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## **Entrepreneurial Tendencies of Tanzanian University Graduates: Evidence from University of Dar-es-Salaam**

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### **Abstract:**

*Entrepreneurship plays a key role in social-economic development of developing countries such as Tanzania where both poverty and unemployment are high. The relationship between unemployment and entrepreneurship is double-faceted. On the one hand, the literature has established that unemployment stimulates entrepreneurial activity, which has been termed as a “refugee effect”. On the other hand, literature has recognized that higher levels of entrepreneurship reduce unemployment; this has been termed as the “Schumpeter effect”. This paper is built within the Schumpeterian effect-theory, which emphasizes that, entrepreneurship reduces unemployment. In order for graduates to become entrepreneurs, positive attitude or tendency towards entrepreneurship is required. Persons with higher entrepreneurial tendencies are said to have positive inclination towards entrepreneurship. It is in this viewpoint that the government of Tanzania has accentuated entrepreneurship training programmes within universities countrywide, in order to empower graduates and facilitate their entry into business; so as to gradually transform them into job creators. Despite government initiatives, very few graduates have managed to start their own*

*businesses. This paper presents findings from a survey conducted to measure among other things, entrepreneurial tendencies of University graduates. It tries to establish whether or not the entrepreneurship training programmes had increased entrepreneurial tendencies of graduates. The General Enterprising Tendencies Test and the independent-samples t-test were applied. The sample size comprised 308 graduates who were clustered into two clusters namely those who studied entrepreneurship (119) and those who did not study entrepreneurship (189). The findings indicate that graduates who had studied at least one entrepreneurship course during their undergraduate studies had higher entrepreneurial propensity and had clear aspirations of becoming entrepreneurs in future than those who studied normal degree programmes. This paper recommends that Universities and other higher learning institutions countrywide should make entrepreneurship training compulsory to all students.*

**Key words:** GET test, entrepreneurship education, entrepreneurial tendencies, independent-samples t-test, University graduates, Tanzania.

## **1. Introduction**

Researching entrepreneurship has been made exigent by the absence of a universally agreed definition of the term (Gartner 1988; Gutterman 2012; Shane *et al.* 2003). Many researchers have focused on the economic function served by the entrepreneur. For example, one of the earliest definitions of entrepreneurship focused on merchants who were willing to assume the risks of purchasing items at certain prices while there was uncertainty about the prices at which those items could eventually be resold. Later definitions began to focus on the risks and challenges associated with combining various factors of production to generate outputs that would be made available for sale in constantly changing markets. Schumpeter was one of the first to include innovation in the definition of entrepreneurship and believed strongly that the proper role of

the entrepreneur was creating and responding to economic discontinuities (Gutterman 2012).

Entrepreneurship, according to Eroğlu and Piçak (2011) is the practice of starting new organizations or revitalizing mature organizations, particularly new businesses generally in response to identified opportunities. Others involved in the study of entrepreneurship focus on the personality traits and life experiences of the entrepreneur in an attempt to generate lists of common entrepreneurial characteristics propensity for “risk taking”, need for achievement and childhood deprivation. While these studies are interesting they have generally been far from conclusive and often have generated conflicting results. While talking about entrepreneurship, most of the people mainly focus on various aspects of business but forget about tendency towards entrepreneurial traits or characteristics. Entrepreneurial tendency is one of the most important parts of an entrepreneurship (Bulsara *et al.* 2010). This paper argues that entrepreneurial tendency of individuals including University graduates can be improved through exposing them to entrepreneurship education and training.

The aims of entrepreneurship education among other things are to change the mindset of people so that they become entrepreneurs in their working places, to solve the problem of job seekers by creating job creators among intellectuals, to discover or exploit opportunities available for the development of individual and country at large, and to see the world as an opportunity and not as the worst place to live in (Chiraka 2012). Several studies have linked lack of entrepreneurship education and training and the problem of graduates’ unemployment in Tanzania (Kilasi 2011; Nkirina 2010; Olomi 2006). There is limited evidence to support this view as the number of universities and non-University training institutions offering entrepreneurship and other courses countrywide is increasing while very few graduates opt for self-employment (Nkirina 2010; SARUA 2011). Many universities and

University colleges in the country today have entrepreneurship development centres and offer either a course or a programme (degree or diploma, etc) on entrepreneurship at an undergraduate and or post-graduate level (UDSM, 2011; Mzumbe, 2005; MUCCoBS, 2012; SUA, 2013; Tumaini University Iringa University College, 2013; Zanzibar University, 2011; Jordan University College, 2013). However, in spite of the increase in number of high learning institutions and proliferation of entrepreneurship courses across institutions, very few graduates opt for entrepreneurship as a career. Little is known about the relationship between the likelihood of a student taking courses in entrepreneurship and their intentions of becoming self-employed after studies.

This paper presents findings from a survey conducted to measure among other things, entrepreneurial tendencies of University graduates. It tries to establish whether or not the entrepreneurship training programmes at the University had increased entrepreneurial tendencies of graduates. The study employed the “General Enterprising Tendencies (GET) Test”. The GET test is a tool that has some potential in assessing entrepreneurial tendencies and therefore entrepreneurial orientation although it cannot determine whether or not a person is going to be an entrepreneur (Mazzarol 2007). The following five hypotheses were formed and tested: Ho: There is no significant difference in the level of [(1) need for achievement, (2) need for autonomy and independence, (3) creative tendency, (4) calculated risk-taking propensity, (5) internal locus of control or drive and determination] among the graduates who had studied entrepreneurship and those who had not studied entrepreneurship during their undergraduate studies. The paper is structured in five sections. Section one introduces the paper whereas, section two presents a review of literature on entrepreneurial tendencies. Section three presents the description of the methodology applied in executing this study while section four presents the empirical findings and

their discussion. Conclusions and recommendations are provided in section five.

## 2. Conceptualizing Entrepreneurial Tendencies

For quite some time, scholars have been assessing the characteristics of an entrepreneur and from a non entrepreneur in order to explain factors that might trigger new venture creation (Mazzarol 2007). Personality characteristics and the environmental forces that shape the potential entrepreneurs have been studied in order to predict whether they will or will not engage in entrepreneurial activity (Fini *et al.* 2009). Key factors that are likely to influence the propensity for entrepreneurship are the need for achievement; the need for autonomy and independence; the creative tendency; the risk taking propensity; and the drive and determination or internal locus of control (Mazzarol 2007; Fini *et al.* 2009; Henderson and Palm, 2011). These entrepreneurial tendencies are likely to be triggered by a tolerance for ambiguity and the individual's previous work or career history (Mair and Marti 2005). Other characteristics include a person's sex, education level, family background, and ethnicity (Aldrich and Waldinger 1990; Rwamtoga 2011).

These drivers of entrepreneurial potential have been studied for some time with several being identified as more important than others. For example, Shane *et al.* (2003) identified the need for achievement, the propensity for taking calculated risks, the tolerance for ambiguity, locus of control, self-efficacy, goal setting, independence, drive and ego passion as being very important. These qualities have been recognized in different groupings as those that characterise the typical entrepreneur (Krasniqi 2009). Though, a concern is as to whether entrepreneurship is primarily determined by innate personality traits or the environmental context into which individuals finds themselves (McCarthy 1998). It is now clear

that entrepreneurial success is not just a function of the individual, but several other factors are responsible for this. Both the characteristics of the individual, the influences of environment as well as the nature of the venture being developed are important to the process of new venture creation and the process that is required to get it going ( Mair and Marti 2005; Krasniqi 2009). Shane (2000) argues that entrepreneurship is all about seizing opportunities which others don't know about, or find too difficult and risky to realize. He further argues that, the source of entrepreneurship lies in differences in information about opportunities. Individual differences influence the opportunities that people discover how their entrepreneurial efforts are organized, and how the government can influence this process. Networks may provide resources that are usually not accessible in an open environment, allowing people to advance as entrepreneurs. Several studies from Europe, Asia, Brazil, Africa and the Middle East on network and entrepreneurship, make this point (Sarada and Tocoian 2013; Kelley *et al.* 2011). Furthermore, Aldrich (2005) argues that entrepreneurship is not just about recombining resources and knowledge in new ways, but also about creating new organizations. Why do people fail to create new organizations is then a central puzzle to be solved.

Furthermore, Nodoushani and Nodoushani (1999) noted that, the nascent or novice entrepreneur is likely to be influenced by his/her environment which serves to trigger his/her creativity and stimulate his/her desire for achievement leading to the formation of an entrepreneurial venture. Gartner and Shane (1995) further emphasized that, external factors might include technology, the economy, and the individual's past career history, particularly in self-employment, the nature of the venture being created and the time taken for the entrepreneurial activity to commence. Moreover, scholars have advised that, in seeking to understand the process of entrepreneurship the role of both individual

personality characteristics and the external environment need to be considered (Mazzarol, Volery, Doss and Thien 1999; Mazzarol 2007; Henderson and Palm 2011).

Psychometric tests to study entrepreneurial tendencies are now widely used and accepted (Mazzarol 2007). Researchers have prepared various tests to assess personality traits and to seek to measure the cognitive style of a person potentially to determine how they might behave, or at least to explain their existing behaviour (Fini *et al.* 2009). Among the measures of entrepreneurial potential is the General Entrepreneurial Tendencies (GET) test developed by Caird (1991). The GET test measures five entrepreneurial tendencies, namely: the need for achievement; the need for autonomy; the creative tendency; the calculated risk taking propensity; and the internal locus of control (Caird 1991; 1992). GET test was developed from a range of existing psychometric tests including McClelland's Thematic Apperception Test (TAT) as a measure of achievement, and Edwards Personal Preference Schedule (EPPS) as a measure of autonomy (Mazzarol 2007). Others measurements according to Mazzarol (2007) are Honey and Mumford's Measure of Learning Styles and Jackson's Personality Inventory, which is a measure of risk-taking. The GET test incorporates fundamental elements from the Myers-Briggs Type Indicator (MBTI) which normally measures four dimensions: i) introversion-extroversion; ii) intuition-sensation; iii) thinking-feeling and iv) judging-perception (Shorr 2012).

The significance of the GET test as a measure of entrepreneurial potential was put forward by Caird (1992) who accredited that, while there was no apparent understanding of what enterprise competency means, there was a need to examine this area in order to provide support and measurement mechanisms for educational courses targeted at enhancing entrepreneurial capacity (Mazzarol 2007). The GET test employs a series of 54 question items that provide measurement on the five key entrepreneurial attributes.



According to Caird (1993) the results of applying psychological tests shows that entrepreneurs have the following characteristics: a high need for achievement, autonomy, change, dominance; an internal locus of control; characteristics of risk taking, energy and social adroitness; a preference for learning through action and experimentation; and a preference for intuition and thinking.

The GET test has been re-studied by other researchers as well. For example, Cromie and O'Donaghue (1992) conducted two studies using the GET test to evaluate the entrepreneurial tendencies of 194 managers and 661 undergraduate students. They further found that the GET test measure had criterion validity and was able to differentiate significant differences between the entrepreneurial tendencies of different students; suggesting that the instrument had good validity. Further work was recommended on the GET scales to assess their discriminant and predictive validity and general psychometric properties when used with different samples. Kirby (2002) further argues that, although additional work is needed to verify GET test's psychometric properties, some studies have found that the GET has criterion and convergent validity and good internal consistency". According to Cromie (2000), "the GET test is comprehensive, accessible, and easy to administer and score.

Persons with entrepreneurial propensity were viewed as those with high creative tendency, above average need for autonomy and high calculated risk taking orientation. Such people may also have high need for achievement and internal locus of control, but potentially not significantly different from others. Potential entrepreneurs were also more likely to have had a father who was self-employed or to have been self-employed at some stage in the past (Cromie, Callaghan and Jansen 1992).

This paper focuses on personality traits rather than what entrepreneurs do, this is because first, the literature

identifies individual domains (e.g. personality, motivation, and prior experience) and contextual variables (e.g. social context, markets, and economics) as the two dimensions responsible for the formation of entrepreneurial intentions (Fini *et al.* 2009). As for the first one, Zhao, Seibert, and Hills (2005) show that psychological characteristics (e.g. risk-taking propensity and entrepreneurial self-efficacy), together with developed skills and abilities, influence entrepreneurial intentions. Other scholars, studying the role of contextual dimensions, show that environmental influences (e.g. industry opportunities and market heterogeneity; Morris and Lewis 1995) and environmental support (e.g. infrastructural, political, and financial support; Luthje and Franke 2003) impact entrepreneurial intentions. Second according to Fini *et al.* (2009) studies have also shown that attitudes directly predict entrepreneurial intention, while psychological characteristics, individual skills and environmental influence have only an indirect impact. The environmental support doesn't predict entrepreneurial intention.

### **3. Methodology**

This study interviewed graduates from the University of Dar-es-Salaam regardless of their location within the country. It is an established fact that University graduates in Tanzania have the tendency of living in towns and cities. University of Dar-es-Salaam graduates are not an exception to this; most of them are found in cities and towns especially Dar-es-Salaam, Mwanza, Arusha, Moshi, Dodoma, Mbeya and Morogoro.

A cross-sectional design was employed and individual graduates were used as sampling unit. The sampled population involved graduates of the University of Dar-es-Salaam from 2000/2001 to 2010/2011. Graduates were grouped into two clusters, those who studied entrepreneurship (graduates of the University of Dar-es-Salaam Business School-

UDBS) and those who did not study entrepreneurship (graduates of the College of Arts and Social Sciences-CASS). The sample size was 308 graduates; the choice of this figure was based on the confidence level, the margin of error and the skewness level required. A sample size is normally determined by three things, that is, the confidence level, the margin of error and the skewness level (Dodhia 2007; Naing *et al.* 2006). The sample size of 308 was considered adequate at 95% confidence level, 5.5% margin of error and 50% skewness level.

Out of 308 graduates, 119 were selected from UDBS out of 2436 and others 189 from CASS out of 6889 graduates. Systematic random sampling (SRS) was used to get the required sample size.

First, a list of graduates between 2000/2001 and 2010/2011 was obtained from the UDBS and CASS. Second, the first name from each list was picked randomly and the remaining 306 were picked systematically. Only, graduates who were living within the country and who were easily accessed were involved in the study. The systematic random sampling was repeated in order to replace the sampled graduates who were not alive or were not living in the country at the time of this study. Fortunately, none of them were deceased but seven of them (two from CASS and five from UDBS) were not living in the country. Therefore, the systematic random sampling was repeated only once to replace the seven missed respondents. In addition, questionnaires were sent using courier delivery services to several respondents who were living very far from Morogoro and could not be easily accessed. Telephone and e-mail were used to remind respondents to return the questionnaire on time.

A semi-structured questionnaire which included the General Enterprising Tendencies (GET) Test was used in collecting data. The questionnaire consisted of three sections, namely section A, B and C. Section A had 16 questions and was set to explore the background information of a respondent on

issues related to sex, age, graduation year, marital status, ethnic origin, parents' information and more others. Section B was structured in order to assess barriers to self-employment among University graduates and it consisted of 14 questions while section C presented the General Enterprising Tendency (GET) test questions. In its original form the GET test consists of a set of 54 questions which together measures enterprising tendency through the assessment of five enterprising characteristics, namely, calculated risk taking, creative tendency, high need for achievement, high need for autonomy and internal locus of control or drive and determination (Caird 1991; Garalis 2008). This study used the GET test as it was in its original form but slightly modified the language and examples in it to fit the Tanzanian context. Respondents were then required to indicate the extent they agreed or disagreed with each of the questions by ticking in the appropriate box. Individual's scores from each trait were then summed up to get the entrepreneurial tendency as follows: the need for achievement, those who scored 9-12 points had high while respondents who scored below 9 had low need for achievement. Likewise, concerning the need for autonomy and independence; respondents who scored between 4-6 points were regarded to have high need for autonomy and independence as compared to those scored below 4 who had low need for autonomy and independence. On the creative tendency, graduates with 8-12 scores had high and those who scored below 8 had low entrepreneurial tendency. With regard to the calculated risk taking propensity, graduates whose scores ranged from 8-12 had high whereas those whose scores were below 8 points were considered to have low risk taking propensity. Similarly, graduates who scored 8-12 on the drive and determination trait were judged to have high and those with scores below 8 points had low drive and determination.

The gathered data were analysed using the Statistical Package for Social Sciences (SPSS) and the Microsoft Excel (MS

Excel) computer packages. Descriptive statistics were applied in analysing data which were collected using the General Enterprising Tendency (GET) Test. Graduates entrepreneurial tendencies were then compared between those who had studied entrepreneurship and those who had not studied entrepreneurship using the independent-samples t-test. The independent-samples t-test was preferred for this study because it is statistically more robust in comparing means between two independent samples than the Man-Whitney U-test. The independent-samples t-test (or independent t-test, for short) compares the means between two unrelated groups on the same continuous, dependent variable. According to Fagerland (2012), for the independent-samples t-test to be applied, a number of assumptions need to be met. The most important ones are: One, the dependent variable should be measured on a continuous scale, that is, interval or ratio level; two, independent variable should consist of two categorical, independent groups. Other key assumptions include independence of observations, which means that there is no relationship between the observations in each group or between the groups themselves. A fourth assumption entails that; there should be no significant outliers. Outliers are simply single data points within data sets that do not follow the usual pattern. Perhaps the most fundamental assumption is the fifth one which requires that, dependent variable should be approximately normally distributed for each group of the independent variable. The last assumption necessitates homogeneity of variances. Examples of studies which applied independent-samples t-test to compare means are (Sarjou *et al.* 2012; Winke *et al.* 2010; Maysami and Ziemnowicz 2007; Olmsted 2008).

#### **4. Findings and Discussion**

This section presents the study findings. The section is organized into three main parts; the first part assesses

graduates entrepreneurial intension, the second one an analysis of graduates' entrepreneurial intention by cohort and the last one presents an assessment of graduates' entrepreneurial tendencies. It is important to note that, 83 (27%) of the interviewed graduates were females whereas, 225 (73%) were males. The mere fact that this study managed to get only 83 female respondents out of the 308 further shows that truly women are still lowly represented in the Tanzanian higher education.

## 4.1 Findings

### 4.1.1 Graduates' Entrepreneurial Intention

Respondents were asked as to whether they had ever seriously thought about setting up and owning a firm. Majority (35.1 %) reported to have thought momentarily about establishing a firm, 25 % of them thought about it and were determined to become self-employed in the future. Others, 13.3 % thought quite thoroughly, while 6.2 % though about it but dropped the idea.

A considerable number 18.2 % never thought about establishing their own businesses despite the difficulties in getting formal employment. Figure 1 presents results on entrepreneurial intention of graduates.

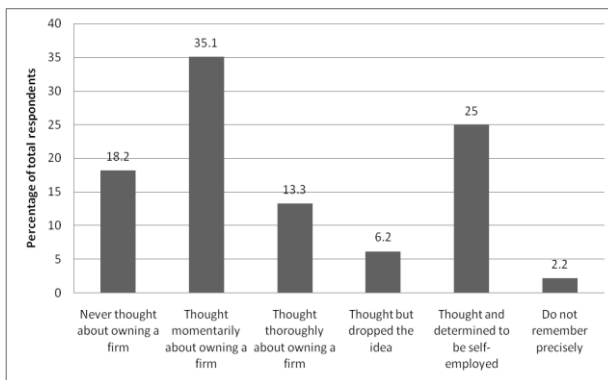


Figure1: Graduates' Entrepreneurial Intention

### 4.1.2 Graduates' Entrepreneurial Intention by Cohort

A comparative analysis of entrepreneurial intention between graduates who studied entrepreneurship and those who did not study entrepreneurship was carried out. The number of graduates who never thought about setting up their own firms varied drastically between the associates. Among those who had not studied entrepreneurship 27.8 % reported to have never thought about setting up and owning firms as compared to only 9 % of their oppose group. Results further indicate that, 34.1 % of graduates who had studied entrepreneurship thought about establishing and managing their own firms as they were determined to become self-employed in the future; whereas, only 19.6 % of their counter parts were determined to be entrepreneurs. Equally, 35 % of respondents who had studied entrepreneurship courses thought momentarily about establishing firms as compared to 33.6 % of those who had not studied entrepreneurship. Figure 2 presents the details.

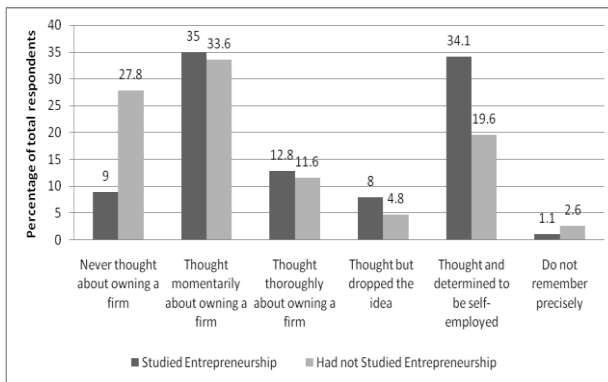


Figure 2: Graduates' Entrepreneurial Intention by Cohort

### 4.1.3 Entrepreneurial Tendency of Tanzanian University Graduates

The GET test was used to measure entrepreneurial tendency of graduates inform of calculated risk taking, creative tendency, high need for achievement, high need for autonomy and internal locus of control or drive and determination. The

findings indicated that 34.1% of graduates interviewed had high need for achievement as compared to 65.9% who scored low on the same trait. Results further show that only 19.8% of the graduates under study had high need for autonomy and independence as compared to 80.2% who had low scores on the trait. In terms of creative tendency, 28.6% of respondents had high creative tendency while 71.4% had low creative tendency. According to the results, 38.3% of graduates involved in a study had high risk-taking propensity and 61.7% had low risk taking propensity. It can further be noted that 55.2% of graduates involved in the survey had high drive and determination while 44.8% had low drive and determination as shown in Table 1.

Attitude	Entrepreneurial Tendencies			
	High		Low	
	Frequency	Percent (%)	Frequency	Percent (%)
Need for achievement 9 -12= High; < 9 = Low	105	34.1	203	65.9
Need for autonomy and independence 4 - 6 = High; < 4 = Low	61	19.8	247	80.2
Creative tendency 8 -12 = High; < 8 Low	88	28.6	220	71.4
Moderate/calculated risk-taking 8 -12 = High; < 8 Low	118	38.3	190	61.7
Drive and determination 8 -12 = High; < 8 Low	170	55.2	138	44.8

**Table 1: Entrepreneurial Tendencies of University Graduates (N=308)**



#### 4.1.3.1 Entrepreneurship Education and Graduates' Need for Achievement

The mean score on the graduates need for achievement was compared between those who had studied entrepreneurship and those who had not studied entrepreneurship during their undergraduate studies using the independent t-test. It was found that there was a statistically significant difference ( $p < 0.05$ ) in terms of need for achievement between graduates who had studied entrepreneurship courses and their counterpart (Table 3). For this reason, it is concluded that the differences between condition Means seen in Table 2 are not likely due to chance but due to the independent variable manipulation and therefore the null hypothesis is rejected. That is to say, entrepreneurship education had increased graduates' need for achievement.

	Degree Programme Studied	N	Mean	Std. Deviation	Std. Error Mean
Need for achievement	Didn't Include Entrepreneurship Course	189	8.4603	1.99328	.14499
	Included Entrepreneurship Course	118	9.6356	1.90216	.17511

**Table 2: Results of the Independent Samples T- Test (Group Statistics)**

	Levene's Test for Equality of Variances		t-test for Equality of Means	t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference

									Lower	Upper
Need for achievement	Equal variances assumed	.138	.710	-5.114	305	.000	-1.17528	.22982	-.162751	-.72304
	Equal variances not assumed			-5.170	257.188	.000	-1.17528	.22734	-.162297	-.72759

**Table 3: Results of the Independent Samples T- Test (Independent Samples Test)**

#### 4.1.3.2 Impact of Entrepreneurship Education on Need for Autonomy and Independence

Concerning whether the mean score on the need for autonomy and independence differ significantly between graduates who had studied entrepreneurship and those who had studied just normal courses, this study found that their mean score on the need for autonomy and independence trait differed significantly. Since the results in Table 5 show that the Sig. (2-tailed) or  $p < 0.05$ . This signifies that the differences between condition Means as presented in Table 4 are not likely due to chance but due to the independent variable manipulation. Graduates who had studied entrepreneurship had three times higher need for autonomy and independence (Mean = 9.8136) than those who had not studied entrepreneurship courses (Mean = 2.9788). Hence, the null hypothesis is rejected.

	Degree Programme Studied	N	Mean	Std. Deviation	Std. Error Mean
Need for autonomy and Independence	Didn't Include Entrepreneurship Course	189	2.9788	1.76839	.12863
	Included Entrepreneurship Course	118	9.8136	2.08351	.19180

**Table 4: Results of the Independent Samples T- Test (Group Statistics)**

		Levene's Test for Equality of Variances		t-test for Equality of Means	t-test for Equality of Means			t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Need for autonomy and Independence	Equal variances assumed	7.796	.006	-30.733	305	.000	-6.83472	.22239	-7.27234	-6.39711
	Equal variances not assumed			-29.595	218.416	.000	-6.83472	.23094	-7.28988	-6.37956

**Table 5: Results of the Independent Samples T- Test (Independent Samples Test)**

#### 4.1.3.3 Entrepreneurship Education and Graduates' Creative Tendency

The mean score on creative tendency was also compared between respondents whose undergraduate degree programmes included an entrepreneurship course and respondents who studied only normal courses. The p-value in Table 7 is less than 0.05 indicating that there is a statistically significant difference between the mean score on creative tendency between respondents whose undergraduate degree programmes included an entrepreneurship course and respondents who studied normal courses. Since the Group Statistics box (Table 6) revealed that the Mean for the graduates whose degree programme studied included entrepreneurship course was

twice as much greater than the Mean for the “did not include entrepreneurship course” condition; it is concluded that participants in the “included entrepreneurship course” condition had significantly higher creative tendency than participants in the “did not include entrepreneurship course” condition and the null hypothesis is rejected.

	Degree Programme Studied	N	Mean	Std. Deviation	Std. Error Mean
Creative Tendency	Did not include entrepreneurship course	189	6.3915	1.94748	.14166
	Included Entrepreneurship Course	118	10.5339	1.18164	.10878

**Table 6: Results of the Independent Samples T- Test (Group Statistics)**

		Levene's Test for Equality of Variances		t-test for Equality of Means		t-test for Equality of Means				
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Creative Tendency	Equal variances assumed	47.669	.000	-20.828	305	.000	-4.14236	.19888	-4.53372	3.75101
	Equal variances not assumed			-23.193	304.793	.000	-4.14236	.17861	-4.49382	3.79091

**Table 7: Results of the Independent Samples T- Test (Independent Samples Test)**

#### 4.1.3.4 Impact of Entrepreneurship Education on Graduates' Calculated Risk Taking

An independent-samples t-test was also conducted to compare the calculated risk taking propensity for graduates whose undergraduate degree programme included entrepreneurship course and graduates whose degree programme did not include any entrepreneurship course. There was a significant difference in the scores for the degree programme which included entrepreneurship course ( $M = 10.0932$ ,  $SD = 1.80212$ ) and degree programme which did not include an entrepreneurship course ( $M = 6.6402$ ,  $SD = 1.94271$ ) conditions as shown in Table 8;  $t(262.403) = -15.845$ ,  $p < 0.05$  (Table 9). These results suggest that entrepreneurship education really does have an effect on the calculated risk taking propensity for graduates. Specifically, the results suggest that when at least one entrepreneurship course is added into the degree curriculum of University students, their calculated risk taking propensity to engage into entrepreneurial activities increases. Consequently, the null hypothesis here is rejected.

	Degree Programme Studied	N	Mean	Std. Deviation	Std. Error Mean
Calculated Risk Taking Propensity	Did not include entrepreneurship course	189	6.6402	1.94271	.14131
	Included Entrepreneurship Course	118	10.0932	1.80212	.16590

**Table 8: Results of the Independent Samples T- Test (Group Statistics)**

		Levene's Test for Equality of Variances		t-test for Equality of Means	t-test for Equality of Means			t-test for Equality of Means		
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Calculated Risk Taking Propensity	Equal variances assumed	6.777	.010	-15.572	305	.000	-3.45301	.22175	-3.88936	3.01666
	Equal variances not assumed			-15.845	262.403	.000	-3.45301	.21793	-3.88211	3.02390

**Table 9: Results of the Independent Samples T- Test (Independent Samples Test)**

#### 4.1.3.5 Impact of Entrepreneurship Education on Graduates' Internal Locus of Control

Contrary to what was predicted, results from an independent samples t-test indicated that graduates whose undergraduate degree programme included at least one course on entrepreneurship (M = 10.6525, SD = 0.84101, N = 118) scored much higher on the internal locus of control or drives and determination than University graduates whose undergraduate studies did not include entrepreneurship course (M = 7.5079, SD = 2.10526, N = 189),  $t(-18.326) = 268.232$ ,  $p < 0.05$ , two-tailed as shown in Table 10 and Table 11 respectively. This implies that entrepreneurship education had significant effect on the drives and determination tendency of graduates

	Degree Programme Studied	N	Mean	Std. Deviation	Std. Error Mean
Drives and Determination	Did not include entrepreneurship course	189	7.5079	2.10526	.15314
	Included Entrepreneurship Course	118	10.6525	.84101	.07742

**Table 10: Results of the Independent Samples T- Test (Group Statistics)**

		Levene's Test for Equality of Variances		t-test for Equality of Means	t-test for Equality of Means			95% Confidence Interval of the Difference		
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
		Drives and Determination	Equal variances assumed	89.283	.000	-15.466	305	.000	-3.14461	.20333
Drives and Determination	Equal variances not assumed			-18.326	268.232	.000	-3.14461	.17159	-3.48245	2.80676

**Table 11: Results of the Independent Samples T- Test (Independent Samples Test)**

## 4.2 Discussion

For a long time, personality characteristics have been described as being relatively stable predictors of entrepreneurial behavior (see Raab, Stedham and Neuner 2005). Comprehensive researches by King's (1985) and Müller's (2002) as cited by Raab, Stedham and Neuner (2005) confirmed that the need for

achievement, locus of control, propensity to take risks, problem solving, willingness to assert oneself (willingness to follow through), tolerance of ambiguity, and emotional stability are among strongest personal traits that influence individuals' entrepreneurial inclination. According to Douglas and Fitzsimmons (2005) an individual's intention to behave entrepreneurially will have attitudinal and self-efficacy antecedents. Douglas and Fitzsimmons (2005) further emphasize that; self-efficacy is also expected to moderate the effect of attitudes on intentions, since entrepreneurship as typified by new venture creation involves considerable risk, greater personal decision and responsibility.

The findings on entrepreneurial intention implies that, graduates who had studied at least one course on entrepreneurship during their undergraduate studies had at one point in time thought of establishing their own firms in contrast to those who had not studied entrepreneurship courses. This is because those who had an opportunity to study entrepreneurship during the undergraduate studies had clear aspirations of becoming entrepreneurs in future. Graduates who had studied entrepreneurship had higher entrepreneurial tendencies than those who had not studied entrepreneurship. For example, graduates who had studied entrepreneurship had three times higher need for autonomy and independence and two times creative propensity than those who had not studied entrepreneurship courses.

It can be recapitulated that, when University students are exposed to entrepreneurship education, their general attitude towards entrepreneurship as a career and their intention of becoming entrepreneurs after studies improves significantly. This is good news and a better starting point for any government such as that of Tanzania whose primary objective is to solve the unemployment problem. The debate now should not be on whether or not entrepreneurs are born or taught. This study has proved that potential entrepreneurs can



indeed be trained to become entrepreneurs and supports the argument that entrepreneurs are taught. What may be debated at the moment is on what training the potential entrepreneurs really require which will help them effectively venture into business environment. The paper argues that the type, modalities and contents of the training syllabus may vary depending on individual's experience as well as the environmental and socio-cultural antecedents.

It is important to note that, while there may be many graduates who intend to become entrepreneurs there are actually few who actually ends up being entrepreneurs (see Siyanbola *et al.* 2009; Timmons 1994; Brenner *et al.* 1991; Rosa and McAlpine 1991). Many factors can explain this, one of them is the poor supportive environments for entry into entrepreneurship (Halis 2013; Sarada and Tocoian 2013; Mohd *et al.* 2012). Okhomina (2010) argues that, the need for achievement, internal locus of control, and tolerance for ambiguity are useful predictors of entrepreneurial orientation but there should be conducive supportive environment to moderate the relationships between entrepreneurial orientation and the psychological traits. According to Geri (2013) individuals depend on environmental factors in making decisions (including entry) but the most vital factor for success of any entrepreneur is the tendency to take risk.

Worth noting is the historical antecedent of Tanzania as a socialist country may have also impacted negatively on the desire of most Tanzanians including the university graduates to become entrepreneurs. In 1967, the post-colonial government adopted a radical transformation to development, through the Arusha Declaration and "*Ujamaa policy*" (socialist policy). All the major means of production in the country such as industries, plantations, commerce and mines were nationalized and put into direct state control. The state became the major owner, controller and manager of the state owned enterprises (Ngowi 2009). The Ujamaa policy did not give any incentive to

private sector enterprises. Private sector entrepreneurs were looked upon as exploiters and “*enemies of the state*” (Olomi 2009). During this period, Tanzanians were indoctrinated to hate virtually everything capitalistic including entrepreneurship. An entrepreneur was regarded as an evil and associated with a beast. The slogan “*Ubepari ni Unyama*” (capitalism is barbaric) was heard on the radio after every news bulletin. Thus, entrepreneurship was made attractive only for the morally deviant individuals (Chiraka 2012). Olomi (2009) reports that, during Ujamaa policy, regulations were introduced to bar civil servants and leaders of the ruling party from engaging in business activities. Since all educated Africans were civil servants, this meant that, business activities were left to Asians and those indigenous people who had no job opportunities, and these tended to be people who had no substantial education. Given the acknowledged roles of the private as opposed to public sector in economic development process, this epoch can be said to have been “*a lost period*” in Tanzania’s economic development process (Ngowi 2009).

## **5 Conclusions and Recommendations**

This study has found that entrepreneurship education had increased the University graduates’ entrepreneurial tendencies in terms of the need for achievement, the need for autonomy and independence, the creative tendency propensity, the calculated risk taking attribute and the internal locus of control. Graduates who had studied at least one entrepreneurship course in their undergraduate degree programmes had twice as much higher entrepreneurial propensity than those who had not studied entrepreneurship. In addition, this study has found that graduates who had an opportunity to study at least one entrepreneurship course during their undergraduate studies had clear aspirations of becoming entrepreneurs in future. This paper argues that the

failure of most University graduates in Tanzania to engage in new venture creation can be partly attributed to poor business environment and the historical antecedent of the country as socialist state.

In view of the above conclusions this paper recommends the following:

- i. Since entrepreneurship education increases the entrepreneurial tendencies, Universities and other higher learning institutions countrywide should make entrepreneurship training compulsory to all students. Entrepreneurship courses will facilitate the process of promoting entrepreneurial interests among students (future graduates) by imparting the skills and confidence they need to start their own businesses. Universities countrywide are urged to embark on a long term mission to expose students (future graduates) to self-determination and practical exploration in entrepreneurship at an early stage and evaluate their progress while still studying.
- ii. Universities in Tanzania should adopt a “Student Centered Learning Model” (SCLM) which is commonly known as the “Entrepreneurial Directed Approach” (EDA). EDA will enable students (prospective graduates) to have a positive entrepreneurial mindset. The techniques associated with EDA are: running a real business, visit to business location and interview with entrepreneurs. These teaching techniques are considered as the most important in improving students’ entrepreneurial awareness and skills (Pihie and Sani, 2009). EDA will also improve students’ enterprising behavior through prior exposure to other “hands on” entrepreneurship teaching techniques such as developing business plan, case analysis, class presentation and discussion. Entrepreneurship education in universities should consider teaching

techniques that require students' to have "hands on" enterprise experience as well as to practice entrepreneurial directed approach in improving university students' entrepreneurial mindset.

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