

## **Study Streams and Student Entrepreneurial Intention**

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**Abstract:** Understanding the levels of entrepreneurial intention among university students is particularly critical in Africa where the scourge of unemployment is profound. Alive to this, governments and well-meaning institutions are investing in entrepreneurship development, the gains of which remain to be seen leading to an ebbing of hope in the youth population. To this end the study investigates the entrepreneurial intention of university students in South Africa with an aim to reveal differences arising from study streams. The study consequently extends knowledge by examining entrepreneurial intention within the context of an unemployment-ridden society while leveraging on the theories of planned behaviour. The study executed from a positivist standpoint surveyed 238 students and quantitatively analysed the data principally to test deductively derived hypothesised relationships. The empirical study concludes that there is indeed a difference in entrepreneurial intention levels between the two groups. Empirical in nature, this quantitative study and concludes that there is indeed a difference in entrepreneurial intention levels between the two groups. Interventions aimed at enhancing entrepreneurship can only generate desirable results if the entrepreneurial intentions of the target population are known. This would ensure that the right type of interventions are created and delivered to specific groups as the ‘one-size-fits-all’ approach continues to fail. Serving a clearly heterogeneous population with seemingly homogenous interventions appears faulty and this reality needs to inform pro-entrepreneurship initiatives in future.

**Keywords:** Entrepreneurial intention; Entrepreneurship; University; Students; Business

**JEL Classification:** L260; O550; R110

### **1. Introduction**

The unemployment rate in South Africa is around 24.3% (Statistics South Africa, 2014b, p. 5). Needless to say, this rate has far reaching consequences for the economy and perhaps more so, for youth in the country. To overcome this, education has been touted as a trusted remedy. It seems though that this remedy continues to fall short of the promise that it holds to open up a landscape of

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employment opportunities for those who have been through the universities. Indeed, according to Fatoki (2010:87) university graduates are unable to break into the workforce, as job opportunities are scarce and difficult to acquire. These issues lead to circumstances that foster high levels of crime and poverty (Memani & Fields, 2014:289).

The situation reemphasises the importance of entrepreneurship and venture creation in an economic context (Diaz-Garcia & Jimenez-Moreno, 2010, p. 261) and yet South Africa's continues to struggle to promote entrepreneurial activity amongst its people (Fatoki, 2010, p. 90; Herrington, Kew & Kew, 2014, pp. 30-31). While there may be numerous reasons for this, knowledge of the entrepreneurial intentions of students in South Africa, may be essential for catalysing the country's development (Zain, Akram & Ghani, 2010, p. 35). Such intentions are usual precursors to the establishment of ventures such as SMMES that hold the answer to South Africa's unemployment problem given their ability to create jobs (Memani & Fields, 2014, p. 287; Ndedi, 2009, p. 464).

Entrepreneurial intentions relate to the desire that an individual nurses to set up a business in the future (Fatoki, 2010, p. 88; Van Gelderen, Brand, Van Praag, Bodewes, Poutsma, & Van Gils, 2008, p. 540) or the search for specific knowledge in order to fulfil the goal of creating a venture. While previous studies may have delved into the issue of entrepreneurial intentions (Farrington, Venter & Louw 2012, pp. 41-42), within the peculiar South African context, effort has not been committed to investigating the concept in a comparative study of business and non-business students. To this end, the study aims to compare the entrepreneurial intention of business and non-business undergraduates at a leading South African University. The overarching objective is to determine if a relationship exists between students' current study stream and their entrepreneurial intentions.

## **2. Theoretical Foundation**

There has been substantial interest in the idea of entrepreneurial intention (EI) by scholars, over time since the seminal work of Shapero in the seventies. According to Linan and Fayolle (2015), a lot of the work can be broadly grouped into five major categories, namely: Core EI model, Personal level variables, Entrepreneurship education, Context and institutions as well as Entrepreneurial process. While this categorisation appears appealing and useful for purposes of better understanding EI literature, it is worthy to highlight the fact that some studies may cut across the categorisations. Indeed, this research on study streams and EI falls in the inter-category set as it may be viewed from a personal characteristics perspective or alternatively from an entrepreneurship education standpoint.

Essentially though, entrepreneurial intention is seen as the thought process of a person at a particular time, which influences their decision to create their own business. This thought process also impacts the ability to perform in different roles and pursue entrepreneurial activity (Sondari, 2013, p. 48). Entrepreneurial intentions can be divided into cognitive and contextual factors (Franco, Haase & Lautenschlager, 2010, p. 262; Skosana, 2014, p. 140). Cognitive factors are related to an individual's demographics, psychological and personal characteristics, skill sets, social ties and networks (Abbey, 2002, p.70). Contextual factors, conversely, are related to the demographic characteristics of an individual such as gender, ethnicity, age, education and family antecedents (Lee, Lim, Pathak, Chang & Li, 2006, p. 353). Bird (1988) defines EI as a state of mind that directs an individual's attention and action towards self-employment as compared to pursuing employment prospects in an existing organisation. This definition suggests that EI is therefore related to the desire to own a business or become self-employed (Thompson, 2009).

This is indicative of the fact that the extent to which EI studies are reliant on the proposed nexus between intention and action cannot be over-emphasised. According to Eresia-Eke and Gunda (2015), within the specific context of entrepreneurship, it is this relationship between EI and entrepreneurial activity that makes the study of EI useful for purposes of entrepreneurship development though it is noteworthy that having an entrepreneurial intention does not automatically cause an individual to choose entrepreneurship as a career path (Sondari, 2013, p. 47). Studies have shown that factors influencing entrepreneurial intention include education, personality traits, gender, age, family and culture (Ismail, Khalid, Othman, Jusoff, Rahman, Kassim, & Zain, 2009, p. 55; Yeboah, Kumi & Jacob, 2013, p. 37). In order to examine the relationship between entrepreneurial intention and the aforementioned personality and demographic factors, studies have often used behavioural intention models (Raguz & Matic, 2011, p. 39). Kwong and Thompson (2016) support the view by arguing that the decision to start a business venture is clearly an act consistent with planned behaviour. Consequently, two theoretical models dominate extant EI literature - Ajzen's model of planned behaviour and Shapero's entrepreneurial event model.

Ajzen's model of planned behaviour (1991) proposes that behaviour is preceded by intention which itself emerges from a combination of individual attitudes, perceived behavioural control and subjective norms. While attitudes attempt to express the extent to which the individual is favourably disposed to the behaviour, perceived behavioural control is more concerned with the individual's self-assessment of their ability to exercise control over resources and opportunities. Subjective norms relate to boundaries defined by society that elucidate expectations associated with choices that individuals make. The theory of planned behaviour (TPB) developed by Ajzen (2005, p. 117), is clearly premised on the

assumption that a human being's behaviour is rational and so certain intentions of an individual may lead to certain behaviours (Kuttim, Kallaste, Venesaar & Kiis 2013, p. 660). In essence, the theory suggests that entrepreneurial intentions may lead to entrepreneurial actions such as the starting-up of a business.

Shapero's entrepreneurial event model proposes the antecedents of entrepreneurial intentions are perceived ability, propensity to act and perceived feasibility. The model also acknowledges that specific desirables may impact on perceived desirability in the same way as perceived self-efficacy could lead to perceived feasibility. Perceived desirability refers to the attractiveness of starting one's own business. Perceived feasibility, on the other hand, is the degree to which an individual feels comfortable in starting his or her own business (Krueger et al., 2000, p. 419). The propensity to act upon opportunities, then, refers to the disposition to act on one's decisions (Lee et al., 2011, p. 126).

According to Fayolle and Linan (2015) EI is an important research area in the field of entrepreneurship. Consequently, several studies have been conducted on entrepreneurial intentions in both developed and developing economies (Amos & Alex, 2014) belching new knowledge along with collateral questions that need to be addressed (Fayolle & Linan, 2015). Given the peculiar idiosyncrasies of countries and societies, and the fact that intentions seem to be shaped by a number of different factors, it would seem illogical to draw conclusions about a country, based upon studies conducted in another.

Within the student community, a number of EI studies have been conducted with different goals, methodologies and different findings. A cross-country research conducted by Lee, Lim and Pathak (2006, p. 351) revealed the existence of different levels of EI among students in the US, Korea, China and Fiji. Veciana, Aponte and Urbano (2005, p. 172) found a similar occurrence in Puerto Rico and Catalonia. Relatively low prevalence of EI was found by Luthje and Franke's (2003, p.141) as well as Linan, Rodriguez-Cohard and Rueda-Cantuche (2001, pp. 156-157) in the studies conducted among students at Massachusetts Institute of Technology (MIT) and Andalusian students respectively. This finding resonates with the South African situation as Fatoki (2010) found that final year students in a South Africa University had low levels of entrepreneurial intention. Indeed, in South Africa, EI amongst students is so weak that students prefer to work for existing organisations (Farrington, Venter, & Louw, 2012, p. 42; Olufunso, 2010, p. 91).

Rather than consider students as an aggregate research population, Wilson, Kickul and Marlino, (2007, p. 395) disaggregated the group and found that male students displayed higher entrepreneurial intentions than female students. This finding reveals the existence of different levels of EI among students within the same university. In the same vein, it exposes the fact that different degrees of association

may be found between EI and demographic factors of an individual. This is what has made it attractive to investigate the possibility of the existence of different EI levels based upon on a different categorization criterion; in the case of the current study, this being the exposure to business education. This thought derives impetus from the fact that students are generally exposed to different levels of entrepreneurship education (Memani & Fields, 2014, p. 289) and this may create varying levels of knowledge that could in turn bear some correlation with their levels of entrepreneurial intention. Given that there are different categories of students, it would seem worthwhile to attempt to identify groups that bear higher or lower entrepreneurial intentions, so as to fashion interventions targeted at improving existing levels, more effectively. In recognition of this, Ahmed, Nawaz, Ahmad, Sajukat, Usman, Rehman and Ahmed (2010, p. 18), undertook a study that found that the entrepreneurial intentions of a student differed depending on their year of study. It was their realisation that students at higher levels of study displayed more inclination towards entrepreneurial activity. A similar finding was made in Malaysia, where it was found that graduating students have a greater desire to venture into entrepreneurship arguably due to their exposure to entrepreneurial courses (Zain, Akram & Ghani 2010, p. 40). In effect the position appears to be that knowledge or exposure lends itself to improved self-efficacy that can promote EI. This study broadly categorises students into two groups - business and non-business students and is encouraged by the proven relationship between knowledge, self-efficacy and EI to hypothesise that:

*H<sub>0</sub>: There is no difference between the EI levels of business students and non-business students.*

### **3. Methodology**

The study is driven by a positivist philosophical inclination given its preference for objectivity and empiricism. The preferred research approach is deductive and so the hypothesis of interest was rationally deduced from existing literature. A survey-strategy was used to access the study's target population, which consisted of current undergraduate students at one of South Africa's leading Universities. Two mutually exclusive and collectively exhaustive groups of business and non-business students were created. Business students are considered to be those whose degrees fall within the faculty of Economic and Management Sciences. Besides this group, all other students are categorised by the study as non-business students. A non-probability sampling approach - quota sampling – was used for the study in a bid to ensure some characteristics of the population are mirrored (Daniel, 2012, p. 102; Zikmund & Babin, 2010, p. 313) in the sample. A total respondent group of 238 students was utilised in the study. The specific method for the distribution and collection of the pre-tested questionnaires was a central-location intercept survey.

The instrument used was that of Liñán, which had been utilised for previous studies (Liñán & Chen, 2009, pp. 612-613; Liñán, Urbano & Guerrero, 2011, p. 215; Jaén & Liñán, 2013, pp. 959-960) and acknowledges that the entrepreneurial intention construct is a multidimensional construct, consisting of the sub-constructs of entrepreneurial activity, skills related to entrepreneurial activity, attractiveness towards entrepreneurship, professional attraction after degree completion and importance of educational courses to entrepreneurship development. The instrument was predominantly made up of 7-point Likert scale statements. In spite of the fact that the instrument had been used for other studies, all the scales of the component constructs of EI were tested for internal consistency. The entrepreneurial activity, skills relating to entrepreneurial activity and attractiveness of entrepreneurship had Cronbach alpha values of 0.94, 0.78 and 0.70 respectively. Other Cronbach alpha values obtained were 0.55 for professional attraction after degree completion and 0.70 for importance of educational courses.

#### 4. Study Results

A total of 238 students responded to the questionnaire. While 46.64% of the group were business students, the remaining 53.36% were non-business (see Figure 1). The gender split was 42% male and 57.6% female; with one respondent not answering the gender question. The majority of students were classified as white (67.2%), while the remaining ethnic groups (black, coloured, Indian) accounted for 32.8% of the group. Two respondents elected not to respond to the race question.

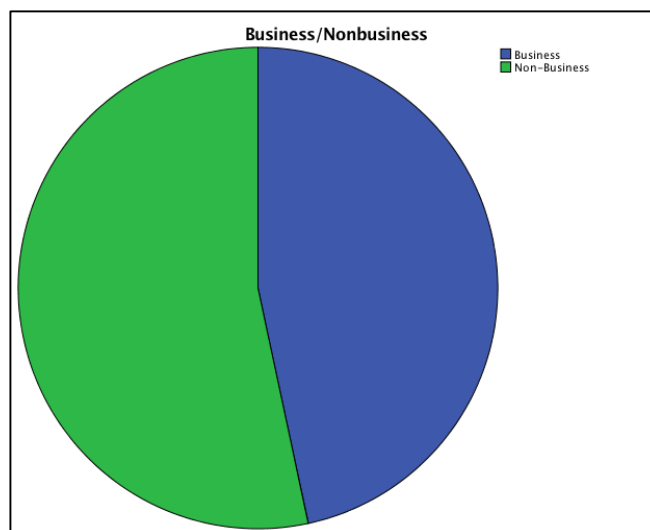


Figure 1. Proportions of Business and Non-Business Students

Respondents utilised in the study came from a number of different study areas. The distribution of students on the basis of study streams is shown in Table 1. The category of business students included only students who were enrolled in the faculty of economic management science. Students enrolled in other faculties were categorised as non-business students. In all, there were 111 business students and 127 non-business students in the study.

**Table 1. Distribution of respondents according to faculties**

Faculty	Frequency	Percent	Valid Percent	Cumulative Percent
Faculty of Economic Management Science	111	46.6	46.6	46.6
Faculty of Humanities	52	21.8	21.8	68.5
Faculty of Engineering	56	23.5	23.5	92.0
Faculty of Education	13	5.5	5.5	97.5
Faculty of Health Science	1	0.4	0.4	97.9
Faculty of Law	2	0.8	0.8	98.7
Faculty of Nature and Agriculture	2	0.8	0.8	99.6
Faculty of Theology	1	0.4	0.4	100.0
Total	238	100	100	

The study hypothesised that:

*H<sub>0</sub>: There is no difference between the EI levels of business students and non-business students.*

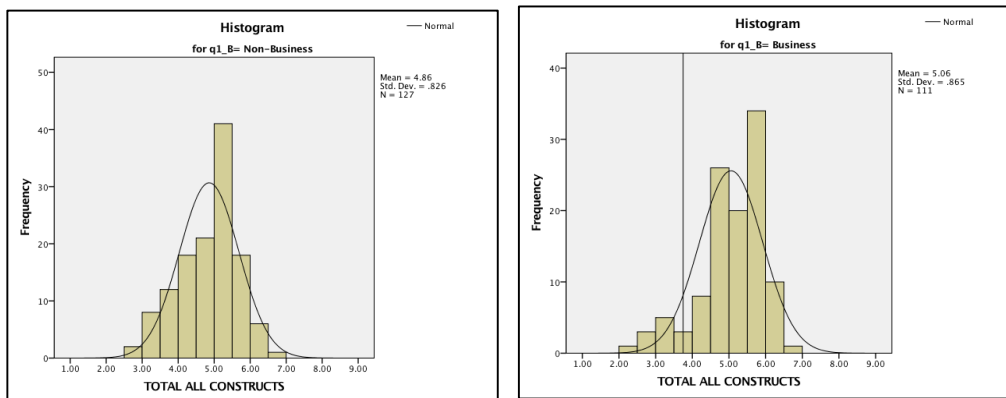
This one-tailed (directional) hypothesis was tested at a 5% level of significance ( $\alpha = 0.05$ ). Since the overall entrepreneurial intention construct was measured with Likert-scales on an interval level of measurement, the study was faced with the option to use an appropriate parametric significance test such as the independent samples t-test or turn to the a non-parametric alternative like the Mann-Whitney U test.

The Kolmogorov-Smirnov test for normality was conducted to aid the choice of the appropriate test for the study’s hypothesis. Table 2 reports the results of the Kolmogorov-Smirnov test for normality regarding the entrepreneurial intention construct for the business and non-business sub-groups of students.

**Table 2. Test of normality of entrepreneurial intention responses of business and non-business student groups**

Business/Non-business	Kolmogorov-Smirnov		
	Statistic	Degrees of Freedom	p-value
Business	0.10	111	0.00
Non-Business	0.12	127	0.00

The p-values associated with both sub-groups maintain values that are less than 0.05 which suggests that for both sub-groups, the test variable of interest does not display a normal distribution within the group. Figure 2 below illustrates histograms representing the distribution of the business and non-business sub-groups with regards to the entrepreneurial intention construct.



**Figure 2. Distribution of EI responses of business and non-business Student groups**

The histograms depicted corroborate the results of the Kolmogorov-Smirnov test by depicting non-normal distributions for business and non-business student groups. The results of these tests have showed a violation of the necessary normality assumption required for the application of parametric tests. Consequently, the non-parametric Mann-Whitney U test was employed for the hypothesis test. Table 3 provides the results of the Mann-Whitney U test conducted to test  $H_0$ .



**Table 3. Mann-Whitney U test results**

Hypothesis	Students	n	Results: Mann-Whitney U Test
H <sub>0</sub> : There is no difference between the EI levels of business students and non-business students	Business	111	Test statistic: 5957 1-tailed p-value: 0.02 Conclusion: The existence of a significant difference implies that H <sub>0</sub> should be rejected
	Non-Business	127	

The p-value of 0.02, in the context of a 5%-level of significance implies that the null hypothesis that suggests the absence of a difference in the entrepreneurial intention levels of business and non-business students, needs to be rejected. The alternate hypothesis that would in effect suggest a difference between the entrepreneurial intention levels of business students and non-business students is therefore accepted.

As part of the process of analysing the data, responses to items contained in each of the component constructs of EI were aggregated and composite mean (M) and standard deviation (SD) scores for business and non-business category of students were determined. The output of the exercise is presented in Table 4. The standard deviations associated with both business and non-business students are of a similar nature. Nonetheless, the measure of greater importance to the study from table 4 is that which expresses the mean scores of both groups.

Examination of the scores obtained per sub-construct shows that business students obtained a higher average mean for every individual sub-construct of EI, save for the sub-construct of attractiveness towards entrepreneurship. When all the sub-constructs are grouped, on the average, business students at the University obtained a higher overall mean score of 5.06 compared to a collateral score of 4.86 that non-business students obtained. This is suggestive of a higher entrepreneurial intention on the part of business students.

**Table 4. Mean scores and standard deviations of EI sub-constructs**

Sub-Construct	Students					
	Business		Non-business		Total	
	M	SD	M	SD	M	SD
Entrepreneurial activity	5.20	1.19	4.88	1.18	5.04	1.19
Skills related to entrepreneurial activity	5.64	0.79	5.57	0.68	5.60	0.74

Attractiveness towards entrepreneurship	4.31	1.38	4.40	1.30	4.35	1.34
Professional attraction after degree completion	3.45	1.08	3.10	1.16	3.28	1.12
Importance of educational courses to develop entrepreneurship	5.12	0.93	5.03	0.97	5.07	0.95
Total entrepreneurial intention construct	5.06	0.86	4.86	0.83		

## 5. Discussion of Findings

Clearly, the findings demonstrate that there is a difference in the level of entrepreneurial intentions of business students as compared to non-business students. Closer examination though reveals that the difference in EI levels between the groups is not huge. This result was unexpected particularly if knowledge lends itself to self-efficacy which in turn fuels intention. Perhaps, it is valuable to posit that expected relationships in many cases hold true only within a particular context which of-course embodies a number of assumptions.

With particular reference to the small difference in EI levels between business and non-business students, it could be that the dire situation of unemployment and poverty that is evident in the country forces students to think more entrepreneurially. This thinking is buoyed by the realisation of how difficult it has been for friends, cousins or colleagues who are graduates to find reasonable employment in established organisations. Confronted by a potential situation of lack of job opportunities, individuals may be forced into thinking of starting business ventures (Chan & Quah, 2012, p. 51; Shariff & Saud, 2009, p. 130).

Furthermore, the small gap in the entrepreneurial levels identified could be a result of the attitudes associated with the younger generation. This homogenous group tends to be more free-spirited and adventurous as compared to older generations who tend to be guided by a more conservative mind-set. Technological advances and its increased availability to the public that aids access to information and networks by university students can stimulate such outcomes; very much in the same way as a traditional formal business education class would have.

There is however a converse argument as it pertains to knowledge and self-efficacy that ought to be considered. As a result of the sparse knowledge and understanding of the prerequisites required to start one's own business, non-business students may overestimate their abilities to identify a business opportunity and create ventures of

their own. This would then cause higher-than-expected levels of EI to be found among the group. On the other hand, business students being exposed to business and entrepreneurial courses are armed with an enhanced and holistic understanding of the requirements and challenge that dot the route to becoming a successful entrepreneur. This could essentially lower the mean of business students on the scale of entrepreneurial intention. In the face of all of this, there would be a consequent reduction in the EI-levels gap between business and non-business students.

Nevertheless, the point remains that there is a difference between the levels of EI of the business student group relative to that of the non-business group. This difference, even if it appears little should be considered in the development of entrepreneurial development initiatives, if such interventions are to be efficacious.

## **6. Implications of Findings**

These findings on a sub-group level of information may help to enable government to allocate resources develop initiatives specifically targeted at identified groups. It would there seem logical that interventions for the group with a higher EI should be aimed at transforming intention to action. On the other hand, interventions created for groups with low EI levels should be driven by a goal to increase the intention to venture into business of members of the group. With specific reference to the broad groups created in this study, entrepreneurship education could be aimed at non-business students to fertilise the existing levels of EI among them. For business students with a higher level of EI, granted that this EI level is deemed to be satisfactory, interventions aimed at this group should be created with an intention to change intentions of members of the group to entrepreneurial action (EA). Business incubator services for instance, would be more useful to the cohort of business students relative to the group of non-business students. Such initiatives aimed at enabling start-ups allows for students desirous of self-employment to tap in early to existing support and improve the chances of their businesses surviving the problematic periods where the liability of newness is huge. This route may lead to the creation of jobs for others and ultimately decrease unemployment and poverty in the South African society.

The failure in understanding students' entrepreneurial intention at tertiary level will hinder the intervention programs of educational bodies in aiding the development of training programs and educational courses (Sriram, Mersha & Herron, 2007, pp. 246-247). Therefore, the effort to deploy entrepreneurship as a remedy for high levels of unemployment and poverty will only bear desirable results when adequate consideration is given to existing levels of EI among populations of interest. Knowledge of these would allow for the phasing of interventions that are informed by specific positions of target groups on an entrepreneurial intention –



entrepreneurial action (EI EA) continuum. Further, the fact that business students have a higher level of EI suggests that exposure to business or entrepreneurship education could be utilised within universities to fertilise EI among students.

## 7. Recommendations for Future Research

The study focussed on business and non-business students but other similar broad categories may be created for the purpose of gauging the levels of EI in each group while also exploring the underlying reasons for EI levels in each group. For such studies, the use of a random sampling method is encouraged as this might enable possible generalisation of findings.

It might also be interesting for future research to attempt to determine the conversion rate of student entrepreneurial intention into actual entrepreneurial action epitomised by business start-ups. Such a study could adopt a longitudinal time frame to determine the extent to which high entrepreneurial intentions translated into action.

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