

Graduate Entrepreneurial Intention in South Africa: Motivations and Obstacles

Fatoki, Olawale Olufunso

Department of Business Management, University of Fort Hare

University of Fort Hare, Alice, P.B. X1314, Eastern Cape, 5700, South Africa

Tel: 927-40-653-2248 E-mail: ofatoki@ufh.ac.za

Abstract

This study investigates the entrepreneurial intention of South African graduates as well as the motivators and obstacles to entrepreneurial intention. 701 students in their final year of study participated in the survey and data was collected through self-administered questionnaires. The principal component analysis, T-test and descriptive statistics were used for data analysis. The results indicate that the entrepreneurial intention of South African students is very weak. In addition, the study identified five motivators of entrepreneurial intention. These are employment, autonomy, creativity, economic and capital. The obstacles to entrepreneurial intention of South African graduates are capital, skill, support, risk, economy and crime. Recommendations to reduce the obstacles to graduate entrepreneurship are suggested.

Keywords: Entrepreneurial intention, Graduates, Motivators, Obstacles

1. Introduction

According to Gree and Thurnik (2003) entrepreneurship has been recognized as one of the tools that drives the economy of a country. Turker and Selcuk (2009) point out that entrepreneurial activities are not only the incubator of technological innovation, but they also provide employment opportunities and increase competitiveness. According to Maas and Herrington (2006) entrepreneurship is a significant component of the solution to South Africa's development issues. Entrepreneurship is fundamental to the growth of the South African economy and its future socio-political stability. Without the creation of new business South Africa risks economic stagnation. Herrington, Kew and Kew (2009) in the Global Entrepreneurship Monitor South African Report note that given the failure of the formal and public sector to absorb the growing number of job seekers in South Africa, increasing attention has focused on entrepreneurship and new firm creation and its potential for contributing to economic growth and job creation.

According to Herrington *et al.* (2009) in 2008, South Africa ranked 23rd out of 43 countries, with a Total Early-Stage Entrepreneurial Activity (TEA) below the average rate (10.6%) of all participating countries. The TEA is a primary measure of entrepreneurship used by GEM. South Africa's TEA rate of 7.8 percent is significantly lower than the average for all efficiency-driven economies (developed countries) which have 11.4 percent as well as the average for all middle to low income countries, where South Africa belongs 13.2 percent. A country at South Africa's stage of economic development would be expected to have a TEA rate in the order of 13%, almost double South Africa's TEA rate of 7.8%. In addition, South Africa suffers from high unemployment with an official estimate of 24.5% of the economically active population unemployed (Statistics South Africa, Quarterly Labour Force Survey, 2009). Graduate unemployment is particularly high. According to Dhliwayo (2008) there are too many graduates for few graduate jobs. With a rapidly growing economy desperately in need of skilled labour, unemployment, ideally, among graduates is supposed to fall. However, this is not the case as unemployment has risen among young and better-educated people. Increased enrolment at tertiary institutions has put more graduates into the labour market. However, there has not been an increase at the rate at which graduates are employed.

Segoai (2009) asserts that unemployment has increased in South Africa as the deepening economic recession has led to massive corporate downsizing. This is not good news for an average university graduate who finds it difficult to get a job. Development Policy Research Unit (2005) points out that within the context of rising unemployment rates in a skills constrained economy, rising graduate unemployment is particularly worrying. While in absolute numbers graduate unemployment is not comparatively large, it remains an important area of study for two reasons. Firstly, as a category, despite the small absolute numbers, relative to the number of the unemployed – it has been the fastest growing education cohort of unemployed since 1995. Secondly, for an

economy faced with severe skills shortages, it is particularly worrying that we are unable to generate sufficient job opportunities for those individuals that apparently have the highest probability of finding employment. However, the economic crunch presents young graduates with new opportunities to explore their creativity. One of the ways to solve graduate unemployment is graduate entrepreneurship. Graduate entrepreneurship is a process taken by a graduate to start a business in terms of an individual career orientation (Rwigema & Venter, 2004). The Consortium for Entrepreneurship Education (2005) notes that wealth and a high majority of jobs are created by small businesses started by entrepreneurially minded individuals, many of whom go on to create big businesses. People exposed to entrepreneurship frequently express that they have more opportunity to exercise creative freedoms, higher self esteem, and an overall greater sense of control over their own lives. The government of South Africa has put the issue of graduate entrepreneurship high on its agenda. New policy and institutional frameworks have been introduced. For instance, the National Youth Development Agency (NYDA) was launched in 2008 with the primary objective of improving entrepreneurship and reducing youth and graduate unemployment in South Africa. Despite all these measures graduate unemployment is still very high in South Africa.

Studies on the entrepreneurial intention of graduates such as Frank, Korunka, Leuger and Mugler (2005) and Turker and Selcuk (2009) and Ismail, Khalid, Othman, Jusoff, Rahman, Kassim and Zain (2009) have focused mainly on developed countries. Barbosa and Moraes (2004) argue that studies carried out in developing countries are also very important and may reach different conclusions from those carried out in developed countries. This is because there are environmental differences between developed and developing countries. For instance, crime is much higher in South Africa than in most developed countries and this may affect the entrepreneurial intention of university students. Therefore, it is critical to focus on graduates and understand which factors affect their intentions to start-up a business in the future. Furthermore it is important to identify the motivation and the actual or perceived barriers to the formation of new businesses in order to remove or lower entry barriers and improve business formation. Henderson and Robertson (2000) posit that the future working environment will depend on the creativity and individuality of the young especially graduates. This study will empirically investigate the motivations and obstacles to graduate entrepreneurial intention in South Africa with a view to providing recommendations that will improve graduate entrepreneurship and hence reduce graduate unemployment in South Africa.

2. Objectives of the study

The objectives of the study are to:

- Determine the entrepreneurial intention of South African graduates
- Determine the motivations and obstacles to graduate entrepreneurial intention in South Africa.

“Graduates” can be described as students who are in their final year of study in the universities (Pihie, 2009). They constitute a potential source of would-be entrepreneurs because of the high unemployment caused by limited opportunities in government and private firms in South Africa. In addition, as pointed out by Veciana, Aponte and Urbano (2005) last year students are about to face their professional career choice and secondly, these students belong to the empirically highest entrepreneurial inclination segment of the population. This implies that those individuals between 25 and 34 years old with high level of education tend to show a greater propensity towards entrepreneurship.

3. Literature review

3.1 Theoretical construct

The European Commission (2003) and Van Gelderen, Brand, Van Praag, Bodewes and Van Gils (2008) define entrepreneurship is an attitude that reflects an individual’s motivation and capacity to identify an opportunity and to pursue it, in order to produce new value or economic success. Entrepreneurship is the capacity and willingness to undertake conception, organisation, and management of a productive venture with all attendant risks, while seeking profit as a reward. Henley (2007) points out that entrepreneurship is an intentional activity, in that for many those intentions are formed at least a year in advance of new venture creation suggesting a link between entrepreneurship and intention. Choo and Wong (2009) define entrepreneurial intention as the search for information that can be used to help fulfil the goal of venture creation. Entrepreneurial intentions can also be described as one's judgments about the likelihood of owning one's own business. The personal commitment of the would-be entrepreneur to found a business has a significant impact on shaping the entrepreneurial intention. Wong and Choo (2009) add that that intention is the single best predictor of entrepreneurial behaviour. Mazzarol, Volery, Doss and Thein (1999) note that starting a business is not an event, but a process which may take many

years to evolve and come to fruition. Van Gelderen *et al.* (2008) state that entrepreneurial intentions are central to understanding the entrepreneurship process because they form the underpinnings of new organizations. Because entrepreneurship occurs over time, entrepreneurial intentions might be viewed as the first step in an evolving, long-term process. Intentionality is defined by Bird (1989) as cited in Vasaleinen and Pihkala (2009) as a conscious state of mind that directs attention (and therefore experience and action) toward a specific object (goal) or pathway to achieve it. Individuals with the intention to start a business not only have a propensity to start, but in addition, adopt a rational behaviour to reach their goal. Intentionality is, thus, grounded on cognitive psychology that attempts to explain or predict human behaviour. It is seen that behavioural intention results from attitudes and becomes an immediate determinant of behaviour (Pihie, 2009).

3.2 Empirical review

This study focuses on the assumption that motivations and obstacles influence entrepreneurial intention and eventually the decision start a business or not to start a business. Motivators are what encourage a graduate to start a business and obstacles are what prevent a graduate to start a business. The empirical review of the literature on entrepreneurial intention will focus on both the motivators and the obstacles.

3.2.1 Motivators

According to Ashley-Cotleur, King and Solomon (2009) there are a number of individual factors that motivate a person's decision to become an entrepreneur. These can generally be categorized as (1) demographic variables or (2) attitudes, values or psychological factors. Demographic variables that influence entrepreneurship activities include gender as pointed out by Kolvereid (1993) and Matthews and Moser (1995). Crant (1996) for instance found that men are more likely than women to express an intention or preference for starting their own businesses. In addition, family background can also be a motivator. Crant (1996) found that being raised in a family that is entrepreneurial significantly impacts individuals' intentions to start their own businesses. Having role models is also a significant factor in wanting to start a business as pointed out by Birley and Westhead (1994) and having self employed parents tend to be especially relevant as mentors and guides for children starting their own businesses as highlighted by Matthews and Moser (1995). Other studies relate entrepreneurial behaviour to factors such previous employment Storey (1982) education Storey (1982), ethnic membership Aldrich (1980), and religion Weber (1930). Previous research on attitudes, values and psychological factors as the motivating factors for entrepreneurship focused on the determination of the personality characteristics that distinguish entrepreneurs from non-entrepreneurs and the impact of such characteristics on organisation formation rates. The studies include the need for achievement by McClelland (1961), risk-taking propensity Brockhaus (1980), locus of control Brockhaus (1982), tolerance of ambiguity Schere (1982), and the desire for personal control Greenberger and Sexton (1988). The conclusion of these studies is that a combination of psychological traits interacting with background factors makes some individuals more likely entrepreneurial candidates than others.

Robichaud, McGraw and Roger (2001) argue that that motivation falls into four categories: (1) extrinsic rewards, (2) independence/autonomy, (3) intrinsic rewards, and (4) family security. Extrinsic motives are the economic reasons that entrepreneurs work, whereas intrinsic motives are related to self-fulfilment and growth. Ashley-Cotleur *et al* (2009) agree that extrinsic motivators for a nascent entrepreneur will include expected monetary rewards reflected in salary and benefits. Intrinsic rewards will centre around the satisfaction of being one's own boss, being more in control of your own destiny, and having ultimate responsibility for the success of the venture. Benzeng, Chu and McGee (2009) remark that the motivating factors may differ across countries due to differences in income levels and employment opportunities. Swierczek and Ha (2003) in a study of SME owners in Vietnam found that challenge and achievement were more significant motivators than necessity and security. Turker and Selcuk (2008) point out that although researchers often indicate a link between entrepreneurial intention and some personality factors, such as self-confidence, risk-taking ability, need to achievement, and locus of control, however, a person is surrounded by an extended range of cultural, social, economical, political, demographical, and technological factors. Therefore, personality traits cannot be isolated from these contextual factors.

3.2.2 Obstacles

Potential graduate entrepreneurs may be motivated, mobile and eager to start a new but securing finance or capital may be a challenge to them. Maas and Herrington (2006) indicate that lack of financial support is the second major contributor to the low TEA rate in South Africa. The need for capital is common to everyone who is self employed (Casson, 2003). Elsenhardt and Martin (2004) use the Resource Based Theory to demonstrate the financing needs of an entrepreneur. They argue that entrepreneurs need resources such as fixed assets and

working capital to be able to achieve a competitive advantage in the market. Pretorius and Shaw (2004) observe that a large percentage of the failure of entrepreneurial ventures in South Africa is attributed to inadequate capital structure or resource poverty.

One of the obstacles to the success of an enterprise is lack of willingness to take risk. Fear of failure and embarrassment prevent people with ideas not to explore them and venture into a competitive stage. However, in order to be successful, new entrepreneurs must gain knowledge on their tolerance of risk (Robinson, 2008). Many young entrepreneurs become risk averse because of their social environment (Kazela, 2009). However, starting a business needs drive and perseverance (Botha, 2006). Crime can be one of the barriers to graduate entrepreneurship in South Africa and it is regarded as a major challenge hindering graduate entrepreneurship. Crime causes stress and additional costs for security and this retards the development of emerging markets such as South Africa. South Africa's crime situation is worrying as it is ranked among the top five highest murder rates in the world together with Colombia, Jamaica, Guatemala, and Venezuela (United Nations Office on Drugs and Crime (2007). High crime rates are a serious challenge to business formation (Arzeni, 2004).

Lack of business skills is attributed to failure of business owned by young people. Papulova and Makros (2007) find that most graduates do not have the required managerial skills. Graduate entrepreneurs, be they technicians, accountants or social researchers, requires skills in the field of management and these skills, especially technical skills seem to be lacking when it comes to business development over the long term. Herrington and Wood (2007) confirm that lack of education and training has reduced management capacity in new firms in South Africa. This is one of the reasons for the low level of entrepreneurial creation and the high failure rate of new ventures. The quality and context of the educational system do not promote the development of managerial competencies. According to Herrington *et al.* (2009) the quality of entrepreneurship training apart from academic qualification is poor and therefore local entrepreneurs and graduate entrepreneurs have poor business and managerial skills.

South Africa government is committing a great deal of effort to support the development of graduate entrepreneurship in the South Africa. Since most new entrepreneurs do not have the necessary capital to start a business, government support becomes very important. One of the measures by the government which has impacted on entrepreneurship is the Accelerated and Share Growth Initiative for South Africa (AsgiSA). Other government agencies formed to encourage youth and graduate entrepreneurship include the Small Enterprise Development Agency (SEDA) and the National Youth Development Agency. Unfortunately, most entrepreneurs are not aware of these government programmes, specifically designed to help them. There is little information on the types of financial products available to entrepreneurs as well as the procedure to apply for these products. There is the belief amongst potential entrepreneurs that there is no government support for entrepreneurship in South Africa (Maas & Herrington, 2006). Cultural attitudes and social background impede young and graduate entrepreneurs. In South Africa, the urge to create wealth is perceived not be a concern. Rather value is placed on earning wages (Kazela, 2009). The general perception is to earn an academic qualification in order to be more suitably qualified for the employment market. Kazela (2009) adds that the culture of dependence is very high in South Africa hence the people expect government to do everything for them. This attitude influences the consideration of entrepreneurship by young people from fresh tertiary institutions.

4. Research methodology

4.1 Population and sample

The study focuses on graduating students at the University of Fort Hare, South Africa. The research was conducted in the three campuses of the university at Alice, Bisho and East London. The target population of this research is the final year students both undergraduate and post graduate in Alice campus. These are graduating students. Information obtained from the Registrations Department of the university revealed that the population of graduating students is one thousand two hundred and forty four. The researcher used the probability sampling method for the study. The sample size was determined through the use of RAOSOFT sample size calculator. RAOSOFT is statistical software used in the calculation of sample size. RAOSOFT takes into consideration four factors in determining sample size. These factors include the margin of error, the confidence level, the population and the response distribution. The RAOSOFT sample size calculator gives a recommended minimum sample size of two hundred and ninety two. However, 880 questionnaires were distributed. With the approval and cooperation of lecturers, the questionnaires were distributed during class sessions for undergraduates and Honours. For Masters and doctoral students, their telephone numbers and email addresses were obtained from the Registrations Department and the questionnaires were sent to their emails for completion. Repeated telephone calls to them ensured sizeable completion of the questionnaires. 701 questionnaires were returned

indicating a response rate of 79.6%.

4.2 Measurement

The questionnaire predominantly made use of Likert scale questions to determine entrepreneurial intention and the motivations and obstacles to graduate entrepreneurship. Close-ended questions were used for demographic variables. The instrument was developed taken into consideration other similar studies such as Wong and Choo (2009), Benzing *et al.* (2009) and Phie (2009). Five point Likert scale with 1 meaning strongly disagree to 5 meaning strongly agree was used to measure entrepreneurial intention. The motivation variables were also measured using a five point Likert scale with 1 meaning unimportant and 5 extremely important. For obstacle variables five point Likert scale was used with 1 indicating not a problem and 5 indicating was a very serious problem. The questionnaires were pre-tested using 80 graduating students at University of Fort Hare, Alice campus and some errors were detected and corrected. The Cronbach's alpha was used as the measure of reliability. The normality of the data was determined by using the Kolmogorov-Smirnov test. The pairwise deletion method was used to treat missing values. The data analysis was done using descriptive statistics, principal component analysis and T-test. This research study uses varimax orthogonal rotation method developed by Kaiser (1958). Principal components with Eigenvalues greater than one are usually retained. Items with factor loading lower than 0.300 were removed as suggested by Leech *et al.* (2005).

5. Results and discussions

880 questionnaires were distributed and 701 were returned indicating a response rate of 79.6%. 562 respondents were completing undergraduate degrees, 139 respondents were completing their postgraduates, 398 respondents were males and 303 females. 599 respondents were aged below 25 and 102 above 25. 230 respondents have taken business courses and 471 respondents have never taken business courses

5.1 Entrepreneurial intention

Insert Table 1

To measure the entrepreneurial intention of the graduates, a ten-item scale was developed after a review of the literature such as Choo and Wong (2009) and Pihie (2009). The scale mean for the ten measures of entrepreneurial intention is 1.65 on a five point Likert scale. The results indicate a low level of entrepreneurial intention amongst graduates in South Africa. The results suggest that most graduates prefer to work for private companies or public establishments. This is consistent with the findings of Kazela (2009) that the general perception among the disadvantaged communities is to earn an academic qualification in order to be more suitably qualified for the employment market. This is also one of the reasons for the low TEA rate in South Africa as pointed out by Herrington *et al.* (2009).

5.2 Motivations and obstacles

The control question that was used to measure entrepreneurial intention as related to motivations and obstacles is "Are you seriously considering becoming an entrepreneur?" A Yes answer is used to determine motivations and a No answer is used to determine obstacles. 124 (17.7%) respondents answered Yes and 577 (82.3%) respondents answered No. If the answer is Yes, the respondents are then asked for the motivators. If the answer is No, the respondents are asked for the obstacles.

5.2.1 Motivations

The descriptive statistics for motivators are presented in Table 2

Insert Table 2

The variables with the highest means for motivators are to provide employment (4.82) and to provide job security (4.66). The variables with the lowest means are to maintain my family (1.97) and to enjoy myself (1.34). The results indicate that most graduates who are interested in becoming entrepreneurs do so because of the fear of unemployment. According to Dhliwayo (2008) Graduate unemployment is particularly high in South Africa. There are too many graduates for few graduate jobs. Rwigema and Venter (2004) point out that one of the ways to solve graduate unemployment is graduate entrepreneurship.

The rotated factor matrix for motivation is presented in Table 3

Insert Table 3

Five factors with Eigenvalues greater than one account for 78.3% of the percentage of the variance explained were identified by the principal component analysis. Factor 1 is labelled employment which is an extrinsic factor. The factor has an Eigenvalue of 13.23% and a percentage of variance explained of 38.06%, suggesting that the

factor is the most significant motivator. The factor consists of three items with factor loading greater than 0.3, which are to provide employment, to provide job security and to earn a reasonable living. Factor two with an Eigenvalue of 6.43% and a percentage of variance of 19.62% is labelled autonomy and consists of four items. The items include satisfaction and growth, own boss, personal freedom and realisation of dream. Factor three with an Eigen value of 3.74% and a percentage of variance explained of 8.50% is labelled creativity and it is an intrinsic factor. The factor consists of three items which are creative talent, challenge and risk. Factor four with an Eigenvalue of 2.96% and a percentage of variance explained of 6.74% is labelled the macro-economy and consists of two items which are good economic environment and opportunities in the market. The factor is an external environmental motivator. Factor five with an Eigenvalue of 2.53% and a percentage of variance explained of 5.34% is labelled capital. This factor consists of both access to funds from personal savings and government and understanding of business skills learned in the university which can be termed human capital. Cronbach's alphas for the five factors are greater than 0.7, indicating the reliability of the factors. The findings are consistent with previous empirical studies such as Pihie (2009) and Choo and Wong (2009).

5.2.2 Obstacles

The descriptive statistics and the rotated factor matrix for obstacles are presented in Tables 4 and 5

Insert Tables 4 and 5

Lack of savings with a mean of 4.86 and difficulties in obtaining bank finance with a mean of 4.89 are the biggest obstacles to graduate entrepreneurial intention. Five factors with Eigenvalues greater than one account for 84.8% of the percentage of variance explained were identified by the principal component analysis. Factor one with an Eigen value of 10.03% and a percentage of variance explained of 32.22% is labelled finance and consists of six items which are lack of savings, difficulties in obtaining bank loans, lack of collateral, crime, need to payback school loans and cost of business registration. The negative effects of crime such as costs of security, replacement and repair costs impact internally on the finances of the business. The factor has the highest Eigenvalue suggesting that it is the most important factor. Factor 2 with an Eigenvalue 6.44% and a percentage of variance explained of 24.01% is labelled competency and consists of five items. The items are lack of skill, information, experience, business plan and entrepreneurial module. Factor 3 with an Eigenvalue of 4.14 and a percentage of variance explained of 14.92% is labelled support and consists of two items which are government support and family support. Factor four with an Eigenvalue of 3.29% and a percentage of variance explained of 7.12% is labelled risk and consists of three items which are risk, uncertainty and fear of failure. Factor five is labelled with an Eigenvalue of 3.01% and a percentage of variance explained of 6.55% is labelled macro-economy and consists of two items which are opportunities in the market and bad economic environment. Cronbach's alphas for the six factors are greater than 0.7, indicating the reliability of the factors. Three of the obstacles to entrepreneurship (capital, competency, risk) are internal to the graduate while the other two (support and economy) are external to the graduate. This suggests that obstacles to graduate entrepreneurial intention are both internal and external. The findings are consistent with previous empirical studies such as Frank *et al.* (2005) and Benzing *et al.* (2007).

5.2.3 The importance of motivators and obstacles

Table 6 depicts the scale means of the motivators and obstacles.

Insert Table 6 here

Table 6 shows that the most important motivator of entrepreneurial intention for university graduates in South Africa is employment with a mean of 4.56 on a five point Likert scale. Lack of capital is the greatest obstacle to entrepreneurial intention of South African graduates. The macro-economy is also significant obstacle but has the lowest mean at 2.60. The T-test was used to investigate if there are significant differences in the mean scores of the demographic variables with respect to both the motivators and obstacles. The results of the T-test show that there are no significant differences in the mean scores of the demographic variables with respect to the motivators and obstacles.

6. Managerial implications and recommendations

The findings of this research show that entrepreneurial intention is very low in South Africa. In addition, the motivators of entrepreneurial intention include employment, autonomy, creativity, macro-economy and capital. The obstacles to graduate entrepreneurial intention include lack of access to capital, lack of competency, government support, risk and the macro-economy. To improve the entrepreneurial intention, the motivators must be reinforced and the obstacles eliminated or reduced significantly. One of the ways to reduce the obstacles to entrepreneurial intention is through entrepreneurship education. Entrepreneurial education is needed to enhance

skills and knowledge. Entrepreneurial skills include creativity, innovation, risk-taking and ability to interpret successful entrepreneurial role models and identification of opportunities. Entrepreneurial education thus provides basics of such practical business practices. Low levels of financial literacy can influence the degree to which entrepreneurs access formal sources of finance. These practices should broaden efforts to ensure that a high level of financial literacy is universal to prospective entrepreneurs. Entrepreneurship education should be made accessible to all tertiary learners in order to be equipped for business practices. In addition, expert financial training greatly increases the chances of entrepreneurs securing appropriate and affordable finance. There is an evident skills mismatch between what skills graduate entrepreneurs developed in higher education and what they need in order to survive in the business world. It is recommended that university students should go for industrial attachments for at least a year during their study to gain valuable business and technical experience. Educational institutions should introduce and strengthen entrepreneurial education. When learners are oriented into entrepreneurship from an early age, it becomes easier to develop successful ventures.

There is the necessity for government support initiatives to be efficient. Government agencies such as SEDA, National Youth Development Agency and the Development Corporations can organize practical trainings for students involved in entrepreneurship education or who would like to be involved in entrepreneurial practices. Non-governmental organisations should be well funded through local and international grants to help with the training need of graduate entrepreneurship. Training seminars can also be organized regularly to students involved. Furthermore, a "learning from peers" or mentorship approach can be instituted by government agencies to help students to get involved in entrepreneurship trainings at tertiary institutions. Awareness campaign of government support instruments should be done. In addition, government guarantee should be extended to graduates to improve access to capital. The crime rate in South Africa is very high. Government should work in partnership with organisations such as Business against Crime South Africa and Business Unity South Africa to reduce or free the society of crime. The legal system needs to be more efficient so that criminal cases against businesses can be dealt with quickly. There is also a need for a well-publicized campaign against crime. More effective policing is needed, including better police visibility, area coverage and faster response times. The culture of dependency and that only the government can provide jobs should be reduced through awareness campaign by the government. Graduates should be encouraged to take entrepreneurship as a career rather than depending on government for limited job opportunities. In addition, excessive and over complex regulations should be loosened in the case of first time registration for business. This will encourage individuals or and graduating students to register for any kind of business he or she chooses to undertake. Entrepreneurship awareness day could be organised where individuals will be informed about how to register a business, what you need to have in order to be registered and how much it costs to register a business.

7. Limitations of the study

This study is limited to the perception of potential graduates about the barriers to entrepreneurship. The real barriers encountered by graduates who actually started their own businesses were not investigated in the study. In addition, care should be taken to generalise the findings of this study to all South African graduates since the research covered only one university. The impact of other obstacles in the South African business environment such as corruption was not investigated.

8. Areas for further research

Further studies could investigate the weakness in the educational system and curriculum in South Africa in relation to graduate entrepreneurship. In addition, a paradigm of entrepreneurship does not exist. Business culture is lacking in most university graduates hence this should be explored further in a study. Future research could expand the study to more universities to improve the generalisability of the study

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Table 1. Measures of entrepreneurial intention

Items	Mean	Standard deviation	Skewness	Kurtosis
My professional goal is to become an entrepreneur	1.20	.320	.765	.235
I prefer to be an entrepreneur rather than to be an employee in a company.	1.14	.119	.176	.274
I am prepared to do anything to be an entrepreneur	1.14	.635	.216	.221
I'll put every effort to start and run my own business	1.08	.229	.544	.371
I have thought seriously to start my own business after completing my study	1.11	.559	.267	.331
I have a strong intention to start a business someday.	2.16	.168	.211	.549
I'm determined to create a firm in the future	2.97	.183	.341	.227
I want to be my own boss.	2.20	.544	.117	.182
I will start my business in the next five years.	1.42	.671	.288	.232
I will start my business in the next ten years.	1.98	.111	.536	.221
Scale mean.	1.65			

Table 2. Descriptive statistics for motivators

Items	Mean	Standard deviation	Skewness	Kurtosis
To provide employment	4.82	.208	.427	.165
To provide job security	4.66	.171	.132	.316
Opportunities in the market	4.35	.165	.322	.210
Earn a reasonable living	4.21	.666	.755	.487
To take advantage of my creative talent	3.61	.185	.257	.101
Support for potential entrepreneurs	3.56	.177	.108	.207
For my own satisfaction and growth	3.54	.298	.166	.191
To be my own boss	3.49	.172	.193	.290
To realise my dream	3.45	.189	.206	.178
For my personal freedom	3.39	.149	.277	.497
To challenge myself	3.32	.132	.175	.223
Good economic environment	3.26	.264	.401	.501
I enjoy taking risk	3.24	.222	.329	.222
To invest personal savings	2.65	.397	.208	.103
To use the skill learned in the university	2.61	.231	.222	.407
Entrepreneurial family culture	2.25	.424	.436	.301
Increase my prestige and status	2.21	.317	.237	.297
Follow the example of someone that I admire	2.13	.225	.309	.251
To maintain my family	1.97	.198	.207	.109
Enjoy myself	1.34	.293	.229	.301

Table 3. Rotated factor matrix for motivation

Factors	1	2	3	4	5
To provide employment	0.91				
To provide job security	0.84				
Earn a reasonable living	0.71				
For my own satisfaction and growth		0.82			
To be my own boss		0.74			
Personal freedom		0.71			
To realize my dream		0.66			
To take advantage of my creative talent			0.87		
To challenge myself			0.65		
I like taking risk			0.61		
Good economic environment				0.79	
Opportunities in the market				0.77	
Support for entrepreneurs from government					0.65
Invest personal savings					0.59
To use the skill learned in the university					0.54
Eigenvalue	13.23	6.43	3.74	2.96	2.53
Percentage of variance explained	38.06	19.62	8.50	6.74	5.34
Cronbach's alpha	0.82	0.74	0.78	0.71	0.73

Extraction Method: Principal axis factoring; Rotation method: Varimax with Kaiser normalisation

Factor loadings less than 0.300 have been omitted

Table 4. Descriptive statistics for obstacles

Variable	Mean	Standard deviation	Skewness	Kurtosis
Lack of savings	4.86	1.66	.126	.250
Difficulty in obtaining bank finance	4.80	1.94	.182	.432
Lack of assets for collateral	4.77	1.67	.111	.134
Lack of business skills (financial, marketing)	4.65	2.03	.101	.223
Lack of information about how to start a business	4.55	2.00	.103	.219
Lack of business experience	4.35	1.91	.184	.385
Lack of information about any government agency that can assist in funding a business	4.20	.453	.121	.188
Do not know how to write a business plan	4.15	.209	.321	.421
Fear of crime	4.02	1.48	.200	.211
Need to pay school loans	3.60	1.67	.111	.134
Cost of business registration	3.28	.390	.183	.231
Did not do any business management or entrepreneurial module	3.26	.361	.373	.201
Cannot see any opportunity in the market place	2.75	1.56	.213	.295
The fear of starting a business because of a risk associated with a business	2.75	.39	.183	.231
The uncertainty about the future if I start my own business	2.68	1.49	.298	.222
Fear of failure	2.62	1.91	.184	.385
Weak economic environment	2.57			
Lack of support from family or friend	2.55	1.27	.180	.265
Nobody in my family has ever gone into business	2.15	.890	.199	.146
Convincing others that it is a good idea	1.97	.126	.145	.327
No one to turn to for help	1.90	1.32	.194	.221
Finding right partners	1.85	.60	.361	.221

Table 5. Rotated factor matrix for obstacles

Items	Factor	Factor	Factor	Factor	Factor
Lack of savings	0.93				
Difficulties in obtaining bank loan	0.89				
Lack of collateral for bank loan	0.83				
Crime	0.66				
Need to pay back school loans	0.54				
Cost of business registration	0.51				
Lack of business skills		0.86			
Lack of information about how to start a business		0.76			
Lack of business experience					
Do not know how to write a business plan		0.72			
Did not do entrepreneurial module		0.61			
		0.54			
Lack of information about government agency that can help			0.77		
Lack of support from family and friends			0.59		
Starting a business is too risky				0.81	
The uncertainty of the future				0.72	
Fear of failure				0.71	
Cannot identify opportunity in the market					0.84
Bad economic environment					0.81
Eigenvalues					
Percentage of variance explained	10.03	6.44	4.14	3.29	3.01
Cronbach's alphas	32.22	24.01	14.92	7.12	6.55
	0.79	0.72	0.88	0.71	0.75

Extraction Method: Principal axis factoring; Rotation method: Varimax with Kaiser normalisation

Factor loadings less than 0.300 have been omitted

Table 6. The importance of motivators and obstacles

Factor	Mean	Standard deviation
Motivators		
Employment	4.56	.205
Autonomy	3.45	.177
Creativity	3.41	.297
Macro-economy	3.25	.561
Capital	3.08	.118
Obstacles		
Capital	4.26	.125
Skill	4.19	.169
Support	3.38	.227
Risk	2.68	.548
Macro-economy	2.66	.176