



Global University Entrepreneurial Spirit Students' Survey

**Global University Entrepreneurial
Spirit Students' Survey:
South African Report 2008-2009**

**Entrepreneurial Intentions and Behaviour of
South African University Students**



UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

Preface

The goal of the Global University Entrepreneurial Spirit Students' Survey (GUESSS) was to examine, explain and discuss the behaviour and intentions of students in their decision to start entrepreneurial activities, across countries. This report has been written as part of the international GUESSS research project to compare entrepreneurial intentions and activities of South African tertiary students with their counterparts internationally. The GUESSS project name replaces the former project name International Survey on Collegiate Entrepreneurship (ISCE).

GUESSS has evolved from its inception in 2003, in which Switzerland (initiated by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen) and Germany (European Business School) were involved, to its format in 2008 where 19 different countries took part. In South Africa, at a national level, the project was coordinated by Dr MJ Scheepers of the Department of Business Management, University of Stellenbosch. The 19 participating countries were Germany, Switzerland, Liechtenstein, Austria, Belgium, France, Luxembourg, Ireland, Finland, Hungary, Estonia, Greece, Portugal, New Zealand, Singapore, Australia, Indonesia, Mexico and South Africa. Over the years of the project several country-specific trends and international trends have been discernable in terms of student entrepreneurship. Since the same questions, scales, methods and constructs were used across different countries and universities, a tangible comparison of tendencies and trends could be made. The 2008 project and its output are published on the Internet at www.guesssurvey.org.

This study presents some encouraging findings concerning entrepreneurship in South Africa. It was found that while a fifth of the university students in the sample prefer an entrepreneurial career directly after graduation, the majority consider entrepreneurial employment five years after graduation. Students contemplating starting their own business generally think of basing their enterprises in the services sector on the concept of established business concepts, reflecting a similar trend, highlighted by previous studies, such as the Panel Study on Entrepreneurial Dynamics and the Global Entrepreneurship Monitor studies. Most students only take tentative steps, such as information-gathering and thinking through business ideas, while close to a fifth write business plans, talk to potential financiers or develop a prototype. A small portion of students participating in the study (slightly more than 2%) have already established businesses during their studies. A quarter of these businesses reflect the dynamic nature of entrepreneurship, closing within two years, suggesting that some of these ventures may have a short- or part-time nature.

Universities can support and facilitate entrepreneurial efforts in a variety of ways, such as offering entrepreneurship seminars and lectures as well as business project plan seminars and providing contacts for general questions. Although most students who make use of these

services are quite satisfied with them, it is recommended that universities should do more to support and stimulate entrepreneurship at universities, when one takes into account that the students of today are the leaders and entrepreneurs of tomorrow. Several suggestions are offered in Chapter 6 as to the important role universities can play.

We would like to extend a word of thanks to the participating universities in South Africa, namely the University of Stellenbosch, the University of the Free State, the Nelson Mandela Metropolitan University, the University of Johannesburg, North-West University, the University of the Western Cape, the University of Cape Town, and the University of Pretoria. Without the support and efforts of these universities and their representatives the project would not have been realised to the current level.

We would also like to thank our main sponsor, Van Schaik (www.vanschaik.co.za), an academic book publishing company, as well as British Telecom, South African Breweries and the Department of Business Management at the University of Stellenbosch for sponsoring the “lottery” of incentive prizes for respondents.

This research project presents a wide range of useful information in relation to Academic Entrepreneurship. On the one hand, there is a significant amount of entrepreneurial potential amongst students. On the other hand, however, we see that there is still room for improvement in some areas, such as support, training and further education, at different academic and societal levels. In conclusion, we hope that this project will provide students, authorities, professors, teachers and private service providers with a wealth of ideas, incentives and motivation to help develop a real entrepreneurial spirit amongst academics. We trust that this report will provide food for thought and may inspire you to infuse your teaching and interaction with entrepreneurial flair.

University of Stellenbosch, July 2009
Department of Business Management

Dr MJ Scheepers

Senior Lecturer: Entrepreneurship & Innovation Management

Mr G Solomon

Lecturer: Entrepreneurship & Innovation Management

Ms A de Vries

Lecturer: Financial Management

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1. INTRODUCTION

The Global Entrepreneurship Monitor (GEM) studies provide a good indication of the number of individuals who are thinking about, actively involved in starting, or currently operating an enterprise. Despite the importance of entrepreneurship and small- and medium-sized enterprises (SMEs) to the South African economy, rates of entrepreneurship in South Africa have been consistently low and much lower than other developing countries (Von Broembsen, Wood & Herrington, 2005). Only five to eight out of every 100 adult South Africans are in the process of starting a business or already own a business (Herrington, Kew & Kew, 2008).

Besides the fact that very few South Africans consider starting and/or start and run a business, the quality of entrepreneurship is also low (Herrington et al., 2008; Von Broembsen et al., 2005). Businesses which are started with an *opportunity focus* tend to create more jobs, enjoy more differentiation and therefore experience less competition. Businesses started out of *necessity* or *survival motivation* tend to create very few jobs, operate in markets of intense competition and are vulnerable to outside forces, such as downward turns in the economic cycle. In South Africa, too few opportunity-based businesses are started, although the recent 2008 GEM report suggests this may be changing (Herrington et al., 2008). Moreover, too few necessity-based businesses are started, compared to other developing countries as indicated over a number of years in the Global Entrepreneurship Monitor (GEM) South African reports (2002 – 2006).

Both internationally and locally the GEM reports provide evidence that owner-managers who have a tertiary education tend to start enterprises which create more jobs, than owner-managers with only a secondary or lower levels of education. Furthermore, entrepreneurship education is seen as a key prerequisite for raising the levels of entrepreneurship in South Africa (Herrington et al., 2008; Von Broembsen et al., 2005). The GUESSS research report provides insight into what South African university students' views of entrepreneurship are and what policy measures and curriculum changes are needed to further stimulate the entrepreneurial spirit and encourage the start-up of more opportunity-based enterprises in South Africa, ultimately leading to higher levels of job creation.

1.1 Entrepreneurship and economic growth

Entrepreneurship is often associated with facilitating national economic growth, innovation, job creation, venture creation, rejuvenation of existing business, and even the redirection of national institutional infrastructure. In this regard, Minniti, Allen and Langowitz (2005:14) declare that entrepreneurship has substantial national consequences and as a global phenomenon entrepreneurial activity absorbs a substantial amount of human and financial resources.

In South Africa too, entrepreneurs play a seminal role in economic vitality. Entrepreneurs such as Anton Rupert (tobacco and jewellery), Nicky Oppenheimer (mining and luxury goods), Sol Kerzner (hospitality), Bill Venter (communications) and Jeremy Ord (information technology) feature prominently in the history of South African entrepreneurship. Not only did their ventures create numerous jobs, earn foreign exchange, contribute greatly to the tax base and fund social investment, but they also served as models for innovation and change. Entrepreneurial ventures contribute to economic growth and wealth creation by outsourcing non-core activities and operations to other smaller enterprises, and funding and networking with emerging ventures. These ventures and their leaders also serve as role models and inspire other potential entrepreneurs. Cumulatively, entrepreneurial ventures have served as South Africa's economic foundation (Venter, Rwigema, Urban & Marks, 2008:19).

Nowadays, the economic growth of nations is intertwined with the volume and quality of its entrepreneurs. Whole industries, such as biotechnology, personal computers, software, and health-enhancing products, have been popularised by entrepreneurs. New or revamped products, services and processes have spawned new markets and revived old ones (Timmons, 1999:17). Venter et al. (2008:19) point out that “[f]ledgling start-ups have been known to employ thousands and earn billions annually within a decade or two. Innovative start-ups create wealth that trickles into the general economy, triggering secondary growth.”

Several examples of such entrepreneurial ventures are found in the South African economy: De Beers, Rembrandt, Southern Sun Hotels, and in recent times, Dimension Data (Venter et

al., 2008:19). These entrepreneurial ventures can be termed “gazelles” or “leaders of innovation” that grow rapidly, creating wealth and jobs. These examples illustrate a general point: high growth ventures often have modest origins but with a strong-minded, inventive entrepreneur behind them, they have tremendous lasting impact on economic growth and job creation in a country where unemployment, poverty, and inequality are part of the daily lives of the majority.

Nieman (2006:12-14) argues that not only gazelles are important to the South African economy, but also the whole small-, medium- and micro-business sector (SMME), for the following reasons:

- The labour-absorptive capacity of the small business sector is higher than that of other size-classes.
- The average capital cost of a job created in the SMME sector is lower than in the big business sector.
- They allow for more competitive markets.
- They can adapt more rapidly than large organisations to changing tastes and trends.
- They often use local recycled resources.
- They provide opportunities for aspiring entrepreneurs, especially those who are unemployed, under-employed or retrenched.
- Workers at the smaller end of the scale often require limited or no skills or training: they learn skills on the job.
- Subcontracting by large enterprises to SMMEs lends flexibility to production processes.
- They play a vital role in technical and other innovation.

The small business sector contributes to the South African economy primarily in three ways (Nieman, 2006:13-14):

- *Contribution to the gross domestic product (GDP)*: In 2002 SMEs contributed 36.1% to the GDP, compared to 32.7% in 1995. SMEs accounted for at least half of the GDP in the agricultural and construction sectors, and more than 40% of the GDP in the trade, catering and accommodation, as well as the transport, storage and

communication sectors. Small enterprises are especially significant in the construction, trade, catering and accommodation, transport, storage, and communication sectors. The 15.7% contribution made by micro-enterprises to value added in the community, social, other personal services, finance and business service sectors is second only to the contribution made by large enterprises.

- *Contribution to employment:* The small business sector contributed 55.9% of the private sector employment in 2002. Small businesses, which are especially active in the retail trade and transport, are the largest contributors to employment.
- *Size of the SMME sector:* The small business sector is the largest of all private sector enterprises in South Africa, with 52% of all private sector enterprises falling into this category of small, while 37% of South African enterprises are very small or smaller.

The Special Report on Entrepreneurship, published in May 2009 in *The Economist*, views entrepreneurship as “cool” and an “idea whose time has come”. Wooldridge (2009) argues that this rise in entrepreneurship can be attributed to the technological revolution, driven by a trio of inventions, namely the personal computer, the Internet and the mobile telephone. These inventions enable capital-poor entrepreneurs to reach mass markets and compete with established giants. Examples of such ventures abound: the Internet provides a cheap interactive platform, where companies such as eBay are able to connect buyers and sellers, without them ever meeting face-to-face. Bloggers and online news services are challenging the business models of established newspapers. Mobile telephone operators are able to leapfrog existing landline operators in terms of users and services, compelling these giants to become more responsive to customer needs. In other words, emerging entrepreneurs have changed the established order of things and have in some instances created new industries, corresponding to Schumpeter’s theory of “creative destruction”. These developments have led to cultural changes and have popularised entrepreneurialism. Where merchants and hawkers were once shunned and their activities regarded as peripheral, entrepreneurship has become admired, celebrated by governments and embraced by generation Y (Wooldridge, 2009).

1.2. Entrepreneurship: a matter of learning?

Even though defining entrepreneurship is not the goal of this report, it is essential to clarify that entrepreneurship is not only about starting new businesses. In the words of Stevenson, Roberts and Grousbeck (1989), entrepreneurship can be described as “***the process of creating value by bringing together a unique combination of resources to exploit an opportunity***”.

This definition implies that:

- entrepreneurship may vary in terms of the extent and number of times it occurs,
- entrepreneurship occurs in various contexts (start-up, corporate, social and others);
- entrepreneurship is a process that can be managed; and
- entrepreneurship creates value and it is opportunity-driven.

In other words, students educated in entrepreneurship may implement their entrepreneurial spirit in different contexts – inside an existing enterprise, in a government or educational institution or in a technological or other context. Regardless of the context, entrepreneurship will follow a more or less structured process, and will be focused on an opportunity. These perspectives should be shared with learners and students as they move through the education system.

1.3 Entrepreneurship and education

Despite the apparent link between entrepreneurship and education, South Africa’s current education system has been criticised in the past decade. Von Broembsen et al. (2005) argue that the education system in South Africa needs to improve dramatically if entrepreneurship is really a pressing issue on the national agenda. Although South Africa’s school system does not appear to be worse than other developing countries at promoting entrepreneurship, South African learners fare poorly in areas such as comprehension, maths and science. Especially black Africans in former black African schools have a lower chance of passing matric or gaining university entrance than their white counterparts. Given the strong correlation

between education and entrepreneurial activity, the continued failure of the school system for the majority of South Africa's population is worrying. Clearly, therefore, a major part of the long-term solution to South Africa's low levels of entrepreneurial activity must lie in improvements in education.

Four areas appear to be important:

1. At a fundamental level, we need to see a significant improvement in the efficiency of education expenditure leading to performance improvements in former black African schools.
2. Entrepreneurship education can increase students' awareness of the importance of entrepreneurship and the contribution it can make to communities, society and the economy. By learning about entrepreneurship, students realise the possibilities that entrepreneurship can offer and gain insight into entrepreneurship as a career path.
3. There is evidence that education can positively influence students' attitudes to and knowledge of entrepreneurship. This is important because it suggests that with effective delivery, appropriate entrepreneurship education could significantly increase the proportion of students who believe they have the skills to start a business. Given the extremely strong positive association between entrepreneurial self-confidence and actual entrepreneurial activity, this could be expected to raise the rate of entrepreneurial activity (Orford, Herrington & Wood, 2004:33).
4. As a number of entrepreneurship academics have pointed out (Nieuwenhuizen & Groenewald, 2008; Urban, 2006; Ladzani & Van Vuuren, 2002), students should also be taught entrepreneurial and business skills. Entrepreneurial skills include recognising opportunities, creating and applying novel concepts, and performing feasibility assessments. Strongly linked to entrepreneurial skills are business skills, which include planning, financial management, marketing management, information management, procurement and negotiation. The transfer of these skills increases an individual's chances of entrepreneurial success.

The Global Entrepreneurship Monitor 2008 (Herrington et al., 2008) further supports this view and points out that the current education systems are failing to prepare primary and

secondary school learners adequately to participate in the economy and that only 15% of matriculants proceed to tertiary university studies. However, the GEM data does suggest that current entrepreneurs with higher education seem to be involved with higher-growth businesses, providing more employment, compared to business owners with secondary and lower levels of education. Therefore, it is vital to determine what the career expectations of students at higher educational institutions are, since these individuals will play a prominent role in the South African economy in the near future.

1.4 Entrepreneurship and higher education

Student career expectations are influenced by a variety of factors such as the changing career world, characteristics of various careers, financial factors, education-related factors, family background and role models (Von Broembsen et al., 2005; Kroon & Meyer, 2001). Entrepreneurship educators are often urged to consider how their modules and approach to teaching entrepreneurship can influence students' attitudes and intentions towards entrepreneurship (Nieuwenhuizen & Groenewald, 2008; Kroon & Meyer, 2001).

Earlier empirical work of Owusu-Ansah and Fleming (2002) and Ibrahim and Soufani (2002) found that entrepreneurs who participated in entrepreneurship courses exhibited higher tendencies to start their own businesses compared to those who attended other business courses, or who did not attend any courses. Ladzani and Van Vuuren (2002), who share this view, highlight the pivotal role training plays in supporting small businesses. They propose that entrepreneurship education is essential for starting and managing a business and therefore it has a powerful influence on entrepreneurial intentions.

While some may argue that tertiary entrepreneurship courses are too theoretical, Sullivan (2000) found that entrepreneurs believe that the foundational knowledge gained by participating in academic courses were valuable, when confronted with "real-life" events. Explicit knowledge of entrepreneurship concepts enabled graduates to reflect cognitively on the incidents and determine what learning had taken place. In other words, the ability to dissect, reflect, learn and act on a critical incident was seen to be of great importance

(Nieuwenhuizen & Groenewald, 2008). Therefore it is expected that education can positively influence entrepreneurial intentions.

Since higher education institutions in South Africa have considerable freedom in designing and structuring entrepreneurship and business curricula, there is great diversity among university offerings. However, entrepreneurship studies usually form part of the commerce faculties' offerings. At some universities, engineering faculties also offer entrepreneurship courses. In entrepreneurship modules soft skills such as creativity, problem solving, leadership, communication and opportunity recognition are taught in conjunction with the more traditional small business management skills such as business planning and financial and marketing management.

The importance of tertiary education is reflected in the Global Entrepreneurship Monitor High-Expectation Report 2005 (Autio, 2005). Autio (2005) found that high expectation ventures expected to employ 20 or more employees within the next five years. Analysing samples from both the United States and Europe, it was found that high expectation ventures could partly be explained by high-income, well-educated individuals, motivated by opportunity. It is suggested that individual-level trade-offs are involved and that higher income and education could mitigate the risk of uncertain earnings involved with a new venture (Autio, 2005). Furthermore, entrepreneurship education benefits not only those individuals who would like to start their own businesses, but also contributes to creating a talented, competitive, skilled, creative and entrepreneurial workforce; a key intangible asset in today's competitive business environment.

1.5 Policy and initiatives

Evidence of the South African government's commitment to stimulating youth entrepreneurship can be found in their economic policies and youth development initiatives. Until recently, youth entrepreneurship was promoted and facilitated through the National Youth Commission (NYC) and Umsobomvu Youth Fund (UYF) Policy, who merged to form the National Youth Development Agency (Tshabalala-Msimang, 2009). Their work has been diverse, with country-wide initiatives through the National Youth Service (NYS) to train and

empower officials to identify and implement youth empowerment projects, enable young people to access economic opportunities in several sectors such as tourism, information and communication technology (ICT), and events such as the Soccer World Cup, as well as to develop the skills and knowledge of young people to enable them to become active participants in the economy (Mkhize, 2007).

It is estimated that the Umsobomvu Youth Fund (UYF) annually spends R500 million on its youth entrepreneurship programme, which focuses on three major projects: enterprise funding, micro-finance and business development services.

The enterprise funding project recently launched the FNB-Momentum-UYF Progress Fund, which complements the Franchise Fund, launched in partnership with business partners, while the micro-finance project is focused on entry-level investments, and its pilot projects with the Nations Trust and Nicro Enterprise Finance are funding micro-enterprises and cooperatives. The third project, business development services, is a voucher programme that helps young entrepreneurs to access business support from approved service providers through vouchers ranging in value from R1 500 to R23 000 (Kekana, 2003).

Private sector initiatives complement government's efforts to stimulate youth entrepreneurship, while a large number of private enterprises also focus on stimulating entrepreneurship as part of their social responsibility programmes. Large multinationals such as South African Breweries (SAB) and Sasol offer funding or incubator services. SAB's KickStart programme focuses on enterprise development through promoting business awareness by providing training, supplying grants as start-up capital and providing post-training mentorship and assistance during the setting-up phase of the business (SAB KickStart, 2009). Several financial services companies such as Investec, Sanlam, First National Bank, to name but a few, also support and champion initiatives to stimulate entrepreneurship. For example, Investec supports projects such as (1) junior achievement, focused on exposing secondary school learners to entrepreneurship, within an incubator setting; (2) the Business Place, a network of walk-in centres for entrepreneurs, offering support and information services to potential entrepreneurs, and (3) a Traders' Fair, consisting

of a Craft Market at its Sandton Office. While Sanlam offers a “Creativity for Progress” competition for universities across the country, unleashing social entrepreneurship, FNB offers a “University Business Challenge” online. While private sector enterprises sometimes build networks with universities, more can be done to facilitate closer working relationships between higher educational institutions and the private sector.

Within universities and private educational institutions a wide range of training programmes and support services, often linked to community interaction activities, are offered to stimulate entrepreneurship. There is also the will to increase contact between educational institutions and companies in order to promote cooperation. Over the long-term, the impact of these initiatives will raise the importance of entrepreneurship education and should translate into higher levels of youth entrepreneurial activities (Terblanche, 2009).

1.6 Reasons for a study on South African university students’ entrepreneurial intentions

Based on the information presented above, a number of reasons have been identified to study the entrepreneurial intentions of South African university students:

- The South African government is committed to developing the economy and creating more job opportunities. Entrepreneurship is seen as instrumental to achieve this objective.
- The South African government wishes to pursue a proactive policy regarding education and entrepreneurship. As a result, a whole range of initiatives has been launched in SA with the aim of stimulating entrepreneurship – especially for the youth.
- High-potential ventures are started by individuals with higher incomes and education levels, focused on opportunity entrepreneurship. These types of ventures could be shaped and developed during university years, with appropriate support from relevant stakeholder groups.
- The study would provide a benchmark for university educators to determine if and how the entrepreneurial intentions of tertiary students change over time.

- Since students are the economic leaders of the future, their career expectations and perceptions of entrepreneurship are very relevant and should be studied.

The relevance of entrepreneurship for growth and future economic development necessitates a study on the attitudes, behaviour and career intentions of tertiary students. Despite the policy emphasis on youth entrepreneurship and small business development, higher educational institutions can also play a vital role in shaping the attitudes of future economic leaders.

2. METHODOLOGY

GUESSS is an acronym for the Global University Entrepreneurial Spirit Students' Survey which is based on voluntary cooperation among representatives from 19 different countries. The initiative began through the Swiss Research Institute of Small Business and Entrepreneurship at the University of St Gallen and the KfW Endowed Chair for Entrepreneurship at the European Business School. This core team was responsible for developing the questionnaire, coordinating international efforts in conducting the survey and publishing the findings of the survey.

Each of the 19 countries participating in the survey has one representative, who was responsible for contacting students in that country. The representatives were asked to email the link to the questionnaire to as many students as possible, encouraging them to participate in the survey. In South Africa lecturers at various universities across the country disseminated the invitation to participate in the GUESSS study by making announcements in lectures to students, placing website advertisements, and displaying posters on university campuses. Lottery prize draws amongst respondents were also used as an incentive to increase students' participation in the survey. The survey was administered via a web-based questionnaire. On completion of the survey, all data was processed by the core team and then datasets were disseminated to the national representatives in each country in order to author national reports.

2.1 Goals of the study

Research studies in recent years, based on the Global Entrepreneurship Monitor reports, have shown a strong relationship between education and enterprise creation. Individuals with tertiary education have the potential to create sustainable enterprises which survive beyond the "three year crunch" and tend to create more jobs, compared to businesses started by individuals with secondary or primary education.

GUESSS represents an entrepreneurship research platform which aims to investigate student perceptions of entrepreneurship at tertiary educational institutions every two years.

The primary goals of the project are to investigate the following:

- **The start-up process:** GUESSS helps to systematically record the founding intention and activity of students on a long-term basis, and makes a temporal and geographical comparability possible (panel study).
- **The university:** GUESSS offers a temporal and geographical comparability providing universities with insight into the organisation of entrepreneurship (such as entrepreneurship courses, founding climate, university support services among others).
- **The individual:** GUESSS allows for a temporal and geographical comparability of individual-based characteristics that impact the founding intention and activity of students.

The secondary goals of GUESSS are to:

- observe the quality of the start-ups created by students (e.g. jobs, turnover, etc.);
- assist in identifying students' perceptions of the entrepreneurial process;
- enable participating countries to reflect on their entrepreneurial spirit with regard to specific basic founding conditions that drive students to become entrepreneurs;
- help with the verification and establishment of explanatory approaches at various levels of analysis (e.g. individual, process, macro-economical effectiveness) for the investigation of the founding intent and activity of students; and
- help to generate research models and verify existing ones of entrepreneurial intention and behaviour.

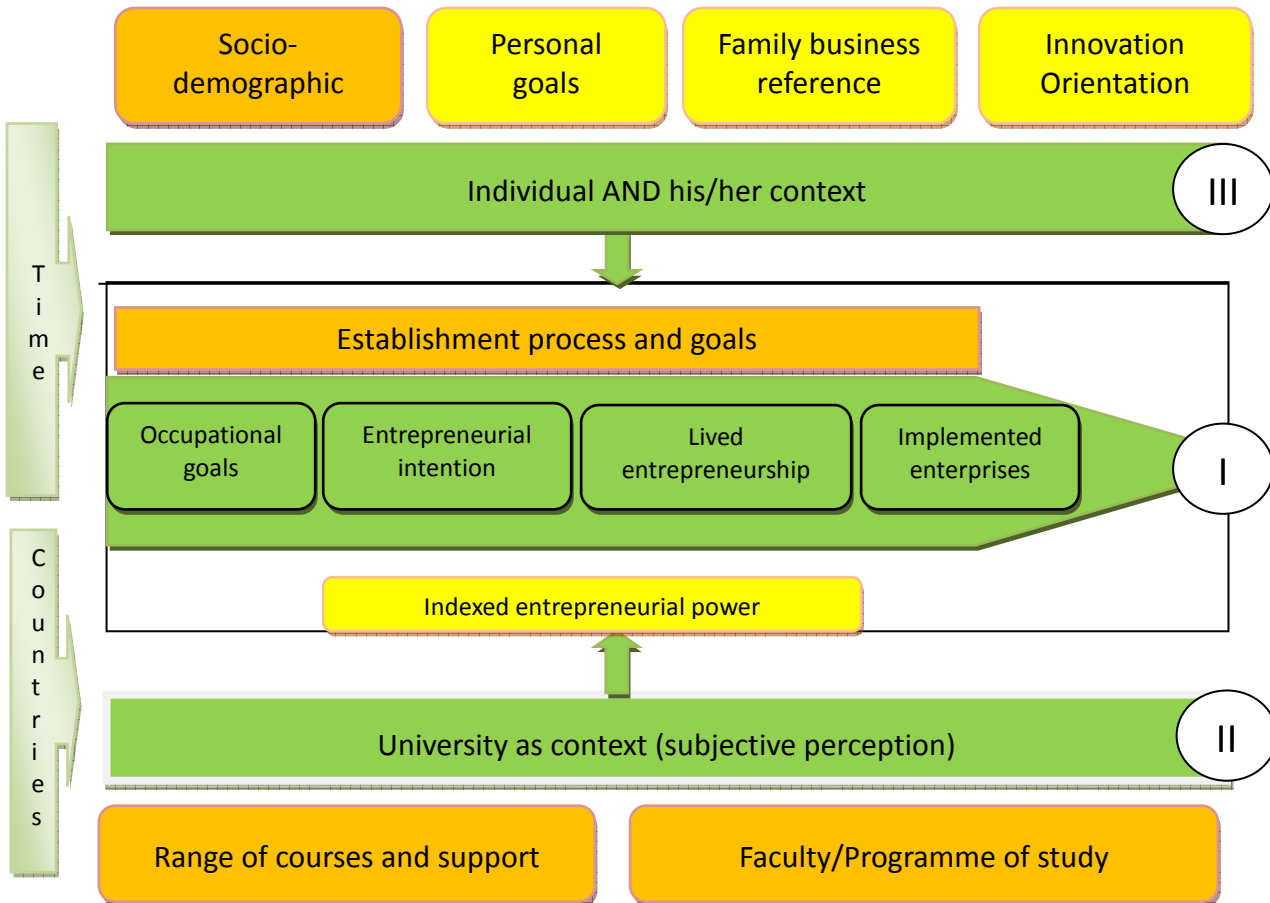


Figure 2.1: Framework of the 2008 study

The framework of the 2008 study, shown in Figure 2.1, illustrates firstly the process of new start-ups of students. Therefore, it is relevant to know which career aspirations students have directly after their studies. Subsequently, the study focused on students' entrepreneurial intentions, specific activities taken and also those who have already started ventures. Secondly, it shows that the university as a context for tertiary education offers several educational programmes within a specific climate, various different types of studies and faculty; these factors also influence the student entrepreneurial pre start-up process. Thirdly, it indicates that students as individuals are influenced by their socio-demographic characteristics, personal goals, innovation orientation and family business reference groups, in turn influencing the start-up process. This model was used to assess student entrepreneurial intentions and behaviour. It is relevant to mention that despite the fact that

intention is the starting point of most entrepreneurial ventures, only one in eleven of people with self-employment ideas actually start a business (Neck, Zacharakis, Bygrave & Reynolds, 2003).

The distinctiveness of this project is highlighted by the ability to compare the entrepreneurial intent and behaviour of tertiary students from different countries, thereby enabling the identification and sharing of best practices with regard to entrepreneurial education. As the project is carried out on an international level, results from South Africa can be benchmarked with other countries worldwide, such as Mexico, Finland, France, Singapore, New Zealand, Austria, Switzerland, Germany, Hungary and Belgium.

2.2 Significance of the study

The sample on which the study is based consisted of 63 580 questionnaires for analysis, coming from 19 countries, as shown in Figure 2.2.

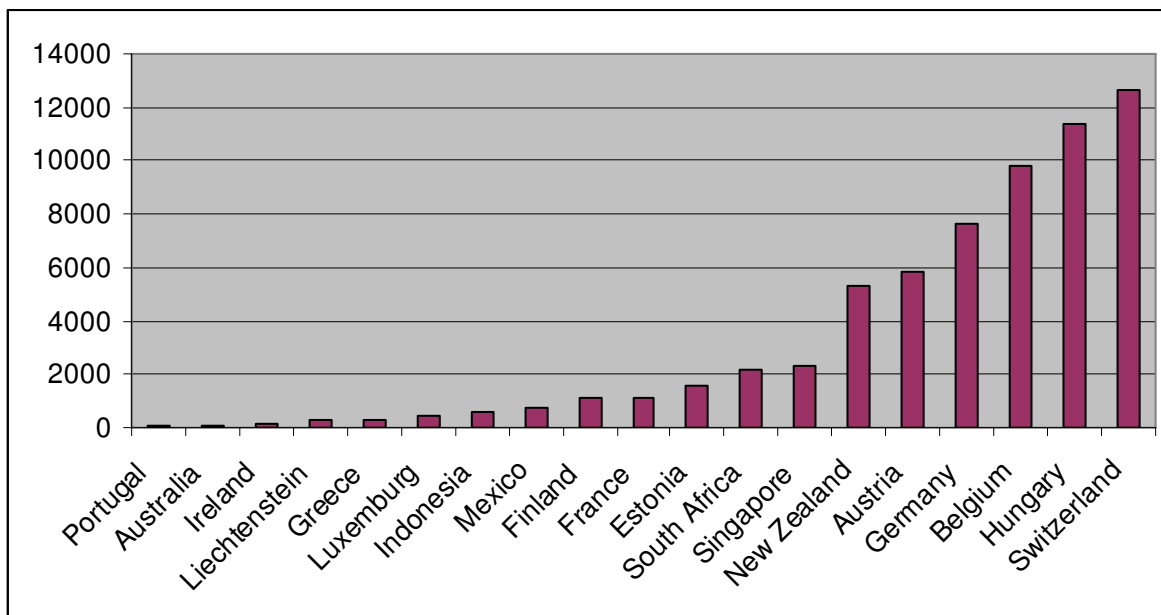


Figure 2.2: Country participation in the 2008 GUESS survey

Some countries, such as Switzerland (12 685 respondents) and Germany (7 626 respondents), have participated in the survey three times and these countries tend to show

higher response rates, due to learning effects during data collection. Singapore (2 319), South Africa (2 203) and Estonia (1 548) collected a comparable number of responses, while some countries, such as Australia (89) and Portugal (60), collected too few responses to enable meaningful comparisons.

2.3 Sample and representativeness

In describing the sample, the participating universities, level of study of the respondents, field of study, age and gender profile, as well as time spent on studying and working is presented in the next sections.

2.3.1 Participating universities

The sample obtained from the survey in South Africa was drawn from eight universities, as shown in Table 2.1, with 2 203 students participating in survey.

Table 2.1: SA university participation

University	Per cent %
University of the Free State	51.2
University of Stellenbosch	28.9
Nelson Mandela Metropolitan University	7.6
North-West University	4.6
University of Johannesburg	4.0
University of the Western Cape	1.3
University of Cape Town	1.1
University of Pretoria	0.5
Others	0.6
Total	100

As shown in Table 2.1, the majority of the respondents (80.1%) were from two universities, namely the University of the Free State (51.2%) and the University of Stellenbosch (28.9%). This may have been due to the visibility of advertisements and announcements on these

campuses, inviting students to participate. Although the sample obtained may therefore not be representative of the total student population of higher education in South Africa, a basis is provided from which to work. Due to the large number of students (more than 2 000) who completed the survey, valuable insights can be gained about how students experience entrepreneurship classes, the university climate and the influence of reference groups such as those with family business backgrounds.

2.3.2 Current level of study

Students were asked to indicate at which level of their studies they had progressed to. As shown in Figure 2.3, the international and South African sample is compared in terms of three study levels, namely Bachelor’s level studies, denoting students busy with undergraduate studies, Master’s level studies, indicating graduate students enrolled for Master’s and further qualifications, and postgraduate studies representing primarily doctoral level studies.

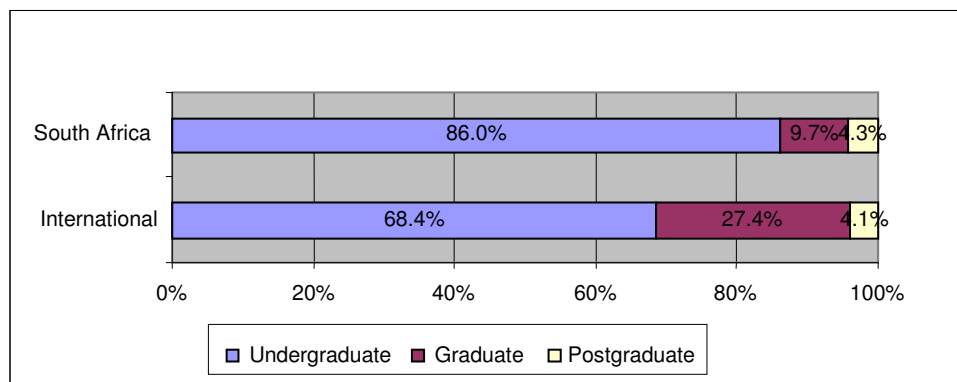


Figure 2.3: Comparison of SA and international respondents’ current levels of study

The data represented in Figure 2.3 shows that the majority (86%) of South African (SA) respondents were still busy with their undergraduate studies, while 9.7% were enrolled for Master’s programmes and 4.3% for postgraduate studies and doctoral (PhD) studies. In comparison, the international sample was composed of 68.4% undergraduate students, 27.4% were graduate students enrolled in Master’s programmes and 4.1% were busy with postgraduate and doctoral studies. The number of undergraduate students in the SA sample is higher, in comparison to the international sample, while similar proportions of postgraduate students completed the survey. Fewer SA graduate students proportionally completed the

survey, in comparison to the international survey. This may have been due to the method of data collection in various countries, since graduate and postgraduate students at SA universities have fewer or no classes and spend less time on campus; therefore it is possible that they were not reached with the communication methods used to invite students to complete the survey.

2.3.3 Field of study

Respondents were also asked to indicate in which field of study they were majoring or pursuing their postgraduate studies, as represented in Figure 2.4. The majority of respondents, both in the South African (38%) and the international sample (24%), were enrolled in Business, Economics, Politics and Administration. The reason for the high number of respondents from this field of study could be explained by the association of the researchers to this category. Therefore motivation for student participation in the survey in this field was relatively higher than for students in other fields. Furthermore, in South Africa, entrepreneurship is offered within Economics and Management Science faculties and not across faculties as might be the case for international universities. Therefore the survey may have appealed mostly to entrepreneurship students, as it relates to a topic in which they are interested.

The second largest response category was maths, computing and engineering studies, for which 10% of SA respondents were enrolled, and 17% of the international sample, there-after life and natural sciences (SA 9%; International 8%), then social and behavioural sciences (SA 8%; International 10%). Areas such as journalism and information, manufacturing, social, personal and transport services and other categories were combined to form the “other” category. Less than 8% of respondents indicated that they were enrolled for other categories, namely health sciences, arts and humanities, law, architecture and teacher and training.

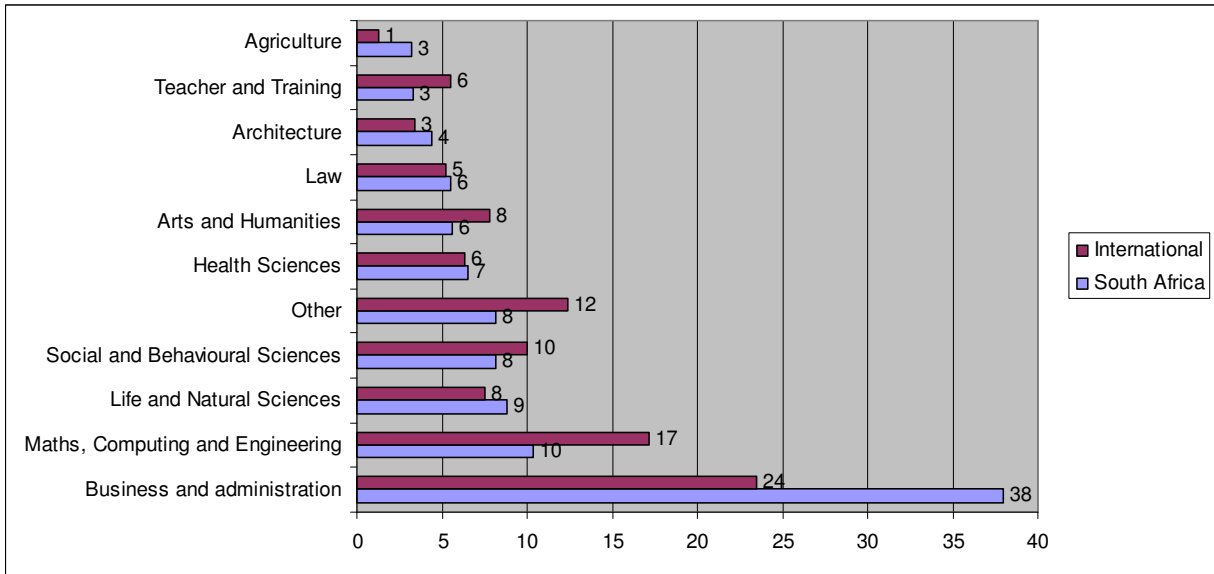


Figure 2.4: Comparison of SA and international sample, in terms of field of study

2.3.4 Age profile of students

An age profile of the respondents was compiled, as depicted in Figure 2.5.

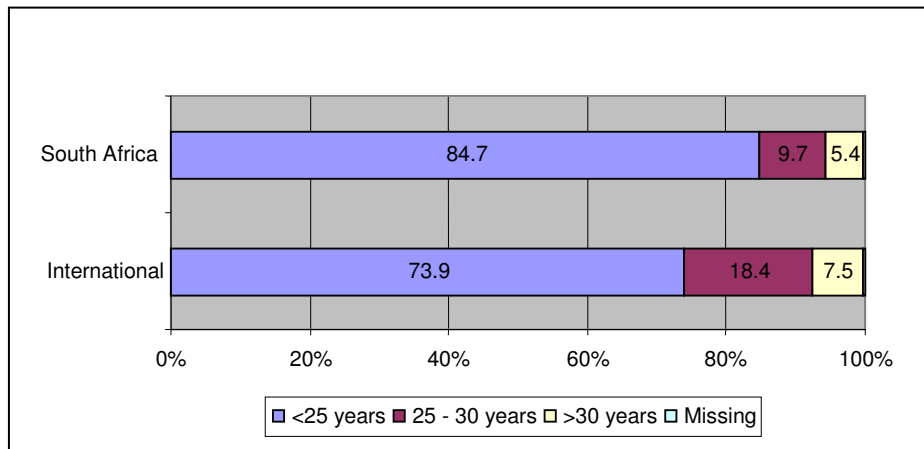


Figure 2.5: Age profile of SA and international sample

The majority (84.7%) of SA students in the sample were younger than 25 years, compared to the international sample where 73.9% of respondents were younger than 25. As shown in Figure 2.5, a small portion (9.7%) of the SA students were between the ages of 25 to 30, compared to 18.4% for the international group, while 5.4% of the SA respondents were older

than 30, compared to 7.5% of the international respondents. The average age of the SA sample was 22.3 years, slightly younger than the international sample, where the average age was 23.4 years.

2.3.5 Gender profile of students

A gender profile of the students was compiled and is presented in Figure 2.6.

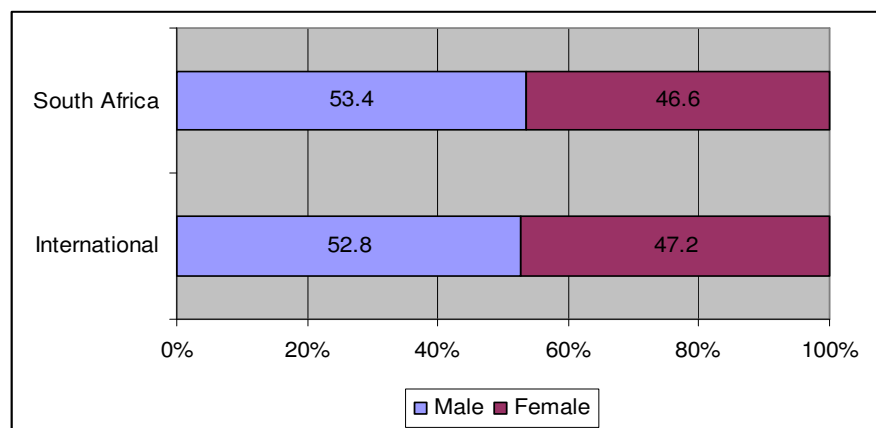


Figure 2.6: Gender analysis of the SA and international sample

As shown in Figure 2.6, there is not much difference between the respondents from a gender perspective. In both the international and the SA sample, more males (slightly more than half), than females participated in the survey.

2.3.6 Time spent studying and working

Respondents were also asked to indicate how much time they spent on studying and how much time they spent on paid work, as illustrated in Figure 2.7.

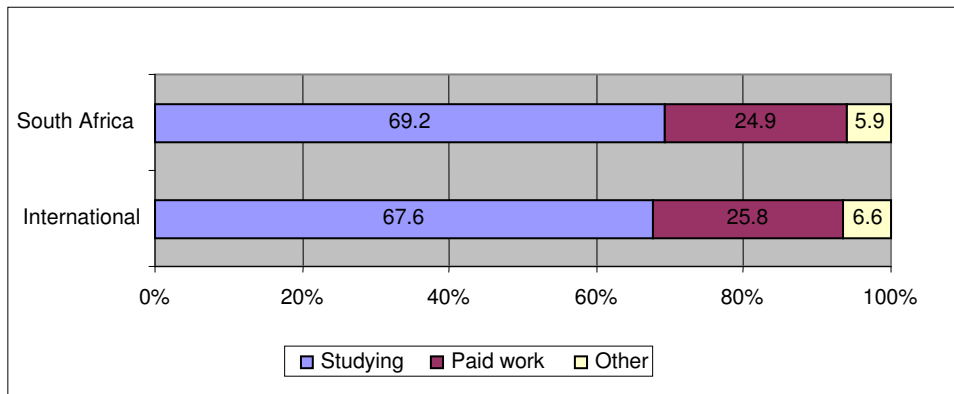


Figure 2.7: Comparison of time spent studying vs. working between the SA and the international sample

Figure 2.7 demonstrates that the South African respondents spent 69.2% of their time studying and 24.9% of their time performing paid work. This seems similar to the international sample, where 67.6% of time was spent studying and 25.8% on doing paid work. This could indicate that academic engagement has relatively equivalent time demands internationally, however it appears that a quarter of students in the sample had already gained work experience during their studies.

2.4 Sample summary

An outline of the profile of the sample is presented in Table 2.2. To sum up: the South African sample consisted of 86% undergraduate students, 9.7% graduate students and 4.3% postgraduate students, whose average age was 22.33 years, with the majority pursuing business and administration (38%) and maths, computer and engineering studies (10%). Slightly more males (53.4%) than females (46.6% students) participated in the study and when asked how much time they spent on working vs. studying, respondents indicated that close to 70% of their time was spent studying, as opposed to 25% on working.

Table 2.2: Sample summary for both the international and SA sample

Sample	Bachelors %	Masters %	Ph D %	Age average years	Male %	Female %	Time studying	Time working
South African	86.0	9.7	4.3	22.3	53.4	46.6	69.2	24.9
International	68.4	27.4	4.1	23.4	52.8	47.2	67.6	25.8

Table 2.2 illustrates that the international sample consisted of 68.4% at undergraduate level of study, 27.4% at graduate level of study and 4.1% at postgraduate level of study, with an average age of 23.4 years. Slightly more male (52.8%) than female students (47.2%) participated in the survey, while the international sample shows a similar pattern of time spent studying vs. working in the SA sample.

While the sample obtained is not representative of the entire student population of higher education in South Africa and worldwide, the participation of the several highly regarded universities and the large final sample has resulted in a stable basis from which we can draw solid conclusions on both the national and the international levels. The next chapter focuses on the university context and climate, while Chapter 4 will detail the career expectations, attitudes toward entrepreneurship and activities undertaken by students to turn their entrepreneurial dreams into reality.

3. ENTREPRENEURIAL ENVIRONMENT AT INSTITUTES OF HIGHER EDUCATION

Since the GUESSS survey was carried out at institutions of higher education, it is important to examine which types of entrepreneurial support services and activities are offered to students at their universities.

3.1 Entrepreneurial context

Universities can offer a range of courses or support services to encourage entrepreneurship. The growth in entrepreneurship-related courses and education over the last 10 years has been tremendous. This trend started in the United States of America (USA), but has also continued in countries such as South Africa, Australia, New Zealand, Switzerland, Germany, Canada, China and Brazil, with a number of schools and universities, offering entrepreneurship as a stand-alone course, capstone module, area of specialisation or a separate degree. University services to stimulate entrepreneurship include entrepreneurship seminars and lectures, often complemented by business plan courses. At some universities lecturers or professors of professional practice provide start-up coaching services. In addition, electronic start-up games and simulations form part of some universities' courses, while in South Africa First National Bank sponsors a National Business Challenge, where university student teams voluntarily enter the competition and big prizes can be won.

Due to the positive influence of entrepreneurial role models on the entrepreneurial intentions of students, many universities invite successful entrepreneurs into classes or hold regular exchange experiences with founders. Other initiatives to stimulate entrepreneurial intent include contacts for general enquiries about entrepreneurship, start-up financing offered through university sources, and incubators. Incubators act as service centres for early-stage ventures, where students pay minimal if any rent, and are allowed access to shared services such as the Internet, fax facilities and a business address.

3.1.1 International views on the importance of university services

Students were asked to consider how important university courses or services were. Table 3.1 shows the views of students, internationally, of the importance of university courses and services offered, in percentages.

Table 3.1: Students' views on the importance of university services, internationally

University courses and services	Very unimportant	Rather unimportant	Rather important	Very important
Business plan project seminars	17.5	18.3	24.9	39.2
Start-up coaching	14.9	15.8	24.3	45.0
Entrepreneurship seminars and lectures	16.0	21.7	29.8	32.5
Start-up games and simulations	17.8	19.1	25.5	37.6
Regular round tables for founders (exchange experiences)	17.4	20.7	26.9	35.1
Contacts for general questions	13.2	15.9	25.6	45.4
Start-up financing through university	16.3	18.1	25.5	40.1
Incubators (service centres for early start-ups)	15.0	18.0	26.6	40.4

n = 63 580

Internationally, students consider contacts for general questions, start-up coaching, incubators and start-up financing as the most important university services, followed by business plan project seminars, start-up games and simulations and founder exchange experience. Entrepreneurship seminars and lectures are also regarded as important, but are regarded as less important than the other courses and services universities offer.

3.1.2 Detailed results for South Africa

Table 3.2 provides an indication of the views of South African university students on the importance of university courses and services offered, in percentages.

Table 3.2: SA students' views on the importance of university services

University courses and services	Very unimportant	Rather unimportant	Rather important	Very important
Business plan project seminars	4.4	10.8	24.7	60.1
Start-up coaching	4.1	11.6	25.1	59.2
Entrepreneurship seminars and lectures	4.0	12.0	25.0	59.0
Start-up games and simulations	6.9	14.7	22.9	51.1
Regular round tables for founders (exchange experiences)	5.3	15.3	26.3	53.1
Contacts for general questions	2.6	9.5	23.8	64.1
Start-up financing through university	6.0	10.7	23.0	60.3
Incubators (service centres for early start-ups)	4.5	12.3	25.9	52.8

n = 2 203

South African students also indicated that contacts for general questions and start-up financing through universities were the most important university services; however, business project plan seminars, start-up coaching, and entrepreneurship seminars and lectures were also ranked very high in importance. Regular founder exchange experiences, incubators and start-up games and simulations came in a close second. It is interesting that a much larger portion (close to 75 - 85%) of South African students regarded these services as “rather important” and “very important”, while internationally, rankings between 60 and 65% were obtained.

3.2 Awareness of university services

Although universities may offer services to promote entrepreneurship, students cannot access these services unless they are aware of them.

3.2.1 Students' awareness of the existence of university services internationally

Students were asked to indicate their awareness of the existence of the abovementioned university services at their universities. Table 3.3 shows that internationally many students do not know whether their universities offer these courses or services. The highest level of unawareness concerns the offering of incubator services, start-up financing and regular round tables for founders. It seems as if half of the students who participated in the surveys are

aware of entrepreneurship seminars and lectures being presented at their universities. It appears as if these services are not offered at all universities, which is understandable, taking into account the resource constraints faced by public universities and the resource-intensiveness of some of these services.

Table 3.3: Students' awareness of the existence of such services at their universities, internationally

University courses and services	Yes	No	Don't know
Business plan project seminars	27.3	11.4	61.3
Start-up coaching	18.2	14.8	66.9
Entrepreneurship seminars and lectures	37.9	8.7	53.4
Start-up games and simulations	21.0	14.2	64.8
Regular round tables for founders (exchange experiences)	15.4	15.2	69.4
Contacts for general questions	24.1	12.7	63.2
Start-up financing through university	9.2	16.7	74.1
Incubators (service centres for early start-ups)	10.1	15.2	74.6

n = 63 580; all numbers in the table denote percentages

3.2.2 South African students' awareness of the existence of university services

South African students are largely unaware of incubator services and regular round tables for founders being offered at their respective universities. Similarly, awareness of start-up financing, start-up games and simulations, and start-up coaching is low. Students indicated that they were generally aware of entrepreneurship seminars and lectures, contacts for general questions and business plan project seminars being offered at their universities. Compared to the international scores, South African students seem slightly more informed than their international counterparts.

Table 3.4: SA students' awareness of the existence of such services at their universities

University courses and services	Yes	No	Don't know
Business plan project seminars	33.8	13.1	53.1
Start-up coaching	19.9	16.2	63.9
Entrepreneurship seminars and lectures	60.1	6.3	33.5
Start-up games and simulations	16.8	17.5	65.7
Regular round tables for founders (exchange experiences)	15.1	17.5	67.5
Contacts for general questions	50.2	9.4	40.4
Start-up financing through university	15.9	19.2	64.9
Incubators (service centres for early start-ups)	9.7	17.1	73.2

n = 2 203; all numbers in the table denote percentages

3.3 Utilisation of university services

University services to stimulate entrepreneurial intent among students need to be utilised if these services are to be offered in future. Therefore, universities need to track students' use of these services.

3.3.1 Students' utilisation of university services, internationally

Internationally, the highest number of students (24 114) made use of entrepreneurship seminars and lectures and business plan project seminars. Other services that were also used by students appear to be contacts for general questions, start-up coaching and start-up games and simulations. Services that were not used by a large number of students were incubators and start-up financing.

Table 3.5: Students' utilisation of university services, internationally

University courses and services	n	Yes	No
Business plan project seminars	17 333	35.9	64.1
Start-up coaching	11 587	18.9	81.1
Entrepreneurship seminars and lectures	24 114	41.9	58.1
Start-up games and simulations	13 345	32.7	67.3
Regular round tables for founders (exchange experiences)	9 813	29.2	70.8
Contacts for general questions	15 324	25.7	74.3
Start-up financing through university	5 866	11.2	88.8
Incubators (service centres for early start-ups)	6 449	10.3	89.7

n = 2 203; all numbers in the table denote percentages

3.3.2 South African students' utilisation of university services

South African students exhibit similar patterns to international students in terms of the utilisation of university services that facilitate entrepreneurship. Most students also utilise entrepreneurship seminars and lectures and business plan project seminars offered by universities. Furthermore, it appears that South African students make more use of contacts for general questions, compared to international norm. Services that follow in popularity are

regular round tables for founders, start-up games and simulations, start-up coaching, start-up financing and incubators.

Table 3.6: SA students' utilisation of university services

University courses and services	n	Yes	No
Business plan project seminars	743	38.1	61.9
Start-up coaching	439	29.2	70.8
Entrepreneurship seminars and lectures	1324	47.4	52.6
Start-up games and simulations	371	30.7	69.3
Regular round tables for founders (exchange experiences)	332	34.3	65.7
Contacts for general questions	1104	48.7	51.3
Start-up financing through university	351	24.5	75.5
Incubators (service centres for early start-ups)	213	24.4	75.6

n = 2 203; all numbers in the table denote percentages

3.4 Satisfaction with university services

As with all services offered, universities need to monitor the satisfaction of students using these services. The feedback can then be used to improve, change or maintain services.

3.4.1 *Students' satisfaction with university services, internationally*

Internationally, most students utilised entrepreneurship seminars and lectures (10 110) and three-quarters of them indicated that their expectations had been met. Other popular services include business project plan seminars and start-up games and simulations and again a large portion (46% - 49%) of students were satisfied with these services. Students who made use of start-up coaching, contacts for general questions, regular round tables for founders, start-up financing and incubators also found that these services fulfilled their expectations. It would appear that most students who utilise these services generally find them useful.

Table 3.7: Students' satisfaction with university services, internationally

University courses and services	n	Not fulfilled	Rather not fulfilled	Rather fulfilled	Fulfilled
Business plan project seminars	6 230	8.5	14.9	30.2	46.4
Start-up coaching	2 200	8.0	14.7	30.8	46.5
Entrepreneurship seminars and lectures	10 110	8.3	17.0	32.6	42.1
Start-up games and simulations	373	10.3	14.9	25.3	49.5
Regular round tables for founders	2 879	7.4	16.9	29.9	45.8
Contacts for general questions	3 936	6.5	14.6	31.1	47.9
Start-up financing through university	661	8.5	16.0	28.3	47.2
Incubators (service centres for early start-ups)	664	11.0	13.0	25.3	50.8

n = 2 203; all numbers in the table denote percentages

3.4.2 South African students' satisfaction with university services

South African students exhibited similar patterns to international students, with most of them having participated in entrepreneurship seminars and lectures and business plan project seminars. The expectations of three quarters of students who made use of these services' were fulfilled. Other popular services include start-up coaching, contacts for general questions and regular round tables for founders. Although few students made use of start-up financing and incubators, those who did were very satisfied with these services.

Table 3.8: SA students' satisfaction with university services

University courses and services	n	Not fulfilled	Somewhat not fulfilled	Somewhat fulfilled	Fulfilled
Business plan project seminars	283	6.7	12.4	35.3	45.6
Start-up coaching	128	5.5	19.5	36.7	38.3
Entrepreneurship seminars and lectures	627	5.1	13.9	33.0	48.0
Start-up games and simulations	113	12.4	17.7	32.7	37.2
Regular round tables for founders	114	7.0	18.4	36.8	37.7
Contacts for general questions	538	4.8	14.5	35.5	45.2
Start-up financing through university	86	9.3	15.1	17.4	58.1
Incubators (service centres for early start-ups)	52	11.5	21.2	21.2	46.2

n = 2 203; all numbers in the table denote percentages

3.5 Summary

Universities can offer a variety of courses or additional services to promote entrepreneurship, such as entrepreneurship seminars and lectures, business plan competitions, start-up coaching services, simulations, exchange experiences with founders, contacts for general

enquiries, and even start-up financing and incubator services. In both the international and the South African sample contacts for general questions, start-up coaching and start-up financing through universities were regarded as the most important university services. Internationally, incubation services were regarded as very important, while the South African sample regarded entrepreneurship seminars and lectures as well as business project plan seminars as more important, compared to the international sample.

Despite the respondents' views on the importance of these services, many students indicated that they did not know whether their universities offered these services. In both the international and South African sample students were generally unaware of whether their universities offered incubation services, start-up financing or round tables for founders. The South African sample did seem slightly more aware of whether their universities offered entrepreneurship seminars and lectures, contacts for general questions and business plan project seminars. The lack of awareness suggests that universities should promote entrepreneurship support services more aggressively, since students cannot utilise services if they are unaware of the existence of such services. When asked which services were utilised, both internationally and in the SA sample, students indicated that entrepreneurship seminars and lectures and business plan project seminars were utilised most widely and students were generally very satisfied with these services. Other services also utilised by students include contacts for general questions, start-up coaching and start-up games and simulations. High levels of satisfaction were also reported. Services not used by many students were incubator and start-up financing services. This may be ascribed to students not being aware of these services, or that these services typically require students to have a very well-developed business idea and business plan.

Taking into account the sample profile and university context, the next chapter considers the goals and career expectations of students, the intention and operation of new ventures, as well as activities students undertake during their studies to prepare them for their future careers.

4. ENTREPRENEURIAL ACTIVITIES AND GOALS

4.1 Students' professional expectations

Entrepreneurship has been promoted as a career choice, entrepreneurs are profiled as heroes in the popular business press, and governments encourage entrepreneurship as the solution to economic growth and job creation (Verreynne & Scheepers, 2008). However, as career choices go, becoming an entrepreneur is one of the most risky, unstructured and probably rewarding choices students can make; therefore university educators need to be aware of students' professional career expectations and they need to understand how students reflect on starting a business or becoming involved in entrepreneurial activities.

4.1.1 Students' thoughts of setting up their own business

To gauge students' thoughts about starting their own businesses, respondents were asked if they had ever seriously thought about setting up their own business. Their responses are summarised and compared in Figure 4.1.

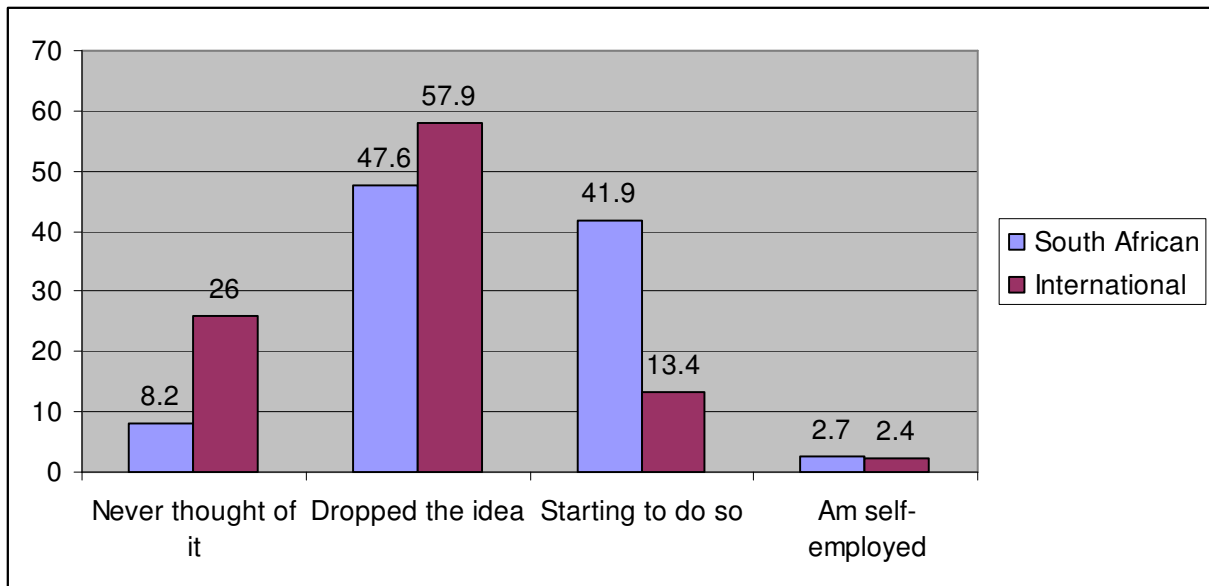


Figure 4.1: Comparison of SA and international respondents' thoughts about on starting a business

Figure 4.1 shows that more international respondents (26.0%) had never thought of starting a business as opposed to the South African sample (8.2%), while more than half (57.9%) of

international students and slightly less than a half (47.6%) of the South African students had thought of starting a business, but had dropped the idea. When comparing whether students were starting to consider opening a business, slightly more than two fifths (41.9%) of South African students indicated they were inclined to start a business, compared to only 13.4% of international students. It is encouraging that many SA students realise that there is a need for entrepreneurship within the local economy, especially against the background of high levels of unemployment. It seems that the school and university systems stimulate students to think about entrepreneurship as a career option. Interestingly, 2.7% of SA students and 2.4% of international students in the sample were already in business. While it is generally the norm that students focus on their studies at university and not on business-related activities, a small portion of students already take the plunge to work for themselves during their studies.

The results from Figure 4.1 suggest that SA students are more entrepreneurially inclined and efforts should be made to support the intentions of SA students to engage in business start-up activity. A three-pronged approach can be recommended. Firstly, more awareness should be generated regarding the option of starting a business (entrepreneurship) as opposed to “secure” dependent employment among university students. Secondly, students who have ideas must be encouraged to develop their ideas further; and thirdly, students who intend starting a business must know where and how to access information and support on starting and/or managing a business. Linking to the services that universities can offer to promote entrepreneurship, such services should be made more visible and available. In this regard especially entrepreneurship lectures and seminars, business plan competitions, contacts for general enquiries and regular interactive experiences with founders, who can serve as role models, could be helpful.

4.1.2 Students' career expectations

Students' career expectations after graduating can be quite diverse and would be expected to change over time. However, the job market today has changed radically from that of 50 years ago. It is expected that an employee in today's workplace will change jobs every two years; and those who do not will virtually commit "career suicide" (Trunk, 2007). Initially, students enter the labour market to gain experience and knowledge of an industry and to form networks before embarking on longer-term career goals (Barringer & Ireland, 2008). Respondents were therefore asked to indicate what their career expectations were for the time directly after their studies (less than < five years) and after a few years of work experience (more than > five years). The results are presented in Figure 4.2 by firstly providing an overview of the career expectations of the international and SA sample, and thereafter more detailed results of career expectations directly after graduation vs. career expectations five years after graduation.

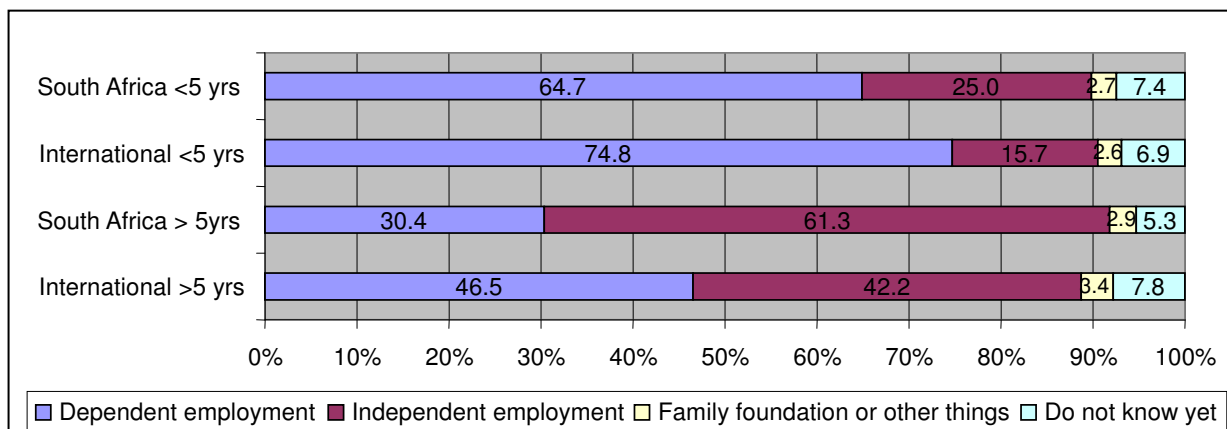


Figure 4.2: Summary of students' career expectations

The data for the major career categories is summarised in Figure 4.2: dependent employment, independent employment, family foundation and uncertain or do not know yet. Within the *first five years of graduation* close to two thirds (64.7%) of SA students preferred dependent employment, while a quarter (25%) preferred independent employment. The remaining students were uncertain (7.4%), while a very small number (2.7%) indicated that

they would be focusing on their family or other things. In comparison, the almost three quarters (74.8%) of international students indicated an interest in dependent employment after graduation, while 15.7% indicated interest in independent employment. A slightly smaller portion was uncertain (6.9%), while 2.6% indicated an intention to focus on family or other things.

The data for *five years after graduation* in Figure 4.2 provides a much different picture. Less than a third (30.4%) of SA students in the sample indicated a preference for dependent employment, whereas the majority (61.3%) preferred independent employment. Again a small portion (2.9%) indicated that they intend to focus on family and other things and 5.3% did not know yet. This is a major shift in the career expectation of respondents over time. The results seem to support the idea that students need to develop confidence, learn and grow before they fulfil a vision such as starting a business in order to be self-employed. In comparison to the international students less than half (46.5%) preferred dependent employment after graduation, while 42.2% leaned towards independent employment. A small portion (3.4%) expressed the intention to focus on family and other things and 7.8% did not know. The shift from dependent to independent employment for the international students five years after graduation also appears to be profound, but it is not as pronounced as the shift for the South African students.

4.1.2.1 Detailed breakdown of career expectations of South African students directly after graduation

The previous section provided an overview of the career expectations of students, while this section will examine their expectations in detail. Respondents could choose from 16 response categories, as shown in Figure 4.3.

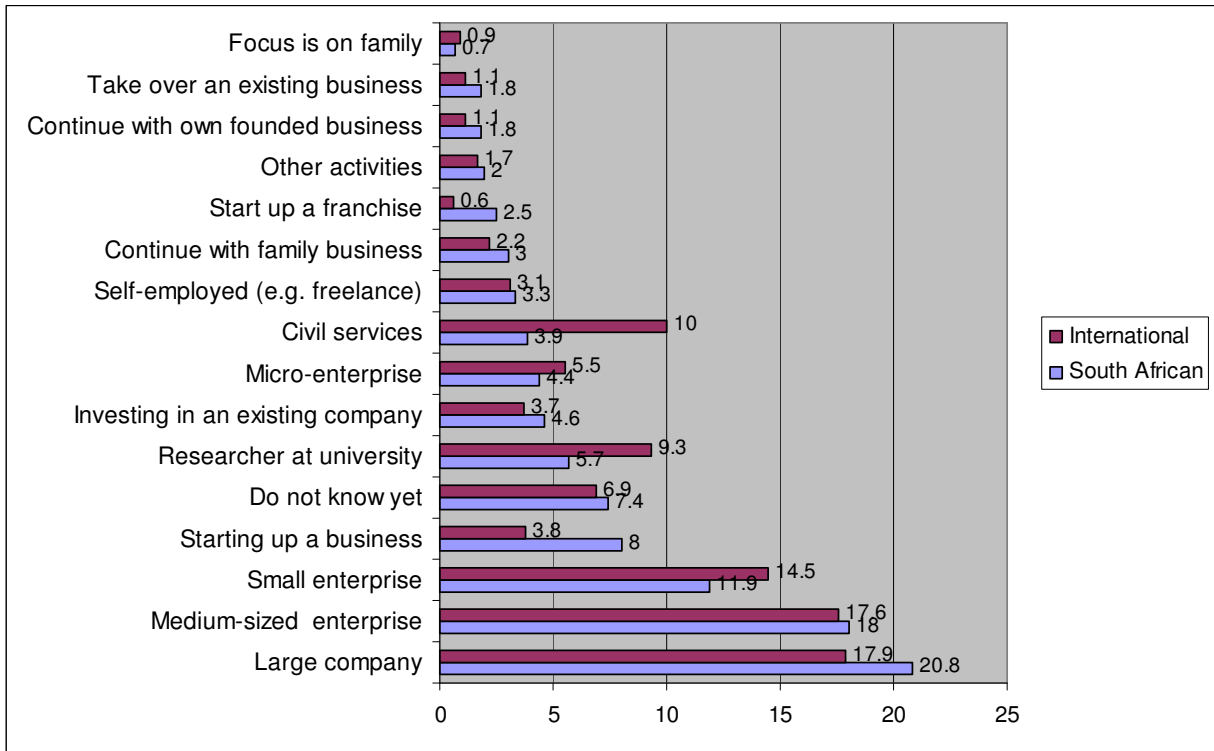


Figure 4.3: Detailed career expectations of students after graduation

Figure 4.3 shows that the top three choices of SA students intending to enter the job market after graduation are: working for a large company (20.8%), working for a medium-sized company (18.0%), or working for a small company (11.9%). South African students view starting up a business (8.0%) as a relatively important activity. There was a low response for amongst other activity in civil service (3.9%). In comparison with the international student responses, very similar choices are reflected, with international students intending to work for a large company (17.9%), a medium-sized company (17.6%), or a small company (14.5%). The international students regarded the civil service (10%) and research (9.3%) as more likely career options. Internationally, students viewed starting up a business (3.8%) as relatively unimportant immediately after graduating.

4.1.2.2 Detailed breakdown of career expectations of South African students five years after graduation

The results for career expectations for five years after graduation reflect a very different picture, as indicated by the overview of the data. Figure 4.4 shows a major shift towards starting a business and independent employment.

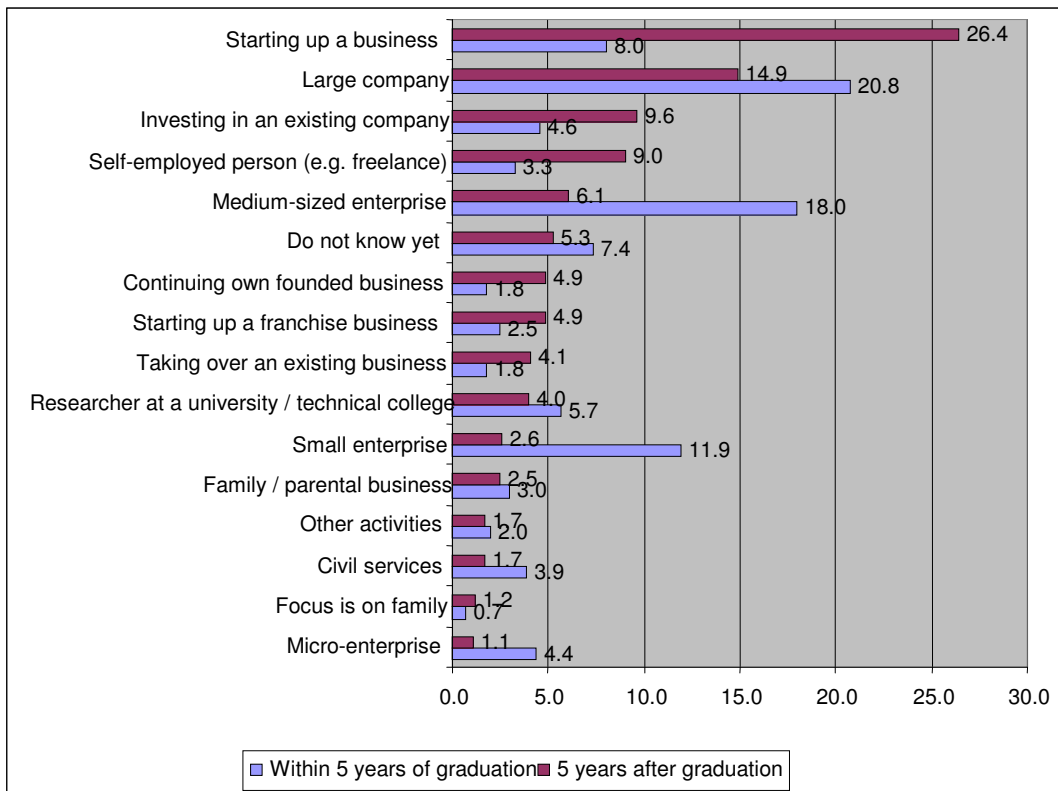


Figure 4.4: Shift of professional expectations of SA students over time

South African respondents showed a high interest in starting a business, increasing from 8% after graduation to 26.4% five years after graduation. The shift towards self-employment from 3.3% immediately after graduation to 9.6% five years after graduation could be interpreted as complementing business start-up behaviour. The other large shifts of particular interest, as reflected in Figure 4.4, are away from working for small- and medium-sized enterprises. A decline of 10% is shown from working for a medium-sized company, where 18% of students

preferred this option after graduation, while only 6.1% still indicated that they want to work for a medium-sized enterprise five years after graduation. Similarly, 11.9% of SA respondents wanted to work for a small enterprise after graduation, declining to 2.6% five years after graduation. These shifts away from small- and medium-sized employment could be seen as supplementing the shift towards independent employment.

The propensity for entrepreneurship seems to be more evident over the longer-term, with students simultaneously expressing an awareness of a need for appropriate experience. In this regard providing students with the opportunity to meet founders and creating networks from universities to small- and medium-sized enterprises (SMEs) may be very useful to students over the longer-term. While they may gain work experience after graduation from SMEs, the founders of these enterprises can also serve as role models for emerging entrepreneurs. The relatively smaller shift in intent to work for a large company could be interpreted as a stable long-term career option for some students, while others realise that larger companies offer fewer job opportunities.

4.1.2.3 Detailed breakdown of career expectations of international students five years after graduation

For the international sample, the results have a similar profile to the South African sample. A number of interesting shifts of intentions are illustrated in Figure 4.5.

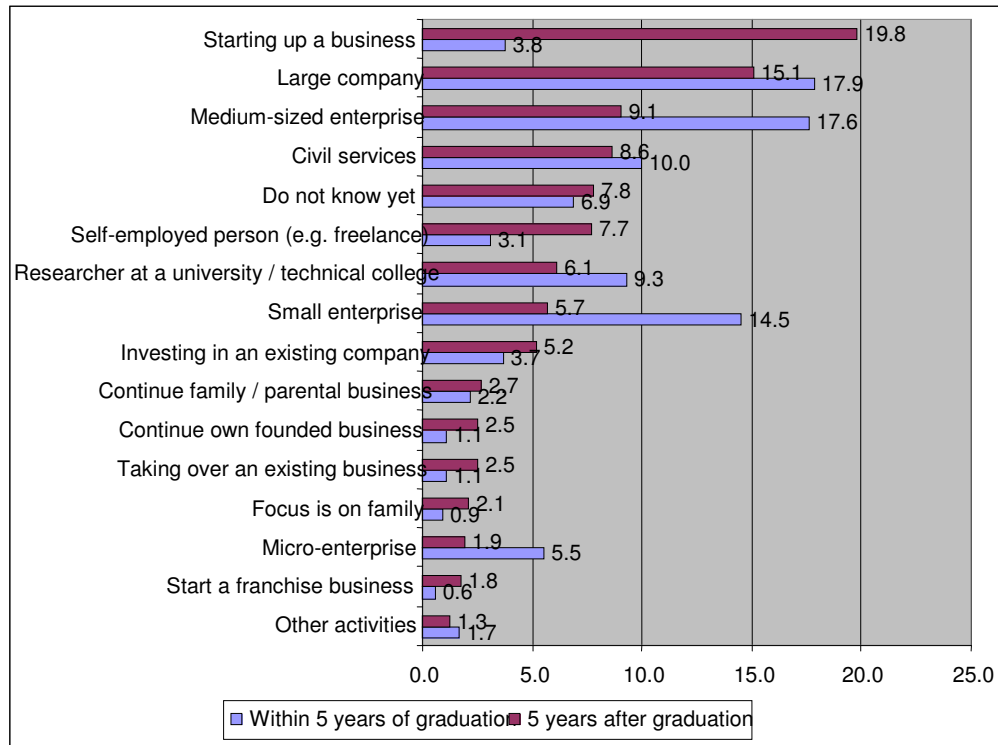


Figure 4.5: Shift of professional expectations of international students over time

Figure 4.5 shows that the largest shift in intentions occurred towards starting up a business, as a small portion (3.8%) of students considered this option within five years after graduation, while 19.8% considered this option five years after graduation. This reflects a 16% increase. The other large shifts of particular interest are away from SME employment; for the medium-sized enterprise a decrease from 17.6%, within five years after graduation to 9.1% five years after graduation and for small enterprises declining from 14.5% to 5.7% five years after graduation. Comparable to the SA students' responses these shifts away from SME employment could be seen as complementary to the shift towards starting up business and independent employment. Moreover, the international sample's relatively small shift in intention to work for a large company indicates the possibility of career development within a large corporation.

To conclude: the shift from dependent employment after graduation to entrepreneurial intent five years after graduation offers an opportunity to support emerging entrepreneurs and offer

short courses to the alumni and employed who aspire to entrepreneurship. Furthermore, policy changes may be required, such as having targeted business support and business development programmes for the youth, when they are between the ages of 25 and 30 years. In the case of South Africa, for example, entrepreneurship education needs to be more accessible to students and mechanisms for promoting entrepreneurship such as business pre-incubation and business incubation could receive more focused attention. However, caution should be exercised with these results since students may harbour dreams about independent employment, but once they get used to the benefits of full-time, salaried employment, they may prefer the security and fringe benefits thereof. The next section considers the entrepreneurial intent of students and actions taken to realise this intent.

4.3 Intention of students to establish a business

The entrepreneurial intent of students was examined by looking at the industry in which they preferred to establish a business, the innovativeness of their business concept, their experiences with practical marketing issues and the steps they had taken to turn their intentions into reality.

4.3.1 Industry of potential business establishments

The respondents were asked a few questions with regard to potential business formation. The respondents were asked first in which sector they would prefer to do business. The results are presented in Table 4.1.

Table 4.1: Comparison of industry sector in which existing and businesses would preferably operate

Industry	South Africa (%)	International (%)
Primary services	64.1	66.8
Primary trade	16.5	15.5
Manufacturing	11.7	13.7
Primary manufacturing	7.7	4.0

n = 1 970

As shown in Table 4.1, the services sector dominates in this area, with almost two thirds (64.1%) of SA respondents and two thirds (66.8%) of international respondents indicating that

they would prefer to operate their businesses in the services sector. The trade sector is in second place with 16.5% of SA students and 15.5 % of international respondents showing an interest in this sector, followed by manufacturing. A small percentage of respondents are interested in the primary sector (agriculture, forestry, fishing), which is comparable to earlier Guesss reports (Fuegilstaller, Klandt & Halter, 2006). The preferences or industry of both the SA and international sample are comparable.

4.3.2 Innovativeness of potential business establishments

The degree of innovation for the potential business establishments is shown in Table 4.2, for both the South African and the international samples.

Table 4.2: Comparison of the degree of innovation of the potential business

Industry	South Africa (%)	International (%)
Traditional, proven concept	48.6	41.2
New for your city/region	22.4	28.4
New for your country	18.6	19.0
New worldwide	10.5	11.4

As shown in Table 4.2, almost half (48.6%) of the SA students want to build their business around a traditional, proven concept, while slightly more than two fifths (41.2%) of international students have similar plans. Slightly more than a fifth (22.4%) of SA students and 28.4% of international students want to create a business around a new concept in their city or region. Similarly, between 18% and 19% of SA and international students would innovate in terms of building a business on a concept new to their country and only slightly more than 10% of SA (10.5%) and international students (11.4%) intend to bring something completely new worldwide, with their planned enterprise or independent activity. Little differences are observed between the SA and the international sample. Thus the degree of innovativeness of business concepts is low, which is similar to findings of the Panel Study on Entrepreneurial Dynamics (Katz & Green, 2009) and the GEM studies. However, the value of more innovative business ideas enables entrepreneurs to create more differentiation, which has the potential to create customer value, leading to more sustainable business enterprises. Additionally, it should be borne in mind that creativity and innovation are also fuelled by

experience, thus entrepreneurship educators need to stimulate and make full-time students aware of the importance of innovation to differentiate business concepts from competitors.

4.3.3 Experience of respondents for potential business establishments

Respondents were also probed in relation to their practical experience, in terms of four marketing categories, namely distribution channels, industry, products/services of which they have experience, and the customer groups they would like to target in their potential business start-ups. The results of the SA respondents are shown in Table 4.3.

Table 4.3: Practical experience of SA respondents in four marketing categories

Experience	No (%)	Yes (%)
Distribution channel	75.9	24.1
Industry	70.5	29.5
Products/Services	57.2	42.8
Customer group	56.1	43.9

n = 1 970

As reflected in Table 4.3, the experience of the respondents in the above categories is relatively limited. The categories in which respondents have the least experience are distribution channel (24.1%) and industry (29.5%). The levels of experience with regard to the products/services and customer groups are slightly more encouraging, with 42.8% of respondents indicating some experience with products/services and almost 44% of the surveyed group already having experience with their targeted customer group.

In all four categories, more than half of the SA respondents did not have any practical experience, which is not surprising, considering that many respondents are full-time students. However, compared to the international results, the experience of the SA respondents is fractionally higher in respect of all four marketing categories, as shown in Figure 4.6.

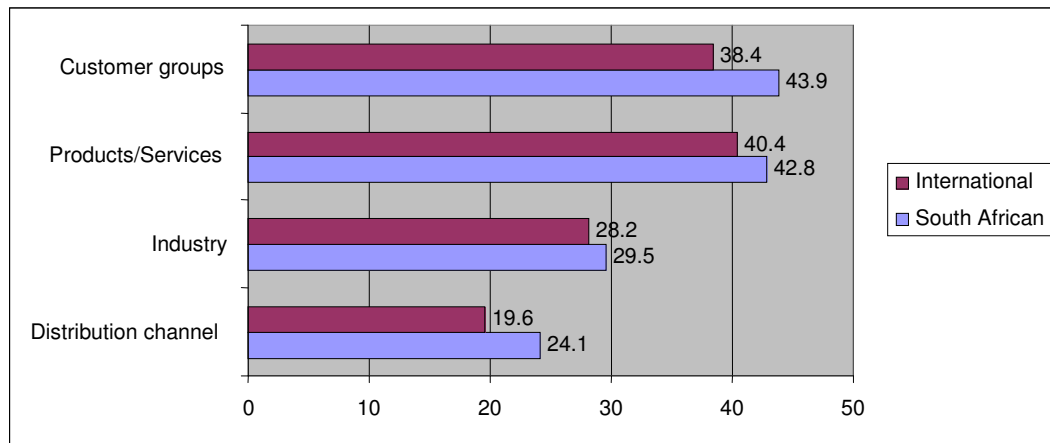


Figure 4.6: Comparison of the international and SA samples' experience in terms of marketing categories

4.3.4 Activities undertaken to establish planned business

In this section the focus will be on those students who considered the idea of starting their own entrepreneurial business. A series of questions were asked regarding activities related to establishing a business, to identify how determined students were about their intentions. The questions asked distinguished between tentative steps such as information-gathering and thinking through some business ideas, and more concrete steps, such as creating a business plan and talking to various institutions about financial support. The results are shown in Table 4.4.

Table 4.4: Steps taken towards setting up a business, by the SA sample

	Frequency (n)	Per cent (%)
No steps taken	501	25.4
Thinking through initial business ideas	1 150	58.4
Writing down the initial business ideas	607	30.8
Developing a business plan	381	19.3
Gathering start-up specific information	558	28.3
Visiting start-up specific events	240	12.2
Talking to potential sources of financing	293	14.9
Determining a start-up date	138	7.0
A prototype of the product/service exists	185	9.4
Others	86	4.4

n=2 203

Even though the students had thought about the idea of self-employment, a quarter (25.4%) of them had not yet taken any steps in setting up their own business, as indicated in Table 4.4. A significant number of students (58.4%) had thought through the initial business ideas, but only 30.8% of those students had put their initial business ideas in writing. Accordingly, more than a quarter (28.3%) of students had gathered information specifically about setting up a business and 12.2% had attended events on the specific topic of business start-ups.

When examining the more concrete and practical steps taken in establishing a business, as shown in Table 4.4, less than a fifth (19.3%) of students had come as far as developing a business plan; with 14.9% having talked with various institutions about possible financial support; and 9.4% of students indicated that a prototype of the product/service exists. A very small portion (7%) of students had determined a start-up date. Therefore, it seems as if even though some students may consider self-employment, only a small percentage had taken any concrete steps in that direction. Although the percentage is low in this regard, the majority of respondents did not appear to be passive.

Figure 4.7 compares the steps taken for potential start-up by international and SA students. The graph shows that a quarter of the SA respondents (25.4%) had not taken any steps toward their potential start-up, while close to half (46.7%) of the international respondents had not yet taken any steps, suggesting that the SA students in the sample may be more proactive than their international counterparts.

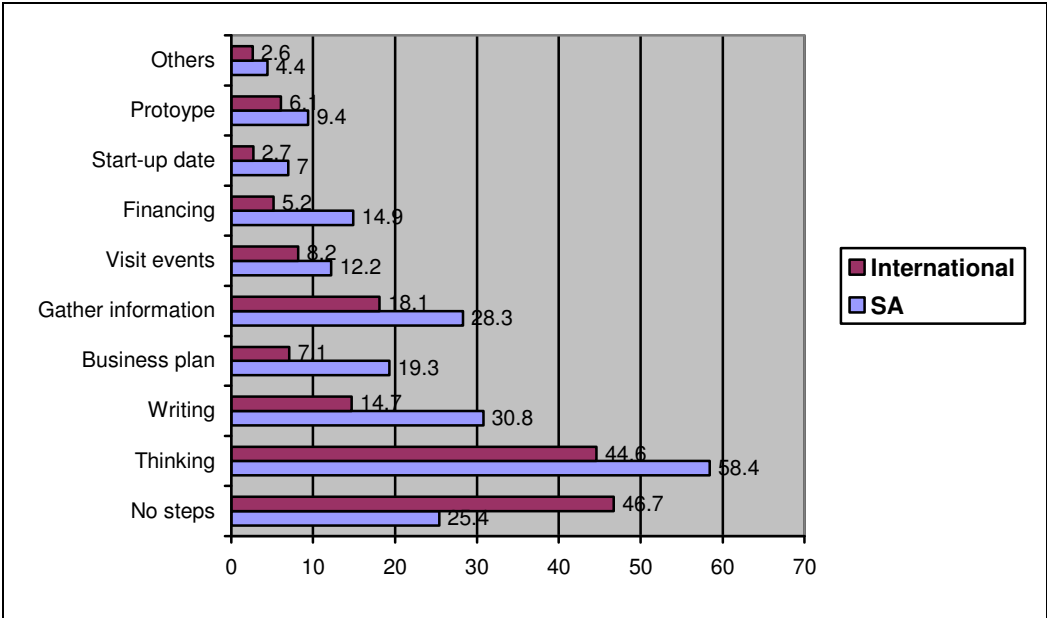


Figure 4.7: Comparison of steps already taken for potential start-up by international and SA sample

Figure 4.7 illustrates that on average a larger percentage of SA students have taken some steps towards becoming self-employed, both in terms of tentative and concrete steps. These results should be linked with Figure 4.1, which depicts students' thoughts of setting up their own business. These results show that 8.2% of SA respondents have never thought of starting their own business. Figure 4.4 reflects that about a quarter (25.4%) of the remaining respondents, who have at least considered the idea of self-employment, have not taken any action towards realising these thoughts. However, almost two thirds of the SA respondents did not procrastinate, but took some action (SA n = 1 970), as shown in Figure 4.7. In comparison to the international sample, only a third of the respondents took some steps toward starting their own business. The results suggest that the SA sample may be more motivated and proactive towards becoming entrepreneurs in taking steps to turn their intentions into reality, compared to the international sample. The next section examines the activities of students who had already established businesses or running businesses, during their studies.

4.4 Businesses established by students

As shown in Figure 4.1 (p. 38) only a small portion of students, both locally and internationally, are already business owners. In the South African sample that is 52 of the 2 203 respondents and internationally 1 716 out of 63 650 respondents. Although this is a small number, it is nevertheless interesting to have a closer look at these respondents, their profiles and motives for starting businesses. Since these entrepreneurs started early, they would gain valuable entrepreneurial experience during their studies, which may help them later on to create and manage more successful businesses than their less experienced peers. Student entrepreneurs were probed to determine the sustainability of their ventures, growth and performance of these ventures as well as their overall satisfaction with the decision to be self-employed.

Firstly, students were asked in which year their enterprise was established. The majority of the enterprises (84.6%) were founded between 2003 and 2008, with the highest number of businesses established in 2007 (25%). This data is reflected in Table 4.5.

Table 4.5: Year in which SA sample's businesses were established

Year	Frequency (n)	Per cent (%)
1988 - 2002	8	15.4
2003	4	7.7
2004	4	7.7
2005	9	17.3
2006	5	9.6
2007	13	25.0
2008	9	17.3

n = 52

Knowing when these 52 enterprises were established, it is also important to determine how many of these enterprises still exist, since this gives an indication of the fluidity of entrepreneurial ventures. As shown in Table 4.6, three quarters (75%) of the 52 enterprises still exist.

Table 4.6: Year of closure of businesses for SA sample

Year	Frequency (n)	Per cent (%)
2003	1	7.7
2004	1	7.7
2005	1	7.7
2006	4	30.8
2007	1	7.7
2008	5	38.5

As shown in Table 4.6, a quarter of the businesses closed down, with the majority closing between 2006 and 2008. The highest closure rate can be seen in 2008, at 38.5%. Although the reasons for closure were not explored in the survey, it should be borne in mind that ventures started by students may have a short-term nature and be opportunity-focused on a specific event, or may provide income only during their studies. Once the event is over, there may be no need to continue with the business, since they may enter the business world or

start a longer-term venture. Thus, short-term or part-time business ventures might be a possible explanation for the closure rate of 25% in South Africa.

The SA and international samples show similar profiles in Figure 4.8 with regard to the sustainability of established ventures, with close to three quarters of businesses still operating.

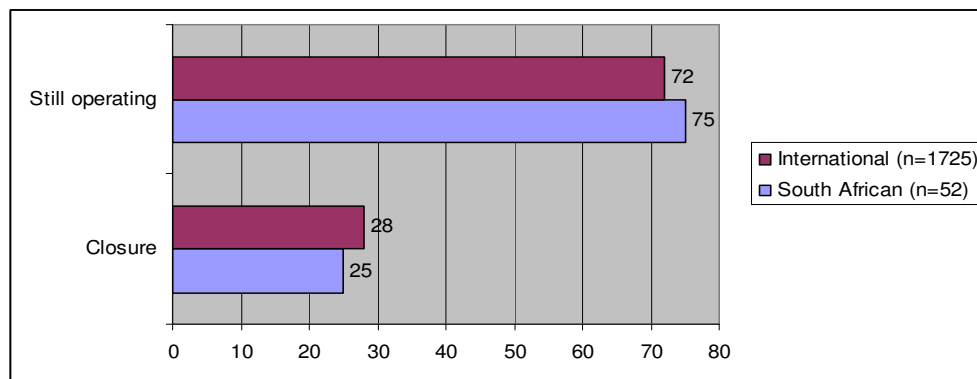


Figure 4.8: Comparison of sustainability of already established businesses

4.4.1 Number of employees in established businesses

The self-employed SA respondents were asked to give an indication of the number of employees for different time periods after the businesses were established. The total amount of employees for each time period was used to determine an average number of employees, as shown in Table 4.7.

Table 4.7: Average number of employees of business start-ups

Number of employees	n	Average
In year of foundation	50	3.83
First year after foundation	39	3.49
Second year after foundation	29	4.38
Third year after foundation	19	6.32
Fourth year after foundation	16	7.56
Fifth year after foundation	15	7.73

The results in Table 4.7 show an increase in the number of employees after the first year of foundation. The average for the first year after foundation is 3.49 and this average increases

to 7.73, five years after foundation. The increase in the average number of employees indicates growth in the established businesses which are still functioning up to five years after foundation. These results correspond with the international results, which also show an increase in the average of employees from the first year, up to five years after foundation, as illustrated in Figure 4.9. It is interesting to notice a slight decrease in the average for the number of employees from the year of foundation to the first year after foundation. This is the case for both South African and international results. However, these results should be considered with caution, since surveys of the SME sector often show that entrepreneurs “overstate” their number of employees.

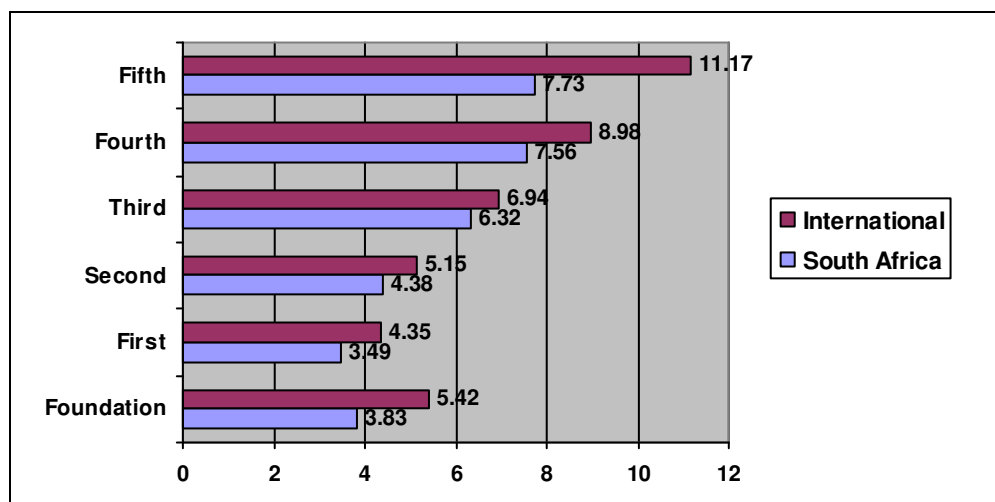


Figure 4.9: Average number of employees of business start-ups

4.4.2 Revenue generated by established businesses

Student entrepreneurs were also asked to provide an indication of the revenue generated per annum by their businesses, as shown in Table 4.8.

Table 4.8: Average revenue for SA sample

Average revenue	n	South Africa (Rand)
In year of foundation	45	89 482.22
First year after foundation	31	96 836.77
Second year after foundation	23	72 006.09
Third year after foundation	16	252 950.00
Fourth year after foundation	12	433 708.33
Fifth year after foundation	11	290 181.82

As indicated in Table 4.8, the average revenue is relatively high for entrepreneurs who had recently started their own business. In the fourth year after the foundation of the start-up, the average revenue for the respondents in South Africa was as high as R433 708.33. As can be expected, the average revenue was the lowest in the year of foundation. Fluctuations in revenue are found between the year of foundation and five years after foundation. This implies that business start-ups do not experience continuous increases in their revenue from the start of their business onwards. These fluctuations might be due to internal managerial challenges or external circumstances, for instance the economic climate of the country during a certain time period. Due to outliers in the international results with regard to average revenue, comparisons could not be made between the SA and the international sample. Furthermore the data on revenue is too limited to make a thorough analysis and draw conclusions with regard to the fluctuations in average revenue.

4.4.3 Performance of established businesses

Simply looking at average revenue does not provide a complete picture of the performance of start-ups. It is also important for any business to compare themselves to their competitors in the market in order to obtain a better understanding of their actual performance. Therefore, further questions were asked with regard to the performance of the business start-ups in comparison to competition. The questions related to performance in terms of revenue growth, market share growth and finally their self-financing/equity ratio. A distinction was made between the current performance and the performance in the last three years in comparison to the competition. Table 4.9 shows the current performance of the SA sample, in comparison to their rivals.

Table 4.9: SA sample's current performance in comparison to the competition

Current performance	Lower (%)	Little lower (%)	Equal (%)	Little higher (%)	Higher (%)
Revenue growth	35.9	7.7	23.1	10.3	23.1
Market share growth	30.9	7.7	28.2	15.4	17.9
Self-financing/Equity ratio	25.6	7.7	15.4	12.8	38.5

Table 4.9 illustrates that the only aspect in which the business start-ups performed better than their competitors was the self-financing/equity ratio. In terms of revenue growth and market share growth, the business start-ups experienced lower performance in comparison to competition. As shown in Table 4.10, this was the case with their current performance as well as their performance in the last three years.

Table 4.10: SA sample’s performance in the last three years in comparison to the competition

Current performance	Lower (%)	Little lower (%)	Equal (%)	Little higher (%)	Higher (%)
Revenue growth	30.8	5.1	28.2	12.8	23.1
Market share growth	33.3	5.1	30.8	12.8	17.9
Self-financing/Equity ratio	30.8	12.8	20.5	2.6	33.3

Internationally, the performances in all three aspects are more or less equal in comparison to competition, both in terms of current performance and the performance in the last three years.

4.4.4 Satisfaction of entrepreneurs of established businesses

Up to now, the focus has been mostly on the entrepreneurial businesses themselves to see how well they perform in the market. This gives a good indication of the quality of entrepreneurs who took part in this survey. But another important aspect which also contributes to the success of any business is the passion and the satisfaction of business owners. Self-employed respondents were asked to indicate their agreement or disagreement with seven statements, related to their personal satisfaction, as represented in Table 4.11. The majority of the respondents, who had already established their own business, were very satisfied with being self-employed. More than half (51.9%) of the 52 business owners indicated that they had become more satisfied with their life through the founding of their businesses; 57.7% would recommend self-employment; and 55.8% conveyed they would always try to remain self-employed for the rest of their life. Only a very small portion (1.9%) completely disagreed with the statement that they were very happy that they had founded their

company, which translates into the majority (98.1%) of these respondents experiencing high satisfaction levels with the establishment of their businesses.

Table 4.11: Personal satisfaction of SA students with their business start-up

Personal satisfaction*	Completely disagree	Partially disagree	Partially agree	Completely agree
All in all I have become more satisfied with my life through the founding of my company.	1.9	1.9	44.2	51.9
I often wonder whether I could have a better life as an employee.	48.1	17.3	19.2	15.4
With hindsight, I am very happy that I founded my company.	1.9	0	26.9	71.2
I would recommend anyone to found a company, if he or she feels capable of doing so.	0	5.8	36.5	57.7
I will always try to remain self-employed for the rest of my life.	3.8	17.3	23.1	55.8
If I had not put so much time and effort into my company, I would prefer to be employed in another company.	38.5	23.1	23.1	15.4
I realise more and more that the risks of being self-employed are not outweighed by particular opportunities.	9.6	17.3	44.2	28.8

* Scores in this table are represented in percentages
n = 52

On comparing these results with the international data in Table 4.12 it is interesting to note that the large majority of all the respondents who took part in this international study, only partially agreed with most of the above statements, whereas the South African respondents felt more strongly about these statements. This seems to suggest that the SA sample may have experienced higher levels of satisfaction, compared to the international sample.

Table 4.12: Personal satisfaction of international students with their business start-up

Personal satisfaction*	Complete disagree	Partially disagree	Partially agree	Completely agree
All in all I have become more satisfied with my life through the founding of my company.	8.8	15.1	44.1	32.1
I often wonder whether I could have a better life as an employee.	26.6	28.7	31.4	13.3
With hindsight, I am very happy that I founded my company.	5.1	9.9	36.2	48.9
I would recommend anyone to found a company, if he or she feels capable of doing so.	7.4	21.0	37.0	34.7
I will always try to remain self-employed for the rest of my life.	14.6	24.1	31.4	30.0
If I had not put so much time and effort into my company, I would prefer to be employed in another company.	33.5	36.3	21.6	8.6
I realise more and more that the risks of being self-employed are not outweighed by particular opportunities.	16.2	29.6	36.1	18.2

* Scores in this table are represented in percentages
n = 1 725

4.5 Summary

Very few South African students (13.4%) from the sample had started to set up their own businesses, compared to about two fifths (41.9%) in the international sample, while a comparable portion, slightly more than 2%, were already self-employed. It is surprising that slightly more than a quarter (26%) of SA students had never thought of starting their own businesses, especially viewed against the high levels of unemployment and stage of economic development of the country. These findings imply that higher educational institutions can do more to create an entrepreneurial awareness in universities by promoting entrepreneurship as a career choice, and by providing courses and additional support.

With regard to career expectations, students were asked to indicate what type of employment (dependent, independent or family-related) they preferred. The majority of students, both in the international sample (74.8%) and the SA sample (64.7%), preferred dependent employment in the first five years of their studies. However, a dramatic shift is evident from students' indication of their preference five years after graduation, where the majority (61.3%)

of SA students indicated a preference for independent employment. Interestingly enough, less than half (46.5%) of the international sample preferred dependent employment, while slightly more than two fifths (42.2%) preferred independent employment. The shift from dependent employment after graduation to entrepreneurial intent five years after graduation presents an opportunity to support emerging entrepreneurs and offer short courses, focusing on entrepreneurship, to alumni. However, caution should be exercised when considering these results, since it is possible that while students may harbour dreams of independent employment, these may be given up once they grow accustomed to the benefits of secure, salaried employment.

The entrepreneurial intent of students was further probed by looking at the sector in which they preferred to work, the relative innovativeness of their concept, their current experience, as well as steps taken to turn these intentions into reality. Most students preferred to establish their potential enterprise within the service sector, based on a traditional, proven concept. Respondents indicated that they had some experience with the products or services and the customer group they would like to start their business in, however less than a third had experience of the distribution channel and industry they would like to establish their business in. Furthermore, most students only took tentative steps, such as information-gathering and thinking through some business ideas. Few students took concrete steps, such as writing a business plan (19.3%), talking to potential financiers, developing a prototype or determining a start-up date. The results suggest that on average, SA students in the sample were more active than those in the international sample.

Katz and Green (2009) argue that four elements come together when individuals start businesses: boundary, resources, intention and exchange, or the so-called BRIE model. In terms of this model individuals could undertake a number of actions to bring them closer to starting a business. In terms of the boundary element of a business, potential entrepreneurs could start by registering a name and business, opening a bank account, designing a website and so forth. Resources include the product or service to be offered, informational resources, financial resources and human resources. Intention refers to the desire of starting a business, while exchange refers to products or services which are transferred from the entrepreneur to

the client. These actions can move potential entrepreneurs closer to starting their venture. However, according to Pfeffer and Sutton (1999), even when people know that taking action would be in their own best interests, most people tend to procrastinate, sticking with inaction or doing familiar things that have not worked. These authors recommend taking small steps towards a goal which provides an easy, achievable start. Therefore a number of smaller actions could help potential entrepreneurs turn their thinking into doing, and dreams into reality.

Only a small portion (slightly more than 2%) of students had already established businesses during their studies. While most businesses seem to have been established in the last three years (2006 to 2008), a quarter of the total businesses established, had been closed. This may be due to the short-term, part-time nature of student businesses. Businesses seem to experience higher average revenues in their fourth and fifth years of existence, also employing more staff in these years. In terms of performance, respondents indicated that their businesses performed better in terms of the self-financing/equity ratio than their competitors, and weaker in terms of revenue growth and market share growth. Interestingly, the majority of SA respondents (98.1%) showed high levels of personal satisfaction with their businesses, compared to their international counterparts.

In view of the fact that reference groups also strongly influenced the career choices of individuals, the next chapter considers personal motives for career choice, as well as the influence of family business reference groups.

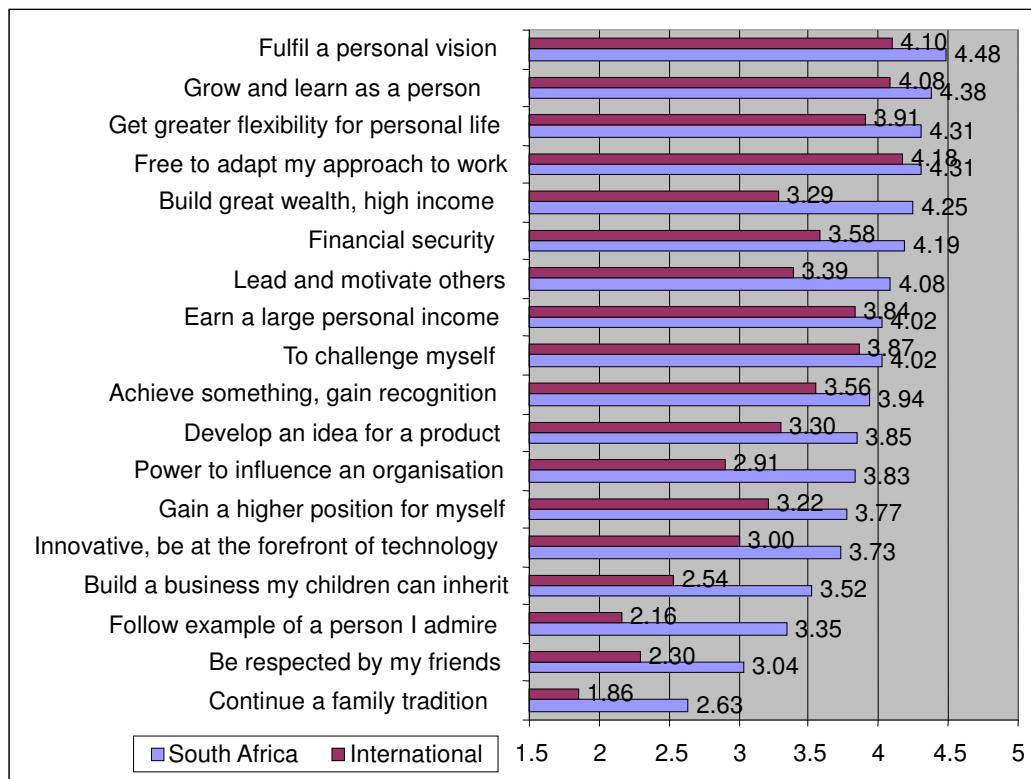
5. THE INDIVIDUAL STUDENT'S CONTEXT

5.1 Career motivations

The entrepreneurial intent of students may potentially be shaped by a variety of sources, such as the field of study they engage in, the university context, and also the student's own individual context. Students may harbour several ambitions and motivations to follow an entrepreneurial career, but personal reference groups such as family and friends also influence career choices.

5.1.1 Reasons for choosing an entrepreneurial career

The reasons for starting a business may vary from person to person and from one context to another. Respondents who already had established businesses were asked to what extent the 18 reasons given in Figure 5.1 were important to them in choosing an entrepreneurial career. Responses were recorded on a five-point scale, with 1 rated as not at all important and 5 as important to a very great extent.



(n = 52 for the South African students and n = 17 250 for the international students)

Figure 5.1: Comparison of reasons for establishing business, between the SA and international sample

It is interesting that the four most important reasons for the SA students are the same as for the international students, albeit in a different order. This result may be indicative of shared characteristics among entrepreneurially-minded people. For the SA students the four most important reasons for starting a business in descending order are the following:

- to fulfil a personal vision (4.48)
- to grow and learn as a person (4.38)
- to get flexibility for my personal life (4.31)
- to adapt my approach to work (4.31)

The ranking of the four most important reasons for the international students are the following:

- to be free to adapt my approach to work (4.18)
- To fulfil my personal vision (4.10)
- To grow and learn as a person (4.08)
- To have greater flexibility in their personal life (3.91)

The results show that the international students have a higher regard for adapting their approach to work than the SA students. It is also interesting that in both samples, fulfilling a personal vision is rated as more important than to grow and learn, since many scholars (Barringer & Ireland, 2008; Baum, Locke & Kirkpatrick, 1998; Pettigrew, 1979) have suggested that a strong, personal vision drives entrepreneurial success.

On the other end of the scale the least important reason in both samples for starting a business is to continue a family tradition. This may be ascribed to the sample profile, since few respondents have parents with family businesses. What can be noted is that the SA students rated family tradition (2.63) relatively higher than the international sample (1.86). Interestingly, in the case of both samples, to “follow the example of a person I admire” was ranked third last, with a 3.35 rating in the case of SA respondents and second last, with a rating of 2.16 in the case of the international students. This could imply that for these groups of students a role model for entrepreneurship is not very important; however, it is slightly more important for the SA students, compared to the international students’ views. This raises the

question of the importance of role models relative to other aspirations such as ambitious achievement of something to be proud of or fulfilling a personal vision or goal.

Surprisingly, none of the two samples of students rated idea development highly for establishing a business. This may be explained by the fact that the initial start-up may work on a trial-and-error basis, where the entrepreneur receives feedback from the market and then adapts products or services accordingly.

5.1.2 Reasons for choosing a career

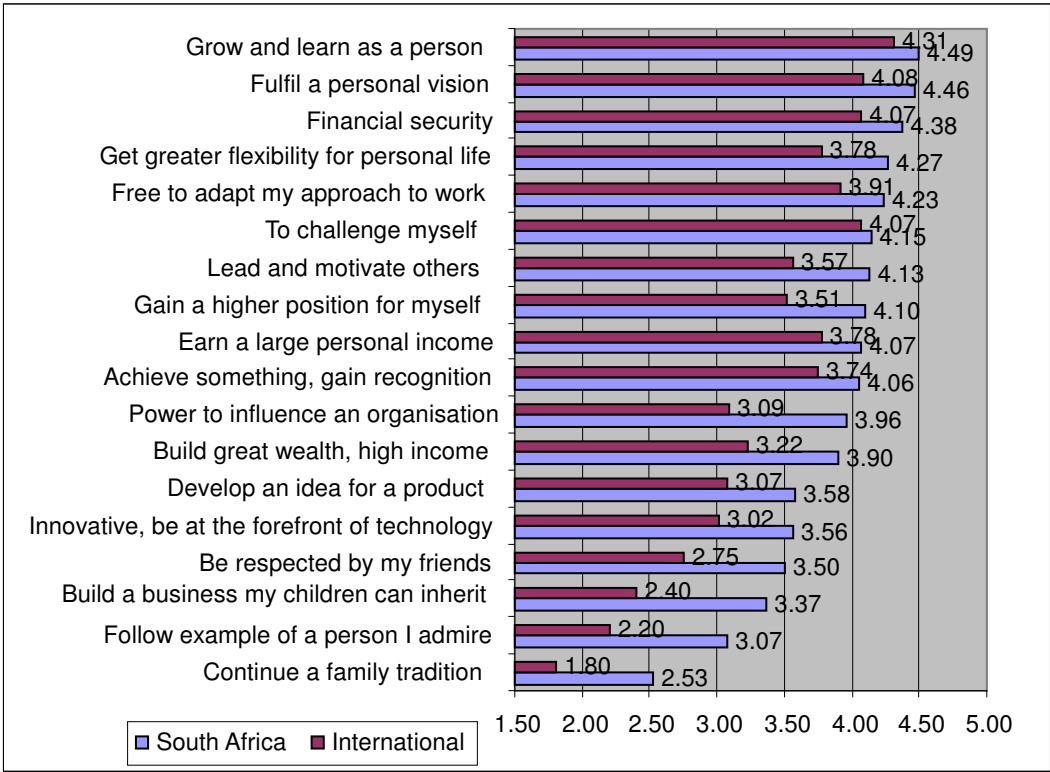
Whichever career a student chooses, he or she may be influenced by various reasons and the motivation for choosing a career may vary from person to person. Similarly, it may be influenced by different factors which may be time-, context- and location-specific. All respondents, regardless of their entrepreneurial intent, were asked how important the factors listed in Figure 5.2 were in influencing their work and career decisions. This was indicated on a five-point scale.

Student responses for the reasons for choice of career presented in Figure 5.2 show similar patterns for both the SA and the international sample. The three most influential reasons in choosing a career were:

- Grow and learn as a person (4.49 for South African students and 4.31 for the international students)
- Fulfil a personal vision (4.46 for South African students and 4.08 for international students)
- Financial security (4.38 for South African students and 4.07 for international students)

It is interesting to note that the “Grow and learn as a person” reason is the most important one in this category, compared to reasons given by students who had established businesses, where fulfilling a personal vision was rated to be more important than growing and learning as a person. Based on these results it seems as if students who had chosen to establish their own businesses had developed the confidence to opt for independent employment. Furthermore, both SA and international respondents with established businesses did not rate

financial security very highly on the list of important reasons for choosing an entrepreneurial career. This seems to suggest that individuals who are inclined towards independent employment may be more comfortable in dealing with financial uncertainty. Students who are attracted to dependent employment may prefer a less risky and more secure environment.



(n = 2 151 for the South African students and n = 61 815 for the international students)

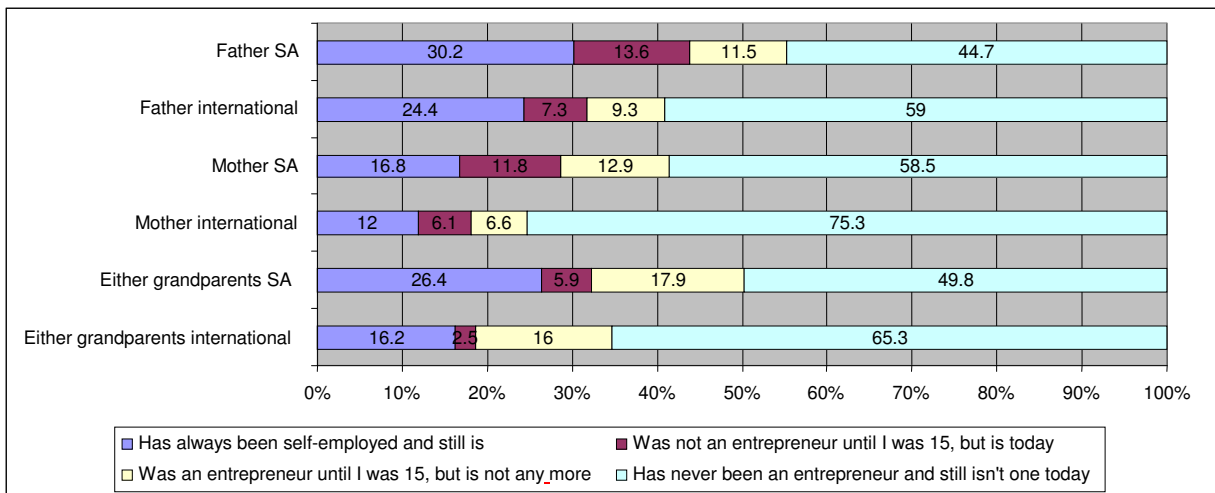
Figure 5.2: Comparison of reasons for career choice between SA and international sample

The reasons rated low on importance also show interesting patterns. The six least important reasons such as continuing a family tradition, following the example of a person I admire, building a business my children can inherit, being respected by my friends, to be innovative or developing an idea for a product, are also the same and in the same order for both the SA and the international sample. It seems that career choices internationally are driven by similar factors as those of SA students.

5.2 Family business background

Many entrepreneurship textbooks regard the influence of being reared in an entrepreneurial family as a predictor for getting involved in an entrepreneurial career (Katz & Green, 2009; Dyer & Handler, 1994; Hoy & Verser, 1994). Therefore the survey also asked respondents to indicate whether their parents or either of their grandparents had been self-employed at some point during their socialisation up to the age of 15. Figure 5.3 depicts the categories for student responses, comparing the international and the SA sample:

- Has always been self-employed and still is
- Has never been an entrepreneur and still isn't one today
- Was an entrepreneur until I was 15, but is not any more
- Was not an entrepreneur until I was 15, but is today



SA n = 2 200; International n = 63 580

Figure 5.3: Comparison of the influence of family business reference group as a reason for career choice, among SA and international sample

Figure 5.3 demonstrates that the majority of the respondents indicated that neither their parents nor their grandparents had ever been self-employed. Close to half of the SA students (49.8%) indicated that neither of their grandparents had ever been self-employed, while internationally, close to two-thirds (65.3%) of the students did not have entrepreneurial grandparents.

In terms of parents, more than half (58.5%) of SA students' mothers had never been self-employed, while three quarters (75.3%) of international students' mothers had never been self-employed. With regard to the influence of entrepreneurial fathers, 44.7% of SA students' and 59% of international students' fathers had not been self-employed. Interestingly, the families of SA students have a higher percentage of self-employment in each category, compared to those of the international students' sample.

Figure 5.3 also shows the influence of family reference groups. It should be noted that more than half (55.2%) of SA students experienced entrepreneurial exposure through their father, since 30.1% of the fathers had always been self-employed, 13.6% of the fathers became self-employed after the student was 15 years of age and 11.5% of the fathers were self-employed but are not any more. For the international student sample, exposure to business activities from the fathers' perspective is 41%. Marked differences also exist when comparing entrepreneurial mothers from the SA sample with the international sample, where 41.5% of SA students indicated their mothers were/had been involved with their own business, compared to 24.7% of the international sample. In terms of grandparents there is also a marked difference, with half (50.2%) of the SA sample indicating that either of their grandparents was/had been involved with entrepreneurship, compared to 34.7% of the international sample.

To conclude: while not having entrepreneurial parents does not preclude individuals from establishing a business in future, entrepreneurial parents or grandparents do provide exposure to the world of business and make students aware of the demands of running and operating a business. While the majority of students in both the international and South African sample did not have entrepreneurial mothers or grandparents, more than half of South African students (55.2%) had indirect experience of entrepreneurship, through their fathers' entrepreneurial activities.

5.3 Summary

Students, in both the international and the SA sample, who already had businesses, indicated that the most important reasons for choosing to start a business were to fulfil a personal vision, to grow and learn as a person, to attain flexibility, and to be able to adapt their approach to work. In contrast, the other group of students indicated that growing and learning as a person, a personal vision and financial security were the most important motives for choosing a career. It is interesting that financial security seems to be a differentiator between the two groups. Seemingly entrepreneurially-minded respondents are more comfortable with dealing with financial uncertainty, while respondents attracted to dependent employment are more risk-averse.

The relative importance of reasons for establishing business is significant for educational institutions, in the sense that these institutions can adapt and design entrepreneurship programmes, in line with the relevant theory and student needs. The relative ranking of the reasons for establishing businesses seems to favour reasons which could be related to personal motives. Future research should focus on assessing the alignment of educational programmes with students' needs.

The relevance of a family business background was also assessed by asking respondents to indicate to what extent their parents or grandparents were/had been involved in an entrepreneurial career. Surprisingly, South African students indicated higher levels of exposure to a family business background, through their fathers, mothers and grandparents, than the international sample.

6. CONCLUSION

6.1 Important findings of this study

Given South Africa's economic circumstances, entrepreneurship is a vital skill that can empower individuals, offering a means to financial independence and a sense of self-worth. Internationally, entrepreneurship and entrepreneurial intent are generally considered to be important prerequisites for economic growth and social wealth creation. However, rates of entrepreneurship in South Africa have been consistently low and much lower than in other developing countries (Von Broembsen et al., 2005). Only five to eight out of every 100 adult South Africans are in the process of starting a business or already own a business (Herrington et al., 2008). Besides the fact that few South Africans consider starting and/or start and run a business, the quality of entrepreneurship is also low (Herrington et al., 2008; Von Broembsen et al., 2005). In South Africa too few opportunity-based businesses are started, although the recent 2008 GEM report suggests this may be changing (Herrington et al., 2008).

The Global University Entrepreneurial Spirit Students' Survey (GUESSS) investigates tertiary students' entrepreneurial intent, activities and behaviour, since a strong relationship exists between individuals with a tertiary education and sustainable enterprise creation. The GUESSS study represents an entrepreneurship research platform which investigates the start-up process, university context and individual motives, enabling temporal and geographical comparisons, across 19 countries.

The South African sample that participated in the survey is not representative of the total student population locally or worldwide, but since participation was voluntary and international comparisons are possible, a stable basis is provided from which inferences can be drawn nationally and internationally. Both in the SA and the international sample the majority of respondents were undergraduate students (SA sample 86%; international sample 68.4%), with a smaller percentage of graduate students (SA sample 9.7%; international sample 27.4%) and slightly more than 4% pursuing postgraduate studies. The average age in the SA sample is slightly younger than the international sample, with 22.33 years, compared to 23.39 years. The majority of students who participated in the survey were pursuing business administration

and maths, computer and engineering studies (10%). Slightly more male than female students participated in the survey, for both the SA and international sample. Both groups indicated that close to 70% of their time was spent studying, as opposed to 25% working, which is to be expected for this sample.

One of the pertinent questions in this survey concerned the perceived entrepreneurial environment at the institutions of higher education. Universities can offer a variety of courses or additional services to promote entrepreneurship, such as entrepreneurship seminars and lectures, business plan competitions, start-up coaching services, simulations, exchange experiences with founders, contacts for general enquiries, and even start-up financing and incubator services.

In both the international and the SA sample, contacts for general questions, start-up coaching and start-up financing through universities were regarded as the most important university services. Internationally, incubation services were regarded as very important, while the SA sample regarded entrepreneurship seminars and lectures as well as business project plan seminars as more important, compared to the international sample. An important finding is that despite the importance respondents attached to these services, many students indicated that they were not aware whether their universities offered support services. The lack of awareness suggests that universities should promote entrepreneurship support services more aggressively, since students cannot utilise services if they are unaware of the existence of such services. When asked which services were utilised, both the international and the SA sample students indicated that entrepreneurship seminars and lectures and business plan project seminars were utilised most widely and students were generally very satisfied with these services. Other services also utilised by students include contacts for general questions, start-up coaching and start-up games and simulations. For these, high levels of satisfaction were also reported. Services not used by many students were incubator and start-up financing services. This may be ascribed to students not being aware of these services, or that these services typically require students to have a very well-developed business idea and business plan.

With regard to career expectations, slightly more than two fifths (41.9%) of SA students indicated that they are inclined to start their own businesses, compared to 13.4% of the international sample, which is encouraging, taking into account that SA is a developing country, in need of entrepreneurship, and with high levels of unemployment. The majority of students, both in the international sample (74.8%) and the SA sample (64.7%), preferred dependent employment within the first five years of their studies. However, a dramatic shift is evident in students' indication of their preference five years after graduation, where the majority (61.3%) of SA students indicate a preference for independent employment. Interestingly enough, less than half (46.5%) of the international sample preferred dependent employment, while slightly more than two fifths (42.2%) preferred independent employment. The shift from dependent employment after graduation to entrepreneurial intent five years after graduation presents an opportunity to support emerging entrepreneurs and offer short courses to alumni, focusing on entrepreneurship.

The entrepreneurial intent of students was further probed by looking at the sector in which they preferred to work, the relative innovativeness of their concept, their current experience, as well as steps taken to turn these intentions into reality. Most students preferred to establish their potential enterprise within the service sector, based on a traditional, proven concept. It is cause for concern that both locally and internationally business concepts are low in terms of innovativeness. Respondents indicated that they had some experience with the products or services and the customer group in which they would like to start their business; however, less than a third had experience of the distribution channel and industry in which they would like to establish their business. Furthermore, most students indicated that they only took tentative steps, such as information-gathering and thinking through some business ideas. Few students took concrete steps such as writing a business plan (19.3%), talking to potential financiers, developing a prototype or determining a start-up date. The results suggest that on average, SA students in the sample were more active than the international sample.

Only a small portion (slightly more than 2%) of students had already established businesses during their studies. While most businesses seem to have been established in the last three years (2006 to 2008), a quarter of the total businesses established, have been closed. This

may be due to the short-term, part-time nature of student businesses. Businesses seem to experience higher average revenues in their fourth and fifth years of existence, and also employ more staff in these years. Interestingly, the majority of SA respondents (98.1%) showed high levels of personal satisfaction with their businesses, compared to their international counterparts.

Finally, the personal motives and influence of family business background for career choice were explored. Entrepreneurially orientated students indicated that fulfilling a personal vision, growing and learning as a person, flexibility, and being able to adapt their approach to work were the most important career motivations. In contrast, the other group of students indicated that growing and learning as a person, a personal vision, and financial security were the most important motivations for choosing a career. It is interesting that financial security seemed to be differentiator between the two groups. Seemingly, entrepreneurially minded respondents were more comfortable with dealing with financial uncertainty, while respondents attracted to dependent employment were more risk-averse. The relevance of a family business background was also assessed by asking respondents to indicate to what extent their parents or grandparents were or had been involved in an entrepreneurial career. Surprisingly, South African students indicated higher levels of exposure to a family business background, through their fathers, mothers and grandparents than the international sample.

6.2 The role of universities

Universities are well placed to assist in the development of entrepreneurship, since these institutions are directly in contact with students and can make them aware of the benefits of an entrepreneurial career, while providing education, training and support. Several initiatives can be launched and supported to stimulate entrepreneurial thinking amongst students. Potential entrepreneurs have specific aspirations and qualities that enable them to succeed – they are less risk-averse, and more opportunity-orientated than their conservative counterparts. Students can gain entrepreneurial experience throughout their university studies by participating in projects which encourage young people to develop entrepreneurial qualities at an early age and equip them with a greater array of choice in terms of their ultimate career.

This research project suggests that there is room for improvement in supporting and stimulating entrepreneurship campus-wide. In too many universities, entrepreneurship is only offered to commerce students and not across all fields of study. The challenge is finding the time and allocating additional credits to add this valuable life-skill and knowledge into already fully packed academic offerings. Despite these challenges the value of exposing students to entrepreneurial and business skills may prove invaluable over the long-term.

Universities should also develop educational support and offerings targeted at student entrepreneurs at different stages of commitment and planning. While most entrepreneurship courses and seminars provide students with general knowledge and skills, few are set up to provide in-depth guidance and support of a practical nature. The age-old debate of what the role of a university should be in terms of theory versus practice is very relevant to the way entrepreneurship education is presented. While one school of thought advocates the experiential nature of entrepreneurship education, the other holds the position that institutions of higher learning should focus on education, research and theory-building and leave hands-on experience to practitioners. The ideal may lie between these two extremes. Full-time academic staff members who teach entrepreneurship should also have practical experience to inspire students to establish their own enterprises. Should this not be possible, a practical

component should be included in course work, which could be taught by an experienced entrepreneur.

Some overseas universities establish entrepreneurship centres and actively solicit private sponsors to provide practical support and set up incubation centres for potential student entrepreneurs. Very few public South African universities are in a position to provide such extensive, personalised support. However, the value of such services should not be underestimated, especially in a developing country such as South Africa.

More extensive networking with the private sector, SMMEs and entrepreneurs should be encouraged, so that students and lecturers can experience the real-life crises and challenges entrepreneurs have to overcome on a daily basis. More efficient and better structured relationships between universities and smaller private sector operators, in the form of mentoring, internships or holiday work experience, would add value and encourage student entrepreneurial intentions.

Efforts should also be made to stimulate the innovative thinking of students and expand their thinking beyond the ordinary business concepts to more innovative business ideas. More innovative business concepts enable enterprises to differentiate themselves from competitors and achieve a sustainable competitive advantage.

Finally, the entrepreneurship needs of students and entrepreneurship education services offered by higher educational institutions should be monitored over the longer-term. Longitudinal studies should also aim to track alumni five years after graduation, to determine how intentions change over time and to gauge the influence of education over the longer-term.

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APPENDICES

Appendix 1:

Country participation across 19 countries

Countries	Institute or University	Representative
Switzerland	Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG)	Prof. Dr. Urs Fueglistaller Prof. Dr. Christoph Muller
Germany	Chair for Entrepreneurship at European Business School (EBS)	Prof. Dr. Heinz Klandt
Austria	Institut für Unternehmensgründung und Unternehmensentwicklung an der Johannes Kepler Universität Linz	Prof. Dr. Norbert Kailer
Liechtenstein	Hochschule Lichtenstein	Prof Dr. Urs Baidegger
France	EM Lyon	Prof. Dr. Alain Fayolle
Belgium	Vlerick Leuven Gent Management School	Prof. Dr. Hans Crijns
Luxembourg	Institut Universitaire International Luxembourg	Prof. Dr. Pol Wagner
Ireland	University of Limerick	Dr. Naomi Birdthistle
Finland	Lappeenranta University of Technology	Prof. Dr. Asko Miettinen
Hungary	University of Pecs, Faculty of Business & Economics	Ass. Prof. Laszlo Szerb
Estonia	Tallinn University of Technology	Prof. Dr. Urve Venesaar
Greece	University of Western Macedonia Department of Balkan Studies	Ass. Prof. Katterina Sarri
Portugal	Technical University of Lisbon Instituto Superior Tecnico	Prof Dr. João Leitão Prof. Dr. Rui Baptista
Australia	The University of New England School of Business, Economics and Public Policy	Prof. Dr. Brian Gibson
New Zealand	University of Otago Department of Marketing	Prof. Dr. Jurgen Gnoth
South Africa	University of Stellenbosch Department of Business Management	Dr. Retha Scheepers
Singapore	National University of Singapore	Prof. Wong Poh Kam
Indonesia	Bankrie School of Management	Mr. Taufiq Amir
Mexico	Technologico de Monterrey Instituto Tecnológico de Estudios Superiores de Monterrey	Dr. Elisa Cobas Flores