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The relationship between levels of education of entrepreneurs and their business success: A study of the province of KwaZulu-Natal, South Africa

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Abstract:

The small, medium and micro enterprise (SMME) sector has been widely recognized as an engine of economic growth in South Africa. The implementation of the National Small Business Strategy (NSBS) in 1995 established important objectives for the sector to address such problems as lack of access to markets and procurement, lack of access to finance and credit, low skills and education levels, lack of access to information and a shortage of effective support institutions. In response, the South African government established institutions and programmes designed to improve access to sources of finance, market opportunities, technology, training and development and education. This paper examines whether there is a relationship between the level of education of SMME owners and the growth of their businesses, using labour force and turnover as success indicators. The study adopted a mixed method approach, including questionnaire surveys, observations and face-to-face interviews. The results indicate that in the two years preceding the study there had been a relationship between the owner/manager's level of education and the business's ability to grow by increasing its labour force and annual turnover. This study, conducted in a developing economy, therefore supports the findings of similar studies in developed economies, that the level of education of an entrepreneur and the success of their business are related.

South Africa's recent integration into the world economy raises the issue of its potential for building competitive advantage and prosperity at the local level in the context of an increasingly globalized economy. The experience of prospering localities in industrialized countries, in particular the USA, Western Europe and Japan, suggests that the small and medium-sized enterprise (SME) sector is at the forefront of local economic development. In particular, the SME sector has been identified as one of the potential means of creating an enabling environment by enhancing opportunities for job creation and improving distribution of wealth (RSA, 1995). Small and medium enterprises have recently attracted significant interest in South Africa because they are regarded by some as a potential panacea for the myriad socio-economic ills confronting the country.

According to Guzman and Santos (2001) the entrepreneurial quality of the owner of a small, medium or micro enterprise (SMME) is a critical factor affecting the ability of

SMMEs in general to survive and achieve sustainable growth. Peters (2009) is of the view that the South African socio-economic situation is different to that in many other developing countries as a result of apartheid policies which were designed to deny the majority of citizens – which happened to be African Black- the opportunity to participate actively in the economy. The result was a highly distorted and racially- biased distribution of income related to racial origin. Since 1994, however, the national government has implemented various policies and initiatives aimed at eradicating the effects of the injustices of the past. The national strategy for small business development, referred to as the National Small Business Strategy (NSBS), was formally endorsed by Parliament in 1995 (DTI, 1995) and it established several important objectives for the SMME sector with regard to the problems it faced. The most prevalent of these problems included an unfavourable legal environment, lack of access to markets and procurement, lack of access to finance and credit, lack of access to information, a shortage of effective supportive institutions and, lastly, low skills levels and level of education (RSA, 1995).

To eliminate, or at least reduce, the problems identified above and achieve the objectives that were initially set, the government established institutions and programmes designed to improve the access of the SMME sector to critical resources such as finance, market opportunities, technology and, more specifically, training and development. The underlying aim of the NSBS strategy, in keeping with the government's initiative to address and correct imbalances created by apartheid, was to offer previously disadvantaged individuals (PDis) the opportunity to create wealth for themselves by establishing and growing small businesses and/or expanding existing businesses.

However, after some 17 years of implementation of the SMME development strategies, South Africa's formal employment problem remains largely unchanged. Many researchers, including Kesper (2000), Chalera (2007) and, more recently, Peters (2009) argue that this can be attributed to an array of ineffective policy measures initiated by the government ostensibly to assist the SMME sector. This present study suggests and proposes the notion that if SMME development is not based on educational achievement (in the formative and non-formative sense), then it is unlikely that SMMEs will achieve success in terms of growing the labour force and increasing financial turnover (trading income). The study therefore set out to measure the relationship between education and growth of SMME businesses as envisaged by the government through the NSBS. For the purpose of the study, the focus was on growth in turnover and expansion or contraction of the labour force in the SMMEs that were investigated. The Small Enterprise Development Agency (SEDA) database of existing entrepreneurs in KwaZulu-Natal, one of the nine provinces of South Africa, was used to identify suitable businesses for the study.

Value of the study

Most of the research conducted to date on the level of education of SMME owner/managers in relation to the success of businesses, as reported in the literature, relates to developed economies. In contrast, this study uses data from a developing economy in order to establish whether the results support those from the developed

economies. The study was also designed to enable data relevant to SMMEs to be collected: such data could be used to inform government policy more effectively, particularly with regard to how empowerment initiatives might be addressed for both Black and White entrepreneurs. The specific aim of the study was thus to investigate to what extent the level of education of the entrepreneur contributes to the success of the business.

Background and literature review

SMMEs have contributed significantly to employment growth while being highly efficient in serving increasingly segmented consumer markets. The political attention given by post-apartheid South Africa to SMMEs as an 'important vehicle to address the challenges of job creation, economic growth and equity' (RSA, 1995) continues to be a benchmark for examining the status of small enterprise development, particularly of Black (Mrican) owned enterprises in South Africa (Rogerson, 1997). There has been an increase in the literature on micro-enterprises which has mainly emanated from cross-section surveys with a focus on growth constraints (Rogerson and Reid, 1997; Rogerson and Rogerson, 1997; Kirkwood, 2009).

The bulk of employment creation by South African SMMEs has arisen in new micro-enterprise formations (cited in Peters, 2009). However, most of these businesses have been started out of necessity rather than choice; and only a small minority of the entrepreneurs managed to secure the survival of their micro-enterprises beyond the first two, critical years of existence (Levy, 1996; Rogerson and Rogerson, 1997; Rogerson, 1998, Kesper, 1999).

Given the country's history of dualism and discrimination, growth in successful SMMEs and highly-skilled labour is unlikely to emerge in substantial numbers, now or in the near future, from formerly disadvantaged segments of the population (Rogerson, 1999). It is thus reasonable to predict that the goal of job creation might be achieved only at the expense of economic empowerment and income redistribution. It is therefore argued that priorities need to be assigned to these partly conflicting goals, and support interventions adjusted accordingly, in the context of also addressing the issues of South Africa's macro-economic performance and high concentration of industries, retail and financial sectors (Kesper, 1999). It has now been acknowledged that a large majority of business units in industrialized countries are small, and even a conservative review of the job generation literature suggests that small firms account for at least a proportional share of employment creation (Peters, 2009). Net new jobs created in small firms, however, result from a very dynamic process of expansion and contraction within the small firm sector. While some small firms start and remain small throughout their existence, others experience stages of growth; and unstable firms decline. Large employment gains occur seemingly only in a few small firms (Sengenberger *et al*, 1990; Qualman, 1998; Mead, 1999).

The importance of small businesses in modern economies is now widely accepted. In advanced industrial societies this importance was ignored for much of the twentieth-

century, with small businesses often regarded as disappearing remnants of earlier stages of economic development. The large enterprise was seen as superseding small businesses and as an indicator of economic progress. By the end of the twentieth-century, however, this view was increasingly being recognized as mistaken. Small businesses are now seen as important sources for job creation and hence economic development.

The main focus in examining business strategy and small businesses has been on strategies underlying the growth process. Given also the relative rarity of substantial growth by the typical small business, academics, management experts and governments in many countries have been keen to discover ways in which small business growth can be encouraged. What kinds of strategies do successful small businesses use to grow and, conversely, what constraints prevent or restrict growth? Very little attention has been given to the rather more mundane issue of the strategies adopted to ensure continuity and survival of the enterprise despite the fact that this, rather than significant rates of growth, is what commonly prevails in the greater majority of small businesses.

In African as well as in other less developed nations, SMMEs which constitute the majority of the businesses in the economy have received increasing attention because of their labour-absorptive capacity in times of contraction of both public sector and private formal economies and increasing numbers of new labour entrants. With the shift of industrial policy away from import-substitution and of trade policy towards liberalization, SMMEs are moreover expected to respond flexibly and thus withstand global competition (Hirst and Zeitlin, 1992; Bambara, 1995; Kaplinsky and Morris, 1999).

While the Latin American experiences of both single and, especially, clustered SMMEs confirm the dynamism associated with SMMEs (Cortes *et al*, 1987; Rabellotti, 1999), there has been little systematic evidence of the incidence of micro-enterprise 'graduation' or growth into larger ones in Africa (Mead, 1999). Indeed, one- person operations constitute the majority of small-scale industry in Africa and only about 1% of these succeeds in graduating to an intermediate size (Mead, 1995; Dia, 1996; McPherson, 1996; Manu, 1999).

Research findings on SMMEs throughout Africa are diverse, although they show widely that it cannot be enterprise size as such which determines a firm's growth potential, because success and failure of SMMEs co-exist; rather, they point instead to the role of the entrepreneur (Sengenberger *et al*, 1990; Spath, 1994). The predominance of SMMEs in the industrial sector, both in terms of numbers and employment opportunities generated, does demonstrate that SMMEs form an important part of African economies. Nevertheless, the critical underlying issues of the viability of these small firms and the sustainability and quality of the employment they generated remain unclear (Spath, 1994; Dia, 1996; McCormick *et al*, 1997).

According to Guzman and Santos (2001), the entrepreneurial quality of the SMME owner is a critical factor affecting an SMME's ability to overcome barriers to survival and achieve sustainable growth. A combination of formal and on-the-job training may be seen as one of the key factors that lays the foundation for success. Education is thought to increase the intrinsic motivation and energizer behaviours and the more enterprise education an individual receives, the greater the possibility of entrepreneurial success (Gibb and Scott, 1986) and hence the greater chance of business growth.

Education is one of the most widely studied entrepreneurial variables. We can presume that 'education' is related to knowledge, skills, problem-solving ability, discipline, motivation and self confidence, all of which may influence and enable the entrepreneur to cope with problems and thereby be more successful. In particular, entrepreneurs with higher levels of education and experience are likely to be more efficient in seeking, gathering and analysing information about availability of opportunities which lead to growth (Forbes, 2005).

In South Africa, certain categories of jobs were reserved for Whites, as part of a policy that was reinforced by a vastly inferior education system, the so-called 'Bantu education', which had devastating effects on skills and the positions in the labour market to which the majority of Black workers could aspire. Only a small minority gained access to higher education, while technological and professional careers were made less attainable by chronic inadequacies in the teaching of mathematics and sciences in Black schools (Qunta, 1995). Many Whites contend that their wealth was the product of entrepreneurship, education, advanced skills, a relatively good government and the traditions of social order and economic organization that Whites brought with them from Europe and actively cultivated. According to Human (1993), in no scenario would South African Whites have been less well-off than Blacks.

The Department of Trade and Industry (DTI) takes the view that a developed SMME sector in South Africa can address the issues of job creation, poverty eradication and a more equitable distribution of wealth. The DTI holds that the essential missing elements needed to empower the SMME sector can be developed through the provision of generic business services and training and improved access to credit. Support of SMMEs in the survivalist, micro and small business sector usually targets the need for basic business skills training for emergent entrepreneurs and the need for better access to capital. In South Africa, these issues in particular have formed the cornerstone in the government's strategy for SMME promotion and development (Ntsika, 1997). This is based on the premise that past market failures, including restrictions on Black business ownership and access to finance must be addressed in order to create an enabling environment for SMME development.

As noted above, interest in the promotion of SMMEs stems from the widespread belief that the SMME sector will generate new jobs on a large scale in the country and, by implementing Black Economic Empowerment (BEE) initiatives, it will directly benefit the

previously disadvantaged individuals (PDis), who happened to be mainly African Black, thus contributing to a more equitable distribution of wealth.

As with SMMEs in much of the rest of the world, South African SMMEs need assistance in various aspects of business such as business management, acquiring access to capital, developing human resources and skills training, gaining access to and capturing new markets, and making appropriate use of applicable technological advances and acquisition of raw materials at competitive prices. This study contends that education (defined as formal education, work experience and on-the-job training) forms the foundation for sustaining and growing a business. Human capital theory maintains that knowledge provides individuals with increases in their cognitive abilities, leading to more productive and efficient potential activity (Becker, 1964). As such, this study postulates that if profitable opportunities for economic activity exist the individuals with more or higher levels of human capital should be better at perceiving them.

Once engaged in the entrepreneurial process, such individuals should also have superior ability in successfully exploiting opportunities. Human capital, which arises from investment in formal education, work experiences and training (Carter *et al*, 2003), is now regarded as a predictor of venture performance and growth. In terms of educational level, Bates (1990) found that entrepreneurs who had a college education were significantly less likely to fail than those who did not. College-educated entrepreneurs also had greater access to loans from formal institutions. Kangasharju and Pekkala (2002) found that highly educated individuals contributed to higher rates of business growth. Similarly, Pena (2002) found that growth companies in Spanish firms were likely to be managed by entrepreneurs with college degrees.

Knowledge may be defined as being either tacit or explicit. Tacit knowledge refers to know-how, the often non-codified components of activity. In contrast, 'know-what' consists of the explicit type of information normally conveyed in procedures, processes, formal work documents and educational institutions (Davidsson and Honig, 2003). Solving complex problems and making business decisions involves an interaction of tacit and explicit knowledge. Thus individuals may be able to increase their knowledge as a result of formal education, such as tertiary education; informal education, such as work experience/on the job training; and non-formal education, such as adult education. Formal education at higher education institutions may assist the accumulation of explicit knowledge which may in turn provide skills useful to entrepreneurs.

Dobbs and Hamilton (2007) show that there are three factors that emerge consistently as being key to growth, namely, individual attributes of the entrepreneur, organizational characteristics and environmental influences. The first factor relates to the entrepreneur's personality and characteristics (Baum *et al*, 2001). It has also been argued that the mentality, in the form of individual matters, of the entrepreneur is strongly related to growth (Wijewardena *et al*, 2008, Davidsson and Honig, 2003). Recent evidence suggested that the personal characteristics showed a positive

relationship between expansion plan factors (Kozan *et al*, 2006). Similarly Kolvereid (1992) showed that individual factors such as education have been found to be related to aspirations, with people with lower education levels having fewer growth aspirations. This implies that the level of education and growth aspirations are directly related.

The second factor regarding growth is organizational characteristics (Kolvereid and Bullvag, 1996) which can include the growth strategy for, and management of, the organization, competitive strategies, management characteristics and other factors such as access to finance (Sexton, 1989). Finally, the third factor with respect to business growth is external influence. The relationship between growth aspirations and actual growth has been found to be influenced by environmental dynamism (Wiklund and Shepherd, 2003).

On the demand side, higher levels of education and longer previous managerial experiences result in the accumulation of explicit knowledge which contributes to the provision of skills to entrepreneurs (Davidsson and Honig, 2003). Forbes (2005) asserts that entrepreneurs with higher levels of education and work experience are likely to be more efficient in seeking, gathering and analyzing information about the availability of business opportunities. Gimeno *et al* (1997) show that prior managerial and entrepreneurial experiences positively influence the economic performances of new businesses. Chandler and Jansen (1992) emphasize that the number of businesses previously initiated by founders and the years they previously spent as owner/manager do not affect the growth of new firms; on the contrary, the years of general managerial experience in another firm are positively correlated with self-perceived management competence, which in turn is a predictor of growth. On the supply side, the level of education may serve as a proxy for persistence, motivation and self discipline, all of which can have a positive influence on providers of financial capital (Coleman, 2004).

Many studies have shown that tertiary or college education greatly raised a person's income. The earnings of higher-educated individuals are always well above the average (Becker, 1964). However, formal education does not necessarily result in increased earnings in a business environment: the subjects studied will have an influence on the performance and growth of a business. Becker (1964) points out that college graduates are not fully prepared for the labour market when they graduate and must be fitted into their jobs, even if they start a business venture, through formal and informal training programmes. Cooper *et al* (1994), in a longitudinal study of a large sample of new ventures in the USA, showed that high growth firms are more frequently created by higher-educated individuals.

Methodology

The aim of this study was to determine whether the level of education of the SMME owner/manager plays a significant role in growing SMME turnover and employee numbers. Two hypotheses were developed and tested.

- H₁: the level of education and turnover growth are independent.
- H₂: the level of education and labour growth are independent.

The two specific issues of turnover (that is, annual trading income) and labour growth and their relationship with education arose from the literature review which provided a rationale for developing and proposing these hypotheses.

The population of the study consisted of owner/ managers of small and medium size businesses, as classified in the Government White Paper, 2005, further categorized as manufacturing, agribusiness and retail (Parliament of the Republic of South Africa, 2005). The Small Enterprise Development Agency (SEDA) maintains databases of SMMEs registered in the respective districts in KwaZulu-Natal. The significance of using these databases, as they were, is that most registered businesses had been in existence for more than one year at the time of conducting the study and thus were not classified as 'survivalist'.

In order to obtain an in-depth study and ensure a high degree of reliability and validity, the researchers used a variety of probability and non-probability sampling techniques in selecting the sample for the study. Non-probability sampling was found to be suitable because the study sought to explore financing ideas that remain undeveloped in a heterogeneous population. The population for SMMEs was generated from information provided by SEDA: some 1,540 enterprises were listed on the SEDA database. The population of the study consisted of owner/managers of small and medium-sized firms in the eleven municipalities of KwaZulu-Natal Province, operating in the manufacturing, agribusiness, transport and retail sectors. The names of the enterprises in the database were organized in alphabetical order and a table of random numbers was used to select the 320 (21%) enterprises that formed the sample for the study.

The main survey instrument used was a questionnaire, which comprised two major sections. Section One consisted of items on demographic information of the responding firms, including gender, age, citizenship, education, number of employees, period of operation since start-up, form of business ownership and training undertaken by the enterprise owners. Section Two of the instrument was designed to collect information which would facilitate identification of the principal factors that contributed to SMME growth and creation of employment.

A pilot study was conducted on 30 enterprises and the questionnaire was then refined in light of these pre-study results. The reliability of the final instrument was calculated using Cronbach Alpha coefficients: the calculated Cronbach Alpha for this research was 0.845.

The validity of the research instrument was determined by taking expert advice from academics in the field of entrepreneurship who assessed the extent to which the instrument represented and logically connected the underlying theory and the

phenomena under study; and the relevance of the questions in the instrument to the research objectives.

In addition to the survey questionnaire, other different instruments were used; interviews, documentary evidence and observation. As a result, the instruments generated both qualitative and quantitative raw data. For the purpose of analyzing the data, the items in the questionnaire were assigned Likert scale scores. The data were then processed and analyzed using the statistical package for social sciences (SPSS).¹ The study employed a multistage sampling procedure. Purposeful sampling was used to select the towns whose SMMEs were included in the study. Within the selected towns judgmental and random sampling were applied to obtain the actual sample of cases. Judgmental sampling was used to solicit the responses of 320 small and medium-scale enterprises in Durban-Pinetown Metropole, Pietermaritzburg, Richards Bay, Empangeni, and Ladysmith. The sample sizes for the five towns were 496, 396, 420, 228 and 361 270 respectively. The selection to participate in the study was based on the firm qualifying as a small and medium-scale enterprise registered on the SEDA database. Hence, for the purpose of this study, SMMEs that were in operation for at least two years prior to the study being undertaken, having paid salaries/wages to workers in the three months preceding the study and, lastly, having employed between five and 250 employees were included in the study. However, it should be noted that the SMME sector is not well documented because censuses in a large number of less-developed countries, including South Africa, have not been undertaken and, as a result, useful data for SMMEs from official sources are largely absent.

Of the 1,540 enterprises on the SEDA database, 945 qualified for inclusion in the study. Because there was no authoritative information about which of the firms were small-scale enterprises (SEs) and which ones were medium-scale enterprises (MEs), only one sampling frame was compiled for the 1,540 enterprises. Sample frames were developed for the selected towns and the sample size for the study was distributed proportionately throughout the towns.

Survey results

The findings of the study are discussed below.

1. Gender and age

The rationale for the question on gender was to establish whether there were gender balances in the sub-sectors under investigation. Of the respondents, 61% were male and 39% were female. The majority of respondents across all sub-sectors were in the 31-40 age group, followed by the 41-50 age group.

2. Level of education of respondents

According to Storey (2004) experience and educational level achieved may provide signals of better human capital. The better the human capital, the greater the viability of the

start-up for growth, expansion and consequently access to business resources. Guzman (1994) views the entrepreneurial quality of the SMME owner as a critical factor affecting the ability of SMMEs to overcome barriers to survival and achieve sustainable growth. A combination of formal and on-the-job training may be regarded as one of the factors that sets the foundations for success. In order to establish the relationship between SMME owner/managers and the success of the business all respondents were therefore asked to specify their educational background. Six categories of highest qualification were used to describe the educational characteristics: primary, junior secondary, senior secondary, diploma, graduate and ostgraduate. The respondents were asked to indicate the highest level qualification achieved.

The results indicated that, at best, 37% of respondents had completed a senior certificate, 10% were graduates, 3% had completed some postgraduate qualification, 24% had completed junior secondary school and 6% had completed primary schooling.²

3. *Legal ownership*

The majority of owner/managers (59%) indicated that their chosen form of legal entity was the close corporation (CC), because of the limited liability and ease of registration. The second highest was private company at 18%, followed by sole trader at 14% and partnership at 9%.

4. *Number of employees and experience*

Forty-seven percent of owner/managers said that they employed between 1 and 20 employees. Fifteen per cent of owner/managers employed between 21 and 40 employees, 5% employed between 40 and 100 employees and 29% of respondents said that they employed more than 100 employees.

It is interesting to note that from inception to the time of the study, most firms (from observation) had a relatively low staff turnover with a resultant marked improvement in the level of skills in the workforce.

Based on the interviews, it was noted that many owners and/or managers of engineering/manufacturing companies had initially worked for a large conglomerate or company, where they gained valuable business and technical skills, and they had decided to leave formal employment and start their own businesses. Many of the owner/managers interviewed had been managers/workers at other companies and, having worked in that capacity for some time, they had decided to leave and start their own business. Many of them referred to the fact that they were able to attract customers away from their previous employers as a result of connections made during their employment. The biggest advantage (from observation) for these customers was the continuity of the same, if not better, level of service from the managers of their own new businesses. From observing owner/managers it is apparent that the most successful entrepreneurs/business owners are those who have gained some skill either in production processes or services or managing

some components of the production process. All respondents interviewed were owners/managers of their respective businesses.

5. *Growth in labour force*

Increases in the size of the labour force are good indicators for measuring the growth of a business.

Forty-eight per cent of respondents said that their businesses had expanded, 23% said their businesses had contracted and 29% said that there had been no change. In addition, changes in the nature of employment are important. It was found that there had been an overall reduction in the employment of unskilled labour, from 72% at inception to 56% at the time of the study. Employment rates for semi-skilled labour in companies employing 1-20 employees improved from 17% at inception to 26% at the time of the study. A relationship between the level of education and labour force growth could be identified: those entrepreneurs having had a tertiary level of education experienced a greater increase in the size of their labour forces in the two years preceding this study. It would appear that these entrepreneurs acknowledge and accept the value of improving the skills of the labour force.

6. *Increase in turnover (annual trading income)*

Changes in turnover are one of the indicators of growth of a business. Seventy-one per cent of the respondents indicated that their year-on-year turnover had increased since the inception of their businesses. Twenty-one per cent indicated that their businesses had not experienced improved turnover over the same period.

7. *Business funding*

Financial capital is one of the key resources for sustaining and growing a business. Respondents were requested to state the main sources of funds during the last two years. Fifty-seven per cent used commercial banks; 12% made use of Development Finance Institutions (DFIs) such as Khula Enterprises, Business Partners, Umsobomvu Youth Fund, etc; 25% made use of own funds and sources such as family or friends to start their business; and 4% used venture capital.

8. *Education and growth of labour force*

According to Storey (2004) experience and educational level achieved may provide signals of better human capital. The better the human capital the greater the viability of the start-up and the likelihood of growth, expansion and, consequently, access to business resources.

The Chi-square test result proved to be significant ($p < 0.05$), indicating that there is a relationship between the owner/manager's level of education and the ability of the business to increase the size of its labour force (during the two years preceding this

study). Thus it seems that the qualifications of the owners of the businesses did play a role in the ability of the business to increase its labour force.

(9) Education and turnover

The Chi-square test result proved to be significant ($p < 0.05$), indicating that there is a positive relationship between the level of education and the increased year-on-year turnover in the two years period preceding the study.

Summary of hypothesis testing.

Two hypotheses were tested.

- H_1 : *The level of education and turnover growth are independent.* This hypothesis was not supported. There was a relationship between the level of education and growth in turnover.
- H_2 : *The level of education and labour growth are independent.* This hypothesis was not supported. There was a relationship between the level of education and growth in labour.

Conclusions

This paper explores the relationship between the level of education of the business owner and the growth of the business. We found that most of the entrepreneurs had a senior certificate (Grade 12) as the highest level of qualification. The majority of the businesses were owned by males and the most common form of legal ownership was the close corporation. A cross-tabulation was performed between the level of education of the respondents, in relation to the increase in the size of the labour force that their respective businesses had experienced over the preceding two years. The Chi-square test result proved to be significant indicating that there was a relationship between the level of education of the owners/managers and the ability of their businesses to increase the size of its labour force.

A cross-tabulation of the owner's level of education and the level of turnover was also carried out. The Chi-square test result proved to be significant, indicating that there was a relationship between the level of education of the owner/manager and year-on-year increases in turnover.

Recommendations for the NSBS and the role of HE

Further to the discussions on the perceived flaws in the NSBS, we offer the following recommendations for improvement.

(1) Emphasis on education (both formal and informal)

SMME education must be incorporated into the curricula for schools and HEIs. In Australia, for instance, where the failure rate is also regarded as unacceptably high,

many SMME owners have indicated that government should do more to ensure that people receive at least basic training in business management before they start a business.

(2) Better access to information and advisory services

The government needs to redesign the current method of providing information, advice and training of entrepreneurs. Updates to relevant information and advice should be made available through e-mail, print media, television, remote centres, regional government offices and the internet. Awareness of services and the performance of institutions tasked with delivering the services must be considerably improved.

(3) Renewed efforts to promote entrepreneurship in schools and HE/s

The government has to re-emphasize the importance of entrepreneurship to all citizens. This should start at primary school level so that an awareness of entrepreneurial activities is generated amongst all South Africans, with regard to the possibilities and opportunities for undertaking new initiatives and this must be emphasized throughout the academic careers of students. For those not entering HE, the emphasis should be on apprenticeship programmes facilitated by government and business under the guise of Public Private Partnerships (PPP).

Tertiary institutions represent an environment in which students can be prepared, by providing the necessary knowledge and skills, to become entrepreneurs. The type of HE education offered would have an impact on the success and the growth of a business, in terms of increasing turnover and increasing the labour force. Brijlal (2011) proposes that entrepreneurship education should be taught to all final year students across all disciplines. Education about, and for, entrepreneurship will increase students' interest in becoming entrepreneurs after graduation (Friedrich and Visser, 2005). According to Krueger and Brazeal's model of entrepreneurial potential (Krueger and Brazeal, 1994), education should improve the perceived feasibility for entrepreneurship by increasing the knowledge of students, building confidence and promoting self-efficacy. It should also improve the perceived desirability for entrepreneurship by showing students that this activity is highly beneficial to the economy and socially accepted by the community and that it can be personally rewarding work.

In South Africa, as its tertiary institutions and state agencies learn more about SMMEs and about each other they will need to continue to redefine their roles and adjust their programmes. Tertiary institutions have the infrastructure to provide the arena and the networking systems to bring people together. As the culture of tertiary institutions changes it will become more important to understand the entrepreneurial needs of students so that there is institutional alignment of higher education offerings and the needs of the students. The totality of the experience that students gain in higher education is, and will be, influenced by many factors, including the prior experiences they have had in education, their personal aspirations for the future, their expectations concerning their

life while at university and how their experience at university supports their future aspirations (Collins *et al*, 2004).

Universities and Technikons (Universities of Technology) in South Africa can contribute to creating entrepreneurial skills by providing, amongst others, the following.

- The knowledge, skills and attitudes that its graduates will possess (the aim being to effect a change in the mindset of students, from potential employees to potential employers).
- Help for individual students to 'position' themselves in relation to self-employment. Students should be supported in identifying and in considering self-employment as an option.
- Practical business skills for students and facilitation of experiential learning and exposure to opportunities with the small, medium and micro enterprise sector that will be mutually beneficial.
- Experts, for example successful entrepreneurs or lecturers, who will teach these graduates, be involved in wealth generation activities and facilitate and generate opportunities for the student body (SRC, the Student Representative Council) also to become involved.
- Links and interaction between HEIs and their local business support organizations.

According to the government's White Paper on National Strategy for the Development and Promotion of Small Business in South Africa, Notice 213 (DTI, 1995) the quantity of research on trends, problems and the needs of small enterprises among South African institutions of higher learning has increased significantly. However, the volume of research with a practical orientation and/ or policy relevance is still very limited in the context of the needs of the country.

Future research

Future research should establish the extent to which issues such as the type of education, race and gender contribute to the success of businesses and identify what barriers inhibit growth in the context of a developing economy. Future research should also consider the relationship between the different types of education (formal and informal) and business growth.

Notes

¹The Statistical Package for Social Sciences, SPSS, is a proprietary program developed and sold by IBM, see also <http://www.spss.com/>.

²The Senior Certificate, now the National Senior Certificate, is a qualification for those in secondary education in South Africa. It is roughly equivalent, for instance, to AS level in the UK or a High School Diploma in the USA. In 2010 there were some 642,000 candidates for the National Senior Certificate. See also: <http://www.education>.

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