

***A critical analysis of entrepreneurial and business skills in SMEs
in the textile and clothing industry in Johannesburg, South
Africa***

By
Thandeka Ruth Kunene

Submitted in fulfilment of the requirements for the degree
Philosophiae Doctor Entrepreneurship

In the Faculty of Economic and Management Sciences
At the University of Pretoria, South Africa

Supervisor: Prof J.J. van Vuuren

November 2008

Abstract

South Africa has abandoned apartheid and re-entered the global economy where factors like the lack of global competitiveness and global recession, among other factors, are contributing to poor performance of South African firms. This poor performance has resulted in many firms restructuring, shrinking, closing down and losing hundreds of thousands of jobs. The South African government is promoting SMEs as alternative employment source. The problem is the high rate of SMEs closure. To sustain jobs, SMEs must survive and grow. Critical to aiding SME growth is the understanding of various internal and external factors which determine success or failure. This study investigates “skills” as one of the significant internal factors.

The literature reviews eight models by authors Glancey (1998), van Vuuren & Nieman (1999), Erikson (2002), Wickham (1998), Man et al (2002), Ucbasaran et al (2004), Darroch & Clover (2005) and Perks & Struwig (2005) to present the integrated model for entrepreneurial performance as “**integrated $\uparrow E/P = f(\text{key skills}) \times [1 + h(\text{supporting skills})]$** ”. The key skills are represented as multiplicative, symbolising the fact that the absence of any one key skill will lead to zero performance. Based on this model, several propositions are put forward.

The aim of this study was to investigate whether the key set of competencies identified by the eight models reviewed (as presented in the detailed model) can be applied to a specific industry (the textile and clothing industry) at a specific geographic location (Johannesburg).

The cross-sectional, ex post facto, formal empirical study involved interviewed 570 manufacturing SMEs (197 successful and 373 less successful SMEs). The study ascertained which skills the SME owner/managers perceived as important for success; how they rated their competencies in the said skills; and whether they had been trained in those skills. The instrument used was a structured questionnaire. The statistical analyses included descriptive statistics, frequencies, factor analysis, Cronbach alpha coefficient, Chi-square; t-test and one-way ANOVA tests. The analysis was concluded with a Scheffe’s multiple comparison procedure.

The main findings of the study are:

1. Key skills that enhance SME success include the ability to gather resources, marketing, motivation, legal, financial and operational management skills.
2. Successful SMEs considered key skills to be more important and rated themselves more competent in most of the key skills than did less successful SMEs.
3. Successful SMEs had been trained in more skills categories than less successful SMEs, with most of the successful SMEs having received training in all the key skills identified.

This study recommends that the training of SMEs should focus on developing those skills identified as key internal factors influencing SME success by following the training model **“Training for $\uparrow E/P = \text{training in key skills} \times [1 + \text{training in supporting skills}]$ ”**. The study concludes by listing limitations and suggesting further research.

Acknowledgements

My sincere gratitude to:

1. The SMEs who took part in the study; I salute them for their courage, commitment and pioneering spirit. This study is dedicated to them.
2. My study leader, Prof. Jurie van Vuuren, for his expert advice, his guidance, his support and for reawakening my enthusiasm for research analysis.
3. The UP bursary for financial aid.
4. Government officials, for opening information gates and SME linkages, in particular Linda Vilakazi-Tselane of the city of Johannesburg and Zodwa Mabaso of the Department of Labour.
5. Everyone who assisted with the research process, in particular the interviewers, Refilwe Matatiele for library support, Jacqui Sommerville and Paul van Staden for the statistical processing, Yvonne du Plessis and Marion Marchand for the editing.
6. My classmates, in particular Peter Nemaenzhe, whose camaraderie helped me not to give up.
7. My family and friends, for their support, patience and encouragement. My dad Tutu Vincent, who laid the foundations of my love for education; my mom Gemma, who is a role model in perseverance; my sister Thembi, whose company (Siyazi Investments) granted me financial support and study leave; my sister Phindi for believing in me; my brother Daluxolo for linking my studies with my SME (house of hemp); my niece Kutlwano for encouraged me to reach excellence and my friend Ras Mkushi for pushing me to “up and just do it”.

Most of all, I thank the Almighty I AM, Emperor Haile Selassie I, the Conquering Lion of Judah, whose blessings allowed me the privilege of completing this study in this time. Without His compassion, His generosity and His Love, I can do nothing.

TABLE OF CONTENTS

Chapter 1: Introduction

1.1	Introduction	1
1.2	Background	1
1.3	The situation in South Africa	3
1.4	Research problem	6
1.5	Study purpose	9
1.6	The textile and clothing industry in Johannesburg, South Africa	13
1.7	Defining constructs.....	17
1.8	Research questions	22
1.9	Research aims and objectives.....	22
1.10	Propositions.....	23
1.11	Research method	25
1.12	Benefits of the study	25
1.13	Outline of the study	26
1.14	Reference technique	27
1.15	Conclusion	27

Chapter 2: Factors affecting SME success

2.1	Introduction.....	28
2.2	The external/exogenous factors.....	29
2.2.1	Economic factors.....	30
2.2.2	Political-institutional factors.....	32
2.2.3	Socio-cultural factors.....	34
2.2.4	Market opportunity factors.....	39
2.3	The internal/endogenous factors.....	41
2.3.1	Company demographics.....	41
2.3.2	Human capital.....	42
2.3.3	Demographics.....	45
2.3.4	Previous experience.....	46
2.3.5	Characteristics of the entrepreneur.....	48

2.3.6	Capabilities, abilities and skills of the entrepreneur.....	55
2.4	The entrepreneurship performance model.....	57
2.4.1	Personal skills (P/S).....	64
2.4.2	Entrepreneurial skills (E/S).....	65
2.4.3	Business management skills.....	66
2.5	Integrated model and propositions	70
2.6	Conclusion	80

Chapter 3: The entrepreneurship process

3.1	Introduction	82
3.2	The entrepreneurship process.....	82
3.3	Skills required in the entrepreneurship process.....	85
3.3.1	Entrepreneurial Process - Stage 1	86
3.3.2	Entrepreneurial Process - Stage 2.....	93
3.3.3	Entrepreneurial Process - Stage 3.....	99
3.3.4	Entrepreneurial Process - Stage 4.....	106
3.4	Summary and propositions.....	113
3.5	Conclusion	116

Chapter 4: Acquiring skills

4.1	Introduction	117
4.2	Acquiring of skills.....	117
4.3	Entrepreneurship education	120
4.4	Entrepreneurship training	121
4.5	Training models.....	131
4.6	Summary and propositions.....	135
4.7	Conclusion	138

Chapter 5: Research Methodology

5.1	Introduction	140
5.2	Research problem	141

5.3	Objectives of the study	142
5.4	Research design	143
5.5	Propositions.....	146
5.6	Sampling design	152
5.7	Instrument and questions	155
5.8	Data collection methods	159
5.9	Analysis methods	159
5.10	Research findings reporting	172
5.11	Conclusion	172

Chapter 6: Research findings

6.1	Introduction	173
6.2	Response rate	174
6.3	Personal demographics.....	174
6.3.1	Gender.....	174
6.3.2	Average age of respondents.....	175
6.3.3	Ethnic groups.....	176
6.3.4	Language.....	177
6.3.5	Education background	178
6.3.6	Work experience	179
6.4	Business demographics	180
6.4.1	Number of years in business	180
6.4.2	Number of employees.....	181
6.4.3	Income	181
6.4.4	Business sub-sector.....	182
6.4.5	Regions.....	182
6.4.6	Location	184
6.4.7	Product focus	184
6.4.8	Form of business	185
6.5	Descriptive statistical structure	186
6.6	Validity and reliability	186
6.6.1	Procedure for determining factor structure.....	187
6.6.2	Factor analysis – on the importance of skills	188
6.6.3	Factor analysis – on competence in these skills	194

6.6.4	Testing the statistical and substantive significance.....	197
6.6.5	The chi-square test	198
6.6.6	t-tests	209
6.6.7	One way ANOVA	214
6.6.8	Impact.....	245
6.7	Conclusion	247

Chapter 7: Conclusion

7.1	Introduction	249
7.2	Overview of the literature study.....	250
7.3	Research objectives revisited.....	253
7.4	Results revisited	254
7.5	Contribution of the study	261
7.6	Limitations of the study.....	262
7.7	Recommendations	264
7.8	Conclusion	268

References	I
-------------------------	----------

Annexures	a
------------------------	----------

LIST OF TABLES

Table 1.1:	Summary of the factors that influence venture success	12
Table 2.1:	The Hofstede dimensions with key entrepreneurial dimensions.....	38
Table 2.2:	Summary of the skills constructs as per the 8 models reviewed.....	62
Table 2.3	Factors affecting the performance of SMEs	80
Table 2.4:	Skills needed for increasing entrepreneurial performance	81
Table 3.1:	Business factors and questions for opportunity evaluation.....	88
Table 3.2:	Team factors and questions for opportunity evaluation.....	89
Table 4.1:	Intervention types.....	128
Table 4.2:	Classification of skills constructs and related training	132
Table 4.3:	The improved entrepreneurship training model.....	135
Table 5.1:	The 20 skills categories used in the final questionnaire	144
Table 5.2:	Descriptors of the formal research design.....	144
Table 5.3:	Study design flow chart - from constructs to questionnaire	158
Table 5.4:	Types of data and their measurement characteristics.....	159
Table 5.5:	Summary of validity estimates.....	161
Table 5.6:	Summary of reliability estimates.....	162
Table 5.7:	Analysis done	165
Table 6.1:	Gender composition	174
Table 6.2:	Age of respondents	176
Table 6.3:	The home language of the respondents.....	178
Table 6.4:	Number of employees	181
Table 6.5:	Subsector	182
Table 6.6:	The regions where the business operates	183
Table 6.7:	Rotated factor analysis - perception on the importance of skills.....	188
Table 6.8:	Cronbach alpha results - importance of skills.....	189
Table 6.9:	Factor correlation for rotated factors on importance.....	192
Table 6.10:	Factor score covariance on importance	192
Table 6.11:	Item analysis for factor 1 on importance	192
Table 6.12:	Item analysis for factor 2 on importance	193
Table 6.13:	Rotated factor analysis - respondents rating their competence	194
Table 6.14:	Cronbach alpha results - competence rating.....	195
Table 6.15:	Factor correlation for rotated factors on competence.....	196
Table 6.16:	Factor score covariance on competence	196

Table 6.17: Item analysis for factor 1 on competence	196
Table 6.18: Item analysis for factor 2 on competence	197
Table 6.19: Significant differences between the SMEs on importance	199
Table 6.20: Significant differences between the SMEs on competence	202
Table 6.21: Significant differences between the SMEs on training	206
Table 6.22: Independent <i>t</i> -test - on importance	209
Table 6.23: Independent <i>t</i> -test - on competence	210
Table 6.24: Independent <i>t</i> -test - on number of courses attended	212
Table 6.25: Comparison of factor training areas - by success	213
Table 6.26: ANOVA 1 results - importance of factor 1 - successful	215
Table 6.27: Detailed ANOVA 1 results	215
Table 6.28: Variables that show significant differences from ANOVA 1	216
Table 6.29: ANOVA 2 results - importance of factor 1 - less successful	218
Table 6.30: Detailed ANOVA 2 results	218
Table 6.31: Variables that show significant differences from ANOVA 2	219
Table 6.32: Scheffe's comparisons for regions for ANOVA 2	220
Table 6.33: Scheffe's comparisons for form of company for ANOVA 2	221
Table 6.34: ANOVA 3 results - importance of factor 2 - successful	222
Table 6.35: Detailed ANOVA 3 results	222
Table 6.36: Variables that show significant differences from ANOVA 3	223
Table 6.37: ANOVA 4 results - importance of factor 2 - less successful	224
Table 6.38: Detailed ANOVA 4 results	225
Table 6.39: Variables that show significant differences from ANOVA 4	226
Table 6.40: Scheffe's comparisons for regions for ANOVA 4	227
Table 6.41: ANOVA 5 results - competence in factor 1 - successful	228
Table 6.42: Detailed ANOVA 5 results	228
Table 6.43: Variables that show significant differences from ANOVA 5	230
Table 6.44: ANOVA 6 results - competence in factor 1 – less successful	231
Table 6.45: Detailed ANOVA 6 results	231
Table 6.46: Variables that show significant differences from ANOVA 6	232
Table 6.47: Scheffe's comparisons for regions for ANOVA 6	233
Table 6.48: Scheffe's comparisons for form of company for ANOVA 6	234
Table 6.49: ANOVA 7 results - competence in factor 2 - successful	234
Table 6.50: Detailed ANOVA 7 results	235
Table 6.51: Variables that show significant differences from ANOVA 7	236

Table 6.52: Scheffe's comparisons for regions for ANOVA 7	237
Table 6.53: ANOVA 8 results - competence in factor 2 - less successful	238
Table 6.54: Detailed ANOVA 8 results.....	239
Table 6.55 Variables that show significant differences from ANOVA 8.....	240
Table 6.56: Scheffe's comparisons for region for ANOVA 8	241
Table 6.57: ANOVA of the difference between the SMEs on importance	242
Table 6.58: ANOVA of the difference between the SMEs on competence	244
Table 6.59: Impact of training as perceived by the two groups	245
Table 7.1: Variance between demographics comparing the two samples	260
Table 7.2: List of functional and enterprising skills required by SMEs	265

LIST OF FIGURES

Figure 1.1:	Venture failure slide	10
Figure 1.2:	The textile and clothing industrial pipeline	14
Figure 1.3:	Classification of SMEs	18
Figure 2.1:	Drivers of the entrepreneurial process	44
Figure 2.2:	Maslow's hierarchy of needs.....	48
Figure 2.3:	Glancey et al's model of business performance.....	58
Figure 2.4:	Wickhams model of the entrepreneurial performance.....	59
Figure 3.1:	Entrepreneurial process model by Hisrich & Peters.....	83
Figure 3.2:	The entrepreneurial process by Ardichvili et al	84
Figure 3.3:	The adapted entrepreneurial process model	85
Figure 3.4:	Skills required for stage 1 of the entrepreneurship process	92
Figure 3.5:	The planning process for a business	94
Figure 3.6:	Skill required for stage 2 of the entrepreneurship process.....	98
Figure 3.7:	Skills required for stage 3 of the entrepreneurship process	105
Figure 3.8:	Skills required for stage 4 of the entrepreneurship process	113
Figure 3.9:	Citations of important skills per stage	114
Figure 4.1:	Venture growth and internal capabilities model	139
Figure 5.1:	The research process	140
Figure 5.2:	Steps in analysing data.....	160
Figure 5.3:	Process for establishing statistical significance.....	165
Figure 6.1:	Gender composition of the successful and less successful SMEs.....	175
Figure 6.2:	Ethnic groups of the two samples	177
Figure 6.3:	Education background	178
Figure 6.4:	Work experience of the respondents in the two samples.....	179
Figure 6.5:	Years in business.....	180
Figure 6.6:	Annual income	182
Figure 6.7:	Regions of operations per sample	183
Figure 6.8:	Distribution per location	184
Figure 6.9:	Product focus per sample	185
Figure 6.10:	Forms of business per sample	185
Figure 6.11:	Areas of training comparing the two samples	213
Figure 6.12:	ANOVA tests computed	214

Figure 6.13: Comparing the two samples on importance	243
Figure 6.14: Comparing the two samples on competence	244
Figure 6.15: Correlation between training and factor 1 – competence	246
Figure 6.16: Correlation between training and factor 2 – competence	247
Figure 7.1: Research approach.....	249

ABBREVIATIONS

ACP	African-Caribbean-Pacific
AGOA	African Growth and Opportunity Act
ANOVA	One way Analysis of Variance
BEE	Black Economic Empowerment
CBOs	Community Based Organizations
COJ	The City of Johannesburg
DOL	Department of Labour
DTI	Department of Trade and Industry
EDA	Exploratory Data Analysis
EDU	Economic Development Unit
EU	European Union
GDP	Gross Domestic Product
GEAR	Growth, Equity and Redistribution
GEM	Global Entrepreneurship Monitor
GP	Gauteng Province
HR	Human Resources
UA	Uncertainty Avoidance
ICT	Information and Communication Technologies
ITO	Industry Training Organizations
KPAs	Key Performance Areas
LBSCs	Local Business Support Centres
nAch	need for Achievement
NGOs	Non-Governmental Organisations
OECD	Organisation for Economic Cooperation and Development
PD	Power Distance
PDI	Previously Disadvantaged Individuals
RDP	Reconstruction and Development Programme
SA	South Africa
SARS	South African Revenue Services
SAWCTU	South African Workers in the Clothing and Textile Union
SBDC	Small Business Development Cooperation
SMEs	Small Enterprises including small, very small, micro, informal and medium
SMMEs	Small, Medium and Micro Enterprises
T&C	Textile and Clothing Industry

UK	United Kingdom
UP	University of Pretoria
USA	United States of America
UYF	Umsobomvu Youth Fund
VAT	Value-Added Tax
WTO	World Trade Organization

Chapter 1: Introduction

1.1 Introduction

This document outlines and reports the findings of a research study that was undertaken to investigate the skills (and related training) necessary for the survival and the growth of small enterprises (SMEs) in the textile and clothing (T&C) industry in Gauteng, South Africa (SA). This chapter describes the background to the problem, articulates the aims, objectives and related benefits of the study; introduces certain terms, clarifies concepts and gives operational definitions for constructs that are used in the study. It gives details regarding the method of study; the referencing technique used and finally guides the reader on the outline of the study report.

1.2 Background

With the spread of capitalism and globalization, entrepreneurship continues to gain importance (Rwigema & Venter, 2004:315; OECD, 2002b:7; GEM, 2005b:5; Dawson, Breen & Satyen, 2002:302; Lee, Lim, Pathak, Chang & Li, 2006:352). Statistics show that there is no better way to provide a broad basis for rapid economic growth than to dramatically increase the number of active entrepreneurs in a society (McClelland, 1986:232; Pretorius, van Vuuren & Nieman, 2005b:413; Timmons, 1999:4; Themba, Chamme, Phambuka & Makgosa, 1999:103; Watson, Hogarth-Scott & Wilson, 1998:218; Umsobomvu, 2004:iv).

Linked with entrepreneurship is the SME sector. The important contribution of a dynamic SME sector to economic growth has been widely acknowledged (Timmons, 1999:17; Henning, 2003:1; McPherson, 2000:514; Baron, 1998:275; Dreisler, Blenker & Nielsen, 2003:383). SMEs are said to be major components of many economies (Miller, Besser, Gaskill & Sapp, 2003:215; Joubert, Schoeman & Blignaut, 1999:23; GEM, 1999:5). As a result, most governments, bilateral and multilateral agencies as well as non-governmental organizations worldwide have policies in place to assist entrepreneurship development (Rogerson, 2001a:115; Honig, 1998:372; Robertson, Collins, Medeira & Slater, 2003:308; Lange, Ottens & Taylor, 2000:5; Luiz, 2001:53).

Many authors have pointed out that SMEs are important because they contribute to:

- **The GDP:** SMEs comprise a high percentage of businesses and account for between 30% and 60% of the GDP of many countries (OECD, 2002b:8; Tustin, 2001:5; GEM, 1999:7; Praag & Versloot, 2007:351).
- **Economic development:** SMEs are seen to be the engine that drives economic progress because they develop new markets (including exports); they ensure continuous renewal of stagnating industries, they are a source of economic diversity and they develop vibrant commercial culture (Santrelli & Vivarelli, 2007:2; Pretorius & van Vuuren, 2003:514; Thomas & Mueller, 2000:287; Henning, 2003:2; Miller et al, 2003:215).
- **Wealth creation:** SMEs create wealth by stimulating demand for investment, for capital goods and trading (Dana, 2001:405; Lange et al, 2000:5; GEM, 2006:10; Robertson et al, 2003:308).
- **Job creation:** SMEs are labour intensive and account for over half of the employment in the private sector (Joubert et al, 1999:24, Rogerson, 1999:131; Ligthelm & Cant, 2002:3; GEM, 2002b:7).
- **Economic flexibility:** SMEs' ability to quickly manufacture smaller quantities puts competitive pressure on larger firms to boost productivity, thus enhancing economic flexibility (Lussier & Pfeifer, 2001:228; Gibbon, 2004:156; Kangasharju, 2000:28).
- **Innovation and technology transfer:** SMEs provide a nursery and proving ground for product differentiation, market innovation, technological change and entrepreneurship (Rwigema & Venter, 2004:315; OECD, 2002b:10).
- **Local resources:** Most SME products tend to originate from indigenous crafts that reflect local technologies, local raw materials and the local knowledge base (Rwigema & Karungu 1999:112; Luiz, 2001:54; Bannock, 2002:1; Romijn, 2001:58).
- **Development of skills:** SMEs provide opportunities for individuals to upgrading their human capital and realize their full potential (Gbadamosi, 2002:95; Nieman, 2001:445).
- **Socio-economic transformation:** SME promotion has become a political necessity, as they are a means for bringing social change; equitable distribution of employment and income generating opportunities; exploring the entrepreneurial talents of natives; the empowering of marginalized segments of the population; improving communities' standard of living; creating conditions for sustainable livelihoods and eliminating conditions of extreme poverty (Ladzani & van Vuuren, 2002:154; Mogale, 2005:135; Tustin, 2001:24).

- **Crisis or hardship:** SMEs are said to be particularly important during times of crisis or hardship related to conflict, depression, recession and natural disasters, as SMEs are likely to be more resilient and people turn to SMEs to seek new means of generating income to cope with these shocks (Gurol & Atsan, 2006:26; USAID, 2003).

1.3 The situation in South Africa

South Africa is a middle income, high growth and highly diverse country that has particularly turbulent social and economic conditions (Morris & Zahra, 2000:92; GEM, 2005a:15; GEM, 2006:13). This is partly due to two major factors namely the unfolding of a dynamic process of internal transformation and the country's re-entry into the global economy after decades of international trade and other forms of sanctions (Luiz, 2001:55; Berry, Von Bottnitz, Cassim, Kesper, Rajaratnam & Van Seventer, 2002:1).

The internal transformation is due to the political liberation that abandoned the last vestiges of apartheid and moved towards democracy with majority rule (Tustin, 2001:25). This transformation led to the re-instatement of fundamental economic rights to the majority black populace (Morris & Zahra, 2000:92). The new government has identified job creation and employment as one of the national priorities for equitable economic development (Darroch & Clover, 2005:321; Nafukho, 1998:100).

South Africa's entry into the global economy resulted in the country's international trade commitments under the World Trade Organization (WTO) and the removal of policies designed to protect South African industries (Nasser, du Preez & Herrmann, 2003:393). The opening up of the economy to unfettered global trade exposed South Africa to fierce global competition (Mayrhofer & Hendriks, 2003:597). This severely affected South Africa's traditional industries which, in the absence of global competitiveness, had enjoyed wealth creation and employment opportunities (Viviers, Van Eeden & Venter, 2001:12).

By the end of the 1990s, business liquidations were on the rise, with many formal enterprises restructuring and retrenching more than 100,000 jobs every year (Tustin, 2001:5; Morris & Zahra, 2000:92; Nasser et al, 2003:393; Ligthelm & Cant, 2002:4.). This coupled with a population of 43,9 million (Mogale, 2005:135) and the high population growth (Toye, 2002:2), has resulted in unprecedented unemployment rates, estimated to

be between 30% and 41% in 2001 (Rwigema & Venter, 2004:10; Nasser et al, 2003:393; van Vuuren & Nieman, 1999:1, Viviers et al, 2001:10). These high unemployment rates cannot accommodate the annual rush of between 325 000 and 462 000 school leavers and university graduates wanting to enter the job market (Pretorius & Shaw, 2004:222; van Vuuren & Nieman, 1999:1; South Africa, 2006; South Africa, 2002a).

There is little prospect of a dramatic positive growth in the formal sector, which is currently growing at approximately 3% (Nieman, 2001:445). However, with SA's low (2%) enterprise density (which refers to the percentage of existing and potential entrepreneurs), there is room for expanding active enterprises (van Vuuren & Nieman, 1999:2). Therefore one logical solution to SA unemployment threat is to promote self-dependency, self-employment, entrepreneurship and SME development (Pretorius & Shaw, 2004:221; Nieman, 2001:445; Nasser et al, 2003:395, Umsobomvu, 2002:1).

The contribution that SMEs can make to the South African economy development is valuable, significant, and of particular importance because 80% of the businesses in South Africa are described as SMEs (Baard & Van Den Berg, 2004:1; Clover & Darroch, 2005:238; South Africa, 2006; Ntsika, 2001:37). SMEs contribute at least 35% of the GDP (Rwigema & Venter, 2004:10); generate 40% of all economic activities (Perks & Struwig, 2005:171; Morris, Pitt & Berthon, 1996:59; Berry et al, 2002:4); employ over 50% of the working population (Rwigema & Karungu, 1999:113; Cornwall & Naughton, 2003:61) and promote capacity building (Luiz, 2001:54; Pretorius, Millard & Kruger, 2005a:55).

Yet the South African entrepreneurial environment is marked by a combination of negative factors including the following:

1. South Africa has the lowest entrepreneurial activity rate of all developing countries (GEM, 2005b:7).
2. In general, South Africans are not socialized to become entrepreneurs, but to enter labour markets as employees (Van Aart, Van Aart & Bezuidenhout, 2000:127).
3. Furthermore due to the distortions created by apartheid, the supply of entrepreneurs is socially skewed, with the black population lagging behind the whites in entrepreneurship. It is estimated that only 1.4% of Africans are entrepreneurs compared with 7.5% of the whites (Luiz, 2001:55).

4. The highest percentage of black SMEs is in the survivalist class, where returns are very low and limited (Rwigema & Venter, 2004:15; Berry et al, 2002:5).
5. Most of the South African population remains excluded from the formal economy (Morris et al, 1996:64), as they lack collateral to secure start-up and running capital and are thus considered too risky for many financiers (GEM, 2003b:12).
6. The apartheid system also created an under-educated black majority, robbing black people of skills that are important for SME success (Rwigema & Karungu, 1999:113; Morris et al, 1996:72).

Nevertheless, in South Africa there is a vast amount of dormant human and social capital which can be leveraged into generating jobs and wealth across both the formal and the informal sectors of the economy (Nasser et al, 2003:394). The government of the new South Africa has placed an increased emphasis on the development of SMEs as the most important avenue for achieving national objectives like job creation (South Africa, 2001a; Davies, 2001:4; Ladzani & van Vuuren, 2002:154; Pretorius & Shaw, 2004:222; Pretorius, et al, 2005b:414; Rogerson, 2001a:116; Rwigema & Karungu, 1999:113; Tustin, 2001:14).

SME development forms an important part of the SA government's active strategy to ensure mobility between the first and second economies in order to help alleviate poverty, create profitable opportunities for indigenous entrepreneurs and create wealth for the previously disadvantaged people (Morris & Zahra, 2000:92; Nafukho, 1998:102; Themba et al, 1999:103; Tustin, 2001:23).

Thus the government initiated interventions such as the Reconstruction and Development Programme (RDP) and the growth, equity and redistribution (GEAR) policies to be used as a platform for encouraging entrepreneurial activities in the SME sector (Nasser et al, 2003:394). In 1995 the White Paper on National Strategy for the Development and Promotion of Small Business (South Africa, 1995) stated that "the real engine of sustainable development and equitable growth in South Africa is through the private sector, with the SMEs playing an important part". To further this, the government launched the Small Business Act 102 of 1996 (South Africa, 1996; Henning, 2003:3) whose aim is to increase entrepreneurial activity in the country. These and other policies such as the Integrated Small Business Development Strategy for South Africa; the Black Empowerment Policy, the Intellectual Property Policy; the Tax Policy, the Labour Policy;

the Trade and Industry Policy and the Competition Policy, all support SME development and promotion (Nasser, 2003:394; Rwigema & Venter, 2004:315; Rogerson, 2000:676).

One example of government initiatives to support SME development is training aimed at increasing skills of SME owners (Umsobomvu, 2002:3).

1.4 Research problem

While the nascent entrepreneurship activities rate for South Africa is low at 3.6% (GEM, 2005a:18), generally there is not overall scarcity of nascent entrepreneurship, as new enterprises are being established at a rapid rate, with many youngsters now considering entrepreneurship as a career option (Baron, 2003:253; Rogerson, 2001a:117). The problem is the rather alarmingly high business contraction and closure rate in this segment (Cornwall & Naughton, 2003:71; Santrelli & Vivarelli, 2007:3). New jobs arise from two sources, namely the expansion of existing enterprises or the net creation of new businesses (Pretorius et al, 2005b:414). Mead & Liedholm (1998:61) calculate the number of net new jobs created in the SME sector as follows:

$$\text{Employment in SME sector} = \text{birth of new SMEs} + \text{growth of SMEs} - \text{contraction of existing SMEs} - \text{closure of existing SMEs}.$$

This study adopts this equation. However, caution must be taken when using this equation as it is. As it is, this equation ignores the role big business plays in job creation. It would be more accurate if it was preceded by an equation that shows that the enterprises are made up of big business, public sector and small business. Following this clarification this equation would then focus only on employment in the SME sector.

Despite the dynamics that led to the rapid growth of the SME sector, and the numerous efforts by government to assist the development of this sector; the SMEs sector is notoriously volatile and experiences a high degree of business closure and shrinkage (MacMahon & Murphy, 1999:25; Baard & Van Den Berg, 2004:1; Eriksson & Kuhn, 2006:1033). This implies that SMEs are limited in their ability to create long-term sustainable employment and may also be responsible for the greatest number of job and wealth losses (Way, 2002:766; Ligthelm & Cant, 2002:4; Rogerson, 2001a:117; Ahwireng-Obeng, 2003:1).

It must be noted however that the term business closure encompasses all terms referring to discontinuance of business operations for any reason and formal bankruptcy proceedings. However there are SMEs that have exited their businesses not because of the failure to create wealth or reach adequate turnover targets but also due to numerous other reasons that caused them to stop operations and close their business (Erikson & Kuhn, 2006:1021; Watson & Everett, 1999:31). These include owner retiring, illness, moving places or changing lifestyles, the business changing ownership, business being bought by another firm, merging with other companies, termination to prevent further losses, moving resources to other priorities or more profitable opportunities as well as failure to motivate oneself to make a go for it (GMAP, 2007:15; Nieman, 2006:226). This study uses the term business closure to describe 1. failed businesses that ceased due to bankruptcy and with losses and 2. non failed businesses that cease without loss (Watson, Everett & Newby, 2000:3). This study focuses on failed business and adopts the definition that “failure” is when an SME’s resources are exhausted and the firm lacks sufficient capital to cover the obligations of the business (Thornhill & Amit, 2003:497; Panco & Korn, 1999:1; Dahlqvist et al, 2000:15).

SMEs are the most vulnerable in terms of survival because of the liability of newness and smallness (Davila, Foster & Gupta, 2003:689; Thornhill & Amit, 2003:497; Kangasharju, 2000:28; Watson et al, 1998:218, Fielden, Davidson & Makin, 2000:296). The SME life span tends to be short, with approximately two thirds of all start-ups failing within the first five years (Solymossy & Penna, 2001; Ibrahim & Soufani, 2002:421; Miller et al, 2003:215; Ladzani & van Vuuren, 2002:155). Only small percentages stay in business in the long term, with many of the survivors achieving only marginal performance (Lussier & Pfeifer, 2001:228; Rogerson, 2001a:117; Freeman, 2000:372; GEM, 2007:5, MacMahon & Murphy, 1999:25).

In South Africa, this SME failure rate is somewhere between 70% and 80% (Van Eeden, Viviers, & Venter, 2003:13), costing the South African economy millions in rands and in employment (Baard & Van Den Berg, 2004:1). Furthermore, most South African SMEs are at the low end of the enterprise size scale and exist primarily as survivalist firms with little capacity for sustained survival or growth (GEM, 2007:20; Rogerson, 2001a:117). The opportunity for SMEs to create jobs and economic wealth will be missed if they cannot attain their potential (Fielden et al, 2000:303).

Despite the many challenges and difficulties of the SMEs, the sector has great potential for increased employment creation (Miller et al, 2003:215). While many SMEs fail, others survive beyond infancy and adolescence, becoming major success stories, creating wealth for their founders and jobs for the communities they serve (Thornhill & Amit, 2003:497; GEM, 2001a:8; Monk, 2000:12; Rogerson, 2001b:268). Studies have found that as much as 90% of the employment growth originates from the entrepreneurial sector of the South African economy (Morris et al, 1996:72). Growing SMEs create about 5.28 sustainable and long-term jobs in the first year to 8.14 jobs by the fourth year (Rogerson, 2001a:117; GEM, 2007:5; GEM, 2002a:5).

The employment record of SMEs would improve if, instead of failing, they could be assisted to reach steady growth path and become entrepreneurial (Kangasharju, 2000:28). Entrepreneurship should thus be the focus of intervention instead of supporting many struggling SMEs (Themba et al, 1999:110). The debate over the distinction between an entrepreneur and an SME is established and ongoing (Glancey, Greig, & Pettigrew, 1998:250). The main difference between an SME and entrepreneurship is that SMEs are started with the aim of supporting the owners, and normally have limited growth ambitions (Hisrich & Peters, 2002:13; Gundry & Welsch, 2001:453). By contrast, entrepreneurs are more opportunity driven, innovative, change-oriented, dynamic, formal, professional and strategic; they usually aim for high potential ventures (Mueller & Thomas, 2001:57; Morris et al, 1996:61; Rwigema & Venter, 2004:6).

At the same time SME survival is important in the theory of sustained entrepreneurship because the survival of the SMEs, especially in developing states and in periods of economic instability, can lead to sustained job creation (Glancey et al, 1998:250). Also a significant number of SMEs make their contribution by helping people survive when nothing better is available, and thus SMEs are appropriate for enabling a large number of people to earn some income; therefore making more people less poor (Rogerson, 2001a:118). Since this study is to investigate survival, success and growth factors, both entrepreneurs and SMEs are considered.

Clearly if SMEs are to be the vehicle for job creation they must be started, sustained and grown (Luiz, 2001:56; Gbadamosi, 2002:95; Clover & Darroch, 2005:239; Honig, 1998:373). The key issue facing government is how best to promote the creation of more SMEs with growth potential (Freeman, 2000:373), and at the same time help those SMEs

that are starting to survive and become efficient enough to achieve entrepreneurial growth, such that there is net firm creation (i.e. start-up exceeds closure) and firm expansion exceeds contraction of existing SMEs (Darroch & Clover, 2005:324; Fielden et al, 2000:296; Rogerson, 2001a:117, Nieman, 2001:446). Therefore any method that can aid in the successful growing of SMEs is important, not only to these SMEs but also to the entire economy of a country (Way, 2002:766; Glancey, 1998:18; GEM, 2003b:13).

1.5 Study purpose

The purpose of this study is to investigate the link between SME success, competencies of the SME team and the training that was received by the SME.

Critical to aiding the successful growing of SMEs is the understanding of which factors cause some firms to grow and become successful SMEs who create sustainable long-term employment opportunities (Rogerson, 2001a:118; Dockel & Ligthelm, 2005:54, Larsson, Hedelin, Garling, 2003:205), and which factors cause other firms to close down creating negative net jobs (Fielden et al, 2000:296; Honig, 1998:373; Watson et al, 1998:217; Baron, 1998:276).

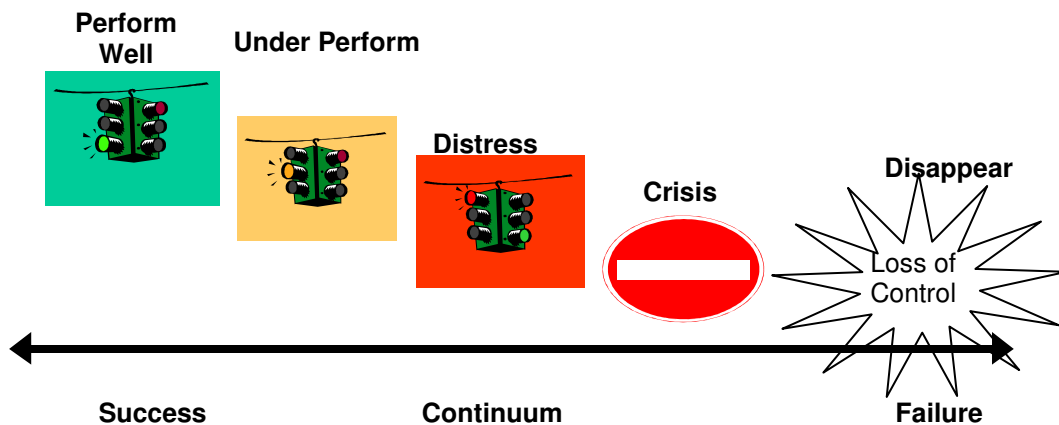
Very little is understood about these growth-determining factors and many questions about new venture creation (especially in non-USA contexts) remain unanswered (Mueller & Thomas, 2001:53; Deakins & Freel, 1998:144; Fielden et al, 2000:296). This study thus starts by investigating the determinants of SME survival, success and growth as well as those determinants of SME failure.

Studying the factors that influence SME success gives access to reliable information about how the successful SMEs carry out their high performance (Watson et al, 1998:220; Lussier & Pfeifer, 2001:228, Baron, 2003:253, Mueller & Thomas, 2001:52; Pretorius et al, 2005a:55; Rowden, 2002:79). Such studies provide useful information enabling others to build on the successful ideas by emulating best practices, or adopting such ideas for ensuring success in other companies (Bridges, 2002:4, Nasser et al, 2003:396; Fielden et al, 2000:297).

Instead of focusing only on successes, it is important to also analyse failures (Thornhill & Amit, 2003:497; Cornwal & Naughton 2003:71; Pretorius, 2001:44). The success or

failure of a new business is often dependent on overcoming the series of potential life-threatening barriers that many SMEs experience throughout their start-up and growth periods (Fielden et al, 2000:297). Studies of failure can provide useful information about the factors which led to the failure, and how successful owner-managers overcame their problems (Panco & Korn, 1999:1; Watson et al, 1998:221). Such information can help SMEs (existing or planned) to be forewarned and proactive in their decision making, to avoid falling into the trap of business failure (Ligthelm & Cant, 2002:1; Dahlgvist, Davidsson, & Wiklund, 2000:2).

Figure 1.1: Venture failure slide



Source: Nieman (2006:228)

already been made by others and taking appropriate action to develop strategies for overcoming threatening barriers, to correct market failures, to minimizing their impact, to improve the odds of survival under given conditions and to arrest the venture's slide into ultimate failure (Panco & Korn, 1999:1; Nieman, 2006:228; Clover & Darroch, 2005:240; Fielden et al, 2000:295; Gartner, Starr & Bhat, 1999:215).

For the public sector, identifying factors that constrain business survival, performance and growth could assist public sector institutions to develop policies and strategies that will remove the barriers and counter those distortions to "level the playing field" (Robertson et al, 2003:308; Luiz, 2001:53, Lussier & Pfeifer, 2001:228; Dreisler et al, 2003:387). For researchers, these studies can help create better analytical models of entrepreneurial value creation (Thornhill & Amit, 2003:498) and also enhance the

construction of management training syllabi for SMEs (Ligthelm & Cant, 2002:1; Rwigema & Venter, 2004:14).

Survival, success and growth of small business (or failure and bad performance) has been of interest to researchers for many years and has thus become the subject of a lot of analysis (Perks & Struwig, 2005:171; Gundry & Welsch, 2001:454; Watson et al, 1998:222; Panco & Korn, 1999:2). Researchers have been struggling to uncover the primary determinants of new venture success (or failure), and thus have been trying to come up with a comprehensive list of the factors that play a role in the success (or failure) of new ventures (Baron 2004b:221; Pretorius et al, 2005a:55; Dahlgvist et al, 2000:1).

Clearly a very large number of variables are involved (Baron, 2004a:169; Gartner et al, 1999:218; GEM, 2005a:12). While some analysts suggest that the dynamics of the growth of businesses remains a black box (Deakins & Freel, 1998:145; Dockel & Ligthelm, 2005:55), others have argued that the success of enterprises is a function of a combination of both external and internal factors (McCline, Bhat & Baj, 2000:82; Markman & Baron, 2003:282; Guzman & Santos, 2001:218).

The external factors are also referred to as exogenous, environmental or contextual factors. These external factors are outside the control and influence of the manager and his team or their actions, and cover a number of issues, depending on the unique environment of the community in which the business operates (Simpson, Tuck & Bellamy, 2004:484; Viviers et al, 2001:4). Internal factors (also referred to as endogenous factors) are firm-based and cover personal and behavioural factors. These internal factors are thus potentially controllable since they involve the decisions, behaviour and actions of the entrepreneurs and his or her team (Kangasharju, 2000:28; Panco & Korn, 1999:2; Ligthelm & Cant, 2002:4).

Below is a table listing some of the factors that were identified in literature and which the study has decided to highlight, as discussed briefly in chapter 2:

Table 1.1: Summary of the factors that influence venture success

Exogenous / external factors	Endogenous / internal factors
Macro Economic factors <ul style="list-style-type: none"> • Geographic area and region • Density • Inflation & Interest rates • Unemployment • Exchange rates • Economic change 	Company demographics factors <ul style="list-style-type: none"> • Size of firm • Age of firm • Organizational structure • Community networks
Political-Institutional factors <ul style="list-style-type: none"> • Macro-economic policies • The business environment • The judiciary • Bureaucracy • Costs of compliance • Public support 	Human demographics factors <ul style="list-style-type: none"> • Age • Gender • Family background • Exposure to role models
Socio-Cultural factors <ul style="list-style-type: none"> • Access to public infrastructure • Access to money / capital • Access to technology • Access to labour • Access to other resources • Crime • Health • Culture • Role models 	Previous Experience factors <ul style="list-style-type: none"> • Education • Training • Work experience • Business ownership • Industry specific
Market Opportunity factors <ul style="list-style-type: none"> • Demand for supply • Competition • Access to markets • Location 	Human Capital factors <ul style="list-style-type: none"> • Personal characteristics • Capabilities, abilities and skills

Source: Own compilation adapted from literature study

This is not an exhaustive list but is given to illustrate the context of the focus of this study which was aimed at investigating capabilities, abilities and skills that are one of the internal factors identifies for SME success (Rogerson, 2001a:119; Strydom & Tustin, 2003:1; MacMahon & Murphy, 1999:25).

The study seeks to probe the argument that successful SMEs owners-managers have the skills, competencies and know-how needed to run and grow their business (Viviers et al, 2001:2; Ladzani & van Vuuren, 2002:154; Wasilczuk, 2000:88; Ibrahim & Soufani, 2002:421; Lange et al, 2000:5; Nafukho, 1998:103).

While the determination of success and growth in large corporate firms is well researched, similar studies on SMEs are less common and many unknowns remain (Glancey, 1998:18; Bruyant & Julien, 2000:172; Baines & Robson, 2001:351 Perks & Struwig, 2005:171; Praag & Versloot, 2007:352). Thus the purpose of this study is to fill the gap that exists in identifying the subset of the skills associated with growth potential in the context of SME development.

While it is widely accepted that ability plays a significant role in SME development, the question remains whether the crucial set of competencies is a universal one or whether it differs in different economies or industrial sectors (Wasilczuk, 2000:93; Dahlgvist et al, 2000:15). While entrepreneurship is a global phenomenon, it has significant differences between countries (GEM, 2001b:6; GEM, 2002b:5; Sternberg & Wennekers, 2005:193). Some researchers argue that it is best to view entrepreneurship in the context of specific countries, economies and cultures, as some problems are universal while others are specific to a country, industry or region (Viviers et al, 2001:4; Man, Lau & Chan, 2002:139; Rogerson, 2001a:120).

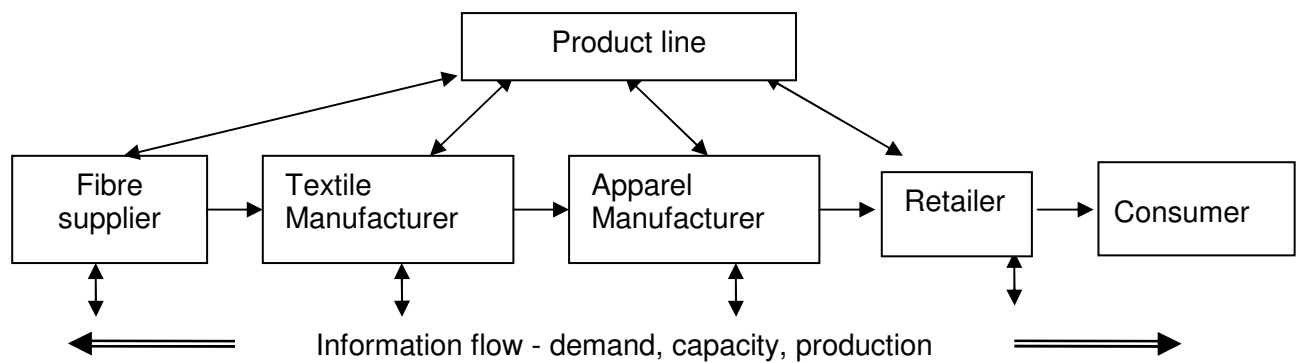
Focusing on one industry in one area standardizes and controls external factors like market opportunities, industry circumstances, the labour market, public sector regulation and the business environment (McCLine et al, 2000:83; Rauch & Frese, 2000:8; Rogerson, 2001a:117; Rwigema & Venter 2004:41). Thus the specific purpose of this study is to focus on internal factors in particular those skills factors which are key to setting up, running and growing SMEs in the textile and clothing industry in the Johannesburg Metropolitan area of South Africa.

1.6 The textile and clothing industry in Johannesburg, South Africa

Being one of the oldest sectors in the history of industrial development, the textile and clothing (T&C) industry is often referred to as a traditional industry (Coughlin, Rubin & Darga, 2005:5). The textile and clothing sector is a diverse and heterogeneous industry whose products are used by virtually everybody (Stengg, 2001:3). The textile and clothing industry can be seen as a supply chain comprising of a number of discrete activities (Norda, 2004:2).

Figure 1.2 illustrates the main categories of activities in the textile and clothing industry:

Figure 1.2: The textile and clothing industrial pipeline



Source: Coughlin et al (2005:55)

The textile and clothing industry is a global industry which has production activities worldwide and is connected through various arrangements and strategic decisions to serve the world market internationally (McCormnick & Rogerson, 2004:2). Although a marginal player in international production leagues, South Africa retains the largest textile and clothing sector in Africa, with an estimated output of \$4.1 billion (Rogerson, 2004b:110; Gibbon, 2004:157).

The textile and clothing industry accounts for at least 225 000 jobs (Kamaha, 2004:426; Nordas, 2004:1); with at least 75% of its workers being women (McCormnick & Rogerson, 2004:4). The low skills requirement of the sector and the fact that it costs less to create one formal job in this sector than in any other sector makes it a key industry for the South African government that is trying to create as many jobs as possible for the substantial part of the active population which has few or no skills (Otiso, 2004:84).

The clothing sector is also dominated by SMEs (Stengg, 2001:5; Rogerson, 2004b:128; Kamaha, 2004:430). Due to its small-scale production, low technology requirements and the related low costs, low economies of scale and low barriers to entry, this sector is viewed as a seedbed for fledgling entrepreneurs (Peberdy & Rogerson, 2000:27).

Another advantage of this industry is that it uses extensive local resources and has high export potential, given the opportunities around the African Growth and Opportunity Act (AGOA) and the European Union (EU) trade agreements which have made tariffs and quotas free for African-Caribbean-Pacific ACP countries (Coughlin et al, 2004:18; Gibbon, 2004:164; McCormnick & Rogerson, 2004:4).

Clearly the textile and clothing industry in South Africa has great potential to generate employment opportunities and enhance national economic growth. However, major problems exist in this sector (Coughlin et al, 2004:61). Although the overall demand for clothing and textiles has increased; the textile and clothing industry of South Africa is exhibiting characteristics of distress, retreat and even decline (Rogerson, 2004b:113; Kamaha, 2004:426). Against other manufacturing trends, the overall output levels, productivity and capital utilization have shrunk in this industry by at least 20% in real terms since 1995 (Gibbon, 2004:187; Rogerson, 2001b:271).

The business environment in the T&C industry is shaped by foreign ownership, market instability; skills shortages, low productivity, the inflexibility of the highly unionized labour market, tremendous buyer power, global cut-throat competition and unprecedented imports (Kamaha, 2004:438; Peberdy & Rogerson, 2000:28; Coughlin et al, 2004:61; Otiso, 2004:85).

The shedding of apartheid saw South Africa become part of the General Agreement on Tariffs and Trade (GATT), which resulted in the reduction of tariffs such as the textile and clothing import duty (Rogerson, 2004b:113; Nordas, 2004:1). This led to a flood of cheap imports, with import penetration levels rising from R220 million in 1994 to R950 million in 2000, making the T&C industry one of the most import-flooded sectors in South Africa (Peberdy & Rogerson, 2000:28; Kamaha, 2004:426).

This meant that any enterprise in this industry that could not grow or move into export activities to counteract the loss of local markets was in trouble (Rogerson, 2004b:133). Since most of the enterprises in the T&C industry were unable to compete with the unprecedented and fierce international rivals, many enterprises saw their markets disappear and their production plummet (McCormick & Rogerson, 2004:3; Gibbon, 2004:157). By 2001 the sector was referred to as a shrinking manufacturing sector characterized by retrenchments (40% of the employment base being lost) and firm closures (35% of the businesses having closed with factories long abandoned), with many remaining firms using little of their capacity and being idle most of the time (Coughlin et al, 2004:61; Kamaha, 2004:426; Peberdy & Rogerson, 2000:28).

When the South African T&C industry first developed, it was largely concentrated in Johannesburg (Gibbon, 2004:157), which currently houses the third largest cluster of

T&C manufacturers after Cape Town and Durban (Rogerson, 2004:765; Kamaha; 2004:430). Johannesburg is regarded as the economic hub of South Africa and the country's biggest consumer market (Nieman, 2001:446). SMEs account for 35% of Johannesburg's employment (Finmark, 2006). In Johannesburg, clothing production is the number one economic activity to secure jobs, and the government has earmarked this sector to help to rejuvenate the otherwise decaying inner city (Kamaha, 2004:426). Moreover, there are in Johannesburg other enterprises in the T&C industry that are growing and successfully exporting to highly demanding European and American customers (Coughlin et al, 2004:61).

Thus it is very important to understand the factors behind the emergence of successful T&C enterprises (Rogerson, 2004b:113) that are operating in the Johannesburg area in this time of globalization, trade liberalization and a free South Africa.

At 25%, the textile and clothing sector has been the largest beneficiaries for government support programmes in the city of Johannesburg (Rogerson, 2004:773). The study was sparked by the programs offering training support in particular those of the by the Department of Labour (DOL) and the city of Johannesburg. The Department of Labour passed the Skills Development Act (South Africa, 1998) to lay the legal base for improving the skills of the people in South Africa. This led to the creation of the National Skills Development Strategy (South Africa, 2001b), the National Skills Fund (South Africa, 2003) and the Clothing and Textile SETA (South Africa, 2005c) all aimed at enlarging the skills base to advance workplace security and productivity. The city of Johannesburg (COJ) Municipality's Economic Development Unit (EDU) has embarked upon implementing a "2030 skills strategy development" process to address a mismatch identified between the demand for and supply of skills within the City (COJ, 2004).

While both the Department of Labour and the City of Johannesburg were supporting many training programmes as a means to develop their SMEs, neither DOL or COJ knew whether the training targets the transfer of those skills that were important for business success nor whether the training had any impact in terms of actual SME survival and success.

In this context this study examines the skill levels of textile and clothing SMEs operating in Johannesburg (Kamaha, 2004:430). This study takes into cognizance that manufacturing and retailing are quite different in nature and experience different

problems (Stengg; 2001:3; Viviers et al 2001:6); thus most of the research statistics and analysis in this study focus only on the manufacturing part of the textile and clothing industry, and the study only refers to the distribution sector on an ad-hoc basis.

1.7 Defining constructs

At this point it is necessary to define certain constructs used in this study report. This section forms part of the conceptual foundation of this study. This section introduces certain terms, clarifies concepts and gives operational definitions for constructs that are used in the study.

Skills

Wickham (2001:41) defines “skills” as knowledge that is demonstrated by action – an ability to perform in a certain way. This is in line with the UK department of education’s definition, which defines skills broadly as “the ability to perform tasks according to a pre-defined standard of competence” (Tustin (2003:26). Also a skill is defined as “a combination of knowledge and the ability to apply it” (Rwigema & Venter 2004:43). Al-Madhoun & Analoui (2002:432) defines skill as “an ability which can be developed and which is manifested in performance, not merely in potential; the ability to translate knowledge into practice”. Synonymous with skill are the words competency, capability, ability, aptitude, know-how, knowledge, proficiency, expertise, adeptness and capacity (Oxford dictionary, 2005).

PDIs Previously disadvantaged Individuals

This study frequently refers to PDIs which means to those communities/individuals in the population who have been disadvantaged by the apartheid and separate development policies of the past (Nieman, 2001:445).

SMEs

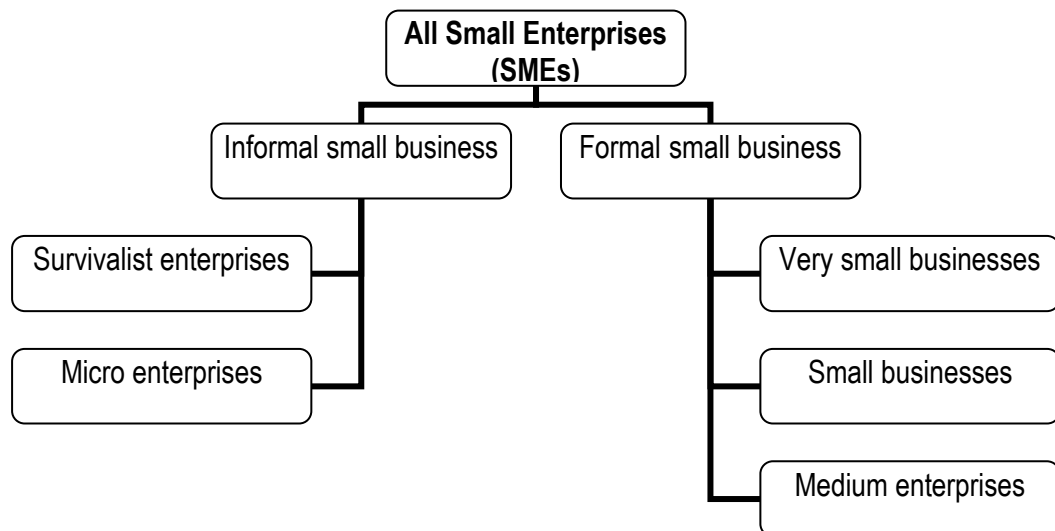
This study uses the acronym “SME” to mean all small enterprises / businesses. Definitions of what constitutes a small enterprise/business vary within the literature (Hill & Stewart, 2000:106; Dawson, Breen & Satyen, 2002:303). This study uses the National Small Business Act No. 102 of 1996 (South Africa, 1996) which defines it as:

“A separate and distinct business entity, including cooperative enterprises and nongovernmental organizations, managed by one owner or more which, including its branches or subsidiaries, if any, is carried on in any sector or sub-sector of the

economy and which can be classified as micro, a very small, a small or a medium enterprise.”

For this study the construct “SME” refers to all survivalist, informal, micro, very small, small business and medium businesses as classified in accordance with the Standard Industrial classification shown in figure 1.3 below:

Figure 1.3: Classification of SMEs



Source: Tustin (2001:10)

The classification is both qualitative and quantitative. Qualitative classification entails categorizing and defining SMEs in terms of ownership structure. Quantitative classification entails defining SME according to three main criteria, namely employment, turnover and asset value (Tustin, 2001:12, Ntsika, 2001:13), where:

- “Annual turnover” is the total gross income in the past year, which is the sum total of sales excluding VAT, before any deductions.
- “Asset value” refers to the gross movable asset value before any deduction such as depreciation. It excludes fixed property such as land and buildings but includes items such as tools, machinery and motor vehicles.
- “Employees” includes paid employees that contribute towards turnover. It includes casual labour and contract labour from all sources. It does not, however, include unpaid labour such as the employer (or owner-manager or working proprietor or family workers. Total full-time paid employees are equal to the total number of full-time employees plus the full-time equivalent of part-time or casual employees.

Informal businesses consist of survivalists and micro-enterprises that usually activities of people unable to find a paid job; they include all business projects that do not pay value-added tax (VAT), and are not licensed or audited e.g. vendors, hawkers, subsistence farmers, household industry (Ntsika, 2001:13, Morris et al, 1996:61, Tustin, 2001:27; Peberdy & Rogerson, 2000:29). Informal SMEs are usually run from home, street pavements or market stalls; they generate income less than the poverty line; they have minimal asset value; are usually in sectors with ease of entry; are unregulated and have low competitive markets (Dockel & Ligthelm, 2005:56; Honig, 1998:372; Morris & Zahra, 2000:95; Fielden et al, 2000:298).

Micro businesses often involve only the owner, some members of the family and at most one or two paid employees. They usually lack formality in terms of business licences, VAT, registration and accounting procedures. Most of these enterprises have a limited capital base and only rudimentary technical or business skills among their operators. Metal workers, furniture makers, spaza shops, and minibus-taxi businesses belong to this category. Micro-businesses employ not more than 5 employees and have a turnover of at least R150,000 and gross assets of R100,000 (South Africa, 1996, Tustin, 2001:10).

Very small businesses refer to self-employed persons and enterprises employing a limited number of employees who operate in the formal market and have access to modern technology. Very small businesses in the textile sector have full-time paid employees of not fewer than 10 and not more than 20, and have a turnover of between R150,000 and R2 million, and gross assets of R600,000 (South Africa, 1996, Ntsika, 2001:13; Tustin, 2001:11).

A *small business* is described as generally more established than the very small enterprise category. The processes employed by organizational structures of these enterprises are more complex. This type of enterprise has resorted to a secondary coordinating mechanism as opposed to direct supervision by the entrepreneur himself. These enterprises are likely to operate from business or industrial premises, are tax registered and meet other formal registration requirements. These SMEs employ fewer than 50 full-time employees and have a total turnover of between R2 million and R6 million and gross assets of R1,75 million (South Africa, 1996; Ntsika 2001:13; Tustin, 2001:12).

A *medium business* is an enterprise that has a more complex management and ownership structure but is still owner/manager controlled. Often decentralisation of power to an additional management layer, division of labour and functional divisions are characteristics that help distinguish between small and medium enterprises (Tustin, 2001:12). These enterprises employ fewer than 200 employees and have a total annual turnover of between R6 million and R25 million, depending on the industry sector, and total gross assets of R7.5 million (South Africa, 1996, Ntsika, 2001:13).

Entrepreneurial Businesses:

The entrepreneurial business is one that proactively seeks to grow and is not limited by the resources currently under its control (Morris et al, 1996:61).

Entrepreneurship:

The construct of entrepreneurship is both complex and controversial, as there is no universal agreement on the definition (Pretorius & van Vuuren, 2003:516; Dana, 2001:405; Shane & Venkatarama, 2000:218). The study acknowledges that there are various other definitions as shown with the few samples below:

- “Entrepreneurship is the creation of an innovative economic organization or networks of organizations for the purpose of gain under conditions of risk and uncertainty” (Dollinger, 1999:7).
- “Entrepreneurship is new independent business creation” (Dess, Lumpkin & McGee, 1999:93).
- “Entrepreneurship is any attempt by individuals to start a new firm including any attempt for self employment” (GEM, 2007:8).

This study adopts Schumpeter’s definition that “Entrepreneurship is innovation or carrying out unique combinations of resources so as to create new products, services, processes, organizational forms, sources of supply and markets” (Schumpeter, 1934:195).

The entrepreneur:

There is also no consensus on a clear universally definition of the entrepreneur. The following definitions are but a sample of what is available:

- “An entrepreneur is a person who destroys the existing economic order by introducing new products and services, by creating new forms of organization, or by exploiting new raw materials” (Schumpeter, 1934a).
- “An entrepreneur is someone who perceives an opportunity and creates an organization to pursue it” (Bygrave, 1993:257).
- An entrepreneur is one who habitually creates and innovates to build something of recognized value around an opportunity” Bolton & Thompson (2000:11).
- “An entrepreneur, is one who "owns, launches, manages, and assumes the risks of an economic venture" (Bradley, 2002:14).
- “An entrepreneur is one who brings innovative products and services to the market and whose role is to coordinate the assembling of resources and people and make a profit from arbitrage” (Jansen, 2003).

This study adapts the University of Pretoria definition: “an entrepreneur is a person who sees an opportunity in the market; gathers resources and creates and grows a business venture to satisfy these needs. He/she takes the risk of the venture and is rewarded with profit if it succeeds.” However it is acknowledged that except for profit and wealth creation, there are various other drivers of leading entrepreneurs to start and run businesses including the drive for wealth, profit, self employment, achievement, independence, artistic, aesthetic, altruism, transformation, values, beliefs, ideologies as well as other social, political, economic and environmental benefits (Martin & Osberg, 2007:34; Alvord, Brown & Letts, 2001:135; Dees, 1998:1; Bolton & Thompson, 2004:21; Lowe & Marriott, 2006:198; Krueger, Reilly & Carsrud, 2000:411). Therefore this study shies away from the term “profit” and uses rather the term “value-add” in its place. This covers all types of entrepreneurs including the classic entrepreneur, the business entrepreneur, the internet entrepreneur, the social entrepreneur, the artistic entrepreneur and the entrepreneur in the shadows as described by Bolton & Thompson (2004:16) and Radu & Redien-Collot (2008:259).

Success

There are problems with the term “success” and its various interpretations and perceptions in the SME sector (Simpson et al, 2004:483). Wickham (2001:123) defines success as “the measure of achievement of an organisation utilizing its performance”. Measures of achievement include: surviving the three-year death valley (Jansen, 2003; Perks & Struwig, 2005:172; Dockel & Ligthelm, 2005:54), growth in employment, sales,

profitability, assets, locations (Delmar, Davidson & Gartner, 2003:189; Hupalo, 2003:1); innovativeness, which includes products and service strategy and sales in innovative products (Jansen, 2003); and employee and customer satisfaction (Rauch & Frese, 2000:10; Cornwall & Naughton, 2003:62).

For this study, the groups of SME are classified into the following categories, namely successful and less successful SMEs.

- A successful SME is defined as a business that has been in operation for more than three years, generates more than R150 000 and employs more than 5 people. This includes all SMEs that continue to survive and expand.
- A less successful SME is defined as a business that has been in operation for less than three years, generating less than R150 000 or employing less than 5 people. This would include all SMEs in business startup and survival.

Barriers

The *Oxford Dictionary* (2005) defines barriers as obstacles barring advance or preventing access. Synonyms to barriers include words like hurdles, blockages, difficulties, problems.

1.8 Research questions

The study sought to answer the following research questions:

1. Which skills factors are associated with successful SMEs / entrepreneurs?
2. How important are these skills as perceived by SMEs owners in the textile and clothing industry in Johannesburg?
3. How competent do these SME owners view themselves and their teams to be in these skills?
4. In which of the skills has training been received?

1.9 Research aims and objectives

The aim of this study is to establish which skills, as identified in theory, are perceived as affecting (negatively or positively) the success of textile and clothing SMEs in the South African context. The objectives of this study are:

1. To review the literature to determine whether there are any common management competencies that contribute to the success of an SME.
2. To investigate the importance of these skills as perceived by SMEs in the textile and clothing industry in the city of Johannesburg.
3. To compare the levels of competencies between successful and less successful SMEs in the city of Johannesburg.
4. To analyse levels of training of SMEs in the textile and clothing industry in Johannesburg in terms of the skills identified.
5. To suggest areas of improvement in the supporting of SMEs and in the research needed to help bridge the information gap in addressing problems relating to entrepreneurship and SME development in Africa.

1.10 Propositions

The propositions that this study seeks to prove/disprove are:

Key / important skills

- **Proposition 1:** There are some skills that are considered to be key / important for SME success.
- **Proposition 2:** There are some skills that are considered to be supportive business skills.

Technical skills:

- **Proposition 3.1:** Successful SMEs are not likely to consider technical skills to be more important for business than less successful SMEs.
- **Proposition 3.2:** Successful SMEs are not likely to be more competent in technical skills than less successful SMEs.
- **Proposition 3.3:** Successful SMEs are likely to have been more trained in technical skills than less successful SMEs.

Personal skills:

- **Proposition 4.1 to 4.4:** Successful SMEs are not likely to consider personal skills to be more important for business than less successful SMEs.
- **Proposition 5.1 to 5.4:** Successful SMEs are not likely to be more competent in personal skills than less successful SMEs.

- **Proposition 6.1 to 6.4:** Successful SMEs are not likely to have been more trained in personal skills compared to less successful SMEs.

Business skills

- **Proposition 7.1 to 7.11:** Successful SMEs are not likely to consider business skills to be more important for business success than less successful SMEs.
- **Proposition 8.1 to 8.11:** Successful SMEs are not likely to be more competent in business skills than less successful SMEs.
- **Proposition 9.1 to 9.11:** Successful SMEs are not likely to have been more trained in business skills compared to less successful SMEs.

Entrepreneurial skills

- **Proposition 10.1 to 10.4:** Successful SMEs are not likely to consider entrepreneurial skills to be more important for business success than less successful SMEs.
- **Proposition 11.1 to 11.4:** Successful SMEs are not likely to be more competent in entrepreneurial skills than less successful SMEs.
- **Proposition 12.1 to 12.4:** Successful SMEs are not likely to have been more trained in entrepreneurial skills compared to less successful SMEs.

Demographics variance

- **Proposition 13 to 20:** Statistically significant variance does not exist between how SMEs (successful / less successful) view the importance of skills / their competence in those skills regarding the following demographics:
 1. Age
 2. Education
 3. Ethnic group
 4. Gender
 5. Work experience
 6. Region
 7. Subsector
 8. Form of business
 9. Place where business is operated

1.11 Research method

The method of study included a literature review, an empirical study, statistical analysis and report writing. The literature review surveyed the key skills said to impact the SME success and the training linked to these skills. The review provided an insight and understanding into the research problem and the necessary context and background to guide the empirical part of the study. The cross-sectional, ex post facto, formal empirical study involved interviewing 570 manufacturing SMEs made up of 197 successful and 373 less successful SMEs. The empirical study ascertained which skills the SME owner/managers in the textile and clothing industry in Johannesburg perceive as important for business success, how they rate their competencies in the said set of competencies and if they had had prior training in those skills.

The instrument used was a structured questionnaire whose questions were developed based on the findings of the literature review. The questionnaire used mainly closed questions, using a yes/no or a 5-point scale Latex and some open questions. Individual demographics were included primarily to control for age, gender, location and sector effects. The statistical analyses included descriptive statistics, frequencies, factor analysis, Cronbach's alpha coefficient, Chi-square; t-test and One-way ANOVA tests. The analysis was concluded by conducting a Scheffe's multiple comparison procedure.

The study concludes by making recommendations on SME interventions, highlighting potential shortcomings of the study and suggesting further research.

1.12 Benefits of the study

The study, being a critical analysis of skills, contributes the following:

- The study presents an extensive literature review that integrates eight models from authors namely Glancey (1998), Vuuren & Nieman (1999), Erikson (2002), Wickham (1998), Man et al (2002), Ucbasaran et al (2004), Darroch & Clover (2005) and Perks & Struwig (2005) into an integrated and more versatile model. By focusing on the set of skills that are likely to influence success of SMEs, the study presents an objective evaluation of a set of skills that could lead to the survival and growth of small businesses. This facilitates the synthesis of existing research and helps to address the gaps existing in theories. This could have significant benefits for entrepreneurship

education, entrepreneurial learning, entrepreneurial support, public policy and the entrepreneurship practice itself.

- The study tests the integrated model by applying it to a specific industry (T&C) at a specific geographic location (Johannesburg). It offers concrete guidance on the combination of skill factors that make some people more successful as SME owners and entrepreneurs than others in the same sector.
- This study investigates whether competence in the said skills is associated with specific prior training in that industry. This will facilitate the construction of relevant skills development plans for these SMEs and the provision of more appropriate training programmes as it allows the for existing programs to check their content against the presented model.
- This study contributes to the extensive and ongoing research gathering of reliable and accurate information about SMEs in South Africa.

1.13 Outline of the study

The rest of the document is organized as follows:

- Chapter 2 is a literature analysis, which starts by reviewing past local and international research and academic literature on success and failure factors for SMEs. It proceeds to focus on the skills that enhance or constrain SME survival, success and growth. This chapter also reviews entrepreneurial performance models and develops an extended conceptual model linking components of skills to business success. This chapter describes the key aspects of the SME screening questionnaire.
- Chapter 3 is literature analysis of the entrepreneurial process; the skills required in each stage of this process. The literature reviews in chapters 2 and 3 provide the background to and the rationale for the study.
- Chapter 4 investigates the different methods of entrepreneurial learning including training and mentor mentoring as key method of skills transfer. This adds the linking of training with skills development and acquiring to the conceptual model presented in Chapter 2 and 3 above.
- Chapter 5 outlines the research methodology which describes the survey, the sampling procedure, the collection instruments, data collection and the survey respondent profile.
- Chapter 6 details the data collected, estimation methods and empirical analyses of how the factors reported by the SMEs owners/managers may affect business

performance and success. It describes how the venture screening questionnaire was used to analyse the SME respondents and gives the profile of the respondents. This chapter tabulates results from the analysis and exploration of the data and discusses these findings. It ranks and discusses the skills reported by the SME interviewed.

- Chapter 7 revisits the key findings of the literature review, the objectives and the propositions and presents a model that link skills, training and business success. It states the conclusions drawn from the results and makes recommendations on the type of training that third-party funders should commit to in supporting the acquisition of skills for SME success, as implications of the study. This chapter also outlines the limitations of the study and offers some suggestions for future research.

1.14 The reference technique

The reference technique that is used here is the Harvard Reference Technique.

1.15 Conclusion

This chapter highlighted the importance of SME and entrepreneurship development to especially developing economies. This importance justifies the path undertaken by the South African government to prioritize SME development as alternative source of employment and poverty alleviation in the light of globalization and the shrinkage of traditional industries in South Africa.

While the SMEs have a huge potential to create employment, the problem was highlighted as being the high SME closure rate implying that SMEs may be limited in their ability to create long-term sustainable employment and may also be responsible for the greatest number of job and wealth losses. To prevent this, SMEs could be assisted to reach steady growth path and become entrepreneurial. In order to assist SMEs in this regard, factors affecting SME success must be identified and addressed.

Thus the purpose of this study is described by this chapter as to identify skills that are internal factors that contribute to SME success and to investigate if these skills apply to the textile and clothing sector in Johannesburg as well as whether these skills were acquired through training. The chapter also described all constructs and definitions to be used in this study and closed with an outline of the research report to guide the reader through the study done and presented.

Chapter 2: Factors affecting SME success

2.1 Introduction

This chapter is a literature analysis aimed at reviewing local and international research to identify the set of skills that are important for SME success and growth. The chapter starts with a brief discussion of all the factors that have been identified as crucial for SME success, in order to give a background to the importance of skills in entrepreneurship. The chapter defines those skills identified in literature as likely to influence SME survival and growth, as well as how the lack of skills can constrain SME development and ultimately lead to the failure of SMEs. Based on the exploratory study, the chapter presents a model of SME-skills fit and venture success. This model is then translated into the propositions which this research study will prove or fail to prove.

Given the vast amount of literature on venture success/survival/failure (Gartner et al, 1999:216), this chapter should not be regarded as a comprehensive review but merely as serving to highlight the importance of issues relating to the research topic. The focus of this literature review, then, is to outline the logic used for the selection of questions/variables for the research questionnaire. To determine the concepts to be included in the theory of the study, a comprehensive number of text books and articles were reviewed. The relevant literature is in leading academic journals and annual conference proceedings in such disciplines as marketing, entrepreneurship, management, social psychology, economics, organization behaviour and organization theory.

This study limits itself to factors specific to aspects of the functions of a business; it attempts to identify those factors which strong empirical links to entrepreneurial success. The factors identified were divided into the following:

- Factors listed in published articles and books that list skill factors from other studies.
- Factors listed in published articles that show strong evidence linking the skill factor to entrepreneurial success.
- Factors listed in published articles that link training and the said skill factors.
- Factors that are cited by professionals in entrepreneurship models, theories and theorems.

From this review the researcher drew up a range of possible skills that could be determinants of success, and of those whose lack could be a barrier to SME success. The factors were evaluated for inclusion and a semi-structured questionnaire constructed and used as the research instrument.

The chapter is structured under of four sections:

- Section 1 investigates the exogenous factors that influence the entrepreneurial process. This is basically a brief discussion of the external factors listed in table 1.1 in chapter 1.
- Section 2 investigates the endogenous factors that influence the entrepreneurial process. This is basically a brief discussion of the internal factors listed in table 1.1 in chapter 1.
- Section 3 reviews eight models on entrepreneurship performance and gives a combined model that links components of skills to business success/failure. This model provides guidelines for selecting the skills that the SMEs are requested to rank in the survey questionnaire.
- Section 4 is a conclusion that links the presented model to the propositions the research seeks to prove.

2.2 The external/exogenous factors

Simpson et al (2004:484) defines the macro-environment as containing factors external to the company that present situational variables which may facilitate or inhibit entrepreneurship at start-up and during the SME lifecycle. This is supported by Dahlqvist et al, (2000:5) who expounds that these external factors present opportunities, threats and information affecting all entrepreneurs within that environment, regardless of their background, education or business concept. Guzman & Santos (2001:217) lists external factors to include socio-demographics, markets (local, international, emerging and established markets), cultural, economic, political, institutional, legal, productive, technological, infrastructure and other physical factors of that particular environment. Mazzarol, Volery, Doss & Thein (1999:50) and Viviers et al (2001:4) point out that these macro environmental factors are not controllable and the success of the SME often depends on management's ability to deal with them.

Peberdy and Rogerson (2000:21) argue that the success of a new venture depends on the state of specific factors within the boundaries of specific nation-states with their own distinct economic, political and social factors. Toye (2002:49) agrees and highlights that these

factors have implications for education and skill bases; levels of risk; access to markets; and access to resources including inputs, labour, subcontractors and expertise, networks, capital and finance. This influences the SME's chances of marginal survival or high performance (Dahlqvist et al, 2000:5).

The study groups external factors into two categories: macro economics and market-environment issues. Macro-economics variables include all economic, socio-cultural, and political-institutional factors, whereas market environment includes all productive opportunities and market attractiveness factors.

2.2.1 Economic factors

The success of a new venture depends on the state of the national economy at the time the business is launched (Baron, 2004b:233; Ligthelm & Cant, 2002:5; Viviers et al, 2001:4; Nieman, 2006:22, Gurol & Atsan, 2006:28). Examples of the economic factors are discussed briefly below:

- **Enterprise Density**

Enterprise density is defined as the number of firms in a given population at a given time and refers to the percentage of existing and possible entrepreneurs (Panco & Korn, 1999:6). In South Africa the enterprise density is low at 2%, meaning there is room for expanding active enterprises, and this low density acts as a disincentive to firms to exit (van Vuuren & Nieman, 1999:2; GEM, 2005a:17).

- **Inflation**

Inflation has an effect on entrepreneurship (Viviers et al, 2001:4; Ligthelm & Cant, 2002:5). South Africa's inflation figure of 11% in mid 2008 means that value of wealth decreases, consumers tighten their belts and thus there are fewer opportunities for entrepreneurs.

- **Interest rates**

Low interest rates facilitate access to capital and thus resources required for entrepreneurship (Ligthelm & Cant, 2002:5). South Africa's high 15% prime interest rate (in mid 2008) limits both consumption rates and the amount of capital that can be raised (Viviers et al, 2001:4).

- **Unemployment**

Unemployment impacts on the entrepreneurship process (Viviers et al, 2001:4). Where there is high unemployment a lot of people are pushed into entrepreneurship for survival (Wickham, 2001:63; Dollinger, 1999:43); at the same time because of this high unemployment and limited earnings, markets are naturally limited (Ligthelm & Cant, 2002:5). South Africa's high unemployment rates mean that there is more people opting for self-employment yet spending power is limited.

- **Exchange rates**

Exchange rates are a major factor in entrepreneurship (Viviers et al, 2001:4; Ligthelm & Cant, 2002:5). South Africa's weak rand means that there is more opportunities in the export market but that there is less capital for investing in local SMEs.

- **Taxation**

One of the key factors inhibiting SME development is taxation (Robertson et al, 2003:311). If tax rates are high they reduce the profit incentive drastically (Ahwireng-Obeng & Piaray, 1999:78). In South Africa costs associated with meeting VAT (Clover & Darroch, 2005:242) and corporate tax (Viviers et al, 2001:4) are among the highest in the world. The complexity of the tax system further raises the cost of doing business, as many SME do not have the capacity to administer tax returns and thus need to consult experts for a fee in order to meet these legal requirements (Luiz, 2002:65).

- **Change**

The ability to deal with change is a key factor in the success of SMEs (Viviers et al, 2001:4), as change and its related uncertainty are where market opportunities lie (Kirzner 1973; Knight, 1964). Change includes rapidly changing technology (Ligthelm & Cant, 2002:37) and changing market forces (Shane & Venkatarman, 2000:220). South Africa re-entry into the global economy after decades of international trade sanctions opened the floodgates of change (Morris & Zahra, 2000:92). Sadly most SMEs in South Africa lack the capacity to deal with a changing business environment (Strydom & Tustin, 2003:4) and are thus doomed to eventual extinction (Panco & Korn, 1999:7).

- **The business environment**

Positive features of the business environment of a country provide SMEs with opportunities, threats, information and access to role models (Hisrich & Peters, 2002:73; Guzman &

Santos, 2001:217; Henning, 2003:2), which are factors determining SMEs / entrepreneurial success (Pretorius et al, 2005a:55; Nasser et al, 2003:400). Too many shocks in the business environment, however, push risks to unacceptable levels (Themba et al, 1999:106). The challenge facing most governments is to provide a business environment that supports and promotes a vibrant entrepreneurial culture (OECD, 2002b:7). In South Africa entrepreneurs view the environment as unstable (Viviers et al, 2001:3; Morris & Zahra, 2000:96; Kangasharju, 2000:33).

2.2.2 Political-institutional factors

In developing nations, the political climate and legal requirements of doing business in a country can be a possible enhancer or a major stumbling block to the development of entrepreneurship (Themba et al, 1999:104). Examples of the political institutional factors are discussed briefly below:

- **Macro-economic policies**

Macro-economic policies, legislation, frameworks, regulations and laws are factors that can facilitate or hinder entrepreneurship development (Clover & Darroch, 2005:241; Dockel & Ligthelm, 2005:54). Appropriate trade, labour, investment and tax policies and regulations can give an enabling environment that encourages investment and sustainability of entrepreneurs as the new source of wealth and job creation in the economy (Themba et al, 1999:105; Ahwireng-Obeng & Piaray, 1999:78; Henning, 2003:2). On the other hand, a hostile external environment presents legal and regulatory constraints which stifle entrepreneurship and increase the costs of doing business (Finmark, 2006; Ligthelm & Cant, 2002:5). In South Africa some of the government regulatory laws are considered a threat to the SME sector (Viviers et al, 2001:3; Clover & Darroch, 2005:242).

Unavoidably, the challenge facing the new South African government is to institute enforceable rules, regulations and policies with the aim of promoting a national interest that includes the vibrancy of business enterprise (Ahwireng-Obeng & Piaray, 1999:79). Although some overregulation is still an issue, South Africa has seen significant trade deregulation that has supported entrepreneurship (Luiz, 2002:55).

- **The judiciary**

Reliability of the judiciary is important for entrepreneurial development, as it can provide legal protection against the infringement of intellectual property rights, enforce contractual obligations between parties, implement competition laws, as well as administer company law (Ahwireng-Obeng & Piaray, 1999:78). South Africa's judiciary system is considered to be strong thus affording businesses some type of protection.

- **Bureaucracy**

Bureaucratic corruption and red tape can significantly increase business costs, as well as the time spent negotiating with corrupt officials makes products and services uncompetitive in the market place (Ahwireng-Obeng & Piaray, 1999:78). There is a high level of bureaucracy in South Africa.

- **Costs of compliance**

Most SMEs feel they lack capacity to deal with government requirements in general (Strydom & Tustin, 2003:3; Rwigema & Venter, 2004:19). In South Africa the cost of compliance with legislation is high and is seen as a threat to the SME sector and entrepreneurship (Viviers et al, 2001:4; Ligthelm & Cant, 2002:5).

- **Public support**

The government's SME support programmes could ensure that SMEs get ongoing support in the form of knowledge and expertise to ensure growth of the business beyond the initial incubation and early survival (Nasser et al, 2003:399; Ligthelm & Cant, 2002:5). Lack of public sector support has a negative impact on entrepreneurship development in a country (Clover & Darroch, 2005:244).

In South Africa, while the support is typically provided in the form of incentive programmes or inducements to encourage the founding of new enterprises (Mueller & Thomas, 2001:67), many SMEs have no knowledge about existing government support mechanisms or how to access them (Finmark, 2006). Some SMEs find that services like grants or procurement opportunities are complicated, inflexible or inadequate for actual SME needs (Fielden et al, 2000:300; Luiz, 2002:56).

- **Political instability**

Regional political instability such as the war in the Congo, the political unrest in Zimbabwe, South Africa's political predominance in the region, a disintegrated regional economy and the instability of emerging markets all negatively affect the business environment, with many SMEs from the region flooding into SA and increasing competition for the local SMEs (Ahwireng-Obeng & Piaray, 1999:78).

2.2.3 Socio-cultural factors

Socio-cultural conditions reflect the country's stage of development. These social conditions and aspects of the country's culture may create environmental goodwill that benefits SMEs (Wasilczuk, 2000:93; Gurol & Atsan, 2006:28), or may present pressures that stifle entrepreneurship (Themba et al, 1999:108; Rogerson, 2001a:117; Tustin, 2001:126). Examples of socio-cultural factors are discussed briefly below:

- **Access to public infrastructure**

Access to public physical infrastructure services include water, electricity, serviceable roads, telecommunication, telephones, electronic media and postal services which are all crucial for business start-up, development and growth (Rogerson, 1999:137; Clover & Darroch, 2005:242; Ahwireng-Obeng & Piaray, 1999:78). Limited access to public infrastructure services is a major constraint to SME survival (Darroch & Clover, 2005:327; Luiz, 2002:56) and growth (Tustin 2001:126), as it limits operations and restricts access to markets and raw materials (Rogerson, 1999:137). Most SMEs in Johannesburg have access to public infrastructure.

- **Access to money/capital**

The availability of appropriate economic resources is important for business development (Tustin, 2003:126, Goodall, 2000a:15, Czinkota & Ronkainen, 2003:49). This enables SMEs to secure the necessary expertise and raw materials to put entrepreneurial ideas into practice, to be competitive, to survive during unfavourable conditions and to grow (Robertson et al, 2003:313; Wickham, 2001:71). The lack of capital and limited access to finance is a factor inhibiting entrepreneurship and influencing growth negatively, as it impedes the progress that comes from timeous application of resources (Nasser et al, 2003:399; Pretorius & Shaw, 2004:223; Rwigema & Venter, 2004:19; Davila, Foster & Gupta, 2003:700; Ligthelm & Cant, 2002:5).

For South Africa's disadvantaged societies, access to finance remains very limited, as financial institutions like banks are very conservative and risk averse. These financial institutions normally avoid SMEs that are considered risky and have no collateral or dependable track records (Mughan, Lloyd-Reason & Zimmerman, 2004:424; Leah & Tucker, 2000; Luiz, 2002:67). Most of those SMEs that are able to secure start-up finance find the cost of capital is too high (Rwigema & Venter; 2004:19).

- **Access to technology**

Globalization, technological sophistication, access to technology and technological discoveries have seen an increased numbers of businesses built on quality assurance, high-tech innovations and intellectual property (Nasser et al, 2003:399). SMEs need access to appropriate technology if they are to have competitive advantage (Rogerson, 2001a:117). Inability to secure technology at start-up can impact negatively on the entrepreneurship development process in today's world of globalization (Clover & Darroch, 2005:243; SME survey, 2003). For South Africa's disadvantaged societies, access to technology remains very limited (Themba et al, 1999:105; Robertson, 2003:461).

- **Access to labour**

Access to labour markets is a key factor of production crucial for entrepreneurship (Shane & Venkatarman, 2000:221; Thornhill & Amit, 2003:506), as it allows for appropriate expertise that enables ventures to explore identified opportunities (Nasser et al, 2003:399; Markman & Baron, 2003:285). In South Africa the labour is mainly unskilled and informal (Luiz, 2002:67) while the available semi-skilled and skilled labour is expensive (Ahwireng-Obeng & Piaray, 1999:78; Viviers et al, 2001:4).

- **Access to other economic resources**

Access to other economic resources like bankers, suppliers, lawyers, training and all intermediaries needed in the total value chain is imperative for entrepreneurial success (Hisrich & Peters; 2002:263; Nhlengethwa, 2003:1; Kodithuwakhu & Rosa, 2002:433). While such resources / services are easily available for SMEs in Johannesburg, many SMEs from previously disadvantaged backgrounds have limited access to such resources due to financial constraints.

- **Crime**

Low crime and security (Ahwireng-Obeng & Piaray, 1999:78) are prerequisite for the survival and growth of businesses. High levels of crime negatively affect investment levels, sales and business success (Strydom & Tustin, 2003:4; Ligthelm & Cant, 2002:5) and increase the cost of doing business (Ahwireng-Obeng & Piaray, 1999:78; Tustin, 2001:126). In South Africa, entrepreneurs view crime as the biggest threat facing the SME sector (Viviers et al, 2001:4; Finmark, 2006; Tustin 2001:37).

- **Health**

Availability of quality health care is an important influence on entrepreneurship and the ability of entrepreneurs to work (Robertson et al, 2003:311). In South Africa, the high prevalence of HIV/AIDS is a serious threat to SMEs (Viviers et al, 2001:4) and negatively affects business success (Strydom & Tustin, 2003:3; Ligthelm & Cant, 2002:5).

- **Culture**

Culture is considered as the shared values, beliefs and norms of a society and is an important contextual factor, collectively programming and affecting entrepreneurs in a given community, ethnic group, region or country and generating differences across national and regional boundaries (Pretorius & van Vuuren, 2003:517; Stewart, Carland, Carland, Watson & Sweo, 2003:30; Mueller & Thomas, 2001:58). Levels of entrepreneurial activity in a country are affected by cultural norms (GEM, 2002c:20; Weber, 1930; Morrison, 2000:106; Ligthelm & Cant, 2002:41; Lee et al, 2006:352).

National cultures that emphasize achievement and social recognition for all forms of entrepreneurial success are more conducive to entrepreneurship (McClelland, 1961; Thomas & Mueller, 2000:289; Jennings, 1994:148; Nasser et al, 2003:400; Rwigema & Venter, 2004:68). Communities with low entrepreneurial culture may discourage entrepreneurs, who fear social pressure and being ostracized (Ligthelm & Cant, 2002:5; Dreisler et al, 2003:387).

Hofstede's (1980) extensive study into culture led to the development of four culture dimensions which identify and explain differences in cultural patterns observed across countries. Although Hofstede did not specify the relationship between culture and entrepreneurial activity per se, his culture dimensions are useful in identifying key aspects of culture related to entrepreneurial orientation (Mueller & Thomas, 2001:52). The impact of the Hofstede dimensions of power distance; uncertainty avoidance; masculinity; and

individualism on entrepreneurship orientation is described by various authors (Pretorius & van Vuuren, 2003:518; Stewart et al, 2003:31; Themba et al, 1999:108; Drakopoulou; 2002:117).

- Power distance (PD) is the extent to which a society accepts that power is distributed unequally and the degree of tolerance of hierarchy. High power distance leads to restriction on the innovation and creativity which are necessary for spotting opportunities to present solutions to existing problems. Entrepreneurship would require a low power distance score, which means the culture of the society is such that individuals are not scared to think out of the box and society does not frown upon people who question authority and do things differently.
- Uncertainty avoidance (UA) is the extent to which a society feels threatened by uncertain, unknown and ambiguous situations. High uncertainty avoidance (HUA) leads to avoiding high-risk areas that are uncertain; therefore people in a community with a high score would naturally shy away from self-employment, where risk and uncertainty are inherent. Also inherent in the high UA is the fear of failure, which is seen as symbol of weakness and a dereliction of duty. Fear of failure limits initiative, creativity and increases risk aversion. Low uncertainty avoidance means acceptance for uncertainty, willingness to take risks and the recognition of achievement in terms of pioneering efforts, irrespective of the threat of failure. An innovative orientation and tolerance of failure, both an important antecedent for the promotion of entrepreneurship, are more prevalent in low uncertainty avoidance cultures than in high uncertainty avoidance cultures.
- Individualism is the extent to which individuals are allowed to take care of just themselves, and emphasis is placed on individual accomplishment. Collectivism, on the other hand, is when individuals owe their primary allegiance to the group. Low individualism results in the pursuit of collective interests, which does not promote the spirit of independence, individual initiative and the self-reliance needed in entrepreneurship. In collectivist societies, entrepreneurs may find it difficult to reveal anxieties, weaknesses and problems that may arise from the nature of entrepreneurship, to avoid bringing "shame on the in-group". In high individualism cultures, having autonomy is more important. Individual decisions are considered superior; individual initiative is socially encouraged; individual recognition/rewards are emphasized and there is an increased likelihood of an internal locus of control orientation; all of which foster strong entrepreneurial values.
- Masculinity is the extent to which assertiveness, achievement and acquisition of material things and wealth are emphasized over quality of life, values, people, harmony and

relationships (referred to as feminine). Societies characterized by low masculinity have a low drive for achievement which, according to McClelland (1961), results in a low predisposition for entrepreneurial success. High masculine cultures emphasize achievement and thus their achievement motivation is high.

Table 2.1: The Hofstede dimensions with key entrepreneurial dimensions

Hofstede's cultural dimension	Entrepreneurial orientation score on the Hofstede	Entrepreneurial dimension	Categorization for African culture
Power distance	Low	Innovativeness	High
Masculinity	High	Energy / competitive aggressiveness	Low - more feminine
Uncertainty Avoidance	Weak	Risk taking / pro-activeness	Strong – risk averse
Individualism	High	Internal locus of control / Autonomy	Low – collective

Source: Adapted from van Vuuren & Pretorius (2003:522)

South Africa, like other developing countries, is relatively high on power distance and uncertainty avoidance and low on individualism and masculinity (Themba et al, 1999:109). Unlike the United States of America, whose culture supports entrepreneurship (GEM, 2002c:17), South Africa's culture is not supportive of the development of entrepreneurship owing to its negative attitudes/mindsets towards self confidence, entrepreneurship and failure in general (Pretorius & van Vuuren, 2003:524; GEM, 2003a:15). There are communities in South Africa that view business ownership as suspect and entrepreneurship as associated with dishonesty, poor business ethics and serious acts of indiscipline (Gbadamosi, 2002:96; Rwigema & Venter; 2004:19). Furthermore, the notion of enterprise creation could be contradicted by the "Ubuntu" culture (a community-sharing concept emphasizing the common good), which threatens wealth creation and thus discourages SMEs from growing their businesses (Mayrhofer & Hendriks, 2003:597).

- **Role models**

Societies which have the support of successful business people that mentor young entrepreneurs to ensure that they learn by experience and develop sound business principles facilitate entrepreneurship (Nasser et al, 2003:399). Role models can inspire confidence as well as provide mentorship through advice and contacts (Rwigema & Venter

2004:70; GEM, 2006:15). A limited family business culture and the lack of entrepreneurial role models in South Africa is the most prominent barrier to SME development (Ligthelm & Cant, 2002:6).

2.2.4 Market opportunity factors

Market opportunity factors are industry-specific factors associated with the industry in which the firm operates and they represent market conditions, the interest or actions of consumers, competitors, intermediaries and suppliers (Dahlqvist, 2000:5; Viviers et al, 2001:4; Ligthelm & Cant, 2002:5; Nieman, 2006:23). Examples of market opportunity factors are discussed briefly below:

- **Market conditions**

The stage the industry is in at in its life cycle (Markman & Baron, 2003:297) and industry conditions / trends (Shane & Venkatarman, 2000:222) can facilitate or inhibit entrepreneurship. Industry complexities and weaknesses (Ligthelm & Cant, 2002:5) can inhibit entrepreneurship. Major changes in the industry (Viviers et al, 2001:4) lead to low predictability, which does not allow for proper planning (Themba et al, 1999:105). The high growth potential of the industry in which the SME operates is also a factor in entrepreneurship (Gartner et al, 1999:220; Andries & Debackere, 2006:81).

Choosing a market segment with potential market growth is a factor influencing the success of SMEs (Shane & Venkatarman, 2000:224). A poor market selection, for instance one with many market imperfections, too much market heterogeneity and/or a limited market size with poor growth prospects, can negatively affect the entrepreneurship process (Viviers et al, 2001:4; Strydom & Tustin, 2003:3; Ligthelm & Cant, 2002:5). Therefore having access to pools of knowledge regarding opportunities in particular markets would have a positive impact on entrepreneurship (Nasser et al, 2003:399).

- **Demand for supply**

Businesses rely on markets for survival and markets need money to turn their interest into effective demand for supply, leading to market attractiveness (Themba et al, 1999:105; (Ligthelm & Cant, 2002:4; Shane & Venkatarman, 2000:222). Market demand for the SME's products is a major factor influencing the success of an SME (Kangasharju, 2000:29). Low or insufficient or unsteady demand for products/services remains the primary challenge limiting

SME growth (Luiz, 2002:67; Nieman, 2006:23; Viviers et al, 2001:4; Ligthelm & Cant, 2002:5).

- **Competition**

Today, SMEs operate within a global context characterized by intensified competition and unknown competitive rivals (Goodall, 2000b:2; Ligthelm & Cant, 2002:5). Competitive concentration, along with market actions and strategies of competitors, has an impact (positive or negative) on the entrepreneurial process (Kangasharju, 2000:32; Baron, 2004b:233). Therefore an analysis of the role of competitors and counter-competition intelligence and actions are crucial for the survival of an SME (Viviers et al, 2001:4; Nieman, 2006:23; Rwigema & Venter, 2004:19; Ligthelm & Cant, 2002:5).

- **Access to markets**

Stable access to markets and marketing brokers, as well as the ability to overcome barriers to entry into a specific industry, is crucial for enhancing entrepreneurship and SME success (Nasser et al, 2003:399; Rogerson, 2001a:117; Finmark, 2006; Tustin, 2003:37) while inadequate access to profitable markets inhibits entrepreneurship (Clover & Darroch, 2005:244).

Other factors influencing growth negatively include limited export opportunities (Tustin, 2001:126). The reason for the success of smaller firms to enter into export markets lies in the new determinants of competitiveness, as framed by the wishes and needs of the foreign buyers (Czinkota & Ronkainen, 2003:50).

- **Location**

Geographic location has its implications for access to markets and other resources like finance, skilled labour, subcontractors; infrastructure, distribution and transport logistics and other facilities (Tustin, 2001:102; Dahlqvist et al, 2000:5; Berry et al, 2002:22). SME success also depends on neighbourhood appearance and continued/maintained future business operations in that location (Tustin, 2001:37; Strydom & Tustin, 2003:7; GEM, 2002a:23).

The above discussion suggests that business success is associated with factors external to the business itself (Miller et al, 2003:216). However, Glancey (1998:18) cautions against emphasizing only external factors, which can lead to neglecting those factors that impact on firm performance from inside the firm. It can be concluded that since internal factors

determine the success of the firm in the market structured by external factors (Kangasharju, 2000:29); it is crucial to also study the internal factors of firm success. Thus the internal factors are the focus of this study.

2.3 The internal/endogenous factors

The personal environment (internal or firm-based factors) has an impact on entrepreneurship and business success (Guzman & Santos, 2001:218; Fielden et al, 2000:303). The personal environment includes all firm-specific factors that are influenced by specific firm action, including the availability of resources, personal skills and abilities for pursuing entrepreneurial functions and the effective use of resources inside the firm (Panco & Korn, 1999:2; Nieman, 2006:22). Deficiencies in the internal environment are the major cause of SME failures, with over 65% of failure causes said to be firm-based (Dockel & Ligthelm, 2005:61; Ligthelm & Cant, 2002:6).

2.3.1 Company demographics

The literature supports the suggestion that company demographics are factors that may affect firm survival (Panco & Korn, 1999:2). Examples of company demographics factors are discussed briefly below:

- **Size of firm**

SMEs exist in a hostile external environment, with constraints that affect SMEs differently, from larger competitors in the same industry and area (De Villiers 1997:82, Baard & Van den Berg, 2004:2). Being small correlates negatively with survival rates, owing to the limited resources that SMEs find a key liability (Gruber, 2002:194; Davila et al, 2003:700).

- **Age of firm**

Study findings support consideration of age of an organization as a factor that may affect firm survival and growth and/or organizational decline and death (Panco & Korn, 1999:2). The liability of newness that makes new SMEs face a greater risk to survival than older firms is that new firms do not have the experience, access, links, experience, reputation or the legitimacy of the older firms, leading to limited access to external resources (Davila et al, 2003:700).

- **Organizational structure**

The methods by which the firm was founded and its organizational structure and strategic choices are factors that may affect firm survival and growth or organizational decline and death (Gundry & Welsch, 2001:458; Kangasharju, 2000:29).

- **Community networks**

Supporting local communities through ethical corporate social responsibility builds a positive image in the community (Besser, 1999:25), which benefits SME success. On the other hand SMEs seen as capitalist sharks by communities they serve have a lower probability of survival (Miller et al, 2003:216).

- **Product and competitiveness**

Sustainable competitive advantage is a factor in the survival, success and growth of enterprises (Man et al, 2002:129) and is achieved by competitive strategies like product differentiation (Pretorius et al, 2005a:63). Uncompetitive products a limited product offering, lack of track record and unknown brands often lead to SMEs not reaching their targeted sales (Clover & Darroch, 2005:243).

2.3.2 Human capital

The first place to look for explanations for internal determinants of survival is the initial resource endowment which includes the human capital of the enterprise (Dahlqvist et al, 2000:2). Human capital can be defined as the attitudes, commitment, values, knowledge, experience, education, capability, skills and abilities that help the entrepreneur (and his team) in the tasks of starting, running and growing a business, to learn more about how to do so and to make owners more efficient in how they act in running their enterprise and in performing complex tasks (Rauch & Frese, 2000:2; Markman & Baron, 2003:284).

A considerable amount of research suggests that the human capital of the entrepreneur is the central overwhelming force necessary to the development and survival of the business and the competitiveness of his or her venture (Ucbasaran et al, 2004:430; Markman & Baron, 2003:285; Man et al, 2002:130).

Many studies show that there is a positive relationship between the business's success and the SME's human capital (Rauch & Frese, 2000:1; Lussier & Pfeifer, 2001:233). One of the aspects of new/small businesses that make them more prone to failure is that they may not be sufficiently endowed with the requisite human resources to execute their strategy (Thornhill & Amit, 2003:505).

The human capital factors that influence the success or failure of new ventures involve the background of the entrepreneur, the actions of entrepreneurs, the decisions they make; the strategies they develop and the style of leadership they exercise (Baron, 2004b:223; Dahlqvist et al, 2000:3). These are related to the entrepreneurs' motivations, their attitudes, their abilities and the team of managers and employees they gather (Glancey, 1998:18; Guzman & Santos, 2001:217).

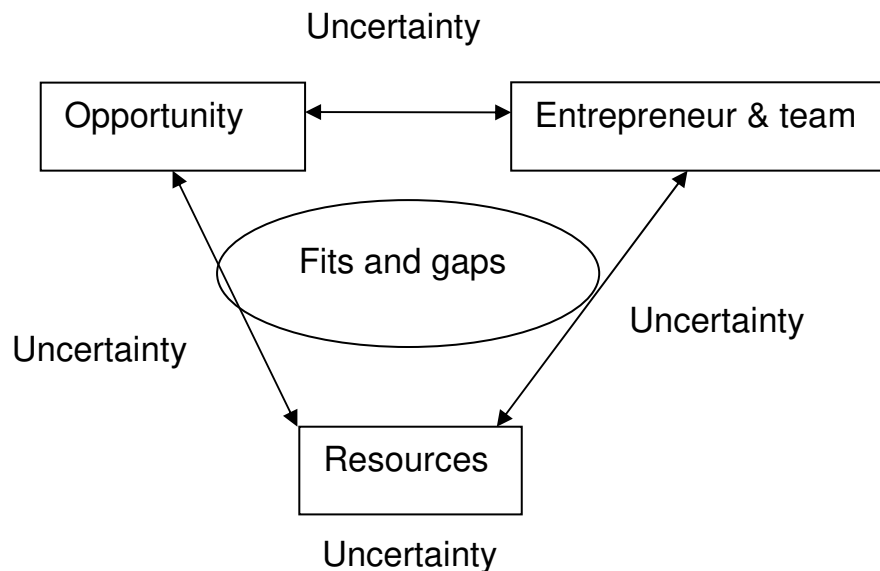
For many years economic theorists have attributed key roles to the function of the entrepreneur in the economic system (McClelland, 1961; Knight, 1964; Schumpeter (1934, Kirzner, 1973; Drucker, 1985). The work of Weber (1930) was elaborated on by McClelland (1961), who posited that the abundance of individual entrepreneurs was a key supply condition leading to economic success in the so-called achieving societies (Thomas & Mueller, 2000:288). Emphasis is given to the positive effect of the experienced, habitual, serial or portfolio entrepreneurs who are fascinated by entrepreneuring such that they use their skills to create and run several entrepreneurial ventures some at the time and others one after another (Westhead, Ucbasaran & Wright, 2005:72; Clinton, Totterdell & Wood, 2006:179; Drakopoulou Dodd & Anderson, 2007:341).

It seems that the entrepreneur forms the hub and the core of the entrepreneurship process (Wickham, 2001:27; Guzman & Santos, 2001:227). The entrepreneurship process itself is the course through which a new venture is created by an entrepreneur who chooses to take appropriate action to pursue an opportunity to produce something distinctive in the marketplace, and to add value in the face of dynamic competition and a volatile environment (Hisrich, Peters & Shepherd, 2005:3; Rwigema & Venter, 2004:26; Baron, 2004a:169).

At its core, the entrepreneurial process is driven by the market opportunity; appropriate and efficient resources and a lead entrepreneur with an appropriate company structure and

motivated team (Timmons, 1999:38; Kodithuwakhu & Rosa, 2002:434; Wickham, 2001:37; Rwigema & Venter, 2004:25; Shane & Venkataraman, 2000:219) as illustrated in figure 2.1.

Figure 2.1: Drivers of the entrepreneurial process



Source: Timmons (1999:38)

The creative brilliance of the lead entrepreneur, together with the quality, maturity, diversity and depth of the entrepreneurial team, is thus a key determinant in the survival of the SME and the likelihood of high performance and growth (Friedrich, Glaub, Gramberg & Frese, 2003:2; Ahwireng-Obengn & Piaray, 1999:78). For this reason, a perspective that sheds light on the key aspects of human capital can contribute substantially to the understanding of the process through which entrepreneurs recognize opportunities and gather resources, and why some people fail while others succeed in entrepreneurship (Baron, 2004b:222; Shane & Venkataraman, 2000:221).

The entrepreneur's human capital is a combination of the following factors, which may have a positive or negative effect on productivity (Dahlqvist et al, 2000:3; Gundry & Welsch, 2001:462; Markman & Baron, 2003:287; Pretorius et al, 2005a:55; Simpson et al, 2004:484):

- Socio-demographics include facts of the entrepreneur's background, like age, gender, race, height, birth order, family background, education, parental status, social values and beliefs of the entrepreneur and exposure to role models.

- Specific experience includes management know-how and specific industry knowledge from accumulated work habits and business experience, which brings understanding of how business is done in a specific context of suppliers, competitors and customers in a specific industry.
- Personal characteristics include all psychological and cognitive characteristics that influence the attitudes and mindset of entrepreneurs, for example intelligence, health, attractiveness, talents, personality, traits, achieved attributes and accumulated habits.
- Competencies, capabilities and skills include all existing and acquired knowledge that leads to certain behaviour and actions of entrepreneurs that enable them to identify and evaluate market opportunities; to set up realistic and measurable goals, to secure resources required and set up new ventures; to produce and service the market; to manage conflict effectively and to achieve overall industrial efficiency as well as effectiveness that lead to the growing of the business.

The section below discusses briefly all the factors of human capital that are said to influence the success or failure of new ventures.

2.3.3 Demographics

Man et al (2002:125) assert that the entrepreneur's demographics are often cited as one of the most influential factors related to the performance of an SME and its competitiveness. Each of these factors is discussed briefly:

- **Age**

Increasing age is strongly and positively correlated with work experience, fostering the development of entrepreneurial skills until diminishing effort associated with old age sets in (GEM, 2005a:11). The optimal starting age for starting a business is between 22 and 45 in the USA. Starting too early may mean limited abilities, with the period before 22 given to training, education and work experience (Rwigema & Venter 2004:70). Starting too late may mean the lack of the energy and resilience of youth that the business so needs (Ucbasaran et al, 2004:432). Successful entrepreneurs have the optimism and energy of youth and experience that comes with age (Bygrave, 1997:8).

- **Gender**

Women have been associated with lower levels of human capital and have had fewer opportunities to develop relevant experience and consequently have greater difficulty in assembling resources (Ucbasaran et al, 2004:432; GEM, 2005a:33; GEM, 2002b:5; Martinez, Mora & Vila, 2007:102).

- **Family upbringing**

Bolton & Thompson (2004:21) argue that family background is important to the entrepreneur. Early family environment includes race, birth order, status and occupation of parents, perception of desirability, perception of feasibility. A youth whose environment instills confidence in entrepreneurial success is more likely to step forward (McCline et al, 2000:88). Well-educated parents who encourage independence and self-reliance confer on their offspring an early advantage; while wealthy parents can assist with start-up capital (Rwigema & Venter, 2004:70).

- **Role models**

According to the role model theory, parents exert a strong influence on children when they opt for a certain type of entrepreneurial activity. It is possible that those entrepreneurs descended from entrepreneurs possess some advantages over those that do not (Guzman & Santos, 2001:217).

- **Education**

A firm's capacity to compete is embedded in incumbents' education, which is related to knowledge, skills, problem-solving ability, discipline, motivation, self-confidence and behaviour of entrepreneurs that allow them to identify market opportunities and gather resources required to set up the business (Rogerson, 2001a:117; Martinez et al, 2007:104). Education itself is a means through which knowledge can be gained and includes all the teaching, formal and informal learning, tutoring and instructing individuals receive in their background years (Rwigema & Venter 2004:69; Ucbasaran et al, 2004:431; Dahlqvist et al, 2000:3; GEM, 2006:20).

2.3.4 Previous experience

The greater the entrepreneurs' previous experience, the higher their entrepreneurial quality will be, as the experience will have involved a learning process that helps them to identify opportunities, reduce their initial inefficiency and also improve their capacity in performing

various tasks (Guzman & Santos, 2001:217; Fielden, 2000:296; Barreira, 2004:43). Previous experience includes work experience, business management experience and industry-specific experience (Rauch & Frese, 2000:2; Gundry & Welsch, 2001:464; Tustin, 2001:88; Ucbasaran et al, 2004:432; Guzman & Santos, 2001:217). Each factor is discussed briefly:

- **Work experience**

The ability to assimilate experience and to learn from experience itself is one of the key factors influencing the entrepreneurial process (Deakins & Freel, 1998:150). Most new firms are started by people who have worked (prior to start-up) in other jobs that gave them the relevant experience to identify a business opportunity and the technical ability to produce the product or give the identified service (McCline et al, 2000:88; Rwigema & Venter 2004:70; Barreira, 2004:55). People lacking work experience have fewer capabilities and may find it more difficult to develop a good business idea (Robertson et al, 2003:313; Rwigema & Venter, 2004:19). Without work experience many of South Africa's black SMEs remain at the survivalist stage or are doomed to failure from the start (Rwigema & Karungu, 1999:113).

- **Business Ownership Experience**

Entrepreneurial experience may be viewed as a significant contributor to entrepreneurial human capital, as it can translate into valuable knowledge developed through direct experience (Tustin, 2001:88). This experience can build reputations that help to secure resources and assets that can be utilized in identifying and exploiting subsequent ventures (Guzman & Santos, 2001:217). SMEs that start their businesses without any prior business ownership experience have to go through the costs of gaining entrepreneurial skills while implementing the idea (Tustin, 2001:126).

- **Industry-specific experience**

Having professional experience in an organization that is in the same industry as the one in which the entrepreneur starts his new venture can increase the probability of survival and high performance (Dahlqvist et al, 2000:4). Industry-specific experience is an essential way of acquiring abilities and expertise to respond to a perceived market need, along with gaining important business contacts and insights about the industry (Deakins & Freel, 1998:150; Guzman & Santos, 2001:217; Barreira, 2004:42). This knowledge is mostly tacit and costly to build, with entrepreneurs who lack experience struggling to make accurate estimates of sales and expenditure targets (Bygrave, 1997:4).

2.3.5 Characteristics of the entrepreneur

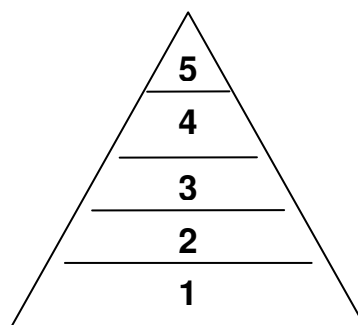
The entrepreneur's characteristics (traits, values, attitudes) are often cited as the most influential factors related to the performance of an SME and its competitiveness (Man et al, 2002:125; Simpson et al, 2004:484; Gurol & Atsan, 2006:28). Earlier studies of the entrepreneurial process examined the so-called entrepreneurial personality or a single psychological profile of the entrepreneur to find individual traits of successful entrepreneurs/owner-managers as compared with non-entrepreneurs (McCline et al, 2000:82; Ibrahim & Soufani, 2002:426; Mueller & Thomas, 2001:51; Rwigema & Venter 2004:64; Baron, 1998:276).

While there is not one all encompassing personality profile, it is widely thought that there are certain characteristics that are necessary to meet the tasks and challenges of new venture creation and without which the entrepreneurial process limps and eventually atrophies (Cornwall & Naughton, 2003:71; Morris & Zahra, 2000:93). The closer the match between the individual's personal characteristics and the characteristic requirements of being an entrepreneur, the more successful the individual will be (Markman & Baron, 2003:281). Each of these personality factors are discussed below:

- **The need for achievement (nAch)**

Maslow's (1980) hierarchy of needs and conception of the socio-cultural dimensions influencing workers' attitudes towards work (motivation) is helpful in exploring their implications for entrepreneurship development.

Figure 2.2: Maslow's hierarchy of needs



1. Level 1: Physiological needs - basic/primary survival needs for food, drink, clothes, shelter, sex and sleep.
2. Level 2: Security needs – the need for self-preservation and the protection of others' future assurance e.g. employment.

3. Level 3: Social needs - the desire to belong, need for affiliation, need to be part of a reference group.
4. Level 4: Esteem needs – the need for self esteem, need for self confidence, need for self image and need for recognition by one's peers.
5. Level 5: Self actualization - a need to stretch one's capabilities includes the need for achievement, self fulfillment, need to develop own skills and express self.

The desire to succeed fulfils the level 5 need for self actualization. This is linked with the identified 'need for achievement' and 'accomplishment of a goals' as the fundamental driving trait in the personality of successful entrepreneurs (McClelland, 1987:221; Darroch & Clover, 2005:327). This is not only innate but can be taught and practiced, thus making it a capability instead of just a trait (Wickham, 2001:16; McClelland, 1987:222).

The motivation construct is defined as the ambition or desire to be successful, to do well, to achieve excellence, to improve and to avoid failure (Santrelli & Vivarelli, 2007:17; van Vuuren & Nieman, 1999:4; McClelland, 1961 as cited by Darroch & Clover, 2005:325). Motivation skills gives the urge, motivation stimulation and inspiration that lead to certain thoughts and behaviour, which in turn give rise to higher levels of effort towards organizational goals (Rwigema & Venter, 2004:48).

McClelland (1987:221) identifies the 'need for achievement' (nAch) as the fundamental driving trait in the personality of successful entrepreneurs. The need for achievement results in high ambition and self-drive, which are necessary if entrepreneurs are to realize large goals against many odds (Rwigema & Venter, 2004:54; Wickham, 2001:16, Gurol & Atsan, 2006:28; Stewart et al, 2003:31). However, other studies like Bygrave (1993:259) have rejected the notion of "need for achievement" as it was also found in comparable non-entrepreneurs).

Achievement motivation is linked with personal self-efficacy, self esteem, attitudes, optimism, hard work, perseverance and high energy levels which all contribute towards business success through the ability to stand up and gather the resources (McClean, 2000:82; Wickham 2001:16; Markman & Baron, 2003:288).

- **Internal locus of control**

One of the characteristics consistently found in successful entrepreneurs is the tendency for the entrepreneur to have internal locus of control (Gurol & Atsan, 2006:28; Thomas & Mueller, 2000:292). The locus of control refers to the degree to which an individual perceives the outcome of an event to be either within or beyond his or her personal control (Morris & Zahra, 2000:94). A person with an internal locus of control believes that he has influence over the outcomes through his ability, effort or skills. On the other hand, people with an external locus of control believe that outside forces such as luck, fate or powerful others control and determine outcomes (Mueller & Thomas, 2001: 56).

Internal locus of control increases the likelihood that a potential entrepreneur will take action to carry out his or her plans (Mueller & Thomas, 2001:57). Managers/owners who had a greater internal locus of control believed in their ability to control key variables (e.g. customer demand, price, distribution, financial resources, use of technology or access to raw materials, etc) that ultimately determine failure or success of a business (Morris & Zahra, 2000:94).

The internal locus of control is linked with initiative, self efficacy, self-confidence, self-esteem and the ability to gather resources (Mueller & Thomas, 2001:56). Each is discussed below:

- **Initiative**

Having initiative is essential, as the business depends on the entrepreneur's actions (Rwigema & Venter, 2004:54). Many individuals who perceive an entrepreneurial opportunity to be both desirable and feasible simply never get around to performing activities essential to starting a business due to paralysis fuelled by inertia, laziness, doubt and fear, among others (Mueller & Thomas, 2001: 56).

- **Self confidence**

Self-confidence which people to believe that they largely control their own fate (Rwigema & Venter 2004:64).

- **Self efficacy**

Self efficacy is the belief in one's ability to organize necessary resources, skills and competencies to effectively execute actions to attain a certain level of achievement on a given task (Markman & Baron, 2003:287; Robertson et al, 2003:313; Erikson, 2002:278).

- **Self esteem**

Self-esteem refers to one's perception of one's self as capable, important, successful and worthy (Pretorius et al, 2005a:57).

- **Ability to gather resources**

The ability to gather and control the venture resources necessary to start, run and grow a business, and to manage them and efficiently and effectively use those resources for the intended purpose (Gbadamosi, 2002:98; Hisrich & Peters, 2002:263; Hellman, 2007:83). Successful entrepreneurs are known to be resourceful, which is viewed as prerequisite for action (Mueller & Thomas, 2001:55; Rwigema & Venter, 2004:64).

- **Tolerance of ambiguity**

Conditions in the market are never certain, are ever changing and there are a lot of seemingly contradictory trends in the market (Rwigema & Venter, 2004:64; Mueller & Thomas, 2001:55). New ventures need to adapt their initial business idea due to the presence of uncertainty and ambiguity (Andries & Debackere, 2006:81). Thus successful entrepreneurs display a higher tolerance of ambiguity than non-entrepreneurs (Morris & Zahra, 2000:94; Gurol & Atsan, 2006:28).

- **Adapting to change**

When owners find their environment destabilizing, adaptation and flexibility becomes a critical strategy for venture success (Rwigema & Venter, 2004:55). An intolerant response to change can lead to denial, risk-averting behaviour and imposition of arbitrary constraints and structures that stifle the owner/manager's ability to adapt (Morris & Zahra, 2000:94). Adaptation is crucial for business performance (Andries & Debackere, 2006:81)

- **Risk taking propensity**

It all started with Adam Smith (1776), who suggested then that risk taking was one of the defining characteristics of an entrepreneur. Risk is loosely defined as probability of unwanted outcomes (Rwigema & Venter 2004:57; Morris & Zahra, 2000:95). Risk taking propensity combines all factors dealing with risk, including taking calculated risks, being realistic when analyzing opportunities, and spreading one's risk. All these are said to be key factors that impact positively on entrepreneurship (Timmons, 1999:38; Gurol & Atsan, 2006:28; Stewart et al, 2003:27; Hisrich & Peters, 2002:238; Themba et al, 1999:107).

Entrepreneurs face uncertainty and possible risk in at least five key areas, including financial, career, family and social; psychological and time (Botha, 2006:68). Successful SME operators tend to be moderate risk-takers who make calculated risk assessments and they are not afraid of failing; rather they are intent on succeeding (Morris & Zahra, 2000:95). Less successful SMEs do not plan for contingencies and rely on luck alone, which is said to be reckless (Rwigema & Venter, 2004:19).

- **Opportunity alertness**

The role of the entrepreneur has been defined as instrumental in discovering and exploiting new opportunities (Schumpeter, 1934; Kirzner, 1973). Therefore the ability to spot opportunity, from the starting point of isolating, quantifying and refining an opportunity from a set of ideas, is a key factor impacting positively on entrepreneurship (Rwigema & Venter 2004:57; Ahwireng-Obed, 2003:1). Opportunity alertness and identification is linked with creativity and innovativeness (Mueller & Thomas, 2001:57). With South Africa being the fourth lowest in terms of opportunity based entrepreneurs means that most South African entrepreneurs are not alert to opportunities (GEM, 2005a:21).

- **Creativity**

Creativity is the cognitive process of developing and generating ideas, concepts, commodities or discoveries (Botha, 2006:68; Rwigema & Venter 2004:57). It has been defined as “the envisioning of a new combination of resources and market realities, often through the questioning of conventional wisdom, the discovery of new knowledge regarding market needs, technology, the availability of vital resources and or finding new applications for pre-existing knowledge” (Pretorius et al, 2005a:56; Lumsdaine & Luimsdaine, 1995:13). Creativity is linked with innovation since innovation is the successful practical implementation of the creative ideas or concepts to ensure that the set commercial and profitable aims are met and are in line with the specific opportunity in the market environment (Antonites, 2003:109; Brazeal & Herbet, 1999:29; Pretorius et al, 2005a:57; Themba et al, 1999:107).

- **Innovation**

Innovation is explicitly included in definitions describing the entrepreneur as a person who introduces new or improved products, new production techniques, new processes, new markets, new marketing or sales methods, new channels of distributions and promotions, new inputs and raw materials, new or improved services, new methods of financing, new technologies (including machinery, equipment and information technologies), new innovative

boundary support, new organizational structure and administrative procedures, and new methods of communication, management or even reorganizing an entire new industry (Schumpeter, 1934; Drucker, 1985; Rwigema & Venter, 2004:59). There appears to be strong empirical evidence that successful entrepreneurs are more innovative than non-entrepreneurs (Mueller & Thomas, 2001:58, Gurol & Atsan, 2006:28, Stewart et al, 2003:27).

- **Optimism**

Entrepreneurs are known to have eternal optimism, helping them believe they will avoid well-known pitfalls (Rwigema & Venter, 2004:59), while many do avoid pitfall, this quality can also lead to the optimism fallacy, which can also contribute to business failure (Baron, 2004b:222).

- **Problem solving**

How the owner of the SME faces the problems determines its success or failure (Rwigema & Venter, 2004:55). Problem-solving skills include time management, ability to handle stress and all problem-solving behaviour.

- **Decision making**

Decisiveness is very important in an entrepreneur as it determines the success or failure of the business (Rwigema & Venter, 2004:57; Bird, 2001:447).

- **Leadership**

A dynamic business depends on the leader being able to articulate the vision of the company to the team and to build a team towards efficiency (Rwigema & Venter, 2004: 69).

- **Ability to learn**

Rogerson (2001a:117) stresses that successful entrepreneurs have absorptive capacity and the ability to learn. Learning refers to the acquisition of knowledge by actors who are willing and able to apply that new knowledge in making decisions or influencing others in the organization (Morris & Zahra, 2000:93).

- **Energy**

Most successful entrepreneurs have lots of energy (Mueller & Thomas, 2001:55; Rwigema & Venter, 2004:64).

- **Integrity**

Personal values like ethics, honesty, integrity, code of ethics and consistency are important for business development and the building of the trust so needed between the owner of the SME and its stakeholders (Rwigema & Venter, 2004:69).

- **Capacity for hard work**

Successful entrepreneurs have instrumental habits of industriousness, hard work and diligence, without which the company may not be able to realize its goals (Thomas & Mueller, 2000:292).

- **Frugality**

Successful entrepreneurs nurture the habits of frugality and thriftiness without which the company may not be able to use its resources effectively and efficiently (Cornwall & Naughton, 2003:71).

- **Accountability**

Successful entrepreneurs assume personal responsibility and accountability, as there is normally no one else to blame (Mueller & Thomas, 2001:55; Rwigema & Venter, 2004:64).

- **Independence and autonomy**

Successful entrepreneurs display individuality, independent thought, preference for autonomy and self-reliance (Thomas & Mueller, 2000:292; Rwigema & Venter, 2004:69).

- **Perseverance**

Successful entrepreneurs are committed and have tenacity, perseverance and endurance (Rwigema & Venter, 2004:57; Mueller & Thomas, 2001:55).

- **Negotiating skills**

Having persuasive negotiating skills is important for entrepreneurship (Guzman & Santos, 2001:216).

- **Time management skills**

Timing and time management are important for entrepreneurship (Bygrave, 1997:15; Morris & Zahra, 2000:92).

While these traits (among others) have been cited in many studies, The studies on entrepreneurial traits have many methodology problems (Baron, 2003:254). One conclusion that could be drawn from these studies is that there is not one all-encompassing personality profile for successful entrepreneurs, nor could researchers find real character differences that distinguished entrepreneurs from non-entrepreneurs (Morris & Zahra, 2000:93; Rwigema & Venter, 2004:66). The main difference was not in character but in the process of recognizing opportunity, taking control of the environment and having the tendency to achieve in the entrepreneurial context (McCline et al, 2000:83).

While research still examines the characteristics of the entrepreneur, it has also moved towards the entrepreneurial process, together with the actions that the entrepreneur has to undertake and the abilities needed to successfully start and grow the enterprise (Bygrave 1993:256; Carter, Gartner & Reynolds, 1996:152; Gartner et al, 1999:216).

2.3.6 Capabilities, abilities and skills of the entrepreneur

Competent management skills are a prerequisite for the success of SMEs (OECD, 2002:24). Management competence (or know-how, capacity, abilities and skills) are a set of factors associated with successful businesses, as they give the entrepreneur the ability to perform a role successfully and the power to act effectively in a particular range of possible future circumstance (Ibrahim & Soufani, 2002:427; Markman & Baron, 2003:287; Wasilczuk, 2000:88; Mughan et al, 2004:428; Lange et al, 2000:6; Man et al, 2002:131; Bird, 1988:443).

These skills include being able to identify and evaluate market opportunities, to set up realistic and measurable goals, to develop business plans, to secure resources required and set up a new venture; to produce and service the market; to manage conflict effectively; and to achieve the overall industrial efficiency as well as effectiveness that lead to the growing of the business (Gundry & Welsch, 2001:463; Miller et al, 2003:219; Dreisler et al, 2003:386). Basically skills assist the entrepreneur to take action and do something about the business.

Bolton & Thompson (2002:11) define facets of the entrepreneur as the reasons why entrepreneurs do what they do. Bolton & Thompson (2002:79) identify six themes of key facets of the entrepreneur that may start as talent or temperament but can be developed, managed, enhanced by learning and application of techniques:

- F = Focus which is the ability to set daily goals and targets, to focus on set goals, to lock on targets, to concentrate never losing sight of critical issues and to discriminate between important, urgent and trivial activities. It is linked with the desire to get things done and the perseverance to make it happen.
- A = Advantage which is the ability to spot opportunities and the related details, to measure which option will give the greatest returns, to gather resources and to visualize the future.
- C = Creativity which is the ability to create ideas, coming up with solutions and creating opportunities given the environment.
- E = Ego which is the inner drive resulting in the need to be independent, to be in charge of own destiny, to make a difference. This gives the ability to have confidence, be motivated, be dedicated, to take responsibility, to be accountable and to have the courage to face and overcome setbacks.
- T = Team which constitutes the ability to know ones limitations, know when to look for help, finding the right people, encouraging all to work as a team and engaging in development of the people's potential.
- S = Social which is the ability to orientate themselves and their business mission around a social cause, passion, beliefs or values.

Superior performance is likely when resources, traits and capabilities are aligned with strategic industry factors (Thornhill & Amit, 2003:498; Lowe & Marriott, 200:11). Competitive advantage can be derived from a firm's capabilities to the extent that they are valuable, rarely able to be imitated and organized to be exploited (van Vuuren & Nieman, 1999:4; Man et al, 2002:135; Erikson, 2002:277).

On the other hand, one of the major reasons for the failure of SMEs seems to be insufficient management capacity; lack of expertise; low levels of skills; and managerial incompetence (Mughan et al, 2004:429; Viviers et al, 2001:4; Ligthelm & Cant, 2002:6; Clover & Darroch, 2005:243; Strydom & Tustin, 2003:1; Rwigema & Karungu, 1999:107; Freeman, 2000:372; Thornhill & Amit, 2003:500). Surveys of business failure suggest that SMEs often have a good idea, but because they have no idea of business fundamentals or do not know how to run a business, they forgo, under-exploit or delay the identified opportunity (Ladzani & van Vuuren, 2002:157; Tustin, 2003:34; Rwigema & Venter, 2004:25).

It can be concluded that entrepreneurship is a question of recognizing a good opportunity and having the skills to convert that opportunity into a thriving business by gathering together and managing resources (Bygrave, 1997:13; Timmons, 1999:38). Since it is the entrepreneur (and his/her team) that drives the venture through the different stages of the entrepreneurial process, it goes without saying that the opportunity must fit the personal skills of the entrepreneurial team (Hisrich et al, 2005:39; Man et al, 2002:130).

In order to understand the factors leading to the success or failure of the entrepreneurship process, it is necessary to look at the capacity needed to be a successful entrepreneur or improve entrepreneurial conduct (Watson et al, 1998:217; Rogerson, 2001a:117).

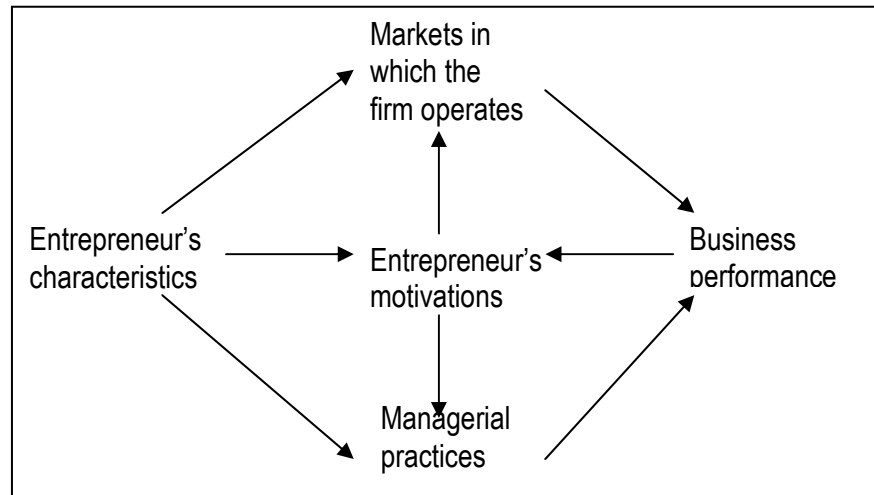
It has been noted that entrepreneurial research has been moving towards understanding skills and competencies that are required by entrepreneurs to function in all the areas related to business trade (Barreira, 2004:43). Thus the main objective of this chapter is to investigate abilities of the entrepreneur (and his/her team) as key endogenous factors in the entrepreneurial process leading to business success, growth or failure.

2.4 The entrepreneurship performance model

This study support Man et al (2002:125) when he states that in entrepreneurship and small business research a firm's performance is often considered the ultimate criterion of success or failure in both empirical studies and theoretical models on the success of SMEs. Therefore the normative theory underlying this study is based on eight models that link entrepreneurship performance with skills.

Glancey et al (1998:255) outlines a model of small-firm performance in which the personal characteristics of the entrepreneur determine the motivations and objectives that direct the firm's performance, which is mediated through the markets in which the entrepreneur operates and the managerial practices which he or she employs, as illustrated below:

Figure 2.3: Glancey et al's model of business performance



Source: Glancey et al (1998:255)

Glancey et al's model can be represented in a mathematical form as follows (Equation 2.1):

$$\text{Increase in performance} = G(\text{traits, motivation, management}) \times h(\text{market}) \quad (2.1)$$

van Vuuren and Nieman (1999:1) developed a three-dimensional model in which entrepreneurial performance is a multiplicative function of motivation times entrepreneurial and business skills, as shown in equation 2.2 below.

$$\uparrow E/P = aM \times b E/S \times c B/S \quad (2.2)$$

- $\uparrow E/P$ is defined as increase in entrepreneurial performance which is based on the starting of a business, utilizing an opportunity and growth of the business idea.
- M = Motivation is seen as the entrepreneur's level of need for achievement. This would include inner control, persistence, leadership, decisiveness, determination and sheer guts, achievement imagery, ability to inspire, ability to overcome obstacles or blocks, ability to get help, reactions to success or failure.
- E/S = Entrepreneurial skills cover the ability to turn their business ideas into feasible business opportunities, to start and to grow a business enterprise. Entrepreneurial skills include creativity, innovation, risk-taking, and the ability to interpret successful entrepreneurial role models and identification of market opportunities.
- B/S = Business skills cover all the conventional management training areas in a business, including being able to formulate business plans, and financial, marketing, operational, human resources, legal, communication, and management skills.
- a , b & c are constant coefficients.

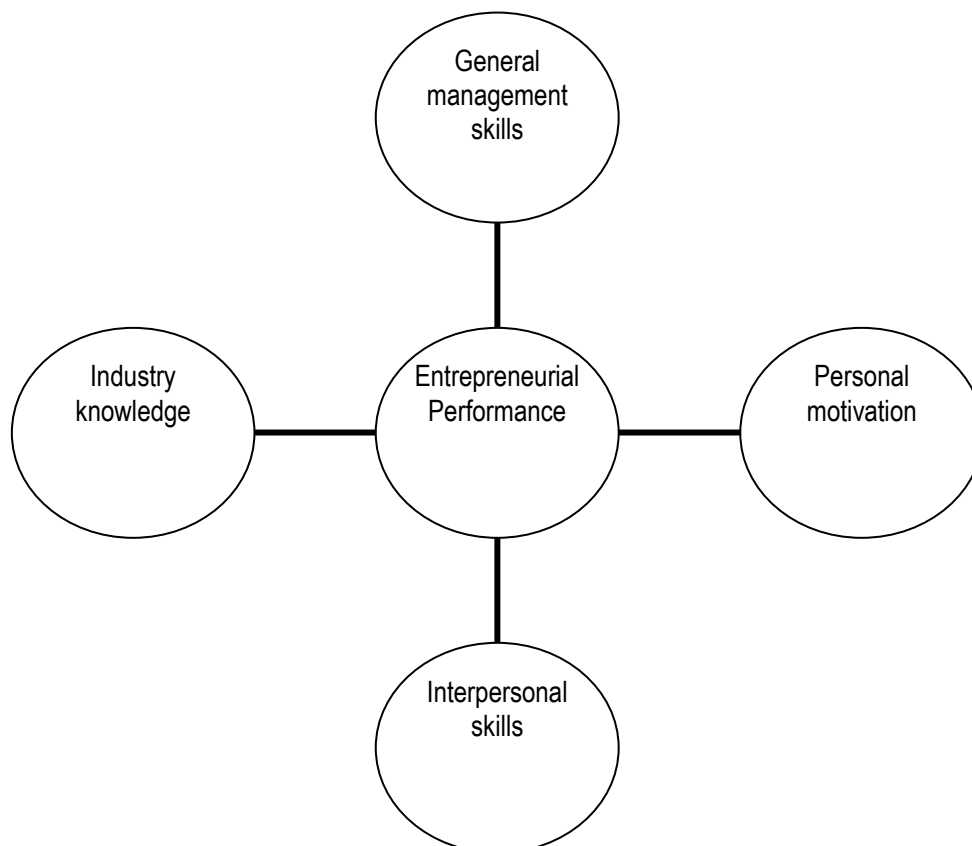
As this mathematical equation has constructs which are multiplicative, this implies that the absence of any one of the elements such as motivation, entrepreneurial skills or business skills will lead to no increase in entrepreneurial performance. This also means that the increase in the capacity of any of these skills can lead to at least an increase in the entrepreneurial performance of the entrepreneur.

The coefficients a, b and c are usually non-zero as they depict the existing levels of skills that an individual has. This study assumes that there is no individual who has no level of skills or such low levels of skills that the skill can be ignored. This principle is of paramount importance in this study and is applied in all the models developed in chapters 2, 3 and 4.

Wickham (2001:55) stated that entrepreneurial performance results from a combination of industry knowledge, general management skills, people skills and personal motivation. Wickham's model can be represented in a mathematical form as follows (Equation 2.3)

$$\uparrow \text{Performance} = W (\text{industry, management, interpersonal, motivation}) \quad (2.3)$$

Fig 2.4: Wickham's model of the entrepreneurial performance



Source: Wickham (2001:55)

Erikson (2002:278) introduces the entrepreneurial capital model, which is defined as a multiplicative function of entrepreneurial competence and entrepreneurial commitment or motivation. Erikson's model can be represented in a mathematical form as follows:

Given equation 2.4 below:

$$\uparrow \text{Performance} = f(\text{ability, motivation}).E(\text{opportunity}) = E(\text{opportunity}) \times \text{ability} \times \text{motivation} \quad (2.4)$$

And equation 2.5 below:

$$\text{Ability} = \text{business management} + \text{entrepreneurial competence} = B/S + \text{opportunity-id} \times \text{resources} \quad (2.5)$$

Therefore means that equation 2.6 below can be written as:

$$\uparrow \text{Performance} = E(\text{opportunity}) \times M \times (B/S + \text{opportunity-id} \times \text{resource}) \quad (2.6)$$

Man et al (2002:134) state that outside of the entrepreneur's background and external environment, SME performance is linked with internal firm factors (the competitive scope) and the influence of the entrepreneur (organizational capabilities and entrepreneurial competencies).

Man et al's model can be represented in a mathematical form as equation 2.7 below:

$$\uparrow \text{Performance} = G(\text{firm competitive scope}) \times M(O/C, E/C) \quad (2.7)$$

Where O/C is the organizational capabilities which are equivalent of business skills construct defined above and E/S is entrepreneurial competencies which Man et al (2002:132) further breaks down to six entrepreneurial competency areas identified from literature namely:

- Opportunity: related to recognizing and developing market opportunity through various means.
- Relationship: related to person-to-person or individual-to-group based interactions, cooperation, trusts, contacts, connections, persuasive ability, communication, interpersonal.
- Conceptual: Related to different conceptual abilities, decision-making skills, understanding complex information, risk taking, innovativeness.

- Organizing: related to the organization of different internal and external human, physical, financial and technological resources, including team building, leading employees, training, controlling.
- Strategic: related to setting, evaluation and implementing the strategies of the firm.
- Commitment competencies: driving the entrepreneur to move ahead with the business.

Ucbasaran et al (2004:440) identified three distinct capabilities that the entrepreneur requires to succeed:

- The entrepreneurial role, which assists with business development.
- The managerial role, which assists with functional needs which include human resources management, marketing, operations, administration, finance and planning.
- The technical role, which is needed for functioning and producing products.

Ucbasaran et al's model can be represented in a mathematical form as equation 2.8 below:

$$\text{Success} = U(E/S, B/S, \text{Technical}) \quad (2.8)$$

Darroch & Clover (2005:325) outlines their model describes SME success as a function of preference for self employment, motivation, entrepreneurship skills (energizing behaviours) and business skills, moderated by background and external firm-level factors. Darroch & Clover's model can be represented in a mathematical form as equation 2.9 below:

$$\text{Success} = D(\text{motivation}, E/S, B/S) \quad (2.9)$$

Perks & Struwig (2005:173) list personal, technical, business operations and management skills as the four categories of skills that are needed to ensure entrepreneurial success. Perks and Struwig's model can be represented in a mathematical form as equation 2.10 below:

$$\text{Success} = P(\text{personal}, \text{management}, B/S, \text{technical}) \quad (2.10)$$

From the above discussion and the table summary below it is clear that the van Vuuren & Nieman (1999) model has identified most of the skill categories that are included by the other seven authors (Glancey et al, 1998; Erikson 2002; Wickham, 2001; Man et al, 2002; Ucbasaran et al, 2004; Darroch & Clover, 2005 and Perks & Struwig, 2005).

Table 2.2: Summary of the skills constructs as per the 8 models reviewed

Skills	Glancey et al, 1998	van Vuuren & Nieman, 1999	Wickham, 2001	Erikson, 2002	Man et al, 2002	Ucbasaran et al , 2004	Darroch & Clover, 2005	Perks & Struwig, 2005
business skills	x	x	x	x			x	x
strategy and business plans		x			x	x		
operations		x				x		
financial		x			x	x		
marketing		x			x	x		
human resources		x			x	x		
legal		x						
communication		x			x			x
entrepreneurial skills		x		x		x	x	
industry / market opportunity	x	x	x	x	x	x		x
risk		x			x	x		
creativity		x						
innovation		x			x			
role models		x						
gathering of resources				x				
personal skills			x		x			x
decision making		x			x			
achievement motivation & commitment	x	x	x	x	x		x	x
inner control		x						
persistence		x						
leadership		x			x			
problem solving		x						x
ability to learn		x				x		
networking					x			
literacy and numeracy								x
technical skills					x	x		x
product/ service development						x		
product / service production						x		

Thus this study adopts the van Vuuren & Nieman (1999) equation 2.2 format in formulating the integrated model as the conceptual basis for the exploratory study to examine the relationships between the skill variables determining the entrepreneurial process. However, the van Vuuren & Nieman (1999) model is integrated with the other 7 models to include all the other skills constructs identified by the other seven authors (Glancey et al, 1998; Erikson 2002; Wickham, 2001; Man et al, 2002; Ucbasaran et al, 2004; Darroch & Clover, 2005 and Perks & Struwig, 2005) reviewed in the literature study. The final integrated model has incorporated the following adaptations:

- Following Erikson's (2002) model the ability to gather resources are included as one of the skills within the entrepreneurial skills construct.
- The integrated model broadens the motivation skills to include all personal skills identified by Man et al (2002) and Perks and Struwig's (2005). Therefore a new construct called "Personal skills (P/S)" is defined as including motivation (need for achievement), problem solving, numeracy and literacy, and communication skills. This integrated model acknowledges that the motivation is the dominating factor in the personal skills construct.
- Another category "Technical skills (T/S)" is identified separate from the business skills following the models by Ucbasaran et al (2004) and Man et al (2002). While it is clear that an entrepreneur needs more than just technical skills (Cornwall & Naughton, 2003:67), technical skills are said (Perks & Struwig, 2005:172) to be a precondition for starting any business (because the entrepreneur must create things well). Therefore the technical skills can be considered as a multiplicative construct, instead of an additive construct as part of the portfolio of business skills.

On the basis of the above literature review the study posits that all skills can be divided into three business areas:

- **Product and service differentiation.** This includes the ability to ensure the product or service is produced at an acceptable quality. This depends entirely on technical skills.
- **Enterprising competencies.** These abilities are responsible for the booster/energizer/enterprising functions which assist with business development and motivation. This depends on entrepreneurial and personal skills.
- **Functional capabilities.** These abilities assist the entrepreneur to function the business and find the balance between opportunity, resources and the entrepreneurial team. These depend on business management skills.

Identifying these three categories are supported by literature that identified these three distinct capabilities areas as interdependent and complementary categories required by entrepreneurs in order to succeed (Schamp & Deschoolmeester, 1998:143; Rwigema & Karungu, 1999:109; Viviers et al, 2001:6; Kodithuwakhu & Rosa, 2002:431).

Therefore the integrated model posits that the increase in entrepreneurial performance is dependant on the availability of product differentiation competencies and enterprising competencies and functional competencies. Since product differentiation competencies are solely dependant on technical skills, functional competencies on business skills and enterprising competencies on personal and entrepreneurship skills, the integrated model for increasing entrepreneurial performance is best represented by equation 2.11 below:

$$\uparrow E/P = (a.P/S \times b.E/S) \times c.(B/S) \times d.(T/S) \quad (2.11)$$

Where:

- $\uparrow E/P$ is defined as entrepreneurial performance which is based on starting a business, utilizing an opportunity and growing the business idea.
- P/S is Personal skills, which includes the following: problem solving, numeracy and literacy, motivation (need for achievement), and communication.
- E/S is Entrepreneurial skills, which cover the ability to turn their business ideas into feasible business opportunities, to start and to grow a business enterprise.
- B/S is Business skills, which cover all the conventional management areas in a business.
- T/S is Technical skills, including vocational and specialized expertise that enables the business to develop and produce the products and services at the acceptable quality.

This integrated model as described by equation 2.11 forms the normative theory for the empirical research. The next section identifies all the skills that form part of each of the four skills category constructs (T/S, B/S, P/S and E/S) in the three business areas (product, enterprising and functional) as described in the integrated model of equation 2.11.

2.4.1 Personal skills (P/S)

Most literature on entrepreneurship identifies personal skills or generic skills as those skills that are universal and apply across a variety of careers and jobs/occupational groups and are not specific to a particular industry or vocation (Tustin, 2003:26; Perks & Struwig, 2005:172). Since traits were identified in the literature as important to entrepreneurship, the

study focused only on those personal traits that are also capabilities. The study defines the personal skills construct to include following skills which were discussed in the section on the entrepreneurial character above:

- Motivation
- Ability to learn
- Decision making
- Adapting to change
- Time management skills
- Negotiating skills
- Problem solving

These factors can also be considered as personal capabilities, instead of just innate traits, because individuals can learn to use these abilities effectively. Other personal capabilities that were identified in the literature review as necessary for SME success included communication, literacy and numeracy, as discussed briefly below:

- **Communication**

This study includes communication as a personal skill needed for business. This follows Botha (2006:71) and Rwigema & Venter (2004:50) who identify communication skills required to gain access to relevant information, to gather information and to handle all information necessary between the entrepreneur, employees, customers, suppliers and all other stakeholders. Communication skills include the ability to communicate with other people, basic customer service skills, basic administration, clerical accounting, listening, talking, writing memos, letters, memoranda, reports, newsletters and policy manuals as well as being able to communicate over language and cultural barriers plus information sharing (Perks & Struwig, 2005:173; Darroch & Clover, 2005:326).

- **Literacy and numeracy**

Basic reading and writing skills and basic numeracy (addition and subtraction) are needed in running a business (Tustin, 2003:26, Perks & Struwig, 2005:172).

2.4.2 Entrepreneurial skills (E/S)

This study incorporates entrepreneurial skills category. Entrepreneurial skills are defined by Nieman (2001:446) as those skills which enhance entrepreneurial performance. This

supports Wickham's definition (2001:41). The skills (opportunity alertness, innovation, creativity, ability to interpret successful entrepreneurial role models and risk taking) that were identified as part of entrepreneurship skills by van Vuuren & Nieman (1999) are incorporated into the entrepreneurial skills construct. This study adds "ability to gather resources" as another skill to be considered as entrepreneurial skills following Erikson's (2002) model.

All these skills are considered as entrepreneurial capabilities instead of innate traits because individuals can be taught how to use these effectively.

2.4.3 Business management skills

Business skills are required to run the business on a daily basis (Botha, 2006:70). One of the dictionary definitions of good management is the skilful use of materials and time towards the achievement of business objectives (Sackett, Rose & Adamson, 2003:298). Business skills cover all the conventional management training areas in a business (van Vuuren & Nieman, 1999:4; Monk, 2000:12). Organizations that are well managed develop a loyal customer base, grow and prosper (Nieman, 2006:19; Mughan et al, 2004:428).

Having inadequate business management skills is one of the most prominent reasons for failure of SMEs (Viviers et al, 2001:5; Monk, 2000:12). It is possible to identify various skills of effective and efficient managers who run successful businesses (Van Dyk, Nel, van Loedolff & Haasbroek, 2001:37). Each of these is discussed below:

- **General management skills**

General management skills are skills that assist with knowing how a business works and how it must be managed. These skills enhance the performance of the entrepreneur and include MIS, organizing, leading, motivating, budgeting, handling security, safety; clerical skills, administration, customer service skills and control (Botha, 2006:71; Tustin, 2003:26; Gartner et al, 1999:219).

- **Planning skills**

Planning skills cited as important for SME success include goal setting, careful planning of time and resource usage as well as the business plan development (Friedrich et al, 2003:2; Czinkota & Ronkainen, 2003:49; Botha, 2006:72).

- **Financial management skills**

Financial management abilities are knowledge of the resources required to run the type of business the venture is in and the ability to monitor and control these resources (Gartner et al, 1999:219; Ayotte, 2007:179). Financial management includes knowledge and understanding of accounting principles, financial planning, knowledge of how to find alternative sources of finance, bookkeeping, cash flow management, credit management, cost management, payroll, stock control, supplier payments, maintaining financial records and accounts, tax management and computations, dealing with computerized accounting systems, profit versus income performance measurement, realistic economic estimates, drafting and interpreting financial statements including income, balance and cash flow statements and general knowledge of the sources of finance (Monk 2000:12; Nieuwenhuizen & Kroon, 2002:162; Perks & Struwig, 2005:173; Tustin, 2003:26, Botha 2006:72).

- **Marketing skills**

Marketing skills important for SME success are about the knowledge of customers and how to sell to them (Gartner et al, 1999:219). Marketing skills include conducting market research and analysis, understanding the needs of the market, devising a marketing strategy, marketing planning, identifying the marketing mix (price, product, place, promotion, location, people and process), identifying a target market, selecting a selling strategy for that market and positioning of the business in that market, quality driven client service based on client needs, selling, product development, promotions, advertising, merchandising, public relations, e-commerce, competitor knowledge, analysis and developing strategies to surpass the competition (Monk, 2000:12; Tustin, 2003:26).

- **Networking skills**

A network is a specific type of relation linking a defined set of persons, objects or events or a set within which certain types of mutually rewarding relationships exist, from where an entrepreneur can obtain resources and get critical support for the development and growth of a business (Nhlengethwa, 2003:1; Drakopoulou Dodd & Patra, 2002:117; Harris & Wheeler, 2005:187). Resources that can be obtained through networking include information about business opportunities, innovation, referrals, business linkages, shared costs, networks of business partners, professionals, technicians, specialists, generalised consultants, the supply chain, potential contractors, bankers, distributors, clients, customer linkages, sector-based trade associations, professional memberships, chambers of commerce, institutional

ties as well as networks of collaboration and coordination (Jansen, 2003; Zhao & Aram, 1995:349; Li & Ferreira, 2006:49; Batjargal, 2006:305).

Networks can be categorized as those that provide personal support, professional support (entrepreneurial networks) or public support (social networks) (Jansen, 2003; Hite, 2005:114; Nhlengethwa, 2003:1; Jack & Robson, 2002:1; Markman & Baron, 2003:292; Drakopoulou Dodd & Patra, 2002:117). Successful entrepreneurs carefully develop beneficial networks at personal, professional and business levels (Rwigema & Venter 2004:70; Batjargal, 2006:305).

- **Supply value chain management skills**

Supply value chain management skills are defined as those abilities needed to secure sources of supply, control stock, identifying raw materials needed, procuring suppliers, wholesalers and retailers as well as buying and securing all required inputs (Zhao & Aram, 1995:349; Gundry & Welsch, 2001:457).

- **Operational skills**

Operational skills are defined as the know-how to make/produce the products and services to a given standard (Gartner et al, 1999:219). Operational management includes production management/trading skills (customer service, marketing, safety and security), process management, quality control, seeking competitive advantage, meeting and surpassing quality of competitors, (Nieuwenhuizen & Kroon, 2002:159; Monk, 2000:12; Tustin, 2003:26; Botha, 2006:71).

- **Human resources management skills**

Human resources are the people within the business (Botha, 2006:71). Human resource management is defined as a method used to identify, select, develop, retain and motivate a workforce that possess superior abilities, that apply their abilities in their work-related activities and whose work-related activities result in these firms achieving superior intermediate indicators of firm performance (Way, 2002:766; Gartner et al, 1999:219).

HR management includes recruitment, selection, training and development of employees on a continuous basis, interpersonal relations, handling of employees, setting of key performance areas (KPA's), performance reviews, arranging teamwork, giving positive and

constructive feedback, assigning tasks, resolving conflict, allocating resources, motivating employees and delegating (Thornhill & Amit, 2003:506; Monk, 2000:12).

- **Legal skills**

Legal skills include the ability to deal with business forms, contractual law, understand the necessity for ethical behaviour within a business as well as the ability to register trademarks, logos and designs (Botha, 2006:71).

- **Business systems and processes skills**

Business system skills are those skills that allow management to set up and run procedures, processes, and record keeping towards effectiveness and efficiency (Tustin, 2003:26). McKeiver & Gadenne (2005:513) note that in practice that the majority of SME are following a resistant strategy when it comes to business systems.

Business systems include organizational structures; record keeping and information systems; planning and control systems; financial and accounting systems; marketing and customer management systems; operations systems; administration systems; communication systems; HR systems including grievance procedures, disciplinary procedures, effective HR performance and reward systems (MacMahon & Murphy, 1999:26; Nieman, 2006:198). Important record keeping includes incoming stock purchase records, stock-take records, inventory books, inventory control, organizational management, clerical accounting, letters, filing systems, customer records systems, accounts payable, payroll records, cash records, fixed assets records and insurance register (Nieuwenhuizen & Kroon, 2002:159).

Record keeping systems are important as they provide the SME with the information necessary to run the business successfully and to detect fraud. An effective record keeping system makes it possible for the SME to evaluate the business on a weekly/monthly basis and to focus on those things needed. (Nieman, 2006:198).

- **ICT Skills**

ICT skills are defined as those skills that allow the entrepreneur the optimal use of IT, including the computer applications which give businesses strategic competitive advantage, as well as everyday business operations (Baard & Van den Berg, 2004:2; Tustin, 2003:26). ICT skills include typing and keyboard skills, basic internet and email skills, computer

programming, computer system analysis, information and communication technology, network design, website development, hardware support, software support, computer assistance, computer equipment operation, technology and ICT applications. (Monk, 2000:12; Marri, Gunasekaran & Kobu, 2003:153; Lawless, Allan, & O'Dwyer, 2000:312).

Appropriate ICT applications can assist SMEs to respond quickly to the external environment; tap into global information, networks and markets; gain in efficiency and business performance; increase managerial competence; reduce costs; increase turnover; increase profitability; reduce work in progress; improve the working environment; improve effectiveness and ability to retain existing clients plus achieving more flexibility and speed (Chapman, James-Moore, Szczygiel & Thompson, 2000:353; OECD, 2002a:13; Marri et al, 2003:152; Goolnik, 2002; SME survey, 2003; Bridges, 2002:3; Romijn, 2001:63).

- **Technical skills**

Technical or vocational skills are defined as those specific skills needed to work within a specific occupation. Technical skills include expertise; the knowledge of the industry, its standards and practices; the ability to use the tools, procedures and techniques of the specified field, the understanding of how specific things work; product/service-specific knowledge that enable one to know what the particular product could do and what it could be used for; process knowledge or how to manufacture the relevant product and all steps that need to be taken to develop and produce the product or perform the tasks necessary to render the service (Tustin, 2003:26; Perks & Struwig, 2005:172; Gartner et al, 1999:219; Nieuwenhuizen & Kroon, 2003:138; Honig, 1998:371; LeBrasseur, Zanibbi & Zinger, 2003:315).

For example, technical skills for the textile and clothing industry include: tailoring, dressmaking, sewing, embroidery, fibre preparation, upholstering, weaving, knitting, crocheting, pattern making, cutting, bleaching, dyeing, finishing, shoemaking fur and leather preparing as well as the operating and cleaning of related machinery (Strydom & Tustin, 2003:2; Tustin, 2003:39).

2.5 Integrated model and propositions

As indicated in chapter 1 the primary objective of this study is to do a critical analysis of the skills (or capabilities) that are key determinants of success in the entrepreneurship process

and SME development. From the literature review above the researcher has presented an integrated model for increased entrepreneurial performance that identifies a certain set of competencies. Based on this integrated model the study posits that the success of an SME will be attributable to recognizing the importance of a set of skills required for SME success and being competent in those skills. Furthermore the study posits that having the right skills is dependant on having received training in that skill.

Therefore the following propositions are presented for investigation:

Proposition A: Successful SMEs are not likely to consider skills to be more important for business than less successful SMEs.

Proposition B: Successful SMEs are not likely to be more competent in skills than less successful SMEs.

Proposition C: Successful SMEs are less likely to have been trained in skills than less successful SMEs.

From the above literature search, skills, competencies and abilities that affect the success of SMEs can be summarized in four categories of skills, namely technical skills (T/S), personal skills (P/S), business management skills (B/S) and entrepreneurship skills (E/S), as portrayed in the integrated $\uparrow E/P$ model represented by equation 2.11 below:

$$\uparrow E/P = a.P/S \times b.E/S \times c.B/S \times d.T/S \quad (2.11)$$

Thus to reach sub-propositions, the skills constructs are further divided into skills within that construct category. Technical skills stand as a complete construct and cannot be subdivided any further.

From the literature review above, the personal skills construct can be represented by equation 2.12 below:

$$P/S = a.PM \times (1 + e.PA + f.PC + g.PD + h.PG + i.PL + j.PN + k.PP + l.PT) \quad (2.12)$$

Where:

- PM = Motivation (need for achievement)
- PA = adaptability to change
- PC = Communication
- PD = Decision making
- PG = Negotiating
- PL = Learning abilities

- PN = Numeracy and literacy
- PP = Problem solving
- PT = Time management
- e, f, g, h, i, j, k and l are constant coefficients

Substituting P/S equation 2.12 into integrated model equation 2.11 above would read as Equation **2.13** below:

$$\uparrow E/P = a.PM \times (1 + e.PA + f.PC + g.PD + h.PG + i.PL + j.PN + k.PP + l.PT) \times b.E/S \times c.B/S \times d.T/S \quad (2.13)$$

If all the other personal skills are declared to be insignificant to entrepreneurial performance in comparison with motivation, then it can be assumed that the PP, PN and PC factors become very small towards zero, with the coefficients e, f, g, h, i, j, k and l going towards zero. Thus equation 2.13 becomes equation 2.14 below:

$$\uparrow E/P = a.PM \times (1 + 0.PA + 0.PC + 0.PD + 0.PG + 0.PL + 0.PN + 0.PP + 0.PT) \times b.E/S \times c.B/S \times d.T/S \quad (2.14)$$

Simplifying equation **2.14** brings it back to the integrated model in equation 2.11.

$$\uparrow E/P = (a P/S \times b E/S) \times c B/S \times d.T/S \quad (2.11)$$

From the literature review above the construct entrepreneurial skills can be presented as equation **2.15** below:

$$E/S = (m.EO \times (1 + n.EC + o.EI)) \times (1 + p.EM) \times q.EG \times r.(1/(1-ER)) \quad (2.15)$$

Where:

- E/S = Entrepreneurial skills, covering the ability to turn their business ideas into feasible business opportunities, to start and to grow a business enterprise.
- EC = Creativity
- EI = Innovation
- EO = Opportunity recognition
- EM = Role model interpretation
- EG = Ability to gather and control resources
- ER = Calculated risk taking with unit as a percentage
- m, n, o, p, q and r are constant coefficients

This equation uses a combination of multiplicative functions and additive functions. This represents opportunity alertness as a function of opportunity recognition, creativity and innovation, as illustrated in the equation **2.16** below:

$$\text{Opportunity alertness} = m.EO \times (1 + n.EC + o.EI) \quad (2.16)$$

If there exists an opportunity then, even if the entrepreneur is neither creative nor innovative, there still exist a chance of performance. However, if there is no viable opportunity, then creative and innovative skills are useless. Innovation and creativity are said to be part of the portfolio of the entrepreneur's skills that assist with opportunity identification; thus they are represented as additive. It is evident that creativity, innovation and opportunity finding are key entrepreneurial skills necessary for identifying and developing an opportunity in the market, thus these are grouped into one category called opportunity alertness.

Because opportunity alertness $m.EO \times (1 + n.EC + o.EI)$ and ability to gather resources ($q.EG$) form part of the core of entrepreneurship process, they are presented as multiplicative. The model represents risk propensity as a function of opportunity alertness and resources, thus the combination of additives and inverse multiplicative functions, as illustrated in equation **2.17** below.

$$\text{Risk propensity} = r.(1/(1-ER)) \quad (2.17)$$

The model assumes that the percentage unit of risk is between 0%, which stands for total risk aversion, and 100%, representing total careless risk taking, normally associated with gambling. When an entrepreneur is totally risk averse the risk propensity = 1, meaning that the entrepreneur's ability to enhance present resources or opportunity through risk taking is nullified ($1 \times$ given resources and opportunity) and the added returns are zero. If the entrepreneur is totally careless, the risk propensity goes towards infinity, implying that the returns would be extremely high ($10 \times$ given resources and opportunity) just before complete chaos (90% risk), with the system going totally out of control if the entrepreneur is 100% careless. Most successful entrepreneurs taking moderate risks (50%) would give some moderate returns on given resources and opportunity.

From the discussion above, the construct business skills can be presented as equation **2.18**:

$$B/S = (s.BF \times t.BM \times u.BH) \times (1 + v.BB + w.BG + x.BI + y.BL + z.BN + \alpha.BO + \beta.BP + \chi.BR + \delta.BV) \quad (2.18)$$

Where

- BB = Business systems management
- BG = General management
- BF = Financial management
- BH = Human resources
- BI = ICT skills
- BL = Legal
- BM = Marketing
- BN = Networking
- BO = Operational
- BP = Planning
- BR = Research and development
- BV = Value chain management
- s, t, u, v, w, x, y, z, α , β , χ , δ are constants

This equation uses a combination of multiplicative functions and additive functions. Marketing, financial and human resource management skills are considered key business skills that correspond to the opportunity (marketing), the resources (finance) and the entrepreneurial team (human resources). Without these three aspects the business would collapse, therefore they are represented as multiplicative. The rest of the business skills are represented as additive, as they are said to form part of the portfolio of the entrepreneur's skills that assists with management. To get the detailed integrated performance model all the constructs are substituted into the equation 2.11.

$$\uparrow E/P = a.P/S \times b.E/S \times c.B/S \times d.T/S \quad (2.11)$$

Where

$$P/S = aPM \times (1 + e.PA + f.PC + g.PD + h.PG + i.PL + j.PN + k.PP + l.PT) \quad (2.12)$$

And

$$E/S = (m.EO \times (1 + n.EC + o.El)) \times (1 + p.EM) \times q.EG \times r.(1/(1-ER)) \quad (2.15)$$

And

$$B/S = (s.BF \times t.BM \times u.BH) \times (1 + v.BB + w.BG + x.BI + y.BL + z.BN + \alpha.BO + \beta.BP + \chi.BR + \delta.BV) \quad (2.18)$$

Therefore the detailed integrated entrepreneurial performance model (E/P) becomes equation 2.19 below:

$$\uparrow E/P-d = a.PM \times (1 + e.PA + f.PC + g.PD + h.PG + i.PL + j.PN + k.PP + l.PT)) \times b.[m.EO \times (1 + n.EC + o.El)) \times (1 + p.EM) \times q.EG \times r.(1/(1-ER))] \times c.((s.BF \times t.BM \times u.BH) \times (1 + v.BB + w.BG + x.BI + y.BL + z.BN + \alpha.BO + \beta.BP + \chi.BR + \delta.BV)) \times d.T/S$$

(2.19)

This can be simplified into the multiplicative constructs and additive constructs as following:

$$\uparrow E/P = [a.PM \times m.EO \times q.EG \times (s.BF \times t.BM \times u.BH) \times d.T/S] \times [(1 + e.PA + f.PC + g.PD + h.PG + i.PL + j.PN + k.PP + l.PT)) \times (1 + n.EC + o.El)) \times (1 + p.EM) \times r.(1/(1-ER) \times (1 + v.BB + w.BG + x.BI + y.BL + z.BN + \alpha.BO + \beta.BP + \chi.BR + \delta.BV)]$$

(2.20)

This can be summarized into the simplified integrated model described by equation 2.21 to 2.23 as:

$$\uparrow E/P = F(\text{key skills}) \times (1 + H(\text{supporting skills}))$$

(2.21)

With:

$$F(\text{Key skills}) = [a.PM \times m.EO \times q.EG \times (s.BF \times t.BM \times u.BH) \times d.T/S]$$

(2.22)

$$H(\text{Supportive skills}) = [(1 + e.PA + f.PC + g.PD + h.PG + i.PL + j.PN + k.PP + l.PT)) \times (1 + n.EC + o.El)) \times (1 + p.EM) \times r.(1/(1-ER) \times (1 + v.BB + w.BG + x.BI + y.BL + z.BN + \alpha.BO + \beta.BP + \chi.BR + \delta.BV)]$$

(2.23)

Where:

- PA = adaptability to change
- PP = Problem solving
- PN = Numeracy and literacy
- PM = Motivation (need for achievement)
- PC = Communication
- PD = Decision making
- PG = Negotiating
- PL = Learning abilities

- PT = Time management
- BB = Business systems management
- BG = General management
- BF = Financial management
- BH = Human resources
- BI = ICT skills
- BL = Legal
- BM = Marketing
- BN = Networking
- BO = Operational
- BP = Planning
- BR = Research and development
- BV = Value chain management
- EC = Creativity
- EI = Innovation
- EO = Opportunity recognition
- EM = Role model interpretation
- EG = Ability to gather and control resources
- ER = Calculated risk taking – unit is percentage
- T/S = Technical skills
- a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z, α , β , χ and δ are constant coefficients

Key skills are represented by the multiplicative function, signifying that the absence of any one of the elements such as motivation, opportunity, ability to gather resources, financial management, human resource management, marketing and technical skills will lead to zero performance. Weakness in these skills will decrease effectiveness in overall performance of the venture. This also means that the increase in the capacity of any of these skills can lead to an increase in the entrepreneurial performance of the entrepreneur.

On the other hand, support skills are represented by additive functions, signifying that the absence of any of these skills will reduce performance yet not completely destroy the business. When all the supportive skills are absent, $\uparrow E/P$ = function of the key skills. This also means that increasing the capacity of any of these skills can enhance performance.

Based on the simplified integrated model above the study posits that success of SMEs will be attributable to entrepreneurs having all the key seven skills, namely motivation, opportunity alertness, ability to gather and control resources, financial management, human resource management, marketing and technical skills. Thus the study propositions are:

Technical skills

Proposition T1: Successful SMEs are not likely to consider technical skills to be more important for business than less successful SMEs.

Proposition T2: Successful SMEs are not likely to be more competent in technical skills than less successful SMEs.

Personal Skills

Propositions P1: Successful SMEs are not likely to consider the following personal skills to be more important for business than less successful SMEs:

- Motivation skills
- Adaptability to change
- Problem solving
- Numeracy and literacy
- Motivation (need for achievement)
- Communication
- Decision making
- Negotiating
- Learning abilities
- Time management
- Numeracy skills
- Communication

Propositions P2: Successful SMEs are not likely to be more competent in the following personal skills than less successful SMEs:

- Motivation skills
- Adaptability to change
- Problem solving
- Numeracy and literacy
- Motivation (need for achievement)

- Communication
- Decision making
- Negotiating
- Learning abilities
- Time management
- Numeracy skills
- Communication

Business skills

Propositions B1: Successful SMEs are not likely to consider the following business skills to be more important for business success than less successful SMEs:

- Business systems
- Business linkages
- Computer literacy
- Financial management
- Human resource management
- Legal
- Marketing
- Operations management
- Research and development
- Strategy and business planning
- Supplier management

Propositions B2: Successful SMEs are not likely to be more competent in the following business skills than less successful SMEs:

- Business systems
- Business linkages
- Computer literacy
- Financial management
- Human resource management
- Legal
- Marketing
- Operations management
- Research and development

- Strategy and business planning
- Supplier management

Entrepreneurial skills

Propositions E1: Successful SMEs are not likely to consider the following entrepreneurial skills to be more important for business than less successful SMEs:

- Opportunity identification
- Creativity
- Innovation
- Risk taking
- Role models
- Securing and controlling resources

Propositions E2: Successful SMEs are not likely to be more competent in the following entrepreneurial skills than less successful SMEs:

- Opportunity identification
- Creativity
- Innovation
- Risk taking
- Role models
- Securing and controlling resources

Variance in demographics

Propositions D1: Statistically significant variance does not exist regarding the following personal demographics:

- Age (less or equal to 40 years, older than 40 years)
- Education (matric and below; above matric)
- Ethnic group (Black, Indian, Coloured, White)
- Gender (Male, Female)
- Work experience (0 to 2 years, 2 to 4 years, 4 to 6 years, over 6 years)
- Region (regions 1, 2 or 3)
- Subsector (apparel, other sector either than apparel)
- Form of business (unregistered, cc, company)
- Place where business is operated (city centre, township, suburb, other)

2.6 Conclusion

The chapter started with a brief review of international research to identify all the variables (external and internal factors) that are presented as crucial for SME success in order to outline the context of skills importance in entrepreneurship as given in the table 2.3 below:

Table 2.3: Factors affecting the performance of SMEs

Exogenous/external factors	Endogenous/internal factors
Macro Economic factors <ul style="list-style-type: none"> • Geographic area and region • Density • Inflation • Interest rates • Unemployment • Exchange rates 	Company demographics factors <ul style="list-style-type: none"> • Size of firm • Age of firm • Organizational structure • Community networks • Product/service differentiation
Political-Institutional factors <ul style="list-style-type: none"> • Macro-economic policies • The business environment • The judiciary • Bureaucracy • Public support 	Human demographics factors <ul style="list-style-type: none"> • Age • Gender • Family background • Exposure to role models
Socio-Cultural factors <ul style="list-style-type: none"> • Access to public infrastructure • Access to money/capital; technology; labour and other resources • Crime • Health • Culture • Role models 	Previous Experience factors <ul style="list-style-type: none"> • Education • Training • Work experience • Business ownership • Industry specific
Market Opportunity factors <ul style="list-style-type: none"> • Demand for supply • Competition • Access to markets • Location • Market uncertainty 	Human Capital factors <ul style="list-style-type: none"> • Personal characteristics • Capabilities, abilities and skills (this particular factor is the focus of this study)

This chapter's main focus was to identify a set of capabilities, abilities and skills that are important to the starting, running and growing of a business, and if lacking could act as barriers to SME development and ultimately lead to failure. The literature search revealed interdependent and complementary competencies that could be clustered into four categories of skills, namely technical skills (T/S), personal skills (P/S), business management skills (B/S) and entrepreneurship skills (E/S). From this model the study posits

that the success of an SME will be attributable to the entrepreneur's having seven key skills categories: motivation, opportunity alertness, ability to gather resources, financial management, human resource management, marketing and technical skills, as shown in table 2.4 below:

Table 2.4: Skills needed for increasing entrepreneurial performance

PERSONAL SKILLS (P/S)		BUSINESS MANAGEMENT SKILLS (B/S)		ENTREPRENEURIAL SKILLS (E/S)	
Key skills		Key skills		Key skills	
PM	Motivation (need for achievement)	BM	Marketing management	EO	Opportunity recognition
		BF	Financial management	EG	Ability to Gather & control resources
		BH	Human resources management		
Supportive skills		Supportive skills		Supportive skills	
PA	Adaptability to change	BG	General management	EC	Creativity
PC	Communication	BI	ICT skills	EI	Innovation
PD	Decision making	BL	Legal	EM	Role Model interpretation
PG	Negotiating skill	BN	Networking	ER	Calculated Risk taking
PL	Learning abilities	BO	Operational	TECHNICAL SKILLS (T/S)	
PN	Numeracy and literacy	BP	Planning		
PP	Problem solving	BR	Research and development		
PT	Time management	BS	Business Systems		
		BV	Value chain management		

The key skills enable the entrepreneurs of the SMEs to motivate themselves and their teams, identify market opportunities, gather the necessary resources, produce a high-quality service or product; and manage the business effectively and efficiently. Without these the business will ultimately flounder.

The next chapter (chapter 4) investigates these skills in terms of their importance in the entrepreneurial steps. Furthermore chapter 4 will investigate training as a method of acquiring these key skills and thereafter develop propositions linking the identified skills and training. This will complete the exploratory study and finalize the model that is being prepared for empirical testing.

Chapter 3: The entrepreneurship process

3.1 Introduction

This chapter continues the literature review aimed at completing the exploratory study that forms the basis of the final model prepared for empirical testing. The first section of this chapter defines the entrepreneurship process and discusses why acquiring skills is a key requirement of the entrepreneurial process. The chapter then proceeds to investigate the importance of the skills identified in chapter 2 in terms of their importance in each of the four main stages of the entrepreneurship process. This review further highlights other key skills that are likely to influence (positively or negatively) each stage of the entrepreneurship process. Thus this chapter presents the final model of skills that SMEs must acquire to succeed in each of the 4 stages of the entrepreneurship process.

3.2 The entrepreneurship process

Following the discussion in Chapter 1, entrepreneurship is described as the pursuit of market opportunities to create future innovative goods and services discovered, evaluated and exploited to extract social and economic value from the environment, leading ultimately to new independent business / venture creation (Shane & Venkataraman, 2000:218; Kirzner, 1973; Fox, 2004:1; Dess et al, 1999:94). The highly complex process of new venture creation is embodied in entrepreneurship (Hisrich et al, 2005:39; Baron, 2004a:169).

At start-up, the entrepreneurship process is a course of action that involves all functions, activities and actions associated with identifying and evaluating perceived opportunities and the bringing together of resources necessary for the successful formation of a new firm to pursue and seize the said opportunities (Bygrave, 1997:2; Cornwall & Naughton, 2003:62). Once set up, the process of entrepreneurship becomes effectively a cyclical progression of opportunity targeting and making strategic decisions regarding the allocation of scarce resources in pursuit of value adding opportunities (Glancey, 1998:18; Kodithuwakhu & Rosa, 2002:443).

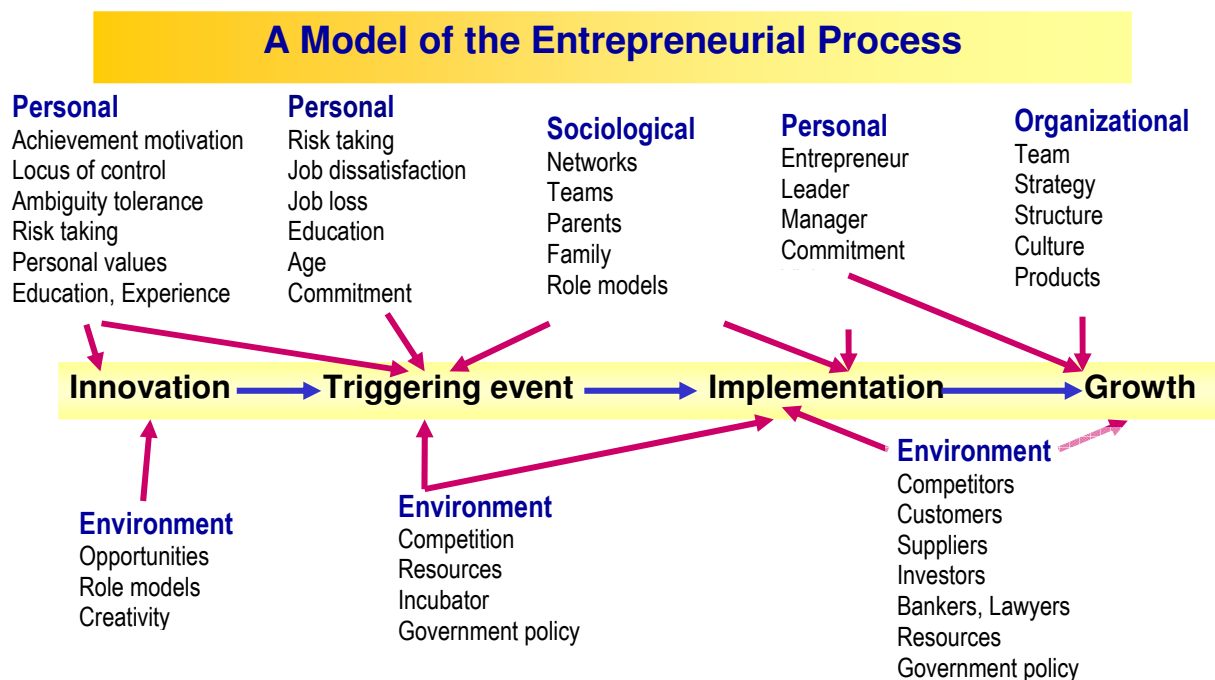
Although theoretical models of the new venture creation process differ in the assumptions and variables encompassed, they do include common elements (Mueller &

Thomas, 2001:53). Different authors have identified between two and five distinct stages in the entrepreneurship process as briefly discussed below:

Pretorius et al (2005a:57) say that the literature cites two broad dimensions of the entrepreneurial process, namely opportunity recognition and resource acquisition. Gruber (2002:193) identifies three distinct stages, namely the pre-founding stage (opportunity identification and evaluation); a founding stage (business plan, resource gathering, incorporation and market entry); and an early development stage (building the company and market penetration). Baron (2004a:170) names the three stages of the entrepreneurship process as screening ideas for feasibility; assembling needed resources; and actually developing a new business.

Bhave (1995:223) identifies four stages namely opportunity identification, technology set up, organization creation and the exchange stages. This is supported by Hisrich & Peters (2002:40) who articulate four stages of the entrepreneurial process namely identifying and evaluating the opportunity; developing the business plan; determining the resources required; and managing the resulting enterprise as illustrated in Figure 3.1 below:

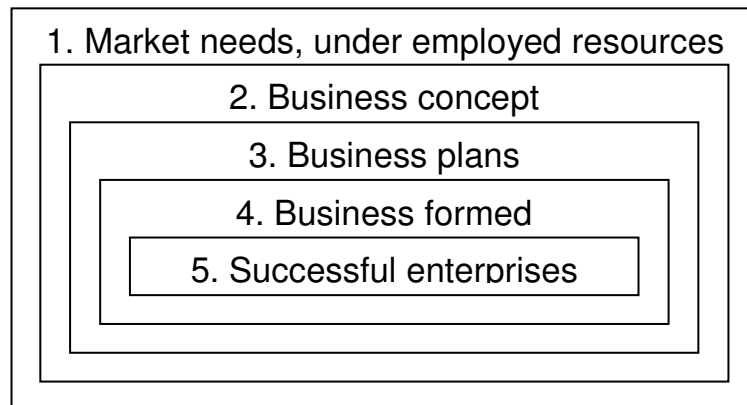
Figure 3.1: Entrepreneurial process model by Hisrich & Peters



Source: Hisrich & Peters (2002:48)

Rwigema & Venter (2004:28) identify five specific steps, namely identifying, measuring and refining an opportunity from multiple ideas; formulating a business plan; marshalling the resources; organizing and mobilizing a team; and overseeing the new venture creation and growth. Figure 3.2 below illustrates Ardichvili et al (2003:107) five-step path from market needs to a successful enterprise.

Figure 3.2: The entrepreneurial process by Ardichvili et al



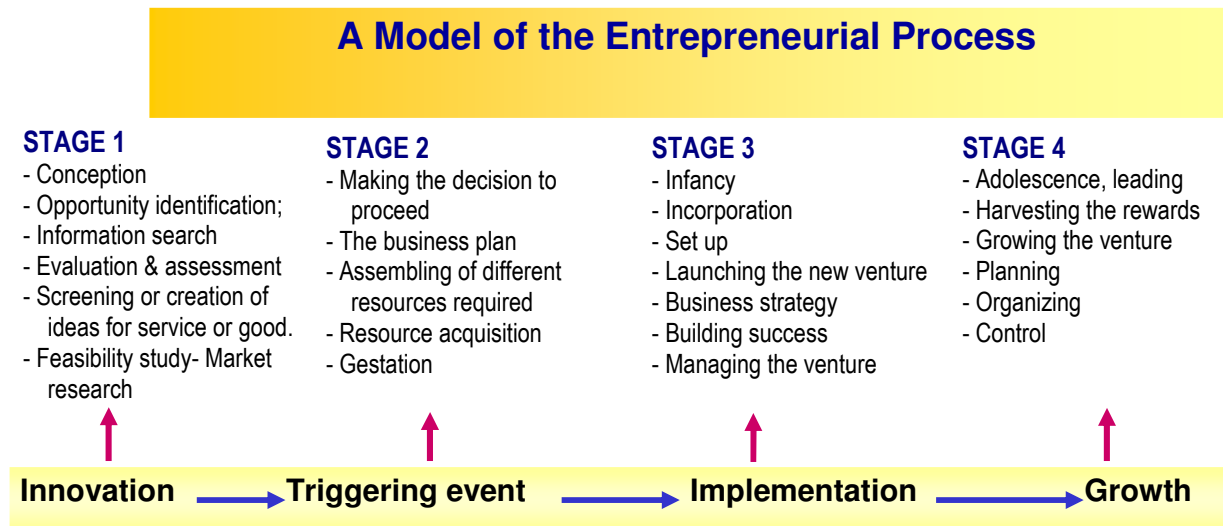
Source: Ardichvili et al (2003:107)

This study integrates of all the activities in the entrepreneurial process as articulated by the authors reviewed above (Ardichvili et al, 2003:107; Pretorius et al, 2005a:57; Hirsrich & Peters, 2002:48; Gruber, 2002:193; Baron's, 2004a:170). Thus the four stages of the entrepreneurial process are defined as follows:

1. **Innovation**, which includes generating the idea, innovation, identifying a market opportunity, information search, conception, screening ideas for feasibility, identifying where to extract value and the development of the product or service.
2. **Triggering event**, which includes gestation, the motivation to start a business, the decision to proceed, the business planning, identifying the different resources required, risk assessment, resource acquisition and assembling.
3. **Implementation**, which includes infancy, incorporation, setting up and launching the new venture, business strategy, implementing the business plan, running the business, deploying of resources, building success and managing the venture.
4. **Growth** which includes adolescence, maximizing profits, harvesting the rewards and continually growing the venture to include other opportunities.

The adapted entrepreneurial model is illustrated in figure 3.3 below.

Figure 3.3: The adapted entrepreneurial process model



Source: Own adaptation

While the entrepreneurship process stages are discontinuous and linear, in practice these five stages overlap, interact and depend on each other (Bygrave, 1993:278; Hisrich & Peters, 2002:39; Ardichvili et al, 2003:107; Baard & Van den berg, 2004:7).

Different skills are needed for the different stages of the process (Pretorius, 2001:37); as factors of success and problems vary according to each of the different stages of the entrepreneurial process (McMahon, 2001:10). Studying the skills needed per entrepreneurial process stage will highlight the interactive nature of the key skills influencing each stage (Carter et al, 1996:151; Kickul & Gundry, 2002:85).

3.3 Skills required in the entrepreneurship process

This section examines the four stages of the entrepreneurial process in terms of understanding each stage and identifying the skills needed for success in that stage of the entrepreneurship process. The discussion will be guided by the key and supportive skills in the three business areas namely “Product differentiation” (Technical skills), “Functional competencies” (Business Skills) and “Enterprising competencies” (Personal Skills and Entrepreneurial Skills) as identified in Chapter 2.

3.3.1 Entrepreneurial Process - Stage 1

Most authors agree that the initial stage in the entrepreneurial process is the identification and refining of a viable economic opportunity that exists in the market (Kuratko, 2001:171; Baron 2004b:221; Timmons, 1999:250; Bhavé, 1994:224). Without the recognition of an opportunity the entrepreneurial process is likely to result in failure (Kodithuwakhu & Rosa, 2002:434; McCline et al, 2000:83).

Opportunity recognition corresponds to the principal activities that take place before a business is formed or structured (Fletcher, 2006:423; Hill & Stewart, 2000:106). The opportunity identification stage can be divided into five main steps namely getting the idea/scanning the environment, identifying the opportunity, developing the opportunity, evaluating the opportunity and evaluating the team (Gartner et al, 1999:220; Ardichvili et al, 2003:108).

- **Getting the idea**

Robertson et al (2003:313) argue that there is a strong link between getting the initial idea and the starting of the new enterprise. Rwigema & Venter (2004:159) define an idea as simply the conception of a possibility and a reflective method of evading, circumventing or surmounting obstacles and challenges. The *Oxford Dictionary* defines an idea as 1. A thought or suggestion about a possible course of action. Synonymous with “idea” are the terms thought, intention, scheme, suggestion, proposal, initiative, spur, impulse, brainwave, insight, concept and connotation (*Oxford*, 2005).

Since ideas are many, developing the idea into a market opportunity, implementing it and building a successful business around it are the important aspects of entrepreneurship (Bygrave, 1997:6; Lumsdaine & Lumsdaine, 1995:167).

A market opportunity is a gap left in a market by those who currently serve it, giving a chance to others to add unrealized value by performing differently from and better than competitors in order to create new possibilities (Wickham, 2001:38). The *Oxford Dictionary* (2005) defines opportunity as a favourable time or set of circumstances for doing something. Synonymous with opportunity are chance, opening and prospect.

Timmons (1999:38) cautions that while business opportunities are detected from ideas, an idea is not synonymous with opportunity. The difference between an idea and an opportunity is that an opportunity is the possibility of occupying the market with a specific innovative product that will satisfy a real need and for which customers are willing to pay (GEM, 2003a:12). McCline et al (2000:83) conclude that successful venturing may well rest upon the ability to recognize or distinguish an opportunity from an idea.

- **Opportunity identification**

Kirzner (1973) advocated a theory of entrepreneurial alertness, describing it as the entrepreneur's ability to see, to discover and exploit opportunities that others miss. Hisrich & Peters (2002:40) noted that this is a very difficult task, as most opportunities do not just appear but rather result from an entrepreneur's alertness to possibilities.

Markman & Baron (2003:289) lists steps involved in opportunity identification to include scanning the informational environment, being able to capture, recognize and make effective use of abstract, implicit and changing information from the changing external environments. Man et al (2002:127) adds that opportunity identification is basically seeking out better ways of competing.

- **Opportunity development**

Morris & Zahra (2000:92) argue that having recognized the opportunity, timely adaptation of that opportunity to suit actual market need is key to new venture success. Kodithuwakhu & Rosa (2002:434) defines opportunity development as the process of combining resources to pursue a market opportunity identified. Markman & Baron (2003:289) conveys that this involves systematic research to refine the idea to the most promising high potential opportunity that can be transformed into marketable items.

- **Opportunity evaluation**

Ucbasaran et al (2004:434) declare that a critical element of the entrepreneurial process is the opportunity screening and evaluation. Hisrich et al (2005:117) affirm that a professional executed evaluation can tell whether the specific product or service has the returns needed to justify the investment and the risk to be taken. According to several authors (Timmons, 1999:109; Rwigema & Venter, 2004:171; Gartner et al, 1999:223;

Carter et al, 1996:157) evaluating the opportunity must answer the questions listed in table 3.2 below.

Table 3.1: Business factors and questions for opportunity evaluation

Business factor	Questions for evaluation
Product or service	<ul style="list-style-type: none"> • Description of the product or service, its differentiator, purpose and the need it fills • What competitive advantage / benefits does the product have? • What is the required customer care support for this product/service? • Is the company able to produce product and supply required aftercare support?
Market opportunity	<ul style="list-style-type: none"> • Where is the market demand? What is the target market? Is it generic or a niche? • Industry characteristics (growth rates, change, entry barriers). • What market share can the product reasonably expect today? In 2, 5 or 10 years? • Timing and length of the window of opportunity? • What competition exists in this market? Substitutes? How big is their turnover? • How accessible are the desired distribution channels?
Costing and pricing	<ul style="list-style-type: none"> • How much will it cost to develop the product and commercialize it? • Where will the funds come from? • How do the pricing, costs and economies of scale compare with competitors? • How easy is it to acquire equipment, skills and other inputs required?
Profitability	<ul style="list-style-type: none"> • Where is the money to be made in this activity? What are the gross margins? • Would the return on investment be acceptable? What is the payback period? • What are the cash flow patterns and the source of working capital?
Capital requirements	<ul style="list-style-type: none"> • How much capital (people, operating expense and assets) is required to start? • What are the long-term capital needs? • How much of the required capital is secured and where will the rest come from? • What securities are available to guarantee the required funds? • Is there a list of potential funders? In case the funders withdraw their capital?
Issues and risks	<ul style="list-style-type: none"> • What risks (real and perceived) are inherent with the product/service? • Industry based risks e.g. is the market on a decline? • Are there plans for surviving the death of the lead entrepreneur? • Unreliable forecasts? Inadequate cash flow? • Inability to grow with the demand or cope with shrinking sales? • Supplier and value chain management?

- **Assessment of the entrepreneurial team**

Regardless of how right the opportunity may seem to be, it will not make a successful business unless it is developed by a team with strong skills (Bygrave, 1997:16). Gartner et al (1999:230) advises that once the opportunity has been evaluated, the next step is to ask pertinent questions about the people who would run the company. Such questions are illustrated in table 3.2 below:

Table 3.2: Team factors and questions for opportunity evaluation

Business factor	Questions for evaluation
Focus:	<ul style="list-style-type: none"> • Is the founder really an entrepreneur, bent on building a company? • Does the entrepreneur (or his team) have some experience (work or industry)? • Do they really like this product/sector? Do they really want this? • Can the team create products to suit that market need? • How stressful is the opportunity for the team?
Selling:	<ul style="list-style-type: none"> • Does the team have the necessary selling and closing skills?
Management:	<ul style="list-style-type: none"> • Who will work full time? Do your managers represent competitive advantage? • Does the team have the necessary management and technical skills? • If the required skills are not available, can they be acquired at competitive rates? • How is their relationship with the entrepreneur, commitment and motivation?
Ownership:	<ul style="list-style-type: none"> • Have the critical decisions about ownership and equity splits been resolved? • Are the members committed to these? • Does the owners have enough financial capital for required own contributions?

Skills required for success in stage 1

From the 100 authors reviewed these skills below were identified as critical for this stage:

- **T/S = Technical skills**

Davila et al (2003:690) suggest that technical skills are a prerequisite as they provide entrepreneurs with the ability to identify opportunities based on existing competence.

- **PC = Communication**

Guzman & Santos (2001:216) identify the ability to interact with individuals from many different backgrounds, plus interpersonal skills such as listening and persuasive communication as linked with success in the opportunity identification stage.

- **PP = Problem solving**

Baron (2004b:221) argues that the abilities that are required for successful identification of a business opportunity include the capacity to solve everyday problems.

- **PM = Motivation (need for achievement)**

Rwigema & Venter (2004:112) name personal motivation as one of the key success factors for systematically scanning and spotting the market opportunity.

- **PA = Adaptability to change**

GEM (2003a:11) state that entrepreneurs who have adaptability to change have a higher probability of identifying opportunities.

- **PT = Time management skills**

Morris & Zahra (2000:92) identify timing as crucial for identifying market opportunities.

- **BF = Financial management**

Erikson (2002:280) expresses that opportunity identification is dependant on skills that enable the nascent entrepreneur to accurately forecast financial estimates.

- **BH = Human resources**

Robertson et al (2003:311) says that the entrepreneur must be able to evaluate the opportunity and how it fits with the skills of the team.

- **BM = Marketing**

Gartner et al (1999:230) declare that successful entrepreneurs have the abilities to identify niche markets, to identify the paying customers and to analyze competitors.

- **BN = Networking**

Drakopoulou (2002:117) asserts that networking can facilitate successful opportunity identification as networks are pathways through which the firm can access opportunities.

- **BP = Planning**

Lussier & Pfeiffer (2005:233) agree with Man et al (2002:127) perception that most successful entrepreneurs have skills that allow them to formulate strategic plans for setting up the business.

- **BR = Research and development**

Hill & Stewart (2000:115) emphasizes that opportunity adaptability is linked to the firm's intelligence-gathering efforts, which include gathering, disseminating, sharing and acting on intelligence.

- **BI = ICT skills**

The OECD (2002a:16) notes that ICT skills allow the entrepreneur to access critical knowledge about markets, opportunities and businesses.

- **EC = Creativity**

Friedrich et al (2003:2) and Pretorius et al (2005a:56) support Schumpeter (1934) and Kirzner (1973) who deem creativity to be key for seeking business opportunities.

- **EI = Innovation**

Wickham (2001:38) supports Freel & Robson (2004:561) by recognizing that innovation is considered key to the identification of opportunities.

- **EO = Opportunity recognition**

Ardichvili et al (2003:107) suggests that the ability to detect, identify, select, evaluate and develop the right business opportunities is key for success in this first stage. This is supported by Baron (2004a:170) who argue that successful entrepreneurs perceive opportunities hidden to others.

- **EG = Ability to gather and control resources**

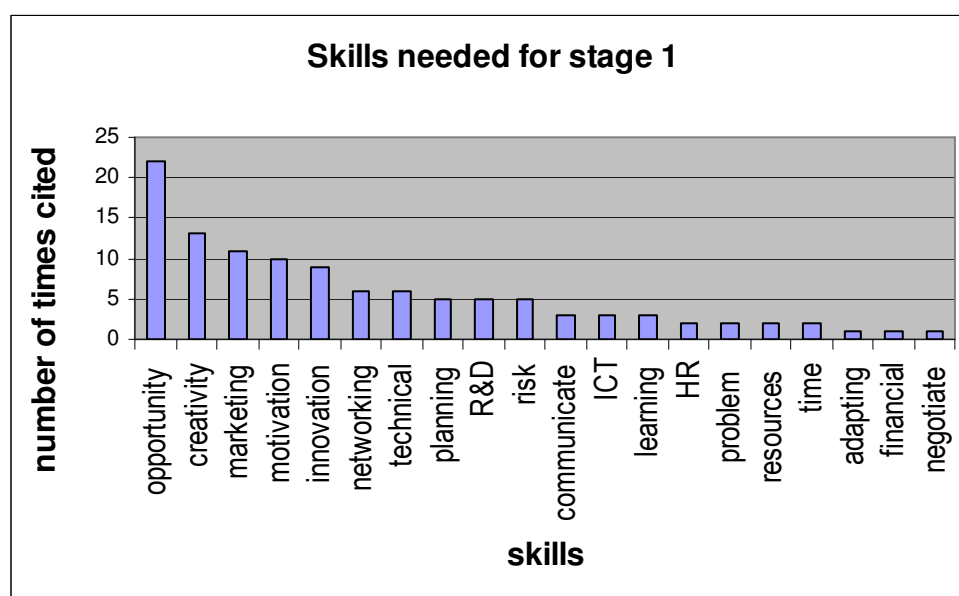
Bradley (2002:15) lists the ability to identify resources needed to pursue the identified opportunity and to conceptualize how the entrepreneur will secure these resources as important.

- **ER = Calculated risk taking**

Baron (2004b:224) puts risk taking as a factor that influences the process of opportunity recognition and development. Rwigema & Venter (2004:175) agree t\with him that identifying, quantifying plus analysing potential uncertainties and envisioned risks linked with each opportunity identified is important for this stage.

Figure 3.4 below illustrates the number of times a skills category was cited by the 100 authors reviewed:

Figure 3.4: Skills required for stage 1 of the entrepreneurship process



More than 10% of the 100 authors reviewed citing opportunity identification, creativity, marketing and motivation skills as important for stage 1 of the entrepreneurship process. This implies that the integrated model equation 2.21 $\uparrow E/P = F(\text{key skills}) \times (1 + H(\text{supporting skills}))$, can be adapted such that the equation describing the key skills for this stage 1 will read as equation 3.1 below:

$$F(\text{Key skills in stage 1}) = [a.PM \times m.EO \times q.EC \times t.BM] \quad (3.1)$$

3.3.2 Entrepreneurial Process - Stage 2

Bygrave (1997:17) and Carter et al (1996:152) argues that the triggering/initialization stage can be divided into four main steps, namely the decision to become an entrepreneur, the developing the business plan, the assembling resources to create the organization, the developing of an organizational boundary and the exchanging of resources across that boundary.

- **Motivation to become an entrepreneur**

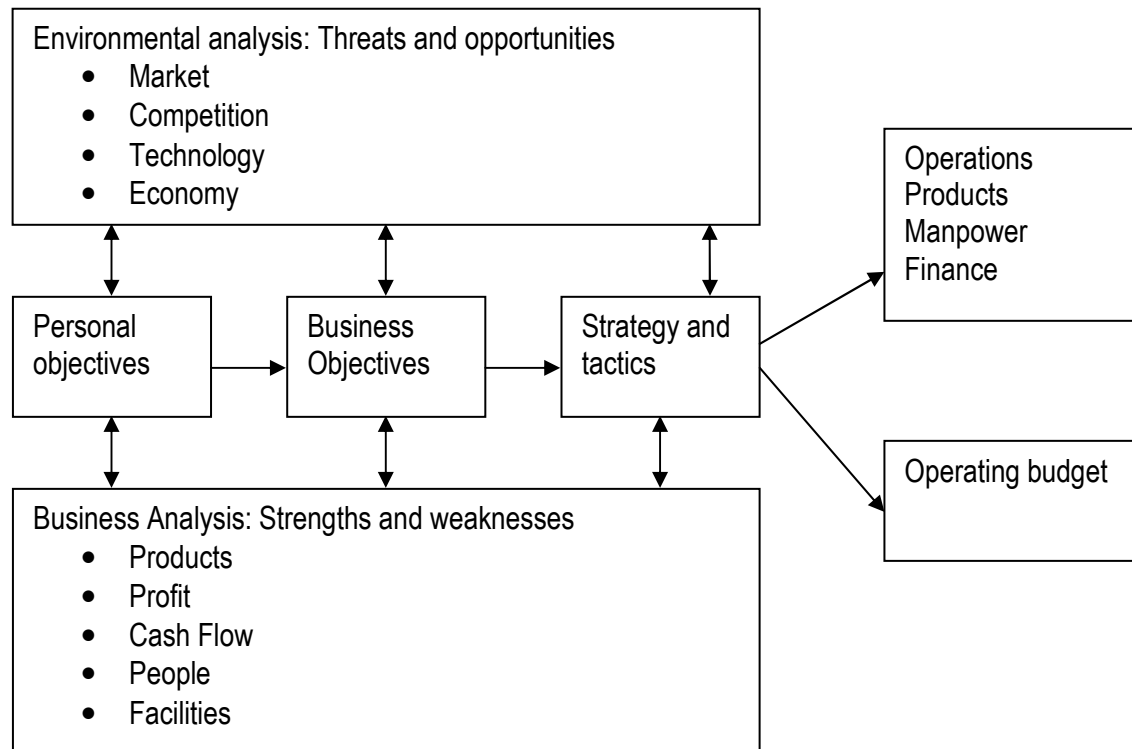
Baron (2004b:221) suggests that the initial and crucial step in this entrepreneurial process stage is the decision to become an entrepreneur. Many authors including Wickham (2001:35), Hisrich & Peters (2002:79), Nieman et al (2003:31) and Baum, Locke & Smith (2001:93) pronounce that the actual decision to become an entrepreneur is motivated by different factors that can be categorized into either the push (necessity) or pull (opportunity) factors. Watson et al (1998:224) endorses this and warns that motivation may also have a bearing on their ultimate success or failure in business.

- **Planning**

Wickham (2001:192) states that once the entrepreneur has formulated a strategy, it is time to formalize a business plan. Hisrich et al (2005:42) agree with Nieman (2006:20) that a good business plan is essential to exploiting the defined opportunity and determining the resources required, obtaining those resources and successfully managing the resulting venture.

Dollinger (1999:134) articulates that proper planning is important for the development of a good business plan. Figure 3.5 below demonstrates the process of planning as illustrated by Baard & van den Berg (2004:3):

Figure 3.5: The planning process for a business



Source: Baard & van den Berg (2004:3)

• **Gathering resources**

Hellman (2007:81) declares that once the entrepreneur has carefully assessed all the required resources and strategies into a business plan, the next thing is to gather the resources needed for addressing the opportunity. Gartner et al (1999:216) considers the acquiring of resources to be as important as opportunities discovered, because in the absence of the key resources the entrepreneurial process is likely to result in failure. Hisrich & Peters (2002:42) pronounce that it is the entrepreneurs' responsibility to attract resources that are sufficiently strategic, valuable or rare.

Company resources can be divided into six key ingredients:

- Technical know-how, which assists in the production of a quality product or offering of a service (Rwigema & Venter, 2004:180).
- Finance including equity, cash and borrowing power (Ayotte, 2007:161).
- Physical assets including buildings, equipment, machinery and vehicles (McMahon, 2001:10; Vesper 1982:327).
- Human resources including motivated employees with skills, training, experience, emotional and intellectual abilities (Kodithuwakhu & Rosa, 2002:435).

- Intangible resources including information, networks, protected patents, unique technology and brand reputation (Morris & Zahra, 2000:93).

Skills required for success in stage 2

To complete this triggering/initializing stage successfully the entrepreneur and his/her team need to have skills that will enable them to do most of the activities outlined above. From the 100 authors reviewed the following skills were identified as key for this stage:

- **Technical skills (T/S)**

Perks & Struwig (2005:178) assert that technical skills are a precondition for successfully starting a business. This is supported by Tustin (2001:83) who states that inadequate technical proficiency are the most prominent reasons for start-up failure.

- **PP = Problem solving**

Davila et al (2003:700) note that problem-solving abilities allows entrepreneurs to overcome challenges rife in the start-up stage and therefore are key to successfully starting a small business.

- **PN = Numeracy and literacy**

Tustin (2003:26) puts forward that to set up an SME, it is critical that SMEs owners must be able to read and write. Addis (2003:152) warns that low levels of literacy threaten economic performance.

- **PC = Communication skills**

Addis (2003:153) counsels that having spotted an opportunity, the SME owner needs basic good communication skills to convince funders and employees to be part of the venture.

- **PM = Motivation (need for achievement)**

Nasser et al (2003:396) affirm McClelland (1987:221) and Timmons (1999:38) who deem that motivation (and the related 'need for achievement', self confidence and self efficacy) is considered key factors during SME startup as it determines the entrepreneurial

intention and the chances that those intentions will be converted into action. Robertson et al (2003:313) agrees and cautions that a business will neither start up nor succeed without motivation.

- **PA = Adaptability to change**

Mazzarol et al (1999:49) posit that the key to success in setting up of new ventures is in continuous adaptation and tolerance of ambiguity. Within the context of start-up, adaptation refers to the founders' willingness and ability to make appropriate adjustments to the business concept as the venture evolves from an initial business idea, to the business plan and finally to an operational enterprise (Morris & Zahra, 2000:94).

- **PL = Learning abilities**

Man et al (2002:127) say that the ability to adapt is a function of the individual entrepreneur and his/her ability to learn.

- **PD = Decision-making skills**

Baron (2004b:221) states that the key to successfully starting a new venture lies in the ability to make fast but accurate decisions.

- **PG = Negotiating skill**

Rwigema & Venter (2004:33) reason that negotiation and persuasion skills are key skills necessary to start a business.

- **BF = Financial management**

Strydom & Tustin (2003:11) conclude that entrepreneurs who successfully start-up new ventures have adequate financial management skills that enable them to accurately estimate their resource needs, to understand the financial terminology that investors and venture capitalist use and to indicate that the proposed venture can make on average 5% profit to be able to re-compensate their investors and cover the staff's salary.

- **BH = Human resources**

Carter et al (1996:156) surmise that to successfully start a small business, the entrepreneur must be able to organize a team, to retain suitable staff, to match employee with operational needs and facilitate the adoption of an organizational vision, strategy

and goal. This is supported by Clover & Darroch (2005:243) and MacMahon & Murphy, (1999:27) who warns that lack of human resource management skills is cited as a key factor constraining business start-up.

- **BL = Legal**

Gartner et al (1999:219) articulate that successful entrepreneurs seek advice from lawyers and normally form legal entities. Ahwireng-Obeng & Piaray (1999:78) agrees inferring that most potential entrepreneurs are either naive or uninterested in laws, taxation and regulations, and this normally affects their SME start-up negatively.

- **BM = Marketing**

Rwigema & Venter (2004:252) warns that poorly defined markets and insufficient market environment analysis can result in limited planning for start-up.

- **BN = Networking**

Many authors including Jack & Robson (2002:1) and Senjem & Reed (2002:1) have indicated that entrepreneurial networks are important for the mobilization and acquisition of scarce resources that are crucial to starting and developing a business. Drakopoulou (2002:117) asserts that networks can provide human contact, preventing the loneliness that comes with working alone.

- **BP = Planning**

Pretorius & Shaw (2004:224) state that most successful ventures have business plans. A realistic goal oriented business plan is perceived as the most essential document to be prepared by the entrepreneur when setting up a business, as it describes the fits and gaps between resources, opportunity and the entrepreneur; it maps the way forward for the business development and it is used to present a business case to financiers for application for finance (Hisrich & Peters, 2002:227; Mughan et al, 2004:428).

- **EM = Role model interpretation**

Friedrich et al (2003:2) agree Honig (1998:37) that exposure to relevant role models makes the act of initializing the entrepreneurship process seems much more doable.

- **EG = Ability to gather and control resources**

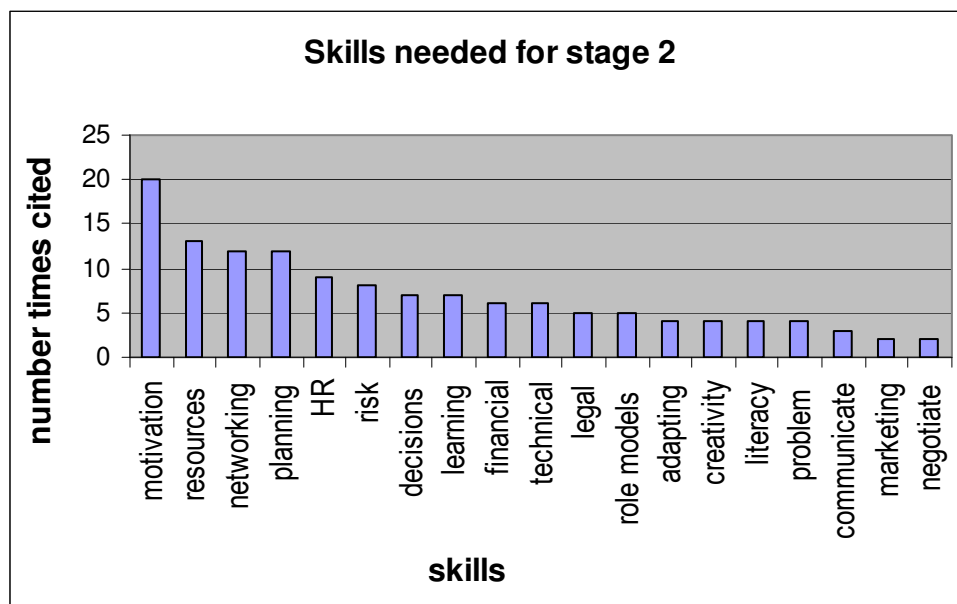
Ligthelm & Cant (2002:9) identifies efficient abilities to identify, seek, secure, capitalize on and control critical yet scarce resources as key to the success of the venture start-up phase. The inability to secure resources has cited as one of the main reasons leading to failure in entrepreneurial start-ups (McMahon, 2001:17).

- **ER = Calculated risk taking**

Markman & Baron (2003:290) observes that entrepreneurs pursue business without fully knowing how the market will react and whether their new products or services will succeed. Successful entrepreneurs have the ability to take calculated risks and to avoid the cognitive bias of underestimating the amount of risk involved in starting a new venture (Baron, 2004a:172).

Figure 3.6 below illustrates the number of times a skills category was cited by the 100 authors reviewed:

Figure 3.6: Skills required for stage 2 of the entrepreneurship process



More than 10% of the 100 authors reviewed citing motivation, securing resources, networking and planning skills as important for stage 2 of the entrepreneurship process. This implies that the integrated model equation 2.21 $\uparrow E/P = F(\text{key skills}) \times (1 + H(\text{supporting skills}))$, can be adapted such that the equation describing the key skills for this stage 2 will read as equation 3.2 below:

$$F(\text{Key skills in stage 2}) = [a.M \times q.EG \times z.BN \times \beta.BP] \quad (3.2)$$

3.3.3 Entrepreneurial Process - Stage 3

Hisrich et al (2005:2) argues that after the resources are acquired the entrepreneur must use them to implement the business plan. Implementing literally means executing the vision and putting it into action (Oxford, 2005). Rauch & Frese (2000:3) define “action” as consisting of goal development, goal redefinition, detailed planning, execution with quality action, monitoring the plan, processing feedback and developing visions for future.

The activities undertaken in this stage include creating the organizational capabilities; implementing a management style in order to grow managerial competencies; setting up production processes, structures and systems; quality control; waste elimination and cost effectiveness; dealing with distributors and suppliers; selling to customers; collecting the finance; resolving operational problems; fending off competitors; steering the organization towards its goals and determining the key variables for success (Gartner et al, 1999:215; Hisrich et al, 2005; Man et al, 2002:127; Rwigema & Venter, 2004:40).

The tasks undertaken in this “implementation” step of the entrepreneurship process can be categorized into the four principles of management, namely planning, organizing, leading and control (Nieman, 2006:19).

Skills required for success in stage 3

It is one thing to be aware that entrepreneurial opportunities exist but a significantly different matter to have the skills to exploit these opportunities and manage the resulting venture (McCline et al, 2000:88; Hisrich et al, 2005:2). From the 100 authors reviewed the following skills were identified as needed for this stage:

- **Technical skills (T/S)**

Nieuwenhuizen & Kroon (2003:132) agree with Nieman (2001:446) and Rogerson (2001a:136) that technical business knowledge is a key firm factor affecting successful business performance. Cornwall & Naughton (2003:67) concurs with Czinkota & Ronkainen (2003:50) that no entrepreneur whose technical competence is in question can be successful because the entrepreneur must be able to create an excellent product.

- **PP = Problem solving**

Nieuwenhuizen & Kroon (2002:159) conjecture that successful entrepreneurs have the ability and perseverance to solve numerous problems, obstacles, challenging circumstances and difficulties in everyday management of the business.

- **PD = Decision making skills**

Baard & van den Berg (2004:4) agree with Man et al (2002:127) that successful entrepreneurs have the ability to swiftly make important decisions required to implement their dreams, to allow the firm to accomplish its goals, to maintain the business as a going concern and to manage risk.

- **PM = Motivation (need for achievement)**

Many authors have stated that entrepreneurial success is a function of achievement motivation and related self efficacy, positive attitudes and commitment (Baron, 2003:254; Nieman, 2001:446; Darroch & Clover, 2005:325; Pretorius et al, 2005a:57).

- **PT = Time management**

Orser, Hogarth-Scott & Riding (2000:47) argue that managing scarce time is crucial for business performance a scarce resource for the SME. The inability to adhere to time constraints has been cited as a factor contributing to failure (Ligthelm & Cant, 2002:41).

- **PG = Negotiating skills**

Hankinson (2000:94) found that persuasion and negotiation skills were important for business performance.

- **PC = Communication skills**

Nieman & Bennet (2006:99) conclude that active listening, clear information and comprehensible communication are very important for optimal business performance.

- **PA = Adaptability to change**

The rate of change in business gets ever faster and technological innovation progresses at a relentless pace (Gadenne, 1998:37). MacMahon & Murphy (1999:27) agrees with Watson et al (1998:230) that this implies that entrepreneurial success is a function of the

capacity to being quick and nimble; being fast and flexible; keeping an open mind plus responding to and managing change.

- **PL = Learning abilities**

Kodithuwakhu & Rosa (2002:443) agree with Nieman (2001:446) successful entrepreneurs are capable and efficient managers who take advice from experts and learn quickly from mistakes and from experiences.

- **BB = Business systems management**

Mughan et al (2004:424) identify business processes and systems management skills as one the key enablers of business excellence. Sackett et al (2003:299) argue that all SMEs need to have a clear understanding of how their own business works and to have the ability to rapidly assess and define the business processes of their partnering organizations and competitors. GEM (2003a:12) and McMahon (2001:17) supports this and cites record keeping skills in particular as one of the business skills necessary to run a small business.

- **BG = General management**

Dockel & Ligthelm (2005:61) identify general management skills are one of the key factors in the entrepreneurial performance formulae. SME failure is often due to a lack of general managerial experience (Viviers et al 2001:11; Clover & Darroch, 2005:244; Nieman, 2001:446).

- **BF = Financial management**

As an SME progresses through various lifecycle stages, the financial dimensions of its operations tend to become more problematic (Nieuwenhuizen & Kroon, 2003:137; Perks & Struwig, 2005:179). Mughan et al (2004:424) concur with Delmar et al (2001:18) that financial management is one of the key business skills necessary to run an SME. Financial management issues that have been cited as skill-based factors negatively influencing performance and success of SMEs included the following:

- Inappropriate pricing strategy (Ligthelm & Cant, 2002:9).
- Inadequate bookkeeping knowledge and systems (Fielden et al, 2000:300).

- Lack of proper accounting (Gartner et al, 1998:225).
- Lack of adequate financial controls and monitoring (Viviers et al, 2001:6; Strydom & Tustin, 2003:2).
- Inadequate credit and debtors policies and controls (GEM, 2003a:12; Nieuwenhuizen & Kroon, 2003:129).
- Poor working capital management (Ladzani & van Vuuren, 2002:158).
- Poor Inventory control (Lean & Tucker, 2000).
- Lack of supplier credit (Perks & Struwig, 2005:179).
- Cash flow problems (Bygrave, 1997:23).
- Failure to reach income targets (Mughan et al, 2004:429).
- Large operation expenses (Strydom & Tustin, 2003:4).
- Excessive fixed costs (Viviers et al 2001:5; Tustin, 2001:17).
- Insufficient profits (Watson et al, 1998:230).
- Owner manager withdrawing too much cash (Deakins & Freel, 1998:148; Kodithuwakhu & Rosa, 2002:460).

- **BH = Human resources management skills**

Nieman (2001:446) emphasizes that those skills that help dealing with employee relations is one of the key skills required for successfully running a new business. Indeed, growing evidence suggests that the inability to successfully manage human resource issues is an important factor in the ventures ultimate failure (Baron, 2003:253).

Human resource management aspects that were cited as factors negatively influencing performance and success of SMEs included the following:

- Non-availability of suitably skilled personnel with specific management skills (Nieman 2006:20).
- Failure to recruit relevant, trained or experienced workforce (McMahon, 2001:17; Kodithuwakhu & Rosa, 2002:462).
- Inadequate labour capacity, as staff get by with general knowledge until assigned new specific roles and functions (Thornhill & Amit, 2003:498; Tustin 2001:5).
- Inability to motivate and retain a competent workforce (Luiz, 2002:67; Hankinson, 2000:94; Mazzarol, 2003:27).
- Poor training of workers and lack of skills development plans to ensure that the team acquires entrepreneurial competencies (Fielden et al, 2000:302; Way 2002:766).

- Inadequate management structure, leading to the inability to make effective decisions, lead or delegate authority (Yusof & Aspinwall 2000:283; Hudson, Smart & Bourne 2001:1105).
- Inability to deal with conflict, worry and stress (Thornhill & Amit, 2003:498; Glancey et al, 1998:265).
- Inability to create attractive working conditions, leading to low staff morale and reduced personal loyalty to the SME (Bygrave, 1997:26).
- Inability to clarify job, roles, performance review and compensation processes (Ligthelm & Cant, 2002:7; Viviers et al 2001:20).

- **BI = ICT skills**

While ICT may not seem like a central concern to entrepreneurs that need a good business plan and seed funding more than they need a computer (McMahon 2001:17), today's information society requires that most SME have some level of ICT use integrated into their businesses (Romijn, 2001:57).

Marri et al (2003:152) agrees with the OECD (2002b:13) report that ICT is being used predominantly as a means to increase managerial competence towards efficiency and business performance. Chapman et al (2000:354) and Nasser et al (2003:397) conveys that the use of ICT can result in higher profit ratios due to improved access to information, enhanced networking, increased access to markets and crucial linkages with local businesses, as well as the reduction of client bad debts.

- **BM = Marketing**

Hankinson (2000:94) argues that marketing is one of the key skills needed by SMEs. Many entrepreneurs are "technically very proficient," but lack the sales and marketing know-how necessary to sell their product (Bradley, 2002:15; Freeman, 2000:374).

- **BN = Networking**

Jack & Robson (2002:1) assert that networking issues have been cited as factors influencing SME success. Networking assists business venture performance through peer advice, access to complementary skills, information sharing and discussing solutions to common problems encountered during the running of SMEs (Ladzani & van Vuuren, 2002:160).

- **BO = Operational**

Gruber (2002:197) argues that one of the bigger challenge for the SME founder is having to deal with the usual day-to-day business operations and at the same time build a viable organization. The operational skills necessary for successful running of SMEs include mastering production skills, quality assurance, acceptable productivity and related performance monitoring, as well as capacity management to enhance the use of existing capacity (Czinkota & Ronkainen, 2003:50; YTKO, 2003).

- **BP = Planning**

Miller et al (2003:223) indicate that planning (goal setting, systematic planning, greater planning sophistication, focused strategies and action plans) has a strong positive effect on the financial performance and has been positively related to business success. Lack of planning, poor planning, lack of written plans and prioritizing are often cited as factors leading to failure of SMEs (Orser et al, 2000:47).

- **BV = Value chain management**

Nieuwenhuizen & Kroon (2002:159) state that successful SMEs strive to keep good supplier and value chain relationships. On the other hand, problems with resource suppliers including inventory turnaround time, quality control and securing credit from suppliers have been cited as factors leading to failure of the SME (Fielden et al, 2000:301).

- **EC = Creativity**

The ability to be creative is very important for successful business performance in a competitive and increasingly demanding world (Pretorius et al, 2005a:56; Nieuwenhuizen & Kroon, 2003:139; Hankinson, 2000:94).

- **EI = Innovation**

Man et al (2002:127) puts forward that successful entrepreneurs have the ability to innovate in the light of the fast-changing environment. Thus most successful SMEs incorporate innovation for new ideas, opportunities, services, products and processes as they implement their business plans (Pretorius et al, 2005a:56; Rwigema & Venter, 2004:112).

- **EO = Opportunity recognition**

Economic success occurs when good managerial practice is combined with enterprising qualities that optimize the identified opportunities and resources available (Kodithuwakhu & Rosa, 2002:436; Robertson et al, 2003:311).

- **EM = Role model interpretation**

Freeman (2000:375) suggests that access to role models who have experience in the field is regarded as important for SME performance.

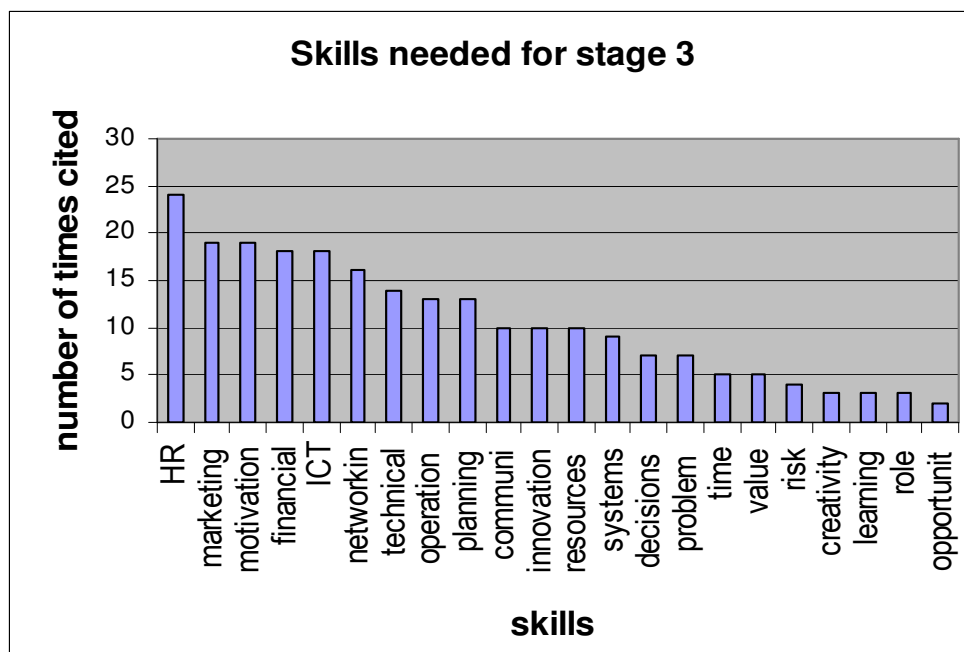
- **EG = Ability to gather and control resources**

Rwigema & Venter (2004:34) agree with Timmons (1999:38) that successful SMEs have the ability to manage and control scarce resources, to keep low overheads, increase productivity and nurture the quality of resources. On the other hand less successful SMEs lack effective control systems (Strydom & Tustin, 2003:2).

- **ER = Calculated risk taking**

Most successful SMEs are run by entrepreneurs with competence to gauge risk associated with various strategies and are capable to take calculated risks plus be able plan for contingencies (Rogerson, 2001a:137; Baron, 2004b:224). Figure 3.7 below illustrates the number of times each skill category was cited by the 100 authors reviewed:

Figure 3.7: Skills required for stage 3 of the entrepreneurship process



More than 10% of the 100 authors reviewed citing HR, marketing, motivation, technical, financial, ICT, networking, operations, planning, communication, innovation and gathering resources skills as important for stage 3 of the entrepreneurship process. This implies that the integrated model equation 2.21 $\uparrow E/P = F(\text{key skills}) \times (1 + H(\text{supporting skills}))$, can be adapted such that the equation describing the key skills for stage 3 will read as equation 3.3 below:

$$F(\text{Key skills in stage 3}) = [u.BH \times t.BM \times a.PM \times d.T/S \times s.BF \times BI \times z.BN \times \alpha.BO \times \beta.BP \times f.PC \times o.EI \times q.EG] \quad (3.3)$$

3.3.4 Entrepreneurial Process - Stage 4

The last stage in the entrepreneurial process relates to that which facilitates the continued survival of the firm, which may lead to its expansion to some optimum size determined by the market demand (Glancey, 1998:18; Larsson et al, 2003:205). Growth is critical to entrepreneurial success and distinguishes the entrepreneurial venture from the small business (Wickham, 2001:303; Rwigema & Venter, 2004:36; Nieman, 2006:188).

Perks & Struwig (2005:171) alerts to the problem of defining growth of a business because uncertainty exists about what growth comprises. The *Oxford Dictionary* defines growth as “An industry that is developing particularly rapidly; a company stock that tends to increase in capital value rather than yield high income”. Synonymous with growing are the terms booming, rising, increasing, maturing and developing.

There are five indicators for growth: financial, strategic, structural, organizational and image indicators (Wickham, 2001:304; Rwigema, 2004:437; Nieman, 2006:189; Gundry & Welsh, 2001:462) as briefly described below:

- Financial growth relating to increases in turnover, costs and investment needed to achieve the turnover, profits, business assets and all related value added.
- Strategic growth relating to changes taking place through mergers and acquisitions, exploiting of new markets, new products and new opportunities.
- Structural growth relating to the changes taking place in the way the business organizes its internal systems with regard to managerial roles, increasing employees

and their responsibilities, reporting relationships, communication links and increased use of internal systems to control resources.

- Organizational growth relating to changes taking place in terms of processes used, the organization's culture, management attitudes towards staff, as well as changes regarding the entrepreneur's role as the business moves from small to large.
- Image growth which relates to the changes taking place in the small business such as becoming more formal (e.g. having formal business premises), moving to newly built premises, redecorating the premises and moving to a new environment.

The activities undertaken in the growth process are linked to five strategic growth intentions, namely market expansion, technological change, garnering resources, operations, and organizational development (Man et al, 2002:127; Gundry & Welsch, 2001:462; Rwigema & Venter, 2004:40).

- **Market expansion**

For businesses to grow they have to reach a wider business environment by expanding existing opportunities, discovering new ones, selling to new markets, expanding distribution channels, expanding advertisement and promotions as well as continuously adapting products to changing tastes. Discovery of new opportunities depends on continually scanning the changing business environment and preparing to exploit these opportunities ahead of, or not far behind competitors.

- **Technological change**

Technological change includes acquiring new equipment, computerizing current operations, upgrading computer systems, replacing present equipment. It also includes keeping up with the increases in technical knowledge.

- **Garnering resources**

Growth is dependent on the venture's ability to attract new resources. For this stage garnering resources includes evaluating whether the company has the resources to fund the growth strategy, taking action, taking new risks, setting linkages with external factors, consolidating available cash on hand, seeking additional financing, seeking professional

advice, exploring a wider range of financing resources, applying for a loan, securing a loan, distributing finance for financing resources.

- **Operations**

This is the phase where the team is continuously revisiting and streamlining every operational aspect, from service quality to public relations. Operations aimed at growth include being product/service-focused and growing the firm's specific competences and skills to overcome constraints and complacency and to deploy resources optimally. This includes operations planning, adding operating space, expanding current facilities, redesigning layout and adding specialized employees.

- **Organizational development**

Growth is depended on the company structure and the development of the organization towards increasing the firm's competitive advantage. The venture cannot afford to acquire assets and set up structures and systems that are incapable of evolving as the organization develops. As a venture grows, so does the structure, until a complex structure emerges.

Skills required for success in stage 4

The most important issue in pursuing growth is whether the entrepreneur has the skills it requires (Nieman, 2006:194; Tustin, 2001:126; Simpson et al, 2004:485). From the 100 authors reviewed the following skills were identified as needed this stage are:

- **Technical Skills (T/S)**

During the growing stage, technical skills and vocational abilities are paramount (Rwigema & Venter, 2004:41, Tustin, 2003:26).

- **PP = Problem solving**

Darroch & Clover (2005:326) identify problem solving skills such as conflict resolution and overcoming stress as key abilities for successfully growing SMEs. On the other hand, the lack of problem-solving skills are cited by MacMahon & Murphy (1999:35) as factors that hinder the growth of SMEs.

- **PA = Adaptability to change**

During the growing phase, ambiguity is high with the changes in technologies, markets, competitors, personnel and other variables (Morris & Zahra, 2000:93). Probst & Raisch, (2005:101) surmise that successful entrepreneurs are able to manage change and they are able to anticipate, execute plus monitor the change towards SME growth.

- **PL = Learning abilities**

The ability of the entrepreneur and / or of the entrepreneurial team to learn is crucial to the growth process (Deakins & Freel, 1998:149; Larsson et al, 2003:210). Successful ventures become learning, flexible organizations that continually adapt the range of potential behaviours to changing opportunities (Rwigema & Venter, 2004:36; Sackett et al, 2003:299).

- **PN = Numeracy and literacy**

Strydom & Tustin (2003:9) argue that inadequate literacy / numeracy skills impact negatively on the growth of small business.

- **PM = Motivation (need for achievement)**

Situational-specific motivation specifically the need to grow is cited as possible predictors of firm growth (Durand, 1975:77). Urban & van Vuuren (2006:3) advise that this stage of the entrepreneurship process requires the entrepreneur to be to motivate themselves and the team to continuous commitment and initiative.

- **PT = Time management**

Rwigema & Venter (2004:46) deliberate that time must be managed productively, effectively and efficiently during the growth stage of a business.

- **PC = Communication skills**

Nieman (2006:196) notes that successful entrepreneurs are able to express their vision for growth clearly and efficiently. On the other hand the lack of communication skills hinders the growth of SMEs (Strydom & Tustin, 2003:10; Perks & Struwig, 2005:183).

- **PG = Negotiating skills**

In order to grow their companies, entrepreneurs must look beyond short-term victories to lasting mutually beneficial gains and build long-term relationships with suppliers, bankers, directors, managers, shareholders, customers (negotiating contracts or tenders), distributors, unions and other stakeholders (Rwigema & Venter, 2004:51; Nieman, 2006:197).

- **PD = Decision making skills**

The key to new venture growth lies in the ability of the owner/manager to make quick and correct decisions (Morris & Zahra, 2000:93; Hankinson, 2000:94; Markham & Baron, 2003:287). Entrepreneurs, by virtue of their superior decision-making abilities, can create growing firms (Glancey et al, 1998:265).

- **BB = Business systems management**

High growth-oriented entrepreneurs tend to have formal organizational structures and systems (Gundry & Welsch, 2001:454; Simpson et al, 2004:485). Viviers et al (2001:8) asserts that applications of business systems and processes enable the owner-manager to adopt a hands-off management style more appropriate for growing businesses.

- **BG = General management**

Successful entrepreneurs are adept at efficiently general management, a factor that becomes increasingly important as pluriactivity increases (Kodithuwakhu & Rosa, 2002:443). Larsson (2003:206) and Schamp & Deschoolmeester (1998:154) list planning, executing (organizing and leading) and monitoring (or control) as general management skills key to growing an SME.

- **BF = Financial management**

Credit and cash flow management, bookkeeping, financial insight and basic financial management are additional areas that need the entrepreneur's attention in the growing stage (Timmons, 1999:251, Pretorius & Shaw, 2004:222).

- **BI = ICT skills**

In a world of global competition, the use of IT can assist in driving the SME from the spectre of failure past mere survival into growth by enabling the SME to tap into global information networks and markets (Baard & Van den Berg, 2004:2; SME survey, 2003; Chapman et al, 2000:354, Goolnik, 2002, Sackett et al, 2003:298). SMEs who fail to apply ICT business solutions find themselves competing in business environments that are becoming increasingly dependent on information technology (Fielden et al, 2000:303; Marri et al, 2003:155).

- **BM = Marketing**

High-growth entrepreneurs have strategic intentions that emphasize market growth and the actual marketing expertise (and understanding of marketing) needed to become competitive (Gundry & Welsch, 2001:462; Freeman, 2000:373; Pretorius & Shaw, 2004:222; Wasilczuk, 2000:89).

- **BN = Networking**

Strong networks (social, public and professional) and practices of networking foster venture growth (Drakopoulou, 2002:117; Jansen, 2003:1). Batjargal (2006:317) concurs with Senjem & Reed (2002:1) and Zhao & Aram (1995:349) that most successful entrepreneurs belong to at least one formal network. Networking allows the entrepreneur to take advantage of the changes in the market (Miller et al, 2003:228) and the diversity of information to develop new opportunities (Harris, Forbes & Fletcher, 2000:141; Hite, 2005:113).

- **BO = Operational**

High-growth entrepreneurs have great concern for reputation and high-quality work and therefore most have high operational skills (Pretorius & Shaw, 2004:222; Nieuwenhuizen & Kroon, 2002:159).

- **BR = Research and development**

Gundry & Welsch (2001:462) state that successful entrepreneurs conduct research that helps them adapt products and technology to changing needs.

- **EC = Creativity**

Freidrich et al (2003) argue that in the later stage in the entrepreneurship process, creativity should continue if the competitive advantage is to be sustained.

- **EI = Innovation**

Dess et al (1999:91) proclaim that key to the growth of the firm is the portfolio of income-generating initiatives. Marri et al (2003:151) and Schamp & Deschoolmeester (1998:154) concur that this is dependant of the planning of innovation, the development of new innovative products and innovative techniques. This is so as to defend their turf, uphold profitability, to gain new markets, to keep up with environmental changes as well as to avoid becoming redundant or extinct (Mueller & Thomas, 2001:57). Freel & Robson (2004:561) findings highlight a positive relationship between novel product innovation and employment growth.

- **EO = Opportunity recognition**

Rwigema & Venter (2004:41) deem this stage of the entrepreneurship process as demanding of skills that enable the SME to find and develop more and new opportunities. Entrepreneurs need skills that enable them to identify opportunities to increase core market share (Man et al, 2002:134); increase volume of sales (Gundry & Welsch, 2001:462); develop new products (Wickham, 2001:304); enter new markets (Erikson, 2002:281); diversify (Nieman, 2006:189); integrate (Robertson et al, 2003:311); form strategic alliances (Deakins & Freel 1998:148); expand distribution channels (Perks & Struwig, 2005:182) and advance technical applications (Gruber, 2002:193).

- **EG = Ability to gather and control resources**

High-growth entrepreneurs have the ability to secure adequate capitalization competitively (Gundry & Welsch, 2001:462; Rwigema & Venter, 2004:46). Furthermore the effective management of these resources is critical to SME growth (Gbadamosi, 2002:97; Probst & Raisch 2005:101; McMahon, 2001:12).

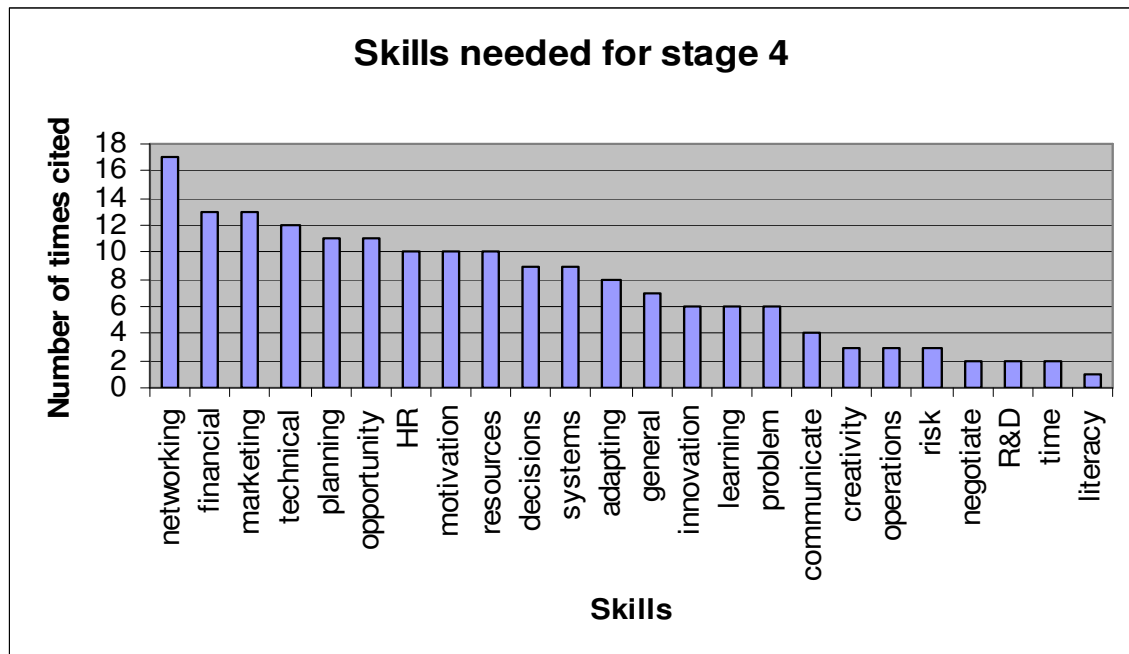
- **ER = Calculated risk taking**

Successful entrepreneurs are able to take new risks in order to grow their companies (Man et al, 2002:132). They use different strategies like pluriactivity to manage risk and

they plan more frequently leading to generally better risk control (Schamp & Deschoolmeester, 1998:161; Kodithuwakhu & Rosa, 2002:455).

Figure 3.8 below illustrates the number of times a skills category was cited by the 100 authors reviewed:

Figure 3.8: Skills required for stage 4 of the entrepreneurship process



More than 10% of the 100 authors reviewed cited networking, financial, marketing, technical, planning, opportunity, HR, motivation and the gathering of resources skills as important for stage 4 of the entrepreneurship process. This implies that the integrated model equation 2.21 $\uparrow E/P = F(\text{key skills}) \times (1 + H(\text{supporting skills}))$, can be adapted such that the equation describing the key skills for this stage 4 will read as equation 3.4 below:

$$F(\text{Key skills for stage 4}) = [z.BN \times s.BF \times t.BM \times d.T/S \times \beta.BP \times u.BH \times a.M \times q.EG]. \quad (3.4)$$

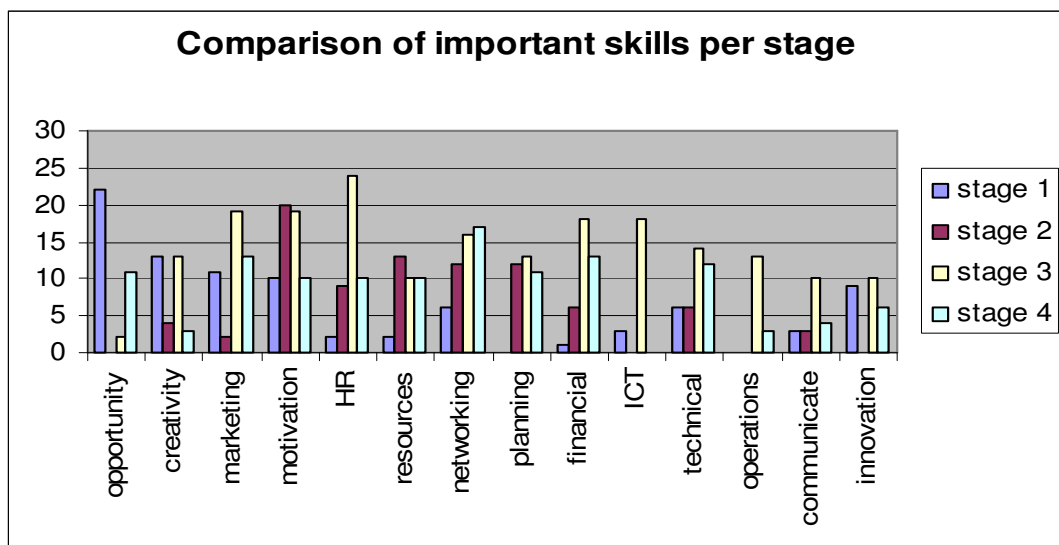
3.4 Summary and propositions

From the above discussions the following observations can be drawn.

1. Only motivation was deemed as an important skill for all the stages of the entrepreneurship process.

2. Marketing is very important in stage 1, 3 and 4 of the process.
3. Gathering of resources, planning and networking were considered important for stages 2, 3 and 4.
4. Opportunity identification is deemed as very important for stage 1 and 4.
5. Human resources management, financial management and technical skills are deemed as important for stages 3 and 4.
6. Creativity is deemed to be important for stage 1 and 3.
7. Communication, operations and innovation skills are deemed as key for stage 3.

Figure 3.9: Citations of important skills per stage



This review is in line with Sullivan's (2000:164) top ten skills per stage. The seven skills identified in chapter 2 namely opportunity identification, marketing, motivation, human resources, financial management, gathering of resources and technical skills have all been identified as important for at least two of the four stages of the entrepreneurial process. So the propositions on key skills can be verified. This means it is valid for the study to investigate whether these seven skills are important for SMEs irrespective of the stage of the entrepreneurship process the SME may be in at the time of the interview.

Furthermore another seven skills were also cited as important for at least one of the four stages. These seven were creativity, networking, planning, ICT, operations, innovation and communication. Networking and planning were deemed as important for three of the four stages, while others like innovation, ICT and innovation were considered important only for one stage. This made it necessary for this study to investigate whether on skills identified in Chapter 2 as supportive were in fact key skills.

The following were thus added to the propositions the study sought to prove / disprove.

Propositions K1. The following skills are not likely to be considered to be key skills:

- Marketing
- Finance
- Human resource
- Motivation
- Gathering of resources
- Opportunity identification
- Technical

Propositions S1. The following skills are not likely to be considered as supportive:

- Motivation skills
- Adaptability to change
- Problem solving
- Numeracy and literacy
- Communication
- Decision making
- Negotiating
- Learning abilities
- Time management
- Business systems
- Business linkages
- Computer literacy
- Legal
- Operations management
- Research and development
- Strategy and business planning
- Supplier management
- Risk taking
- Role models

3.5 Conclusion

Chapter 3 conducted further exploration study to investigate whether the skills identified in chapter 2 did indeed apply to all the four stages of the entrepreneurship process. The chapter finds that only motivation is considered key for all stages while other skills that were identified as key may be important for one or two stages. So the researcher incorporated into its study propositions to investigate whether the skills identified have been categorized correctly as important or supportive and if these categories apply irrespective of the stage of the entrepreneurship process the SME may be in at the time of the interview.

From the model and the exploratory study chapter 3 posits that in a given set of competencies some are key skills and some are support skills.

The next chapter briefly looks at training as a method of acquiring key and supportive skills to enhance SME and entrepreneurial development.

Chapter 4: Acquiring skills

4.1 Introduction

This chapter investigates ways and means of acquiring the key and supporting skills examined in the previous two chapters. The chapter includes a literature analysis of education and training theory in the context of entrepreneurship and small business. As stated in chapter 3, this review is a brief look at training as a method of acquiring these skills for enhancing SME and entrepreneurial development. As in Nieman (2001:448), training of SMEs in this chapter is discussed as part of the study undertaking and not only specific to training. This chapter presents propositions linking training, skills development and acquiring of skills to the conceptual model presented in chapters 2 and 3 above.

The specific focus here is to eliminate any skills identified in the review if they are not transferable or learnable. This chapter presents the final model of assignable skills that SMEs must acquire to succeed in the entrepreneurship process and provides guidelines for selecting skills that the SMEs are requested to rank in the survey questionnaire.

The last section of this chapter formulates 3 more propositions linking the identified skills (in the model) and training as a method of acquiring these skills. These propositions will be added to the propositions developed in chapters 2 and 3 and tested in the empirical research.

4.2 Acquiring of skills

Commentators across the economical spectrum agree that a highly skilled workforce and the development of the abilities and skills of SMEs are key to increased competitiveness and sustainable growth (Lange et al: 2000:5; Tustin, 2003:43; Rogerson, 2001a:117, Nafukho, 1998:100, Volkman, 2004:1; Lowe & Marriott, 2006:105). In order to prevent business failures and to promote SME growth, the lack of appropriate skills must be addressed (MacMahon & Murphy, 1999:35; Kangasharju, 2000:30). The ability to learn and acquire skills seems to be the major difference between organizations that grow and those that find it difficult to grow (Vesselov, 2002:4; Robertson, 2003:461; Henry, Hill &

Leitch, 2005:100). But exactly how do people learn to work in entrepreneurial ways? (Rae, 2000:145).

Despite a growing body of literature in the field there is still considerable uncertainty as to whether entrepreneurs are born or made (Henry et al, 2005:98; Botha, 2006:48; Klofsten, 2000:343). However many developers, economist and investors are content to gamble on the notion that entrepreneurship can be cultivated in individuals (Rwigema & Venter, 2004:48; GEM, 2004:19) and that entrepreneurs can be created and made better by acquiring, developing, practising and refining certain behaviours (Klofsten & Spaeth, 2004:5; Henry et al, 2005:107).

It has been argued that acquiring and developing entrepreneurial competencies is more important in the entrepreneurial process than even direct provision of financial resources and consulting support to the entrepreneur (Pretorius, 2001:223, Ladzani & van Vuuren, 2002:158; Nasser et al, 2003:399; Lange et al, 2000:6). The object of skills acquisition can be defined as provoking the union of an actor and a project or process element (Pretorius et al, 2005b:417; Miller et al, 2003:216).

Many studies do suggest that entrepreneurial and management skills (which seem indispensable for the running of successful SMEs) can be developed through a combination of experience, learning, skills transfer, apprenticeship, education and training (Dana, 2001:405, Ibrahim, Soufani, Poutziouris & Lam, 2004:474; Morris et al, 1996:72; Nieman et al, 2003:12; Robertson, 2003:470; Toye, 2002:26; van Vuuren & Nieman, 1999:4; Rae, 2000:145).

Education and training refers to the extent which all levels of the education system are effective in providing instruction and experience in the creation or management of SMEs (GEM, 2002c:18). Education and training are said to be key elements in successful venture creation (GEM, 2005:5). To this end many African governments' efforts to solve youth unemployment problems have resulted in policy initiatives aimed at raising skills levels through education and training (Hill & Stewart, 2000:105; Devins, Johnson & Sutherland, 2004:449, Keough, 2003:17; Massey, 2004:458; De Faoite, Henry, Johnston & Van der Sijde, 2004:440; Cook, Belliveau & Sandberg, 2004:404). Education and

training is said to facilitate greater levels of participating and succeeding in entrepreneurship (GEM, 2002c:29).

However there are doubts about whether education and training actually influence SME performance or contribute significantly to SME success (Kitching, 1998:111; Devins et al, 2004:449). There is a limit to what can actually be taught, and moreover many argue that personal experience is the best teacher of entrepreneurship (Freeman, 2000:372; Deakins & Freel, 1998:149; Massey, 2004:458).

Although education and training alone will not address the survival needs of many SMEs they play a crucial role in the support of SMEs as they facilitate initiation and development of entrepreneurial activities (van Vuuren & Antonites, 2001:1; Mayrhofer & Hendriks, 2003:1; Ladzani & van Vuuren, 2002:158). Other studies have shown evidence that education and training interventions led to a positive effect on success and growth of the majority of SMEs (Simpson et al, 2004:481; Keough, 2003:17; Hill & Stewart, 2000:105; Kitching, 1998:111; Ibrahim et al, 2004:478; Mueller & Thomas, 2001:68).

Lack of appropriate education and training leads to skills shortages and thus hinders entrepreneurship (Pretorius & Shaw, 2004:222; Ligthelm & Cant, 2002:6, GEM, 2001a:4; Tustin, 2001:126; Ladzani & van Vuuren, 2002:156; Tustin, 2003:38). SME failure in many countries could have been avoided if appropriate management training and counselling had been provided before the situations reached critical conditions (Govender, 1994:114).

Thus the creation of entrepreneurs is partially dependent on the creation and advancement of efficient education and training programmes (Pretorius et al, 2005b:413; Gurol & Atsan, 2006:26; Henry et al, 2005:100). Ensuring access to education and training programmes that train entrepreneurs and upgrade the capacity of SMEs is cited as the main way in which the government can assist SMEs' growth and reduce failure (Luiz, 2002:68). Governments & NGOs can support SMEs through education, training and business advice (Clover & Darroch, 2005:257).

Education and training is considered important for economic prosperity (Sullivan, 2000:162). The USA is considered world leader in the educating and training of entrepreneurs (GEM, 2002c:18). In the 1990s in South Africa, the new government's

Reconstruction and Development Programme (RDP) placed a major emphasis on entrepreneurial awareness, education and training (Klofsten & Spaeth, 2004:8). The education and training institutions could provide the framework for the SME owner-manager to confront and address deficiencies in his business (Hankinson, 2000:94; Markman & Baron, 2003:296). A distinction has been made between entrepreneurial education and entrepreneurial training (Botha, 2006:61).

4.3 Entrepreneurship education

Education is defined as the theory and practice of teaching or information about training in a particular subject (*Oxford Dictionary*, 2005). Education has a strong impact on entrepreneurship (GEM, 2001b:16). The plea for the advancement of entrepreneurship in the formal school curriculum has come from various sources, including the formal education sector, the private sector and non governmental organizations (North, 2002:24). Entrepreneurship and small business education has been rapidly promoted in education institutions in the USA and in Europe, Asia and Africa (Gurol & Atsan, 2006:27; Bygrave, 1997:2). In South Africa, Umsobomvu (2002:2) strongly recommended that entrepreneurship education needs to be integrated into the school curriculum at all levels from kindergarten to university, to build a strong entrepreneurial culture.

The following are said to be benefits of entrepreneurial education (GEM, 2003a:10; Botha, 2006:47; Viviers et al 2001:16; Henry et al, 2005:102; Vesseleov, 2002:27).

- Entrepreneurial education plays a role in raising awareness of the nature and importance of entrepreneurship to the economic development of the country.
- Entrepreneurship education contributes towards building an entrepreneurship culture in a given country.
- Entrepreneurial education can develop attitudes, perceptions and mindsets that are not averse to failure, competition and risk-taking.
- Entrepreneurial education can increase intrinsic motivation and self confidence.
- Students in entrepreneurship education can become aware that entrepreneurs can be made and are not necessarily born.

- Entrepreneurial education can help aspiring entrepreneurs by teaching them the practical skills required in SME start-up and management towards growth.
- Starting a business is risky as it is, but the chances of success can be enhanced if the problems anticipated are understood and solutions investigated prior to the business start-up through education.

However there are arguments that the education field does not lend itself to the possibility of start-up because the education system does little to nurture entrepreneurial activities (Driver et al, 2001:29). In South Africa this is said to be due to many challenges in entrepreneurial education including:

- Overall lack of entrepreneurial elements in the education system (GEM, 2002a:15).
- Inappropriate learning methodologies (Botha, 2006:51).
- Most education programmes not being outcome or skill development based (Ladzani & van Vuuren, 2002:155).
- Typically, entrepreneurship is not promoted as a career option with the education system promoting a large-firm culture whereby the majority of students plan to work for someone else after graduation (Antonites, 2003:31).

Following Umsobomvu's (2004:iv) assertion that "various authors are of the opinion that more emphasis should be placed on training than on business education", this study focuses only on entrepreneurship training.

4.4 Entrepreneurship training

Training is defined as teaching a particular skill or type of behaviour through regular practice and instruction (*Oxford Dictionary*, 2005). Many studies have proved that entrepreneurs can be trained to stimulate entrepreneurial activity and performance (Antonites, 2003:31). The trainability of entrepreneurs is accepted and supported by McClelland (1961:1), Gibb (1993:3), Hisrich & Peters (2002:19) and Pretorius & van Vuuren (2003:515) among others.

Staff training is linked with success in virtually all successful companies which provide training to their employees to create effective workers who can attain organizational

goals and improve their expertise (Rowden, 2002:82; Darroch & Clover, 2005:338; Timmons 1999:219; Rogerson, 2001b:269).

Training complements the early stage of education by capacitating entrepreneurs with the skills needed to set up, run and grow their own businesses (Devins et al, 2004:456; Erikson, 2002:277). The following are said to be benefits of appropriate entrepreneurial training interventions:

- Training improves the odds of getting things right and reduce failure rates (Viviers et al, 2001:16).
- Training facilitates the implementation of strategy by providing skills to perform in the jobs and know-how of procedures and business processes that help the SME implement strategy with fewer difficulties (Freeman, 2000:376; Themba et al, 1999:111).
- Training improves skills that enhance SME entrepreneurial performance in terms of productivity, competitiveness and profitability, and increase in sales, assets and employees (Clover & Darroch, 2005:257; Henry, Hill & Leitch, 2005:102).
- Training helps owner-managers to learn how to prevent and solve business problems (Fernald, Solomon & Bradley, 1999:312; Robertson et al, 2003:314; Ladzani & van Vuuren, 2002:156).
- Training fosters a continuous learning and re-engineering culture that enables SMEs to adapt to change and keep ahead in a highly competitive and turbulent environment (Lange et al, 2000:6; Sackett et al, 2003:299).
- Training and practice can enhance leadership and can boost the need for achievement, enhance self confidence and influence growth-related entrepreneurial and managerial attitudes and perceptions as well as alleviate the fear of failure (McClelland, 1987:220; Ibrahim et al, 2004:478).
- Training can help identify enterprise growth patterns and successfully address key barriers to entrepreneurship (Schamp & Deschoolmeester, 1998:141).
- A first business attempt may fail, but a trained and educated entrepreneur will retain knowledge and abilities to try again (Bridges.org, 2002:6).

Since it is assumed that most emerging small business owner-managers start their enterprises without prior entrepreneurship training (Ladzani & van Vuuren, 2002:156), it can be argued that SME survival could be enhanced by providing appropriate skills

training programmes that impart relevant and transferable skills (Strydom & Tustin, 2003:14; Darroch & Clover, 2005:338; Bridges, 2002:6; Ibrahim et al, 2004:478).

Challenges of entrepreneurial training

While there are numerous initiatives and efforts of various role-players in the training of entrepreneurs in South Africa (Nieman, 2001:445), many people blame the education and training system in South Africa for the lack of entrepreneurial excellence in South Africa (North, 2002:26; GEM, 2003b:13). Shortages of management skills raise questions about the availability and quality of training provided to potential entrepreneurs (Freeman, 2000:372).

Certain barriers exist both on the supply side and execution of entrepreneurship training and skill development initiatives (Ibrahim & Soufani, 2002:425; Klofsten & Spaeth, 2004:17). Identifying and clarifying these barriers to SME skills development in more detail is essential for a successful training strategy that will see the full potential of SMEs realized (Lange et al, 2000:6). The barriers can be categorized into cultural, diagnostic, finance, service provider, appropriateness, content, and relevance factors.

Culture

Culture has important consequences for the success of a training strategy capital (Lange et al, 2000:7). Culture influences attitudes, understanding and behaviour of SMEs about training which tends to influence the quality and the quantity of its provision (Mayrhofer & Hendriks, 2003:599). Even if a learning programme includes the best knowledge and skills content about venture start-ups as its outputs, there is no guarantee that participants will act entrepreneurially unless their mindset, their willingness to take risks, their confidence, attitude and behaviour have been influenced as well (Pretorius et al, 2005b:423).

While the importance of training is trumpeted by government, SMEs are not doing enough to capacitate themselves with skills that are key for business performance (Hankinson, 2000:94). One of the major challenges to skill development is related primarily to barriers resulting from mental paradigms of SME owners and their attitudes towards skills development (Matlay, 2001:400). A significant number of SME owners/managers are hesitant to engage in continuous learning or regular formal training

(Lange et al, 2000:7; Strydom & Tustin, 2003:4; Pittaway & Thedham, 2005:403). There is also a lack of interest / commitment from the SME workforce (Kekale, Pirolt & Falter, 2002:277); since when the training was offered, the actual rates of the usage of training opportunities and programmes were very low (Matlay, 2004:512; Patton, Marlow & Hannon, 2000:11).

The root of this could lie with either a communicational or educational impasse. Many SMEs are uncertain of and misunderstand the role of entrepreneurship training (Mayrhofer & Hendriks, 2003:599). Many SMEs do not believe that training pays off in the short term (Fernald et al, 1999:321; Lawless et al, 2000:313), nor are they convinced of the link between training and business growth / profits (Mayrhofer & Hendriks, 2003:599; Lange et al, 2000:9). This is supported by researchers who deem that there is still a need to know, for sure, whether training people in these identified core competencies will facilitate entrepreneurial success (McClelland, 1987:232) and those who argue that SMEs learn better from experience than from courses delivered in classrooms (Freeman, 2000:375; Wasilczuk, 2000:93; Pittaway & Thedham, 2005:403).

Many SMEs fail to plan for training (Lange et al, 2000:8). They view training as a crisis-driven remedy that is taken when necessary as a way of responding to urgent functional needs, and not as part and parcel of a continuous long-term skills development plan (Massey, 2004:465; Lawless et al, 2000:313). Many SMEs do not seek advice as routine, but usually when it is too late to do anything about it (Hankinson, 2000:94). Even if they do plan for training, the actual steps many SME owners take in professional development remain illusory (Klofsten & Spaeth, 2004:17; Miller et al, 2003:228).

Diagnosis

Very little is known about the training needs of entrepreneurs and their workforce (Matlay, 2001:395). Many SME owners are unaware of why they need certain business skills to be successful (Massey, 2004:465; Strydom & Tustin, 2003:2). They fail to recognize their need for training and lack information on the impact of investment in business skills development (Lawless, 2000:313; Kekale et al, 2002:277).

The SMEs who are aware of the need for training often misdiagnose problem areas, are often unable to describe their training needs, and do not correctly assess how developing

those skills will contribute to the SME (Strydom & Tustin, 2003:2; Watson et al, 1998:219; Lange et al, 2000:10). There is a lack of robustness in the way SMEs try to ensure that there is a fitting relationship between the services on offer, the training selected, the needs of employees in terms of their jobs and the needs of the SMEs (Massey, 2004:465; Matlay, 2004:504).

Furthermore there are barriers related to the knowledge of what learning opportunities are out there (Mayrhofer & Hendriks, 2003:599). Only a relatively small proportion of SMEs are aware of the existence and availability of industry training opportunities in the market (Matlay, 2004:511; Klofsten, 2000:340). They do not know where to find sources of information on skills, the different training offerings available and the relevant skill development initiatives plus training strategies available (Strydom & Tustin: 2003:2; Lange et al, 2000:10; Kekale et al, 2002:277).

Finance

One of the major challenges to skills development is the cost or perceived cost of training and learning. The inherent problem remains that small businesses have limited financial resources and often cannot afford to send their workers for formal training or hire professional trainers to conduct internal training (Lange et al, 2000:10; Strydom & Tustin, 2003:4; Klofsten, 2000:340; Matlay, 2001:402).

Many SMEs' success in upgrading their skills and gaining access to technology may depend crucially on subsidized education and training infrastructure provided by their governments (Robertson, 2003:461). The South African government provides funds for business non-financial support services and incubators that provide space and facilities for SMEs. Its main agent, Ntsika Enterprise Promotions, works with an estimated 97 LBSCs (local business support centres), which are accredited countrywide to give non-financial support services to SMEs (Nieman, 2006:6; Botha, 2006:70; Von Broembsen, 2003:6). However, access to resources to pursue training is a challenge for many SMEs who struggle to access government sponsored training, skills grants and financial assistance (Hankinson, 2000:94; Matlay, 2001:402; Klofsten, 2000:340).

Another possibly sunk cost of training is the real danger of training employees in small firms and having them poached by competitors or having them move to another company, as they now possess more and transferable skills. Many SME

owners/managers may thus perceive training as a costly activity, with the probability of benefits reaped elsewhere being very high (Lange et al, 2000:9).

Time

Time constraints are cited by SMEs as a reason for not attending training (Mayrhoher & Hendriks, 2003:599), as many SMEs cannot afford the time spent away from work both for workers and for themselves (GEM, 2002a:37; Lawless, 2000:314). Thus most small firms prefer in-house training methods (Strydom & Tustin, 2003:14).

Appropriate and relevant training

A critical issue to be addressed if entrepreneurship is to be promoted in South Africa relates to the content of training in entrepreneurship (Nafukho, 1998:102). One of the major barriers to skill developments is the lack of access to appropriate, relevant and quality training programmes (Freeman, 2000:372; Ibrahim & Soufani, 2002:425; Robertson et al, 2003:314). SMEs are not getting the high-quality training they need to keep their companies competitive (Fernald et al, 1999:322; Watson et al, 1998:230). Factors that affect training quality include the unavailability of direct, clearly relevant, appropriate and formal training that will match their specific human resource development needs and limited resources (Matlay, 2001:401; Klofsten & Spaeth, 2004:8).

There is a gap between entrepreneurial needs and the aspirations of training offerings on entrepreneurship (Collins, Hannon & Smith, 2004:454; Patton et al, 2000:11). SMEs often feel that the government sets up initiatives that do not consider the needs of small businesses with regard to training (Lange et al, 2000:7). Most services offered to SMEs are inflexible, over-structured and supply driven, particularly services relating to finance, business management and HR; whereas the growth of SMEs is more often driven by market changes (Mayrhoher & Hendriks, 2003:596; Vesselov, 2002:11; De Faoite et al, 2004:445).

Moreover, many governments that offer training as SME support do not evaluate the effectiveness and impact of the training (Massey, 2004:464, Nieman, 2006:6). Most training programmes do not meet the needs or expectations of SMEs nor are they transferable to the workplace (Mayrhoher & Hendriks, 2003:599; Fernald et al, 1999:323).

The training emphasis of most service providers in South Africa seems to be more on conventional management training than entrepreneurial training (Nieman, 2001:448). The content of entrepreneurship courses and programmes fails to address the question of creativity and innovation (Pretorius et al, 2005b:424). Most programmes focus more on commerce and services, with little training for market-related production (Nieman, 2006:9; Von Broembsen, 2003:19). Thus most of these are not lined up with the SME aim of increasing productivity (Cook et al, 2004:398). What many SME training programmes also lack is the training of entrepreneurs which can change their behaviour to engage in the start-up process (Pretorius et al, 2005b:423) and to overcome self-defeating beliefs (Markman & Baron, 2003:296).

The failure of some programmes to take on board the cultural, educational and social background of local entrepreneurs leads to ineffective training and support programmes (De Faoite et al, 2004:440). Some of the programmes have been successful in other industries or countries as they were tailored for their particular needs, but when imported to other areas/environments they prove unsuitable and ineffective for SMEs (Robertson, 2003:470; Dana, 2001:405; Themba et al, 1999:110).

Service providers

Training of SMES in South Africa is still rather fragmented and probably in the hands of too many role-players, whose aims and objectives are quite often far removed from what the SME sector expects or demands (Nieman, 2001:449). It is estimated that there are 9 395 service providers involved in business, technical and administrative training in South Africa, of which 113 are in Gauteng (Rwigema & Venter, 2004:10). This proliferation of role-players includes the following stakeholders (Matlay, 2004:506; Rogerson, 2004:769; Rowden, 2002:79; Nasser et al, 2003:397; North, 2002:25; Fletcher, 2006:436; GEM, 2002c:19; Umsobomvu, 2002:4; Umsobomvu, 2004:12).

- Government agencies and government-sponsored organizations.
- Local Business Service Centres.
- Tertiary institutions; universities and colleges and technikons.
- NGOs and community-based organizations.
- Entrepreneurs and other individuals connected to the business.
- Foreign donor agencies.

- Chambers of commerce, trade associations and Industry training organizations (ITO) including South African institute for entrepreneurship.
- Private training consultancies and mentors.
- National vocational qualifications, apprenticeships and learnerships.
- Banks (Standard bank with Mindset, ABSA, FNB and Nedbank SME desks).
- Youth development programmes like Umsobomvu, Junior Achievement and Maths centre.
- Small business development programmes like SBDC, The Business Partners, The Education with Enterprise Trust, Entrepreneurship Education Initiative, Addicted to Business, Entrepreneurs on the Move.

Inadequate competency and credibility of the service provider has been cited as a major barrier to skills development (Klofsten & Spaeth, 2004:17). SME owners are often sceptical of organizations offering training, especially when the service provider has no or little experience or understanding of the business environment that the SMEs are operating in (Mayrhofer & Hendriks, 2003:599, De Faoite et al, 2004:445, Klofsten, 2000:340). Most service providers do not base their entrepreneurship training programmes on research (empirical and conceptual) on conditions on the ground (Ibrahim & Soufani, 2002:425).

Intervention types

There are clearly different interventions needed for the different stages of the entrepreneurship process (Henry et al, 2005:99). There is a difference between training targeted at the pre-start-up phase, focusing on training the aspiring entrepreneur, and the post-start up, focusing on training the established entrepreneurs or small business owners (Botha 2006:58). These differences are highlighted in table 4.3 below:

Table 4.1: Intervention types

Stage of business	Type of intervention needed per stage of business
Pre-start	Creation of ideas, assessment of opportunity, SME know-how, network's, decision making, counselling, planning.
Start-up (external)	Customer, supplier, financier consultation, business plan, premises, procurement and sourcing, seeking advice.

Start-up (Internal)	Finance, resources, marketing, administration, systems, secure expertise and staff, financial management, partners, balancing ownership and management.
Established business	New ideas, specialist guidance and investments, idea generation, spin off, technology, banking, accounting.
Growth	Market expansion, other opportunities, exports, product development, strategic approach, management skills, finance control of growth, trading, staff retention, development, networking, new technologies.
Decline	Confidence building, new markets, customers, money, strategic review, planning.
Termination	Legal advice and counselling.
All stages	Business sectors, business support, initiatives and incentives.
Other	Information on small business needs, use of database and research.

Source: Adapted from Botha (2006:60)

Different training methods

There are considerable differences in the ways in which intervention can occur (Botha, 2006:57) including the following:

- Experiential learning strategies including hands-on practicals, role models, forum for interaction between SME owners/managers, field trips, internship; on-the-job training (Cook et al, 2004:404; Freeman, 2000:372; Klostefn & Spaeth, 2004:11).
- Observational learning including case studies, role-plays, real world examples and scenarios (Cope & Watts, 2000:107; Hankinson, 2000:94; Cope, 2003:430).
- Instructor-centred strategies including expert advice, lecturing, presentations, handouts, videos, graphics equipment, job aids, one-on-one delivery; supervision and oral presentations (Deakins & Freel, 1998:147; Kekale et al, 2002:269; Klostefn, 2000:341).
- Individual learning strategies including learning from mistakes, long distance teaching, training manuals, videotapes, e-learning and online learning (Erikson, 2002:287; Henry et al, 2005:112; Lawless et al, 2000:312; Robertson et al, 2003:308).
- Interactive strategies including mentoring, counselling, face to face contact with local consultant; group discussions, team work, peer review, conferences, workshops, networking, and comparing their own approaches with others (Fernald et al, 1999:318; North, 2002:27; Rae, 2000:157; Cope, 2003:445; Porter, 2000:241; Sullivan, 2000:160; Porter, 2000:241).
- Internet based learning (Bridges, 2002:8; Goolnik, 2002; Rogerson, 2001a:117).

Recommendations for entrepreneurial training:

A well planned and effective team effort is required to put the South African economy on the road to victory. This can be done by a collective effort to search for new entrepreneurs as well as the training that inspire them to succeed (North, 2002:27). High-quality training must be substantiated by reduced failure rates, increased profits and growth of SMEs (Ladzani & van Vuuren, 2002:156).

All approaches and programmes have merit if guided by the context in which service provision occurs (Mayrhofer & Hendriks, 2003:596). The potential benefits of entrepreneurship training are significant (Themba et al, 1999:110) especially if the service provided can incorporate the recommendations below towards improving training of SMEs in South Africa:

In terms of the process of developing such a training programme the following is recommended:

- Service providers should benchmark their services with successful similar institutions (Ladzani & van Vuuren, 2002:157; Matlay, 2004:512).
- Since entrepreneurship training is new, role-players in training should collaborate more closely to network, lobby the education authorities, share data, share their experiences, ideas and educational materials in order to identify the needs of the SMEs as well as the common infrastructure needed to determine the relevant training and entrepreneurial direction (Robertson et al, 2003:308; Volkmann, 2004:1; Ibrahim & Soufani, 2002:425).
- Training must be closely related to SME environment, backgrounds and experience and be based on managing larger enterprises (Lawless et al, 2000:308; Kekale et al, 2002:269).
- Imported training programmes need to be adapted to address cultural, social and economic issues and not be based on Western models that do not apply to the local environment (Klofsten, 2000:341; Collins et al, 2004:454).

In terms of the actual implementation of the program the following is recommended:

- Service providers must conduct systematic analysis of training needs (De Faoite et al, 2004:440).

- Service providers must examine the role and effectiveness of entrepreneurship training and its impact on the immediate and long-term performance of SMEs (; Cook et al, 2004:404).
- Training services must be flexible, demand-driven and tailor-made services to address specific and real needs of SMEs and avoid one-size-fits-all policies and programmes (Mayrhofer & Hendriks, 2003:599; Robertson, 2003:470).
- The programme should be associated with a network of firms for practical experience and mentorship (Nieman, 2000:9; Sackett et al, 2003:298).
- Trainers must have all the equipment, tools and materials and supporting facilities needed for successful training implementation (Vesseleov 2002:15).

In terms of training content and curriculum development, it has been argued that existing training firms should revise their training materials to ensure they cover the activities necessary to train in a broad and holistic way (Klofsten & Spaeth, 2004:8; Freeman, 2000:375). Several authors including Henry (2005:102), Pretorius (2001:44), Erikson (2002:287), McClelland (1987:222), Viviers et al (2001:17), Friedrich et al (2003:2) and Schamp & Deschoolmeester (1998:154) have suggested that successful entrepreneurial training programmes must include the following content:

- Activities to identify and stimulate entrepreneurial drive, talents and skills.
- Activities to eliminate the risk-averse bias of many analytical techniques.
- Activities to develop empathy and support for all unique aspects of entrepreneurship.
- Activities to instil positive attitudes towards change.
- Activities to eliminate factors that may hinder entrepreneurship.
- Activities to develop competencies that may enhance the chances of SME survival and success in today's competitive environment.

The next section focuses on identifying the set of competencies that may enhance SME survival and success.

4.5 Training models

To get a set of these competencies, it was useful to review entrepreneurship training models which form the framework within which entrepreneurship training programmes target the transfer of certain skills in South Africa. This study limits itself to three training

models developed at the chair of entrepreneurship of the University of Pretoria as reviewed by Botha (2006).

Model 1: Entrepreneurial performance education model (E/P education model)

The first model reviewed is the model by van Vuuren and Nieman (1999). From the entrepreneurial performance model, equation 2.2 in chapter 2 of this study, van Vuuren and Nieman (1999:6) presented a model called the entrepreneurial performance education model, whose formula is illustrated by equation 4.1 as follows:

$$\uparrow E/P = f(aM \times b E/S \times c B/S) \quad (4.1)$$

Where

- $\uparrow E/P$ is defined as entrepreneurial performance.
- M = Motivation
- E/S = Entrepreneurial skills
- B/S = Business skills
- a, b, c, are constant coefficients

This model argues that training courses should cover training to impart the following skills (Nieman, 2001:445; van Vuuren & Nieman, 1999):

Table 4.2: Classification of skills constructs and related training

Construct	Skill category to be included in training
Entrepreneurial performance (E/P)	<ul style="list-style-type: none"> • Increasing productivity • Increasing the number and quality of employee • Increasing the net value of business • Increasing profitability • Setting up and or running the business
Motivation (M)	<ul style="list-style-type: none"> • Fostering the need for achievement • Increase in internal locus of control • Decision making • Leadership and visionary • Determination / Persistence • Guts

Entrepreneurship skills training that covers the birth and growth of a business as training areas in a business as listed in this row	<ul style="list-style-type: none"> • Assessing of oneself and team • Negotiation • Problem solving, conflict resolution, coping with stress and tension • Risk propensity • Creativity • Innovation • Opportunity identification • Role models • Networking • Change orientation
Business skills training would cover all the conventional management training areas in a business as listed in this row	<ul style="list-style-type: none"> • Planning and strategizing including business planning • Human relations • Marketing • Finance • Accounting • General management • Negotiating • Communication • Managing growth
Technical skills training that covers the ability to use knowledge or techniques of a particular discipline to attain certain ends	

Source: Own compilation adapted from Botha (2006:81)

Model 2: The entrepreneurial education model (E/E model)

The second model that was reviewed is that of Pretorius (2001:122), the Entrepreneurial Education model (E/E model), whose formula is illustrated by equation 4.2 as follows:

$$E/E = f \{ aF (bA \times [cB/P \times dE/S \times eB/S]) \} \quad (4.2)$$

Where:

- E/E = entrepreneurship education for start-ups.
- F = facilitator's skills, knowledge and motivation.
- A = approaches used by facilitator.
- E/S = entrepreneurial success themes and knowledge.
- B/S = business skills and knowledge.

- B/P = business plan utilization.
- a, b, c, d, e are constant co-coefficients.

The major difference is that this model introduces the facilitator, but the skills to be imparted are similar, with motivation being included in the entrepreneurial success construct, which is the same as van Vuuren & Nieman's entrepreneurship skills construct but includes leadership and resilience. This model also emphasizes the business plan development and its uses, thus listing it as a separate construct and elevating it from being part of a group with the business management skills construct, as in van Vuuren & Nieman's (1999) model.

The education for improved entrepreneurial performance model (ED for ↑E/P model)

In 2005, Pretorius, van Vuuren & Nieman (2005b:422) presented the Education for Improved Entrepreneurial Performance (Ed for E/P) model whose formula is illustrated by equation 4.3 as follows:

$$\text{Ed for E/P} = f \{ aF \times bM \times [cE/S \times dB/S \times (eA + fB/P)] \} \quad (4.3)$$

Where:

- F = facilitator's ability, skills and experiences.
- M = motivation.
- E/S = entrepreneurial skills.
- B/S = business skills and knowledge.
- A = approaches of learning used.
- B/P = business plan utilization as an approach.
- a, b, c, d, e and f are constants coefficients.

This model incorporates human, venture and environmental conditions in training for entrepreneurial performance. It also integrates the two earlier models by Pretorius's (2001:122) and the van Vuuren & Nieman (1999:6) strengthening the weaknesses of each model and highlighting the strengths. Table 4.2 below adapts tables by Botha's (2006:81) and Antonites (2003:21) to focus only on the skills that the entrepreneur needs to be trained in according to the three models reviewed above.

Table 4.3: The improved entrepreneurship training model

Entrepreneurial performance (E/P)	Performance motivation (M)	Entrepreneurial skills (E/S) & entrepreneurial success themes	Business skills (B/S)	Business plan
Establishment / running of business	Motivate	Risk propensity	General	Elements
Growing the business	Mentors	Creativity and innovation	Marketing	Preparation
Recruitment	Role models	Opportunity identification	Legal	Presentation
Increasing productivity		Role model analysis (success factor)	Operational	Evaluation
Increasing profitability		Leadership	Human resource	
		Motivation	Communication	
		Attitude of participant	Financial	
		Social skills	Cash flow	
		Start-up skills	Networking	

Source: Own compilation adapted from Botha (2006:81)

4.6 Summary and propositions

From these three models summarised by table 4.2 and the literature review detailed in chapters 2, 3 and 4; it can be summarised that training programmes should strive to enhance a specific set of trainable skills in SMEs. This study follows Nieuwenhuizen & Kroon (2002), Kirzner (1973) and Thornhill & Amit (2003) to cluster and combine the skills into categories as follows:

1. Effective business systems and procedures. This includes business systems, procedures, processes & records, organizational structure, business planning systems, control mechanism, measurement systems, reporting systems and relationships, reward systems (Rwigema & Karungu, 1999:107).
2. Business linkages. This includes business associates, business contacts, industry clustering and networking.

3. Communication which includes competence in languages used in business, access to relevant information, informing, listening, clerical and administrative information.
4. Computer literacy. This includes information and communication technology, ICT applications, computer systems, typing, keyboard, internet, email, computer programming, data-processing, information networks and practices (Lawless 2000:313; Bridges, 2002:5; Chapman, 2000:260).
5. Creativity, innovation and opportunity identification. This includes the ability to create, to innovate, to be alert, to identify and to discern viable business opportunities (Rogerson, 2001a:137; Clover & Darroch, 2005:257).
6. Financial management. This includes cash flow management, working capital management, forecasting, costing, financial analysis, financial control, bookkeeping, accounting, capital budgeting, credit and collection management (Addis 2003:157; Rwigema & Venter, 2004:51).
7. Human Resource Management. This includes employee relations, delegation, organizational planning, leadership, managing personnel, employee training, career development, teamwork, job evaluation, vision, conflict management, personalities, characters and culture at work.
8. Legal. This includes business registration, government requirements, legislation, regulations, incentives, support, tax laws (Themba et al, 1999:105).
9. Life skills. This includes problem solving, time management, decision making, ability to handle stress, ability to handle change, learning ability and negotiating (Rowden, 2002; Mayrhoher & Hendriks, 2003:601).
10. Literacy. This includes reading, writing and mathematical numeracy.
11. Marketing. This includes marketing, sales, market research, business intelligence, customer care, customer relations promotions, competitors knowledge, competitor analysis, increasing sales, international trade, government tenders, securing contracts, market planning, product pricing, sales management, direct selling and distribution management (Strydom & Tustin, 2003:12; Fernald et al, 1999:316).
12. Operations. This includes quality control, production planning, production scheduling and efficient production techniques (Cornwall & Naughton, 2003:67).
13. Research & development including technical, market & product specific research.

14. Risk taking. This includes the ability to evaluate risks in the start-up and founding stage as well as risk management during the life cycle of the SMEs (North, 2002:26; Henry et al, 2005:102).
15. Role models. This includes the ability to learn from other successful entrepreneurs.
16. Securing resources. This includes identifying resources needed to start, run & grow business, matching of the resources with short and long term requirements, securing these and controlling resources for optimal deployment (Klofsten & Spaeth, 2004:10; Kodithuwakhu & Rosa, 2002:462; Mayrhofer & Hendriks, 2003:601).
17. Self motivation. This includes commitment, resilience, confidence building, motivation, self awareness, self confidence, perseverance, patience, determination, persistence, resilience, dedication, self confidence, confidence building, self esteem, self-efficacy and positive attitude (McClelland, 1987:233; Henry et al, 2003:35).
18. Strategic planning. This includes strategy development, planning, business plan development, organizational control, organizing, strategic awareness, goal orientation and plan implementation (Vesselov, 2002:19).
19. Supplier management. This includes purchasing, inventory, stock control, cost analysis, value chain and supplier management (Klofsten & Spaeth, 2004:10).
20. Technical ability. This includes vocational training, industry-specific knowledge, product-specific knowledge on how to construct product or service, knowledge of industry standards and practices (Nasser et al, 2003:400; Nafukho, 1998:102; Kodithuwakhu & Rosa, 2002:437; LeBrasseur et al, 2003:315).

From these categories and the literature reviewed above the following propositions and sub propositions were developed propositions about the link between performance and the training of skills:

Proposition A1: Successful SMEs are less likely to have been trained in technical skills than less successful SMEs.

Propositions A2: Successful SMEs are less likely to have been trained in the following personal skills than less successful SMEs:

- Motivation skills
- Life skills

- Literacy and numeracy skills
- Communication

Propositions A3: Successful SMEs are less likely to have been trained in the following business skills than less successful SMEs:

- Business systems
- Business linkages
- Computer literacy
- Financial management
- Human resource management
- Legal
- Marketing
- Operations management
- Research and development
- Strategy and business planning
- Supplier management

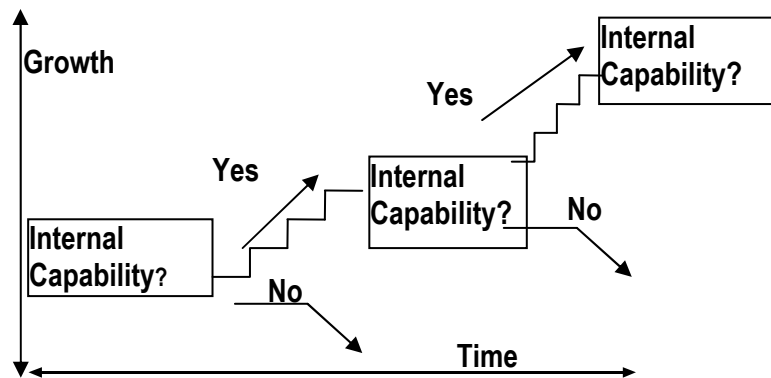
Propositions A4: Successful SMEs are less likely to have been trained in the following entrepreneurial skills than less successful SMEs:

- Opportunity identification, creativity and innovation
- Risk taking
- Role models
- Securing and controlling resources

4.7 Conclusion

This chapter illustrates that the entrepreneurial process begins with a prospective entrepreneur perceiving an opportunity, marshalling the required resources and building a team to realise the vision (McCline et al, 2000:83). How they integrate those elements in relation to competitors in a dynamic environment determines how successful the organisation will become (Thornhill & Amit, 2003:497). As illustrated in figure 4.1 over time, firms succeed or fail as a function of their ability to deploy limited resources in competitive conditions to create and capture value in the marketplace (MacMahon & Murphy 1999:36).

Figure 4.1: Venture growth and internal capabilities model



Source: MacMahon & Murphy (1999:36)

The venture success will be improved if the entrepreneur gains knowledge and acquires the ability needed to steer the venture forward through all the stages of the entrepreneurship process (Gartner et al, 1999:215; Markman & Baron, 2003:296).

The reviewing of training models by van Vuuren & Nieman (1999), Pretorius (2001), Pretorius et al (2005) and the studies by Antonites (2003) and Botha (2006) highlighted which of the identified skills were trainable and the type of training SMEs are believed to need to be able to gain the skills required to function in all areas of the entrepreneurial activity over time (Fernald et al, 1999:310; Nieman, 2003:7). With this list of assignable skills the chapter clustered the skills identified in the literature into 20 skills categories that will be tested in the empirical study.

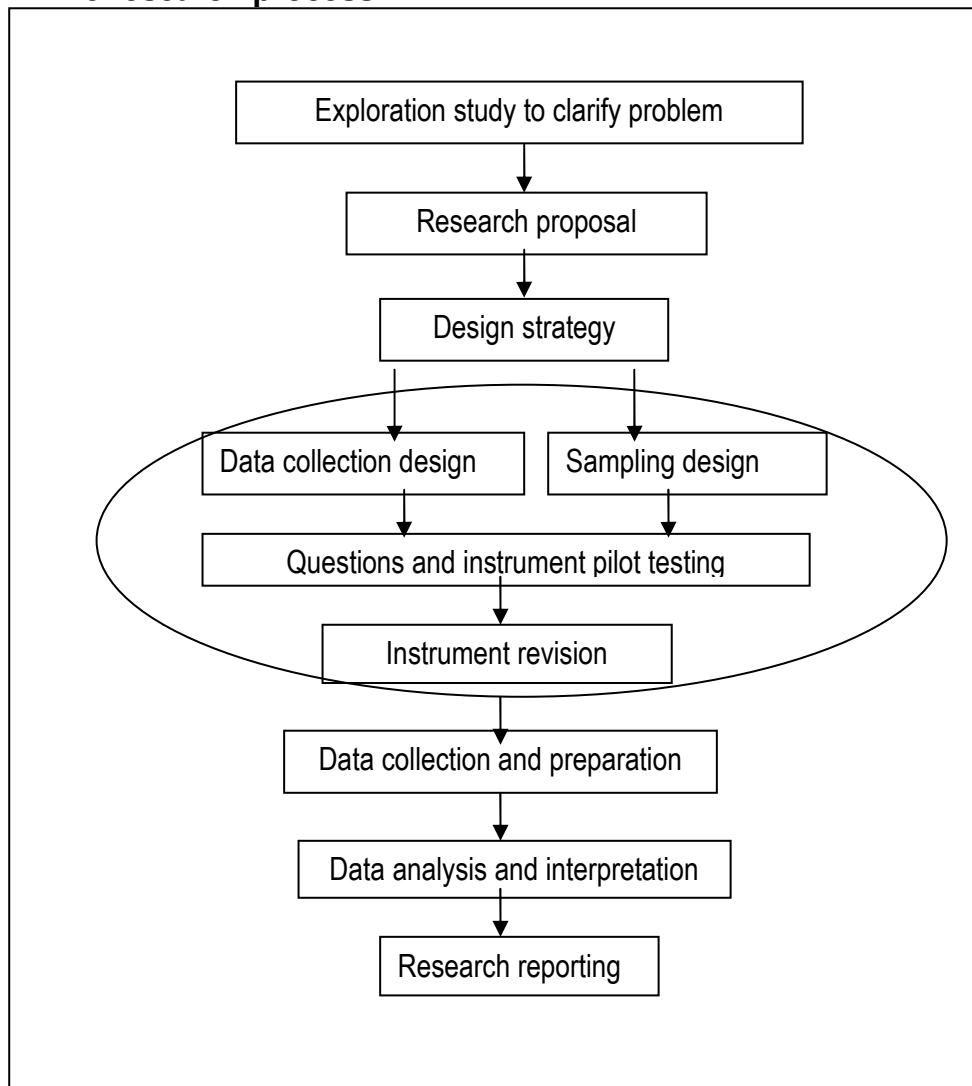
This chapter also formulated propositions linking training and the key skills. The propositions posit that successful SMEs are more likely to have been trained than the less successful SMEs. From these propositions the study will further investigate whether these SMEs had been trained in the said skills, and links this with the extended educational model. The answer will imply whether training does have a significant impact on entrepreneurial performance.

Chapter 5: Research Methodology

5.1 Introduction

This chapter describes the research methodology used to address the objectives of this study. This study uses a two-stage research design comprising of an exploratory study and a formal study to survey SMEs in order to derive owner/manager's opinions on the skills needed in running SMEs successfully. The study focuses on SMEs in the textile and clothing Industry that operate in the municipality of Johannesburg in Gauteng, South Africa. The study follows the research process outlined by Cooper & Schindler (2008:82) as illustrated in Figure 5.1 below:

Figure 5.1: The research process



Source: Cooper & Schindler (2008:82)

This chapter describes the research problem and propositions culminating from the exploratory study. The exploratory study was an extensive literature research towards a detailed and integrated model linking a set of skills and venture performance. The model and the propositions derived are the basis for the research proposal. The research design strategy for the formal study is then described. Issues relating to the design of the measuring instrument to be used, research questions, instrument testing, target population and sample size determination are discussed in detail.

This chapter also outlines the data collection and preparation method. This is followed by an explanation of the methods used to describe, test and analyse the data obtained from the field study against the propositions of the study and for validity and reliability (accuracy and precision) of the constructs. The format of reporting is then summarized and the research method chapter concluded by a schematic diagram that links the theory to the research design and instrument.

5.2 Research problem

The research problem was triggered by the need to understand whether training of emerging SMEs (as supported by the training programs of the Department of Labour and the Economic Development Unit of the city of Johannesburg among other stakeholders) has a positive impact on SME success. First the question to be answered was whether there was a set of specific competencies or skills needed for SME success and then to investigate whether these skills are acquired through training or not. So while the study is investigating the nature of skills needed to success in SMEs, its principal aim is to make a valuable contribution to existing government intervention programs that support SME training.

The study sought to answer the following research questions:

- What set of skills are associated with successful entrepreneurs? Can this set of skills be developed and enhanced?
- How important are these skills as perceived by entrepreneurs and SMEs in the Textile and Clothing industry in Johannesburg? Answering this question will show whether these SME owners are aware of the importance of the set of competencies in enhancing business survival and growth.

- How competent are the SME owners in these skills? Answering this question will indicate whether there is a link between the skills competence and success of the SME.
- In which of the skills has training been received? Answering this question will illustrate whether competence in the said skills is associated with specific prior training as well as give an indication of current training needs of entrepreneurs working in textile and clothing SMEs.

5.3 Objectives of the study

The aim of this study is to establish which skills, as identified in theory, are perceived as affecting (negatively or positively) the success in the textile and clothing industry within the South African context. The objectives of this study are:

- To review the literature to determine whether there are any common management competencies that contribute to the success of an SME. This will generate a list of specific competencies as identified with international researchers in literature.
- To investigate the importance of these skills as perceived by SMEs in the textile and clothing industry in the city of Johannesburg. This will assess whether SMEs are aware of the most important skills that lead to a competitive SME force in this industry in this area.
- To investigate the levels of competencies of successful and less successful SMEs in the city of Johannesburg. This will give statistical evidence as to whether differences in owner/manager skills result in differences in performance and if there is correlations existing between key skills and success of SMEs.
- To analyse levels of training of SMEs in the textile and clothing industry in Johannesburg in terms of the skills identified as important for SME success. This will map the training of SMEs in the Textile and Clothing industry in Johannesburg and investigate whether training received has any impact on the success of SMEs.
- To suggest areas of improvement in the training of SMEs and in the research needed to help bridge the information gap in addressing problems relating to entrepreneurship and SME development in Africa.

5.4 Research design

The research study will use the two-stage design comprising of an exploratory study and a formal study (Cooper & Schindler, 2008:150). The exploratory study was qualitative research which formed part of the first phase of the research, to determine the concepts to be included in the study theory and to support the foundation and background of this study. This was an intensive exploratory study on existing literature and secondary data available on skills linked with SME success and related training (Chapters 1 to 4). A comprehensive number of text books and articles were reviewed. The focus of the literature was those published in leading academic journals and annual conference proceedings in such disciplines as marketing, entrepreneurship, management, social psychology, economics, organization behaviour and organization theory. Furthermore various internal documents of SME development stakeholders in Gauteng were especially examined for specific data, trends, results and conclusions that were relevant to the study. The exploratory study achieved the following:

- It clarified key definitions, concepts and constructs used in the study.
- It identified variables linked with SME development and entrepreneurial performance. This included the variables that measure performance (turnover, number of employees and profit) and those that measure competence in entrepreneurship, business, personal and technical skills.
- It identified previous research studies on SME development and SME training in Gauteng Province, South Africa. This helped to focus the study and avoid duplication of research work plus encourages the building on work already done.
- It assisted with the development, refining and breaking down of study propositions and sub-propositions.
- It refined the research design into the final blueprint that guided this study from the formulation of the propositions to the report about the analysis of the collected data.

The final 20 skills categories chosen were a combination of skills identified in the literature review and listed in table 5.1 below:

Table 5.1: The 20 skills categories used in the final questionnaire

Number	Skill type
1.	Business systems
2.	Business networking
3.	Communication
4.	Computer literacy
5.	Creative opportunity innovation
6.	Financial Management
7.	Human Resource Management
8.	Legal
9.	Life skills
10.	Literacy
11.	Marketing
12.	Operations
13.	Research & development
14.	Risk taking
15.	Role models
16.	Securing and controlling resources
17.	Self motivation
18.	Strategy planning
19.	Supplier management
20.	Technical / vocational ability

Source: Own compilation based on literature and detailed E/P model developed

The second phase starts where the exploration study leaves off. It involved a formal research with the summary of the research design descriptors given in table 5.2.

Table 5.2: Descriptors of the formal research design

Category	Option Used
Research question clarity	Formal
Method of data collection	Communication/interrogative study
Type	Ex post facto
Purpose	Part descriptive / part casual
Time frame	Cross sectional
Scope	Statistical study

Environment	Field setting
Subjects perception	Actual routine

Source: Adapted from Cooper & Schindler (2008:142)

- The formal research begins with the propositions and involves a precise procedure and data source specifications. The goal of the study is to test the propositions and answer the research questions.
- The method of data collection for the study is communication through a combination of personal interviews, telephone interviews and self-administered questionnaires that are formal and interrogative.
- The formal study is ex-post facto, as the investigators have no control over the variables. The study seeks only to report on what has happened and is happening.
- The research purpose is part descriptive in that one of its objectives is to find out what skills are perceived as important by SMEs in the textile and clothing industry in Johannesburg and if these SMEs have been trained in these skills. It is part causal part descriptive as it seeks to find out the link between a set of certain skills and venture performance and why in the same place, same industry and same period, one set of SMEs is more successful than another. The study gathers information about potentially confounding factors and uses such information to make cross-classification comparisons. In this way, it determines whether there is a relationship between the skill, the success and the training.
- The formal study was cross-sectional, taking a snapshot of the perception of SMEs in the textile and clothing industry operating in Johannesburg in terms of how they perceive the importance of certain skills to their businesses, how they rate their competences in those skills, and if they had been trained in those skills.
- The topical scope of the study is statistical aimed capturing the characteristics of the population of the SMEs in the Textile and Clothing industry in Johannesburg by making inferences from sample characteristics. The propositions are tested quantitatively based on empirical data. Generalizations about the results are presented based on the actual data findings, representativeness of the sample and the validity of the design.
- The design was in the fieldwork environment with all the interviews conducted on the business premises with owner/manager.
- Subjects perceive no deviations from everyday route due to the research.

5.5 Propositions

The study tested the following propositions:

Propositions 1: The following skills are not likely to be considered to be key skills:

Propositions 1.1	Marketing
Propositions 1.2	Finance
Propositions 1.3	Human resource
Propositions 1.4	Motivation
Propositions 1.5	Gathering of resources
Propositions 1.6	Opportunity identification
Propositions 1.7	Technical

Propositions 2: The following skills are not likely to be considered as supportive skills:

Propositions 2.1	Life skills
Propositions 2.2	Numeracy and literacy
Propositions 2.3	Communication
Propositions 2.4	Business systems
Propositions 2.5	Business linkages
Propositions 2.6	Computer literacy
Propositions 2.7	Legal
Propositions 2.8	Operations management
Propositions 2.9	Research and development
Propositions 2.10	Strategy and business planning
Propositions 2.11	Supplier management
Propositions 2.12	Risk taking
Propositions 2.13	Role models

Technical skills

Proposition 3.1: Successful SMEs are not likely to consider technical skills to be more important for business than less successful SMEs.

Proposition 3.2: Successful SMEs are not likely to be more competent in technical skills than less success that less successful SMEs.

Proposition 3.3: Successful SMEs are likely to have been more trained in technical skills than less successful SMEs.

Personal Skills

Proposition 4.1 to 4.4: Successful SMEs are not likely to consider the following personal skills to be more important for business than less successful SMEs:

- Proposition 4.1:** Motivation skills
- Proposition 4.2:** Life skills
- Proposition 4.3:** Literacy and numeracy skills
- Proposition 4.4:** Communication

Proposition 5.1 to 5.4: Successful SMEs are not likely to be more competent in the following personal skills than less successful SMEs:

- Proposition 5.1:** Motivation skills
- Proposition 5.2:** Life skills
- Proposition 5.3:** Literacy and numeracy skills
- Proposition 5.4:** Communication

Proposition 6.1 to 6.4: Successful SMEs are not likely to have been more trained in the following personal skills compared to less successful SMEs:

- Proposition 6.1:** Motivation skills
- Proposition 6.2:** Life skills
- Proposition 6.3:** Literacy and numeracy skills
- Proposition 6.4:** Communication

Business skills

Proposition 7.1 to 7.11: Successful SMEs are not likely to consider the following business skills to be more important for business success than less successful SMEs:

- Proposition 7.1:** Business systems
- Proposition 7.2:** Business linkages
- Proposition 7.3:** Computer literacy
- Proposition 7.4:** Financial management
- Proposition 7.5:** Human resource management
- Proposition 7.6:** Legal
- Proposition 7.7:** Marketing
- Proposition 7.8:** Operations management
- Proposition 7.9:** Research and development
- Proposition 7.10:** Strategy and business planning
- Proposition 7.11:** Supplier management

Proposition 8.1 to 8.11: Successful SMEs are not likely to be more competent in the following business skills than less successful SMEs:

- Proposition 8.1:** Business systems
- Proposition 8.2:** Business linkages
- Proposition 8.3:** Computer literacy
- Proposition 8.4:** Financial management
- Proposition 8.5:** Human resource management
- Proposition 8.6:** Legal
- Proposition 8.7:** Marketing
- Proposition 8.8:** Operations management
- Proposition 8.9:** Research and development
- Proposition 8.10:** Strategy and business planning
- Proposition 8.11:** Supplier management

Proposition 9.1 to 9.11: Successful SMEs are not likely to have been more trained in the following business skills compared to less successful SMEs:

- Proposition 9.1:** Business systems
- Proposition 9.2:** Business linkages
- Proposition 9.3:** Computer literacy
- Proposition 9.4:** Financial management
- Proposition 9.5:** Human resource management
- Proposition 9.6:** Legal
- Proposition 9.7:** Marketing
- Proposition 9.8:** Operations management
- Proposition 9.9:** Research and development
- Proposition 9.10:** Strategy and business planning
- Proposition 9.11:** Supplier management

Entrepreneurial skills

Proposition 10.1 to 10.4: Successful SMEs are not likely to consider the following entrepreneurial skills to be more important for business success than less successful SMEs:

- Proposition 10.1:** Opportunity identification, creativity and innovation
- Proposition 10.2:** Risk taking
- Proposition 10.3:** Role models
- Proposition 10.4:** Securing and controlling resources

Proposition 11.1 to 11.4: Successful SMEs are not likely to be more competent in the following entrepreneurial skills than less successful SMEs:

Proposition 11.1: Opportunity identification, creativity and innovation

Proposition 11.2: Risk taking

Proposition 11.3: Role models

Proposition 11.4: Securing and controlling resources

Proposition 12.1 to 12.4: Successful SMEs are not likely to have been more trained in the following entrepreneurial skills compared to less successful SMEs:

Proposition 12.1: Opportunity identification, creativity and innovation

Proposition 12.2: Risk taking

Proposition 12.3: Role models

Proposition 12.4: Securing and controlling resources

Demographics variance

Proposition 13.1 to 13.9: Statistically significant variance does not exist between how successful SMEs view the importance of functional skills regarding the following demographics:

Proposition 13.1: Age

Proposition 13.2: Education

Proposition 13.3: Ethnic group

Proposition 13.4: Gender

Proposition 13.5: Work experience

Proposition 13.6: Region

Proposition 13.7: Subsector

Proposition 13.8: Form of business

Proposition 14.9: Place where business is operated

Proposition 14.1.1 to 14.9: Statistically significant variance does not exist between how less successful SMEs view the importance of functional skills regarding the following demographics:

Proposition 14.1: Age

Proposition 14.2: Education

Proposition 14.3: Ethnic group

Proposition 14.4: Gender

Proposition 14.5: Work experience

- Proposition 14.6:** Region
- Proposition 14.7:** Subsector
- Proposition 14.8:** Form of business
- Proposition 14.9:** Place where business is operated

Proposition 15.1 to 15.9: Statistically significant variance does not exist between how successful SMEs view the importance of enterprising skills regarding the following demographics:

- Proposition 15.1:** Age
- Proposition 15.2:** Education
- Proposition 15.3:** Ethnic group
- Proposition 15.4:** Gender
- Proposition 15.5:** Work experience
- Proposition 15.6:** Region
- Proposition 15.7:** Subsector
- Proposition 15.8:** Form of business
- Proposition 15.9:** Place where business is operated

Proposition 16.1 to 16.9: Statistically significant variance does not exist between how less successful SMEs view the importance of enterprising skills regarding the following demographics:

- Proposition 16.1:** Age
- Proposition 16.2:** Education
- Proposition 16.3:** Ethnic group
- Proposition 16.4:** Gender
- Proposition 16.5:** Work experience
- Proposition 16.6:** Region
- Proposition 16.7:** Subsector
- Proposition 16.8:** Form of business
- Proposition 16.9:** Place where business is operated

Proposition 17.1 to 17.9: Statistically significant variance does not exist between how successful SMEs rate their competence in functional skills regarding the following demographics:

- Proposition 17.1:** Age
- Proposition 17.2:** Education

- Proposition 17.3:** Ethnic group
- Proposition 17.4:** Gender
- Proposition 17.5:** Work experience
- Proposition 17.6:** Region
- Proposition 17.7:** Subsector
- Proposition 17.8:** Form of business
- Proposition 17.9:** Place where business is operated

Proposition 18.1 to 18.9: Statistically significant variance does not exist between how less successful SMEs rate their competence in functional skills regarding the following demographics:

- Proposition 18.1:** Age
- Proposition 18.2:** Education
- Proposition 18.3:** Ethnic group
- Proposition 18.4:** Gender
- Proposition 18.5:** Work experience
- Proposition 18.6:** Region
- Proposition 18.7:** Subsector
- Proposition 18.8:** Form of business
- Proposition 18.9:** Place where business is operated

Proposition 19.1 to 19.9: Statistically significant variance does not exist between how successful SMEs rate their competence in enterprising skills regarding the following demographics:

- Proposition 19.1:** Age
- Proposition 19.2:** Education
- Proposition 19.3:** Ethnic group
- Proposition 19.4:** Gender
- Proposition 19.5:** Work experience
- Proposition 19.6:** Region
- Proposition 19.7:** Subsector
- Proposition 19.8:** Form of business
- Proposition 19.9:** Place where business is operated

Proposition 20.1 to 20.9: Statistically significant variance does not exist between how less successful SMEs rate their competence in enterprising skills regarding the following demographics:

- Proposition 20.1:** Age
- Proposition 20.2:** Education
- Proposition 20.3:** Ethnic group
- Proposition 20.4:** Gender
- Proposition 20.5:** Work experience
- Proposition 20.6:** Region
- Proposition 20.7:** Subsector
- Proposition 20.8:** Form of business
- Proposition 20.9:** Place where business is operated

5.6 Sampling design

Population

The population of the study will be SMEs in the Textile and Clothing Industry in Johannesburg in the Gauteng Province of South Africa. The Gauteng Enterprise Propeller estimates the population of SMEs in the textile and clothing industry in Johannesburg to be approximately 5000 SMEs (South Africa, 2005b).

However because the demographic characteristics of the SME population are not accurately known in South Africa (Dockel & Ligthelm; 2005:56; Strydom & Tustin; 2003:5), this study uses another method to estimate the population. Research statistics indicate the number of SME over the nine provinces in SA and operating within diverse sectors to be 1,065,494 as at 2001 (South Africa, 2004; Berry et al, 2002:13). The SME sector population in Gauteng is between 33% and 40% of the countries SMEs which is between 352,250 to 426,1976 (Baard & van den Berg, 2004:8; Rogerson, 2004:769). Johannesburg has 70% of SMEs in Gauteng (South Africa, 2006). Thus the population sample of Johannesburg SMEs was estimated to be at least 246,575. In particular the study focused on SMEs in the textile and clothing sector which account for 5% of SMEs in Johannesburg (Rogerson, 2004b:117) resulting in population sample being estimated at 12,090 SMEs.

So this study assumes that the population of SMEs in the textile and clothing industry in Johannesburg is between 5,000 and 12,090 SMEs.

Sampling frame

Owing to the fact that an official register of SMEs in the Textile and Clothing industry in Johannesburg, was not available (i.e. there was no sampling frame) the research started by compiling a list from various sources and SME agencies including:

- SME database for SMEs that have been trained by the Department of Labour in all its skills development programs in the Gauteng province from 2001 to 2004.
- SME database of various departments of the city of Johannesburg.
- SME database at the Premier's Office and with the SMME desk department of economic affairs and finance in Gauteng.
- SME database in SETAs for Textiles & Clothing and related services.
- SME database from Non Government Organizations (NGO's), Community based organizations (CBOs) and development agencies.
- SME database from organized local business associations in Johannesburg.
- SME database from organized labour (South African Workers in the clothing and textile union - SAWCTU) and bargaining councils.
- SME database from the South African Revenue Services (SARS) statistics.
- SME database from the department of trade and industry (the DTI) and its registrar of companies.
- SME database from professional sources like www.brabys.com; ezeedex, monitor, bee gees.
- SME database from industrial indexes and speciality magazines.

Type of sample

A probability sample was used to ensure that each member of the SME population is given a known non-zero chance of selection. The sample was also stratified to ensure that adequate representativity in all the industry groups and in both sub-samples (successful and less successful SME). Simple random sampling was utilized to identify the respondents. This increased accuracy and precision of the sample in representing the characteristics of the population of SMEs in the Textile and Clothing industry in that province.

Some of the businesses interviewed were identified through snowball sampling where the SME participants referred another SME in the industry. This was used because the frame list was not exhaustive and it was difficult to get all the names of all the SMEs and the projects in the Textile and Clothing industry.

Sample size

Sample size determination is one of the most crucial aspects of any empirical research. Too small a sample size undermines the power of the statistical tests of significance (Hair, Anderson, Tatham and Black, 1998). In order to be acceptable a sample must be representative of the entire target population. Due to cost and time constraints, the sample did not include all SMEs in the Textile and Clothing industry in Johannesburg. As it is desired that to have a high degree of confidence in the data obtained in the fieldwork, care was taken when determining the sample size, to limit the standard error of the mean and thus to increase precision levels.

The sample size acceptable is 5% of the total population (Cooper & Schindler, 2008:409). Given this study's estimate of a population of between 5000 and 12,090 means that the targeted sample will be between 250 and 616 respondents.

Furthermore for a sample to be ready for factor analysis, the sample size (or the number of responses) should be at least 5 times the number of variables (Dykman, 2005:147; Urban & van Vuuren, 2006:110). Thus the ideal sample size for this study was calculated to be at least 175 (5×35) per sample. Since this study further subdivides the sample into those who were successful and those who were less successful, the initial sample size targeted for the worst case scenario was at least 350 respondents, with 175 respondents per sub-sample (successful and less successful).

The number of respondents interviewed came to a total of 570 SMEs. This covered both sample size criterion in terms of factor analysis of each sub-sample as well as the acceptable sample size per the two population estimations. One sub-sample had a total of 373 respondents who were from less successful SMEs and another had a total of 197 respondents who were from successful SMEs.

This sample size doesn't take into consideration that these SMEs could be further divided into the four SME size categories namely informal; micro; very small, small and medium enterprises and that they were operating across 8 different subsectors of the textile and clothing Industry in the 11 regions of the city of Johannesburg and from every ethnic group in South Africa.

Sample elements

Targeted respondents included SME owners, owner-managers, managers of small ventures and emergent entrepreneurs. Screening procedures eliminated those individuals who do not run their businesses. Thus target respondents have to meet these criteria:

- They operate in the geographic proximity of Johannesburg.
- Their business is within the textile and clothing industry.
- They are actively running the SME.
- Successful SMEs must have been in existence for more than 3 years and have turnover of more than R150 000 and have more than 3 employees.
- Less Successful SMEs must have been in existence for less than 3 years or have turnover of less than R150 000 or have less than five employees.

5.7 Instrument and questions

A structured research instrument (a questionnaire) was used as the instrument to collect data through self administration, face-to-face and telephone interviews. The self designed questionnaire was adapted from previously used and tested instruments with the questions designed using constructs and variables that have been identified in the exploratory study described in chapters 2, 3 and 4.

First investigative questions were developed from the list of refined research questions and information needs coming from the above exploratory study. From here measurement questions were induced by selecting the data type and aligning it to the communication approach. The measurement questions were all aimed at showing or not showing the casual relationship between SME success with a certain set of skills and related training factors.

Only questions that contributed to meaningful answers of whether having certain skills and the related training does contribute significantly to the success of SMEs were included. The nice to have questions were eliminated. Each of the questions was checked for whether they should be asked, if the question is of proper scope and coverage, if the respondent could adequately answer the question and if the respondent will be willing to answer the question. All the questions were checked to ensure that they were asking questions relevant to the propositions. They were also checked to ensure

there was no double meaning, bias and that the respondent would not mistake the meaning of the question or what the interviewer was trying to say.

A fully structured technique was employed to promote objective and efficient scoring and analysis. The structure of the instrument was such that the first section of the questionnaire asked for general characteristics of the firm and demographic background on owner/manager. The firm factors considered included product and service; turnover; number of employees; age of business; form of business; type of industry sub-sector and business location. The owner/manager factors considered included age, gender, levels of education, ethnic group and home language, previous work experience and place of origin indicating family background. The demographics section is important as statistical significance variance can be checked for all demographic variables that impact business performance (Kangasharju, 2000:37; Stewart et al, 2003:35). These demographic factors were measured with mainly closed multiple choice single response questions.

The second section asked three investigative questions aimed at exploring what correlations may or may not have existed between success in entrepreneurship and the said set of competencies (Gartner et al, 1999:219; Klofsten & Spaeth, 2004:1). The investigative questions were:

- To indicate which skills the SMEs perceived to be important for business survival, success and growth. The study also compares differences between successful and less successful SMEs in terms of their perception of which skills are important for successfully running their businesses. These questions aimed at showing or not showing the relationship between important of skill awareness and SME success. Four-point Likert scale questions were used.
- To self evaluate themselves on their abilities on the said skills set. The study will also indicate which skills successful SMEs are more competent in compared with less successful SMEs. The questions aimed at showing or not showing the relationship between sets of competencies and SME success. Four-point Likert scales were used for rating SME ability/knowledge/skill/competencies.
- To indicate for which of these skills they had undergone training and for which they had not been trained. The study will compare training received by successful SMEs with that received by less successful SMEs. The result will show whether the successful SMEs are more trained in the key skills set than less successful SMEs. The questions aimed at showing or not showing the relationship between training in

certain skills sets and SME success. Dichotomous yes/no questions were used to indicate training received.

For each of the investigative questions, the respondents were asked to answer the question evaluating each of the 20 skills categories listed above, meaning each of the three main questions is a cluster of twenty questions; one question for each skills category.

The third and last section of the questionnaire asks the respondent to indicate if the training had impact on performance factors of their business using a five-point Likert scale where 1 = strongly disagree and 5 = strongly agree. This section ends with a free response open-ended question that invited respondents to provide additional unstructured remarks on skills necessary to run an SME; give details of the actual training the SME had received and general comments on the training intervention for SMEs.

One question per time linked the one variable to a proposition. Closed questions facilitated data analysis. The inclusion of a limited number of open-ended questions and the 'other – please specify' multiple choice format option, ensured the receipt of qualitative and quantitative data.

Once developed, the questionnaire was pilot-tested by running pilot interviews with a sample of 10 SMEs, followed by a group discussion to strengthen the validity of the questionnaire and to identify unclear or ambiguous formulated items; to observe nonverbal behaviour signifying discomfort in responding to a particular section or question, to detect flaws in measurement procedures and to investigate the reliability of the selected instrument. This served as a check on whether the planned measurement questions met the data needs of the research question. The questions were then revised and the instrument refined accordingly. Table 5 shows the thesis design flow chart.

Table 5.3: Study design flow chart - from constructs to questionnaire

Propositions, constructs & elements		Questions 1 - 12 = Yes-No Questions 13-48 = FOUR point Likert Scale statements
C1: Background	General human capital	Q1, Q2, Q4, Q5: gender, age, ethnic group, language
	Specific human capital	Q13, Q14: education & previous experience
	Company demographics	Q11, Q12, Q13: SME age, annual turnover, employees Q7, Q8, Q10: sector, form of business, products Q3, Q9: region and business location
Q15: Importance	Personal Skills	S10, S9: numeracy, literacy, problem solving, decision, time S3, S17: communication, motivation
	Business Skills	S1, S2, S4: business systems, networks, ICT S6, S7, S11: finance, human resources, marketing S8, S12, S19: legal, operations, value chain S13, S18: R&D, strategy and business planning
	Entrepreneurial Skills	S16, S14, S15: ability to gather resources, risk, role models S5: opportunity recognition, creativity and innovation
	Technical Skills	S20: technical and vocational skills
Q16: Competence	Personal Skills	S10, S9: numeracy, literacy, problem solving, decision, time S3, S17: communication, motivation
	Business Skills	S1, S2, S4: business systems, networks, ICT S6, S7, S11: finance, human resources, marketing S8, S12, S19: legal, operations, value chain S13, S18: R&D; strategy and business planning
	Entrepreneurial Skills	S16, S14, S15: ability to gather resources, risk, role models. S5: opportunity recognition, creativity and innovation
	Technical Skills	S20: Technical and vocational skills
C17: Training	Personal Skills	S10, S9: numeracy, literacy, problem solving, decision, time S3, S17: communication, motivation
	Business Skills	S1, S2, S4: business systems, networks, ICT S6, S7, S11: finance, human resources, marketing S8, S12, S19: legal, operations, value chain S13, S18: R&D, strategy and business planning
	Entrepreneurial Skills	S16, S14, S15: ability to gather resources, risk, role models S5: opportunity recognition, creativity and innovation
	Technical Skills	S20: technical and vocational skills
Q18.	Impact analysis	I1-6: quality, productivity, operations, sales, motivation, skills

Source: Own compilation based on literature and detailed E/P model developed

5.8 Data collection methods

The method of data collection for this study was communication or interrogation where data was collected using a combination of personal interviews, telephone interviews and self-administered questionnaires. Most of the interviews were conducted during the period October 2005 to February 2006. In total 10 interviewers (students) were recruited to assist with the collection of data. All were trained before and a guideline document given to them.

The research questionnaire was completed by both successful SMEs (total 270) and less successful SMEs (327). All the interviews were conducted on the business premises with owner/manager. Some SMEs asked for the questionnaire to be either mailed or left at their premises for later collection. Follow-up telephone reminders after 15 days contributed a high response rate. About 30% of the questionnaires were filled using telephone interviews in case of non-respondents. This was consistent with Dahlqvist (2000:7) who relied heavy on telephone interviews to minimize non-response.

Once the data was captured in the questionnaires, a sub-sample of a reasonable number of SMEs and projects was identified for a closely matched comparison of respondents from a wide variety of personal backgrounds such as: age, gender, ethnic origin, educational achievements, as well as organizational characteristics that included, amongst others, size, location, market orientation and economic activity. These in-depth interviews solicited qualitative data that allowed for a comparative analysis.

5.9 Analysis methods

The study questionnaire incorporated all the four data types, namely nominal, ordinal, interval and ratio scales data types.

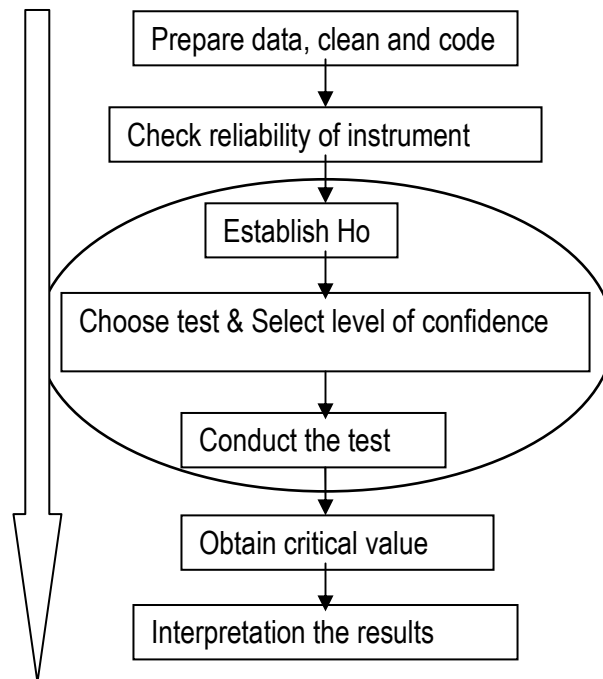
Table 5.4: Types of data and their measurement characteristics

Type of data	Characteristic of data	example	Analysis to determine
nominal	classification	gender (male or female)	equality
ordinal	classification and order	Well, medium, raree	greater or lesser value
Interval	classification, order and distance	Temperature, Likert scale	Equality of intervals
ratio	classification, order, distance & origin	Age, employees	Equality of ratios

Source: Cooper & Schindler (2008:282)

Once the data has been collected the following steps will be applied for analytical purposes as adapted from Cooper & Schindler (2008:476).

Figure 5.2: Steps in analysing data



Source: Adapted from Cooper & Schindler (2008:476)

In quantitative research, data analysis is normally used to refer to the process of breaking down collected data into constituent parts in order to obtain answers to research questions (Terre Blanche & Durheim, 2002:105). Data analysis involves reducing accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques. Scales responses or questionnaires require the analyst to derive various functions as well as to explore relationships among variables. Furthermore, researchers must interpret the results in the light of the research questions or determine if the results are consistent with their propositions and theories; and make recommendations based on the interpretation of the data (Cooper & Schindler, 2001:93).

Preparation of the data

Data analysis begins with editing and coding of the data. Editing included checking of data collection forms for omission, legibility and consistency in classification as well as discarding of completed responses that have missing data; identifying potential error in data collection and discussing its implications (Zikmund, 2003:74). The coding of the data included code development, coding of data, accommodating "Don't know" responses. Transcripts were analysed using content analysis, a method used for coding

both words and phrases dependent upon participants' responses which allows open ended questions to be analysed systematically.

Thereafter data was entered into a user friendly and retrievable database or spreadsheet and SAS statistical software. For this study the questionnaires were processed by the Department of Statistics at the University of Pretoria. The SPSS statistical package of SAS was used to compile descriptive and inferential statistics.

Validity

Validity measures the degree to which a study succeeds in measuring intended values and the extent to which differences found reflects true differences among the respondents (Bateman et al, 2002:79; Cooper & Schindler, 2008:289). There are three types of validity tests namely content, construct and criterion-related validity tests (Cooper & Schindler, 2008:289).

Table 5.5: Summary of validity estimates

Type of validity	What is measured	Methods
Content	Degree to which the content of the items adequately represent the universe of all relevant items under study	Judgemental or panel evaluation with content validity ratio
Criterion related	Degree to which the predictor is adequate in capturing the relevant aspects of the criterion	Correlation
Construct	Identifies the underlying constructs being measured and determine how well the tests represents them	Judgemental; correlation of proposed test with established one; Factor analysis; Multitrait-multi-method analysis and Convergent-discriminant techniques

Source: Adapted from Cooper & Schindler (2008:289)

Reliability

Reliability refers to the degree of reliability of a measurement or low variation between results of different samples of the same population (Bateman et al, 2002:78). Tests of reliability aim to show if the survey can be relied upon to provide the same values if the survey were to be administered repeatedly under similar conditions.

Table 5.6: Summary of reliability estimates

Coefficient	What is measured	Methods and type
Stability	Reliability of a test or instrument is inferred from examinee scores. The same test is administered twice to same subject over a period of less than six months.	Correlation; test-retest
Equivalence	Degree to which alternative forms of the same measure produce same or similar results. Administered simultaneously without a delay.	Correlation, parallel forms
Internal consistency	Degree to which instrument items are homogenous and reflect the same underlying constructs.	Specialized correlation: split half, KR20 and Cronbach's alpha

Source: Cooper & Schindler (2008:293)

Factor analysis

Factor analysis was executed to confirm the validity and reliability of the measuring instruments (questionnaires) used in this study. The term factor analysis was first introduced by Thurstone in 1931 (Terre Blanche & Durrheim, 2002:117). Factor analysis looks for patterns among the variables to discover whether an underlying combination of the original variables (a factor) can summarize the original set. Factor analysis is used to reduce the number of variables and second to detect structure in the relationship between variables as well as to discover the underlying constructs that explain the variance (Cooper & Schindler, 2008:292).

Factor analysis has two main purposes. First it is used for data reduction and secondly for detection of structure (underlying dimensions) in a set of variables (Zikmund, 2003:586). Factor analysis looks for patterns among the variables to discover whether an underlying combination of the original variables (a factor) can summarise the original set (Cooper & Schindler, 2008:562).

One of the commonly used measures of reliability is Cronbach's alpha coefficient (α); which provides a measure of internal consistency. It can estimate the proportion of true score variance that is captured by the items by comparing the sum of item variances with the variance of the sum scale. It is computed as follows:

$$\alpha = (k/(k-1)) * [1 - \sum (S^2_i) / S^2_{sum}]$$

If there is no true score but only error in items (which is esoteric and unique and therefore uncorrelated across subjects), then the variance of the sum will be the same as the sum of variances of the individual items. Therefore the coefficient alpha will be equal to zero. If all items are perfectly reliable and measure the same thing (true score), then the coefficient alpha is equal to 1 (Visser, 2002:195).

Confirmatory factor analysis and corresponding analysis are further emphasized and mentioned below (Statsoft.com, 2006):

- Confirmatory factory analysis allows researchers to test specific propositions about the factor structure for a set of variables, in one or several sampled (for example comparing factor structures across samples).
- Correspondence analysis is a descriptive/exploratory technique designed to analyse two-way and multi-way tables containing some measure of correspondence between two rows and columns. The results provide information which is similar in nature to that produced by factor analysis techniques, and allows one to explore the structure if categorical variables included in the table.

A good factor solution should show invariance in the structure when the factor loadings are derived from various solution techniques. Generally factor analysis is a mathematical procedure not a statistical one, and often misused under this guise. The factor loadings are produced by sampling information, but they cannot be easily tested for significance. Factor analysis assumes that all the variables are caused by the underlying factors. Factor analysis can be used to check out the meaning of a particular variable or element to see if it fits the construct. If it does not fit, the element may be dropped (Kim & Mueller 1988:78).

For factor analysis to be reliable, the number of responses should be equal or greater than five times the variables (Brigant & Yarmold, 1995:100). This was achieved by securing 197 responses from the successful group and 373 from the less successful group covering at least 175 responses for each question with 35 variables.

Frequencies

This analysis was used to determine the frequencies distribution and the percentages for categorical variables.

Descriptive statistics

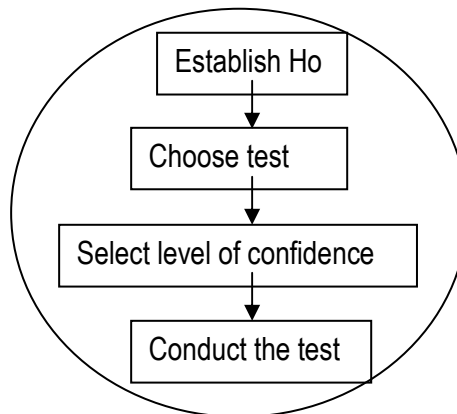
In order to have a broader appreciation of the data collected, descriptive statistical techniques was used to describe characteristics of the population or samples. Descriptive statistics is aimed describing the data by investigating the distribution of the scores for each variable by determining whether the scores on different variables were related to each other (Terre Blanche & Durheim, 2002:105). This reduced the data set and allowed for easier interpretation. It was important to carry out this analysis because it provided a broad biography of the data under study. This enabled the contextualizing of the results.

This statistical method provided information that helped in deciding whether the central location value could be regarded as a reliable representative value of all observations in the data. According to Cooper & Schindler (2008:436) descriptive statistics were used to point out location tendency (mean, median, mode), spread (variance, standard deviation, range, interquartile range) and shape (skewness and kurtosis). The arithmetic average or mean (\bar{X}) comprised a point which coincided with the sum of the scores divided by the number of scores. The standard deviation (S) showed the variation about the average of the data (Dimantopolous & Schlegelmilch, 2002:97). Calculating the standard deviation of the theoretical distribution of the sample reflected how far the sample means could be derived from the population mean.

Inferential Statistics Tests

Inferential statistics is the method used to draw conclusions about the population itself. While the descriptive analysis allows the researcher to generalize from the sample to the population; inferential statistics allows the research to draw conclusions about the population on the basis of data obtained from samples (Terre Blanche & Durheim, 2002:105). The process for testing statistical significance is illustrated in figure 5.3 below:

Figure 5.3: Process for establishing statistical significance



Source: Cooper and Schindler (2008:503)

Based on the results, several conclusions were reached to reject or accept the propositions. A method of testing checks was performed indicating what percentage of the sampling distribution lies beyond the sample statistics on the curve by comparing the probability values (p values) with the significant level (α). Based on the results, the proposition was either rejected or not rejected. If the p value was less than the significant level, the proposition was rejected. If the p value was greater or equal to the significance level, the proposition was not rejected.

The following techniques were used to perform the inferential analysis: chi-square, t-test and the one way analysis of Variance (ANOVA) as per the table 5.7 below:

Table 5.7: Analysis done

Measurement level	Independent 2 samples
Nominal	chi-square 2 sample test
Ordinal	Median test,
Interval and ratio	T test, n way ANOVA

Source: Own compilation

Any appropriately performed test of statistical significance indicates the degree of confidence one can have in accepting or rejecting a proposition.

Chi-square test

The chi-square test is probably the most widely used non-parametric test of significance that is useful for tests involving nominal data. The binomial test is appropriate for situations in which a test for differences between samples is required especially where the population is viewed as only two cases such as successful and less successful and

all observations fall into one or the other of these categories (Cooper & Schindler, 2001:484).

The chi-square test was used to test for significant differences between observed distribution of data among categories and the expected distribution based on the null propositions (Cooper and Schindler, 2001:485). Typically the proposition tested with chi-square is whether or not two different samples are different enough in some characteristic or aspect of their behaviour to allow for the generalization that the population from which the sample drawn is also different in behaviour or characteristic.

A non-parametric test is a rough estimate of confidence. It accepts weaker less accurate data as input than parametric tests and therefore has less status in the pantheon of statistical tests. The chi-square also has its strengths as it is more forgiving in the data it will accept and can thus be used in a wide variety of research contexts. The chi-square test was found to be appropriate for the following questions:

- Is there a relationship between any two variables in the data?
- How strong is the observed relationship in the data?
- What is the direction and shape of the observed relationship in the data?
- Is the observed relationship due to some intervening variables in the data?

While the issue of theoretical or practical importance of a statistically significant result cannot be quantified, the relative magnitude of statistically significant relationship can be measured. A statistically significant result in a chi-square test symbolize the degree of confidence in that the relationship between variables described in the results is systematic in the larger population and not attributable to random error.

The chi-square is a series of mathematical formulae that compare the actual observed frequencies of some phenomenon with the frequencies expected if there were no relationship at all between the two variables in the larger (sampled) population. The chi-square test used is calculated as following:

$$X^2 = \sum (O_{ij} - E_{ij})^2 / E_{ij}$$

Where:

- O_{ij} is the observed number of cases categorized in the ij^{th} cell
- E_{ij} is the expected number of cases under H_0 to be categorized in the ij^{th} cell

For The chi-square test to operate smoothly it requires the following (Blumberg et al, 2005:671; Cooper & Schindler, 2008:482):

- The sample must be randomly drawn from the population or have multinomial distributions.
- Data must be reported in raw frequencies (actual counts and not percentages)
- Measured variables must be independent
- Values / categories on independent and dependant variables must be mutually exclusive and exhaustive
- Observed frequencies cannot be too small. The tradition is that the expected frequency below 5 should not compose more than 20% of the cells and no cell should have an E_i of less than 1.
- As a rule one should perform a chi-square on the data in its un-collapsed form; and if the chi-square value achieved is significant then one may collapse categories to test subsequent refinements of the original proposition.

The chi-square test was used in this study for two independent samples (successful and less successful) to test for difference between the samples in terms of the three main investigative questions.

t-test

According to Zikmund (2003:524) the t-test may be used to test a proposition stating that the mean scores on some variable will be significantly different for two independent sample groups. To test the t-test for difference of means, it is assumed that the two samples are drawn from normal distributions. The null proposition about the differences between groups is normally stated as $u_1 = u_2$ or $u_1 - u_2 = 0$. In most cases comparisons are between two sample means ($X_1 - x_2$). The formula for t is as follows:

$$T = (X_1 - X_2) / (S_{x_1 - x_2})$$

Where:

- x_1 means for group 1.
- x_2 mean for group 2.
- $S_{x_1 - x_2}$ is pooled or combined standard error of difference between means.

The t test has more tail area than that found in the normal distribution. This is compensation for lack of information about the population standard deviation (Cooper & Schindler, 2008:490).

The t-test was executed to measure the significant differences and similarities between these two sub-samples regarding their perceptions of skill importance and own competence.

One-way Analysis of Variance

The statistical method for testing the null proposition such that the means of several populations are equal, is called the analysis of variance (ANOVA). The testing of two independent variables calls for the introduction of ANOVA. ANOVA is used to test the main and interaction effects of categorical variables on a continuous dependent variable, controlling for the effects of selected other continuous variables which co-vary with the dependent. ANOVA has been used for three purposes:

- In quasi experimental (observational) designs, to remove the effect of variables which modify the relationship of the categorical independents to the dependents.
- In experimental designs to control for factors which cannot be randomized, but which, can be measured on an interval scale.
- In regression models to fit regressions where there are both categorical and interval independents.

In this study the ANOVA analysis is used to prove whether a particular independent factor is positively correlated with the success of the SME. One way ANOVA uses a single factor, fixed effects model to compare the effects of one factor on a continuous dependant variable. In a fixed effects model the levels of the factor are established in advance and the results are not generalized to other levels of treatment. To use ANOVA certain conditions must be met:

- The samples must be randomly selected from normal populations.
- The populations must have the equal variances.
- The distance from one value to its groups means should be independent of the distances of other values to that mean (independence of error).

The ANOVA method is inappropriate when the relationship between the covariates and the responses is not the same in each group. By using the one way ANOVA, dichotomous data have been accommodated in the analysis of significant differences between observations. ANOVA is reasonably robust and minor variations from normality

and equal variance are tolerable. ANOVA breaks down or partitions total variability into components parts. ANOVA uses squared deviations of the variance so computation of distances of the individual points from their own mean or from the grand mean can be summed. In an ANOVA model, each group has its own mean and values that deviate from the mean. Similarly all the data points from all of the groups produce an overall grand mean. The total deviation is the sum of the squared differences between each data point and the overall grand mean.

The total deviation of any particular data point may be partitioned into between-group variance and within-group variance. The between-group variance represents the effect of the treatment or factor. The differences of between-group means imply that each group was treated differently and the treatment will appear as deviations of the sample means from the grand mean. Even if this were not so, there would still be some natural variability among subjects and some variability attributable to sampling. The within-group variance describes the deviations of data points within each group from sample mean. This results from variability among subjects and from random variation. It is often called error. It is concluded that when the variability attributable to the treatment exceeds the variability arising from error and random fluctuations, the viability of the null proposition begins to diminish. And this is exactly the way the test statistic for analysis of variance works.

The test statistic for ANOVA is the *F* ratio. The *F* distribution determines the size of ratio necessary to reject the null proposition for a particular sample size and level of significance (Cooper & Schindler, 2008:493). The *F*-ratio or translate p-value compares the variance from the last two sources (Cooper & Schindler, 2008:494). To compute the *F*-ratio the sum of the squared deviations for the numerator and denominator are divided by their respective degrees of freedom as illustrated below:

$$F = \frac{\text{Between-groups variance}}{\text{Within-groups variance}} = \frac{\text{Mean square}_{\text{between}}}{\text{Mean square}_{\text{within}}}$$

where:

$$\text{Mean square}_{\text{between}} = \frac{\text{Sum of squares}_{\text{between}}}{\text{Degrees of freedom}_{\text{between}}}$$

$$\text{Mean Square}_{\text{within}} = \frac{\text{Sum of squares}_{\text{within}}}{\text{Degrees of freedom}_{\text{within}}}$$

Dividing computes the variance as an average or mean, thus the term mean square. The degrees freedom for the numerator, the mean square between groups, is one less than the number of groups ($k-1$). The degrees of freedom for the denominator, the mean square within groups are the total number of observations minus the number of groups ($n-k$).

If the null proposition is true there should be no difference between the populations and the ration should be close to 1. If the population means are not equal, the numerator should manifest this difference, and the F ration should be greater than 1. The f-distribution determines the size of ratio necessary to reject the null proposition for a particular sample size and level of significance.

ANOVA is a versatile statistic which tests for the significant differences between two or more groups of means and additionally breaks down the variability of a set of data into its component sources of variation. ANOVA is carried out in order provide a more in-depth analysis of the data. As with the correlations, some of the study's propositions are built on the significant differences between variables and factors. ANOVA is therefore used to prove or disprove some of the study's propositions.

In this study one-way ANOVA (Analysis of Variance) was used to test the propositions that there was no statistical differences in demographic variables in terms of how successful and the less successful SMEs view the importance of the two factors (functional and enterprising skills) and how the rate their competence in those factors.

Scheffe's multiple comparison procedure

The analysis was concluded by conducting Scheffe's multiple comparison procedure. This investigates the source of variance between the variables. In order to control Type 1 Error (where a true proposition is wrongly rejected) further tests are carried out using Scheffe's multiple comparison procedure. According to Schindler and Cooper (2008:497) Scheffe's test is a further test used after a proposition is rejected. It helps the researcher find the sources of differences within the different levels of the variable. Scheffè's comparison procedure will be used where p-values indicate the direction of the statistical significance.

Probability Values (*p* values) measuring statistical significance

Results are regarded as significant if the *p*-values are smaller than 0.05 (Cooper & Schindler, 2008:470) because this value presents an acceptable level on a 95% confidence interval ($p \leq 0.05$). The *p*-value is the probability of observing a sample value as extreme as, or more extreme than, the value actually observed, given that the proposition is true. The *p*-value is compared to the significance level (α) and on this basis the proposition is either rejected or not rejected. If the *p* value is less than the significance level, the proposition is rejected (if $p \text{ value} < \alpha$, reject null). If *p* is greater than or equal to the significance level, the proposition is not rejected (if $p \text{ value} > \alpha$, don't reject null). If the *p* value is less than 0.05, the proposition will be rejected. Results are regarded as significant if the *p*-values are smaller than 0.05, because this value is used as cut-off point in most behavioural science research. A *p*-value of 0.05 is typical threshold used in industry to evaluate the null proposition.

P-values do not simply provide one with a Yes or No answer. They rather provide a sense of the strength of the evidence against the null proposition. Small *p*-values suggest that the null proposition is unlikely to be true. The smaller the *p*-value is, the more convincing is the rejection of the null proposition. A *p*-value close to zero signals that the null proposition is false and typically that a difference is very likely to exist. On the other hand, large *p*-values closer to 1 imply that there is no detectable difference for the sample size used.

Using the sampling theory approach the study accepts or rejects a proposition on the basis of sampling information alone. The propositions that were stated earlier in this chapter will be tested and be accepted or rejected in chapter 6.

However it must be recalled that statistical significance also does not ensure substantive significance. A large enough sample may demonstrate a statistically significant relationship between two variables, but that relationship may be a trivially weak one. Statistical significance only means that the pattern of distribution and relationship between variables which is found in the data from a sample can be randomly drawn. By itself it doesn't ensure that the relationship is theoretically or practically important or even very large.

5.10 Reporting research findings

The research findings and its analysis will be described in chapter 6 with the report, containing the study conclusion, the interpretations, conclusions, limitations and recommendations, will be detailed in chapter 7. After the results from the analyses, the study will be able to make predictions and recommendations on a model that will deduce a theory on the optimal combination of the five aspects of training needed to help SMEs do well and succeed in growing their businesses. Visual displays will be done using Excel and PowerPoint graphics.

5.11 Conclusion

This chapter provided a description of the methodology applied in this study. In summary this chapter focused on the research questions posed whether there is a certain set of competencies that allows SMEs to start, run and grow successfully. The data collected was primarily based on personal responses and was collected through research questionnaires. The data processing and analysis attempt to answer the research question through the research findings, which are presented in the following chapter.

Chapter 6: Research findings

6.1 Introduction

The purpose of this chapter is to present the empirical research results. The literature review revealed the need for the SME owner to have a set of competencies to be successful in business. The review also highlighted the importance of related relevant training programmes that can help SMEs raise their skills. The key motivation behind this study is to investigate any notable differences or similarities between the successful and the less successful SMEs in terms of competencies, and to find out whether these competencies are related to the training received. This chapter provides a summary of the data analysis and interpretation of the research findings based on the responses from the respondents who completed the quantitative research questionnaires.

The first section of this chapter reports on the demographic profile of the respondents (570 manufacturing SMEs), comparing the 197 successful and the 373 less successful SMEs. The second section focuses on the business demographics of the respondents and examines all essential business information. Both section one and two use descriptive statistics to analyse the data characteristics in terms of shape, skewness and spread. The third section gives the results of factor analysis giving factors on which the successful and less successful samples will be compared. The factor analysis illustrated the reliability and validity of the data and the measuring instruments that were used in this study.

The fourth section focuses on the significant differences between successful and less successful SMEs with the t-tests, chi-square tests and one way analysis of Variance (ANOVA) are presented. In order to find out the sources of differences within the different aspects of a factor, more detailed tests are done using the Scheffe's multiple comparison procedure. The fifth section comprises the correlation analysis used to test the strength of the relationship between competence and training received. The final section of this chapter provides general comments on open ended questions from the respondents regarding the usefulness of training in SME success.

6.2 Response rate

Of the targeted sample of 700 SMEs of 350 per sub-sample, 600 were collected and acceptable yielding an 85% response rate. Two purposive samples were derived from the division of the responses elicited, based on the success criteria defined in chapter 1. Only those surveys in which all items were completed were used for statistical analysis. 30 questionnaires were excluded as they had too many missing entries or incorrect entries. 197 SMEs had more than 5 employees and earned more than R150 000 and were in existence as businesses for more than three years. 373 SMEs were considered as less successful SMEs as they had either less than 5 employees or had annual turnover of less than R150 000 or were less than 3 years in existence as a business.

6.3 Personal demographics

The personal demographics variables for which information was obtained included gender, age, level of education, ethnic groups, language and work experience. The personal demographics of the two respondent samples are presented in the tables and figures that follow:

6.3.1 Gender

The gender composition of the respondents is indicated in table 6.1

Table 6.1: Gender composition

Gender	Successful		Less successful		Total	
	frequency	percent	frequency	percent	frequency	percent
male	82	41.62%	102	27.35%	197	34.56%
female	115	58.38%	271	72.65%	373	65.44%
total	197	100.00%	373	100.00%	570	100.00%

It is found that this sector is female dominated as both samples had majority (over 50%) as females. However there were more females (72.65%) in the less successful than the

successful sample (58.38%). There are more males (41.62%) in the successful sample than males in the less successful sample (27.35%).

Figure 6.1: Gender composition of the successful and less successful SMEs



It could be stated that successful SMEs are led by mainly male managers while less successful SMEs are mainly female.

6.3.2 Average age of respondents

Descriptive statistics was generated using SAS v8.2 statistical software to find frequencies and percentages for the “age” variable. This is given in a summary statistic for the mean factor scores. The average age of the respondents is indicated in Table 6.2:

Table 6.2: Age of respondents

Respondents group	Frequency	Mean	Median	Std Dev	Minimum	Maximum
Successful	197	43.40102	42	10.33306	22	70
Less successful	373	40.89812	40	12.13102	18	80

Although the less successful group had more respondents than the successful group, there is no significant difference between the two groups in terms of the mean, median and standard deviation. The minimum ages of the two groups are four years different with the successful being older than the less successful group. However the successful group had far (10 years) younger maximum ages compared with the less successful group. This is in line with literature review which identifies that identifies the age of between 22 and 45 as ideal starting business. The less successful samples had those who were starting too early limiting their abilities, training, education and work experience. Also with the maximum age being 80 means there are those who may have started too late meaning the lack of energy and resilience of the youth that the business so needs (Ucbasaran et al, 2004:432; Rwigema & Venter 2004:70).

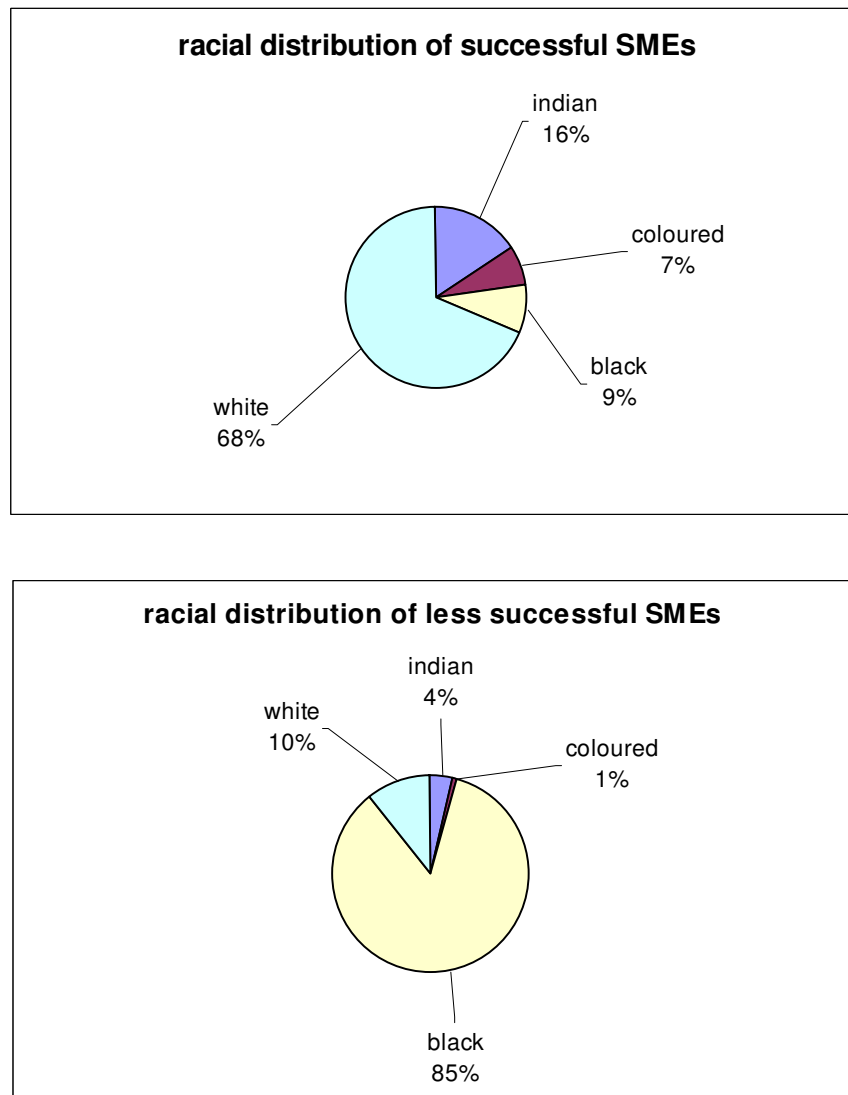
According to Cooper & Schindler (2008:439) the standard deviation shows the variation about the average of the data, measuring how far away from the average the data values typically are. The standard deviation for both groups was fairly large, which implies that the variability of the dataset was sufficient to continue with parametric tests. In both cases the standard deviation varied considerably.

It can therefore be stated that successful SMEs are led by managers older than 40 years; compared to less successful SME that are led by managers younger than 40 years.

6.3.3 Ethnic groups

All racial groups are included in the sample. The majority of the respondents in the successful SMEs are mainly Caucasian (68%) while the majority of the respondents in the less successful sample are mainly black (85%).

Figure 6.2: Ethnic groups of the two samples



It can be stated that successful SMEs are led by mainly white managers while less successful SMEs are mainly black.

6.3.4 Language

The home language of the groups is provided below in Table 6.3

Table 6.3: The home language of the respondents

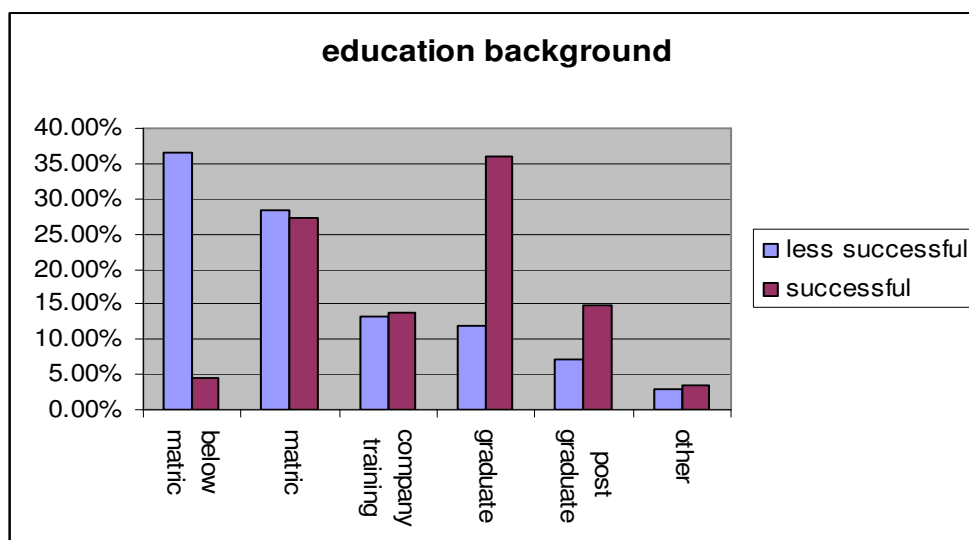
Language variable	Successful		Less successful	
	frequency	percent	frequency	percent
Afrikaans	19	9.64%	8	2.14%
English	161	81.73%	68	18.23%
Ndebele	1	0.51%	1	0.27%
Pedi	4	2.03%	21	5.63%
Sotho	2	1.02%	32	8.58%
Swazi	0	0.00%	8	2.14%
Tsonga	0	0.00%	14	3.75%
Tswana	2	1.02%	36	9.65%
Venda	1	0.51%	7	1.88%
Xhosa	3	1.52%	26	6.97%
Zulu	2	1.02%	150	40.21%
Other	2	1.02%	2	0.54%
total	197	100.00%	373	100.00%

The respondents in the successful sample were mostly English and Afrikaans speaking while the majority of the less successful SMEs were speaking the African languages dominated by Zulu. The other was excluded from any analysis as they were, even combined, too small to facilitate stable statistics.

6.3.5 Education background

The highest level of qualification of the sample groups is indicated in figure 6.3 below:

Figure 6.3: Education background



The majority of the successful group were on average more educated than the less successful group whose large majority (64.88%) have only matric and below. More than 54.31% of the successful SME respondents were graduates and or had other tertiary qualification. Both the successful and less successful SMEs had similar in terms of company training.

It can be stated that successful SMEs are led by managers with education levels above matric while less successful SME have education levels at matric or lower. This supports GEM (2005b:8) that states that South African adults who do not have tertiary education are less likely to sustain new ventures.

6.3.6 Work experience

More of the successful groups (51.27%) had on average worked more than 6 years prior to starting their own businesses as compared to the less successful group whose majority (43.97%) indicated they had two or less years of experience, as indicated in Figure 6.4 below.

Figure 6.4: Work experience of the respondents in the two samples



It can be stated that successful SMEs are led by mainly managers with more than 4 years of work experience while less successful SMEs have less than 4 years experience.

6.4 Business demographics

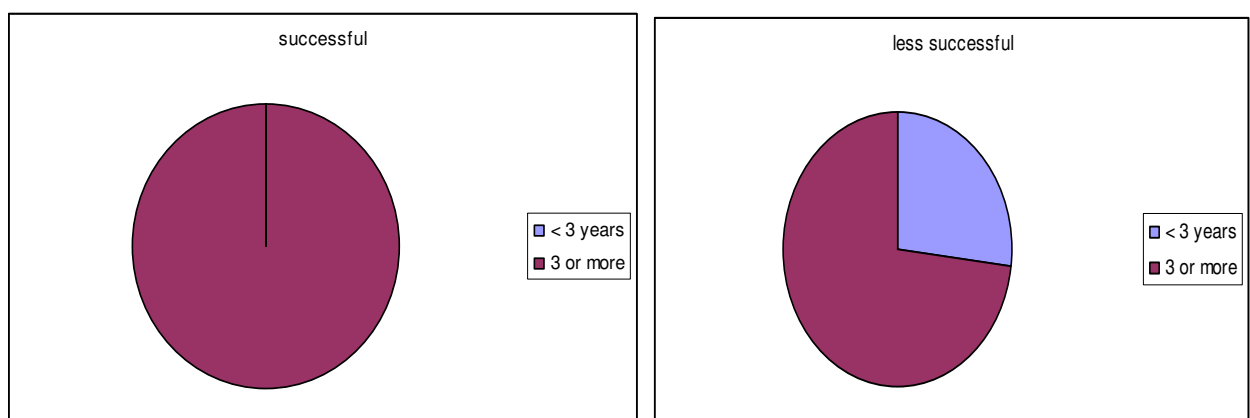
Business demographics report information about the respondents businesses. Both the successful and the less successful samples had to have similar business biographical characteristics (as far as possible) to be able to compare the samples against each other. The business demographics variables for which information was obtained included the number of years in business, the number of employees, income, the business sector, the regions, the location, the product focus and the form of business.

The first three variables were used as business performance indicators to categorise whether the SME fell into the successful or less successful sample. These three indicators were the number of years in business, annual turnover and number of employees in the SMEs.

6.4.1 Number of years in business

The number of years in business existence was three years or more for the successful SME sample. This questionnaire, divided the years of existence into less than three years and three and more being one of the three main factors used as business performance indicators.

Figure 6.5: Years in business



It was noted that there were other respondents whose age was more than three years but they were categorised as less successful due to less than 5 employees and or less than or equal to R150,000 annual turnover.

6.4.2 Number of employees

Descriptive statistics was generated using SAS v8.2 statistical software to find frequencies and percentages for categorical variables. This was given in a summary statistic for mean factor scores as shown in Table 6.4 below.

Table 6.4: Number of employees

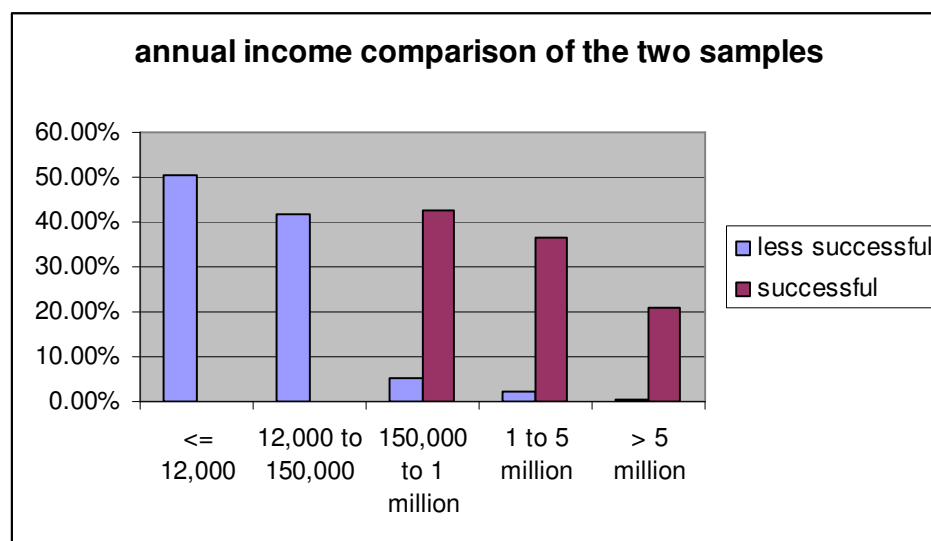
Number of Employees	Mean	Median	Std Deviation	Minimum	Maximum
Successful	41.38579	23	62.05234	6	520
Less successful	4.281501	2	7.600835	1	105

Average number of people employed by successful SMEs was 41 while those employed by less successful employees was 4.

6.4.3 Income

The majority of the respondents in the successful sample indicated that their annual turnover was more than R150,000. In contrast most of the less successful SMEs were under R150,000 with the majority earning less than R12,000. There was a normal distribution between all the intervals.

Figure 6.6: Annual income



6.4.3 Business sub-sector

The majority of the SME respondents indicated that their businesses were in the clothing or apparel sub-sector. Thus the focus of the study is mainly on apparel which is one of the easiest sub-sectors to enter for self employment in the SME sub-sector, as indicated in Table 6.5 below:

Table 6.5: Subsector

Sector	Less successful		Successful		Total	
	frequency	percent	frequency	percent	frequency	percent
apparel	262	70.24%	153	77.66%	415	72.81%
other	111	29.76%	44	22.34%	155	27.19%
total	373	100.00%	197	100.00%	570	100.00%

More than 70% of the respondents in both samples were operating in the apparel subsector.

6.4.5 Regions

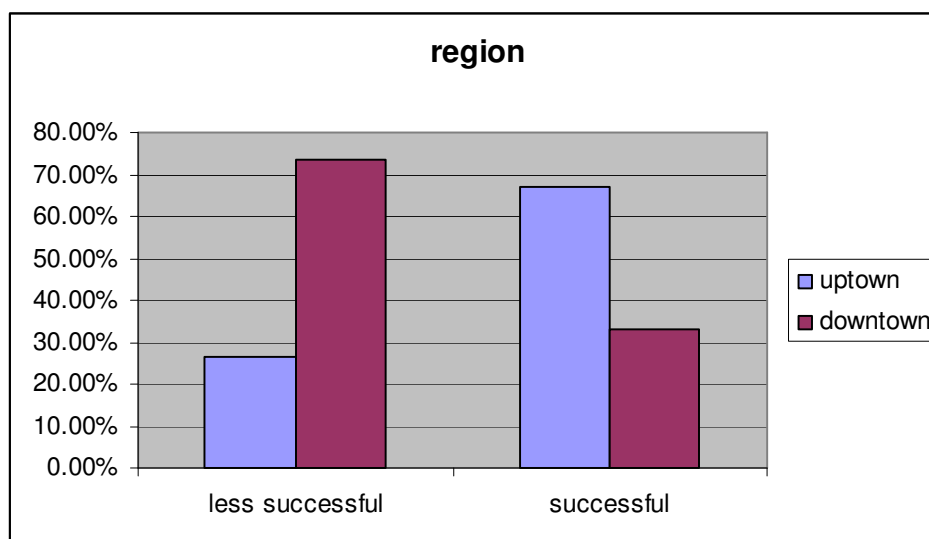
The samples comprised of SME owners/managers from the all the regions of Johannesburg as indicated in table 6. More than a third (37.54%) of the SMEs samples were from the Johannesburg city centre. This is in line with literature that indicates that the Textile and clothing industry tends to be localised (Gibbon, 2004:157; Rogerson, 2004:127; Kamaha; 2004:430).

Table 6.6: The regions where the business operates

Region	Less successful SMEs		Successful SMEs		Total	
	frequency	percent	frequency	percent	frequency	percent
midrand	14	3.75%	19	9.64%	33	5.79%
diepsloot	7	1.88%	0	0.00%	7	1.23%
sandton	38	10.19%	30	15.23%	68	11.93%
northcliff	6	1.61%	18	9.14%	24	4.21%
roodepoort	7	1.88%	25	12.69%	32	5.61%
soweto	54	14.48%	3	1.52%	57	10.00%
alexandra	5	1.34%	3	1.52%	8	1.40%
central	161	43.16%	53	26.90%	214	37.54%
south	22	5.90%	28	14.21%	50	8.77%
diepkloof	45	12.06%	2	1.02%	47	8.25%
orange farm	2	0.54%	4	2.03%	6	1.05%
other	12	3.22%	12	6.09%	24	4.21%
total	373	100%	197	100.00%	570	100.00%

The majority of the less successful SMEs were operating in the down town regions of Johannesburg like Diepsloot, Soweto, Alexandra, Central, Diepkloof, Orange farm – all labelled as downtown; while in contrast the more successful SMEs operated in up town regions like Midrand, Sandton, Northcliff, Roodepoort and Joburg South which are labelled as uptown. This is illustrated in Figure 6.7 below.

Figure 6.7: Regions of operations per sample

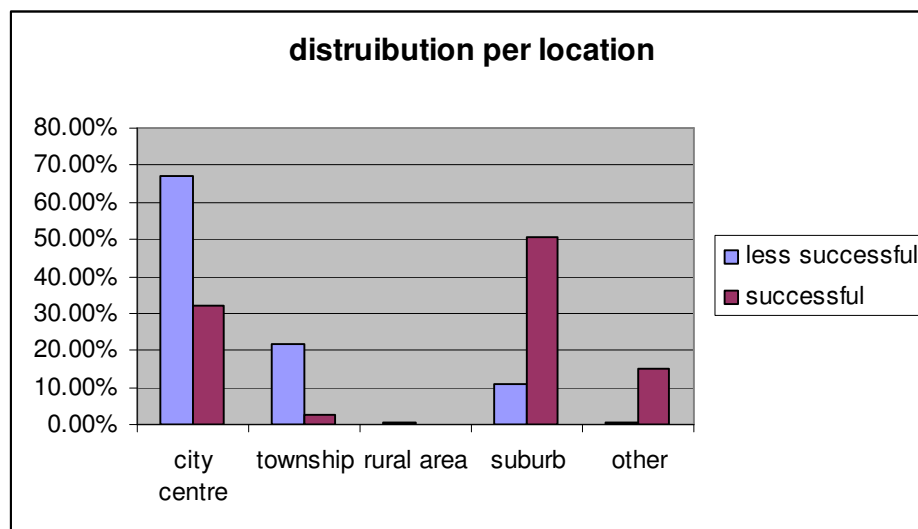


It can therefore be stated that successful SMEs operate mainly in upmarket regions while less successful SMEs operate in poorer regions.

6.4.6 Location

Most of the SMEs in the less successful sample were operating in the city centre or in the townships while the majority of the more successful SMEs were operating in the suburbs. Figure 6.8 below gives a picture of this type of location situation.

Figure 6.8: Distribution per location

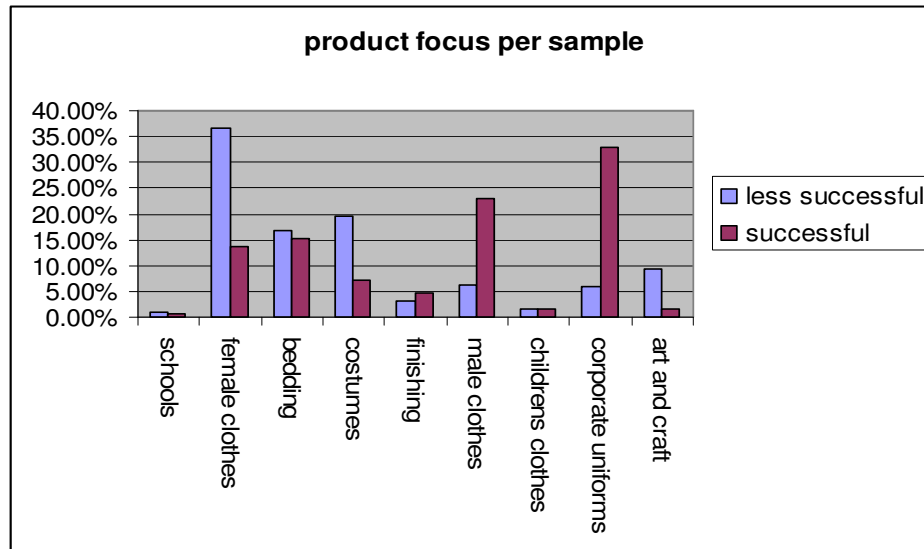


It can therefore be stated that successful SMEs operate in suburbs as compared to less successful SMEs who operate from the townships.

6.4.7 Product focus

Within the apparel sector the successful SMEs were specialising on corporate clothing and men's wear which were more specialised sectors than the over flooded female clothes and curtains and costumes products. This is illustrated in figure 6.9 below.

Figure 6.9: Product focus per sample

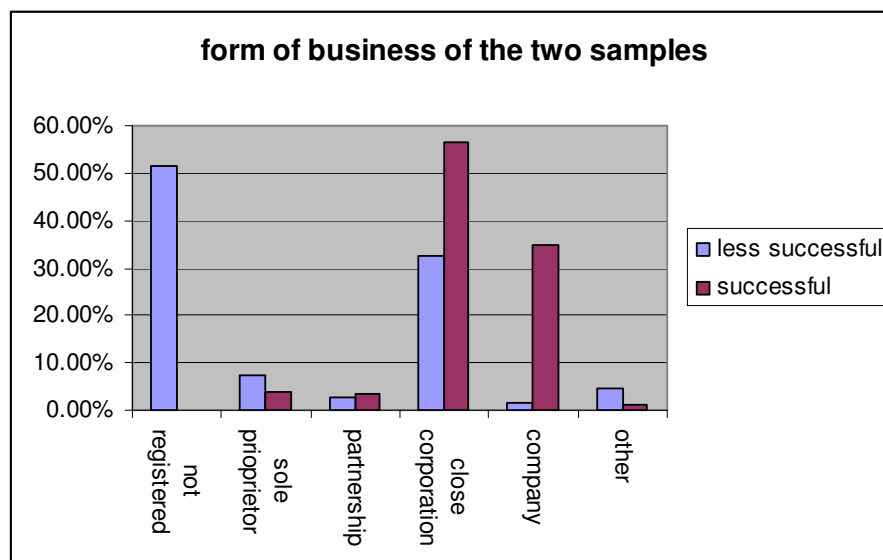


It can therefore be stated that most of the products of successful SMEs are niche textile products compared with the less successful SMEs that produce clothing that is flooding the market.

6.4.8 Form of business

The majority of the respondents in the successful SME sample had all formally registered their businesses with most registered as close corporations and companies (91.38%).

Figure 6.10: Forms of business per sample



In contrast most of the less successful SMEs (51.47%) were not formally registered and most of those registered were registered as close corporations (32.44%).

6.5 Descriptive statistical structure

The descriptive statistical analysis findings show that the shape and spread of the data was normal and therefore acceptable. This finding is consistent across the data set. Data reliability and validity were further tested through factorial designs.

6.6 Validity and reliability

To confirm the validity and reliability of the measuring instruments, factor analysis was executed. Factor analysis was carried out to further understand the data whose characteristics were found to be normal through descriptive analysis. In addition to being tested for normality the data was tested for reliability and validity using factorial design. Factor analysis is used primarily for data reduction, construct development and the investigation of variable relationships. As a narrowing device it allows the selections of salient variables from large groups, providing simplification of dominant variables and replacing them with isolated smaller numbers of hypothetical variants.

Factor analysis was used in this study for same reasons for data reduction, for easy usage of data plus structure validation and reliability checks. It also assisted in classifying the variables, developing/refining questions and ensuring meaningful results. Factorial design was used because a number of factors are involved. The method allowed for the analysis of independent variables and the dependant variables in this study. This helped to save money, time and resources. This study is multidimensional and so it is reasonable to study the several dimensions and their relationships simultaneously, instead of studying one variable at a time. The factorial design was used to measure whether there was any significant difference between successful and less successful businesses in terms of competency in their skills and whether they considered the same skills important for their business success.

Factor analysis was done on variables from the two main investigation questions namely question 15 and 16. The variables were sorted and rotated to illustrate the different factors. The values were presented from the highest to the lowest as evident in the tables below.

Factor analysis was done using BMDP Statistical Software on the items in Questions 15 and 16 for all of the respondents combined.

6.6.1 Procedure for determining factor structure

The two component instruments used in the study (namely importance of skills and competence in skills) were both revalidated in order to determine structure and reliability. The factor analysis procedure used included the following:

- Eigen values > 1.00 were identified. An eignenvalue is a measure of the explanation power of factor.
- The differentiation of possible factors was identified through clear breaks in the screen tests between eigenvalues > 1.00 .
- The variables were subjected to exploratory data analysis (EDA). Where variables loaded were found to be < 0.300 , they were removed and another round of exploratory analysis carried out. EDA simplifies the goal of learning about data as much as is possible. It provides a perspective and set tools for searching for clues and patterns.
- Rotated, unrotated and sorted factor analysis was carried out for the factors. Item analysis was then carried out for all the factors also.
- The procedure was repeated until two stable structures emerged, namely functional skills and enterprising skills.
- Cronbach alpha tests how well variables measure a single uni-dimensional latent construct. The critical values of alpha coefficients range from 0 to 1 and are used to describe the reliability (accuracy) of the factors extracted from dichotomous and or multi-point formatted questionnaires. Content analyses typically report a minimum reliability co-efficient of around 0.6. (Cooper & Schindler, 2008:293). The higher the alpha the more reliable the test. Cronbach alpha was used because it has the most utility for multi-item scales at interval level measurement.

6.6.2 Factor analysis – on the importance of skills

The rotated factor analysis of the respondents' views of the importance of various skills set are illustrated in Table 6.7 below:

Table 6.7: Rotated factor analysis - perception on the importance of skills

Description of the variables	Loadings	
	Factor 1: functional skills	Factor 2: enterprising skills
Business systems,	0.783	-0.173
Business linkages	0.675	0.051
Communication	0.629	0.197
Computer literacy	0.776	-0.131
Opportunity alertness	0.172	0.396
Financial	0.730	-0.079
Human Resource	0.616	0.313
Legal	0.741	-0.110
Life skills	0.466	0.178
Literacy	0.515	-0.090
Operations	0.545	0.050
Role Models	-0.161	0.563
Resources	0.515	0.022
Motivation	0.045	0.300
Planning	0.640	0.222
Value chain	0.786	-0.169
Technical	0.567	0.193
Percentage variance	35.91%	5.03%
Cronbach's alpha	0.9028	0.4308
Eigenvalue	6.63691	1.55465

The three variables marketing, risk taking and research & development were omitted since they had high double loadings and thus were not included in the statistical tests that analyse the factors.

Factors on importance

There were two factors which were given the following labels:

- Factor 1 was labelled “functional skills”. This includes business systems, business linkages, communication, computer literacy, financial management, human resources, legal, life skills, literacy, operations, securing resources, planning, value chain and technical abilities.
- Factor 2 was labelled “enterprising skills”. This includes creativity, innovation, opportunity identification, role models and motivation.

These factors are in line with the basis of a theoretical framework.

Eigenvalues

The eigenvalues of 6.63691 for functional skills and 1.55465 for the enterprising skills are greater than 1.00 which shows that both factors are relevant, good and reliable and should therefore be analysed.

Cronbach alphas

The Cronbach Alpha coefficient - using SAS was determined for the items in each factor. Cronbach’s Alpha is regarded as one of the most important reliability estimates. It measures internal consistency and the degree to which instrument items are homogeneous and reflect the same underlying construct(s). The acceptable threshold of Cronbach alphas ranges from 0.600 to 0.999 and indicates reliability (Athadye, 2003:10; Cooper & Schindler 2001:216-217). The Cronbach Alpha value of 0.8854 was obtained for all the variables used with individual Cronbach alphas as follows:

Table 6.8: Cronbach alpha results - importance of skills

Factor	Description	Cronbach Alpha value
factor 1	functional skills	0.9103
factor 2	enterprising skills	0.4308

The Cronbach Alpha for factor 1 was acceptable at 0.9103 which indicated that the instrument actually measured the concepts aimed to be measured and signified

consistence. On the other hand the Cronbach Alpha for factor 2 was not acceptable as it was very low at 0.4308. Low Cronbach alphas and eigenvalue < 1 indicate low validity and reliability of the factor. Normally such a factor would be excluded in a research study.

The researcher decided to include the second factor and accepted the low Cronbach alpha because the second factor items were similar to the enterprising skills category that was identified in the literature review. The inclusion of the second factor is in line with Davis (2000:484) who argues that the researcher should have some idea of underlying patterns in the data before analysis begins and use the factors that come out closely as the researcher envisages. In the literature review the researcher identified three main skills constructs, namely:

- Technical abilities. These abilities ensure that the product and or service is differentiated and produced at acceptable quality.
- Functional capabilities. These abilities assist the entrepreneur balances between opportunity, resources and the entrepreneurial team. This included all the skills in business management categories.
- Enterprising abilities. These abilities are linked with entrepreneurial competencies responsible for the booster/energizer/enterprising functions. This included motivation and skills in the entrepreneurial competencies identified.

As in the Nieman & van Vuuren (1999) model, the technical skills are included in the business skills construct that the study calls the functional skills. So it is acceptable to this study that instead of three factors, the results gave us only two with the technical skills being in the functional construct.

Furthermore, as factors are created by obtaining the mean scores over all the questions in the item; this low score may be due to the small number of variables (Kim & Mueller 1987:78). Factor 2 has only 3 variables as opposed to 16 variables in factor 1. This may also have been an error due to the categorising of innovation, opportunity identification and creativity into one skill category instead of three.

It may also be because there is low consistency in the understanding of the meaning of the constructs of the enterprising skills. Visser (2002:195) points out that the alphas are low if the respondents don't see the skills constructs in the same way or the questions don't measure the same thing for the different respondents. Thus the respondents don't give consistent answers.

Furthermore the nature of the variables could have contributed to this low alpha result. People's perception of all the skills in the list is very close and may be difficult to differentiate between the constructs thus leading to low factor scores.

Also it was noted that the second factor had all the variables that are not normally labelled as business skills. These correspond to variables such as motivation, creativity, innovation and opportunity identification to which most respondents are not exposed and whose level of competency is not being developed whether they had gone through the training or not.

The researcher decided to go ahead with the analysis of the data collected because the purpose of this study is aimed at dissecting the skills construct into two or more skills constructs to identify the differences in terms of competence in the various skills categories. Thus in essence this study is attempting to separate something that is essentially the same thing. It is therefore acceptable to continue with the analysis especially in lieu of the fact that the factors were consistent with the constructs identified in theory. It is acknowledged that there may be problems in tests that are dependant on the factor reliability therefore a chi squared analysis will also be done on each of the items in the factors.

Factor correlations for rotated factors

The correlation between the two factors was investigated. Factor correlations for rotated factors are reported in table 6.9 below.

Table 6.9: Factor correlation for rotated factors on importance

Factor	Factor 1	Factor 2
1 – functional skills	1.000	
2 – enterprising skills	0.211	1.000

The correlation between factors one and two are not high so the structure is stable enough for them to be used as separate factors.

Factor score covariance

Table 6.10: Factor score covariance on importance

Factor	Factor 1	Factor 2
1 – functional skills	0.924	
2 – enterprising skills	0.208	0.606

These factors were created along the basis of a theoretical framework. Each factor was subjected to an item analysis as part of establishing internal reliability.

Item analysis

Item analysis was done with Cronbach alphas calculated for each factor, to establish the internal reliability. Each item's contribution to that alpha is shown indicating what the alpha of the factor will be if that question is left out of the factor. If the alpha increases by a large margin, when leaving out the question, to the discretion of the researcher, it is decided to leave that question out of further analysis.

Item analysis for factor 1 is illustrated in table 6.16 below (total 13 items):

Table 6.11: Item analysis for factor 1 on importance

Skills variables	Alpha if item is deleted
Business systems	0.9011
Business linkages	0.9028

Communication	0.9033
Computer literacy	0.9010
Finances	0.9020
Human Resource	0.9027
Legal	0.9017
Life skills	0.9085
Literacy	0.9090
Operations	0.9071
Resources	0.9081
Planning	0.9026
Value chain	0.9009
Technical	0.9057
Cronbach alpha for the factor = 0.9103	

A high internal reliability is seen for factor functional skills with all the items contributing to the reliability. None of the items were therefore excluded.

Item analysis for factor 2 is illustrated in table 6.17 below (total 4 items):

Table 6.12: Item analysis for factor 2 on importance

Skills variables	Alpha if item is deleted
Creativity, Innovation, opportunity ID	0.3273
Role Models	0.3209
Self Motivation	0.3574
Cronbach alpha for the factor = 0.4308	

A high internal reliability is seen for factor enterprising skills with all the items contributing to the reliability. None of the items were excluded.

6.6.3 Factor analysis – on competence in these skills

The rotated factor analysis of the respondents views of their competence in various skills set are as follows:

Table 6.13: Rotated factor analysis - respondents rating their competence

Skills variables	Factor 1: functional skills	Factor 2: enterprising skills
Business systems	0.885	-0.201
Business linkages	0.749	-0.021
Communication	0.742	0.067
Computer literacy	0.549	0.272
Opportunity alertness	0.111	0.341
Financial	0.822	-0.172
Human Resource	0.648	0.296
Legal	0.643	0.093
Life skills	0.540	-0.034
Literacy	0.514	-0.034
Operations	0.668	-0.030
Role Models	-0.136	0.513
Resources	-0.078	0.675
Motivation,	0.101	0.301
Planning	0.639	0.303
Value chain	0.747	-0.104
Technical	0.502	0.386
Percentage variance	37.06%	7.37%
Cronbach's alpha	0.8909	0.6011
Eigenvalue	6.78645	1.92688

Factors on competence

There are two factors which were given the following labels:

- Factor 1 was labelled “functional skills”. This includes business systems, business linkages, communication, computer literacy, financial management, human resources, legal, life skills, literacy, operations, planning, value chain and technical abilities.
- Factor 2 was labelled “enterprising skills”. This includes creativity, innovation, opportunity identification, role models, motivation and securing resources.

It is interesting to note that the ability to gather and control resources is seen as a functional skill when analysing the factor analysis of the importance question. However, in the competence question the same skill “ability to gather resources” it is seen as an enterprising skill.

Eigenvalues

The eigenvalue of 6.78645 for functional skills and 1.92688 for enterprising skills are both greater than 1.00 which shows that both factors are relevant good and reliable and should therefore both be analysed. Each factor is therefore acceptable and reliable.

Cronbach alphas

The Cronbach Alpha value of 0.8881 was obtained for all the variables used.

Table 6.14: Cronbach alpha results - competence rating

Factor	Description	Cronbach Alpha value
factor 1	functional skills	0.9188
factor 2	enterprising skills	0.6018

The Cronbach Alpha for factor 1 was well acceptable at 0.8909 while the Cronbach Alpha for factor 2 was just acceptable at 0.6018. The Cronbach alphas indicate that the instrument actually measured the concepts of competence and tested the intended constructs well.

Factor correlation

The correlation between the two factors was investigated. Factor correlations for rotated factors are reported in table below:

Table 6.15: Factor correlation for rotated factors on competence

Factor	Factor 1	Factor 2
1 – functional skills	1.000	
2 – enterprising skills	0.253	1.000

The correlation between factors one and two are not high so the structure is stable enough for them to be used as separate factors.

Factor score covariance

Table 6.16: Factor score covariance on competence

Factor	Factor 1	Factor 2
1 – functional skills	0.934	
2 – enterprising skills	0.256	0.724

Item analysis

Item analysis was done with Cronbach alpha calculated for each factor to establish the internal reliability. Each items contribution to that alpha is shown in Table 6.17 indicating what the alpha of the factor will be if that question is left out of the factor. If the alpha increases by a large margin when leaving out the question, to the discretion of the researcher, it implies leaving that question out of further analysis.

Item analysis for factor 1 is illustrated below (total 13 items):

Table 6.17: Item analysis for factor 1 on competence

Skills variables	Alpha if item is deleted
Business systems	0.9081
Business linkages	0.9112
Communication	0.9100
Computer literacy	0.9145
Financial Management	0.9099
Human Resource	0.9099

Legal	0.9128
Life skills	0.9178
Literacy and Numeracy	0.9189
Operations	0.9132
Strategy & planning	0.9109
Value chain skills	0.9113
Technical/vocational ability	0.9145
Cronbach alpha for the factor = 0.9188	

A high internal reliability is seen for factor functional skills with all the items contributing to the reliability. So none of the items were excluded.

Item analysis for factor 2 is illustrated below (total 4 items):

Table 6.18: Item analysis for factor 2 on competence

Skills variables	Alpha if item is deleted
Opportunity alertness	0.5282
Role Models	0.5161
Securing resources	0.5350
Motivation	0.5037
Cronbach alpha for the factor = 0.6018	

Internal reliability is seen for factor enterprising skills with all the items contributing to the reliability. So none of the items were excluded as they all contribute well to the overall alpha.

6.6.4 Testing the statistical and substantive significance

Since any sample will almost certainly vary somewhat from its population, it must be judged whether these differences are statistically significant or insignificant (Cooper & Schindler, 2001:486).

Various statistical tests were employed in the analysis between the dependant variable, success and the independent variables linked with functional and enterprising skills. The following measures were conducted to compare successful and less successful SMEs in terms of how they rated the importance of certain skills set to their business success; how they rated themselves in terms of competence in that skills and; if they had been trained in that particular skill.

First chi-square tests were computed using SAS for association with the "success" variable.

Secondly the t-tests for independent samples were carried out using all the factors that were identified in the factor analysis. Student's t-test was used to compare mean factor scores for successful and less successful groups as well as for comparing courses attended for successful and less successful groups. The BMDP statistical software (BMDP3D – T-tests) was used in performing the multivariate statistical tests.

Third, one-way ANOVA tests were conducted using SAS to compare the mean factor scores of demographic groups for the successful and less successful respondents separately.

Finally a Scheffe's multiple comparison procedure was conducted.

6.6.5 The chi-square test

The chi-square test for association was performed to indicate the significant differences between the successful and the less successful groups concerning their opinions about the importance of certain business skills towards success, their competence in those skills and the training. The test used the 95% confidence level meaning that the p value must be lower than 0.05.

The chi-square test is a non parametric test of significance used for nominal measurements. The chi-square is presented to indicate the nominal variables with significant differences. Any appropriately performed test of statistical significance indicates the degree of confidence one can have in accepting or rejecting a proposition. Typically the propositions tested with chi-square was whether or not two different samples were different enough in

some characteristic or aspect of their behaviour to allow for the generalisation that the population from which the sample was drawn was also different in behaviour and characteristic. The chi-square is a rough estimate of confidence; it accepts weaker, less accurate data as input than parametric tests and therefore has less status in the pantheon of statistical tests. Because it is more forgiving it can be used in a wide variety of research contexts.

a) Importance

There were significant differences between the successful and less successful SMEs in terms of how they consider the importance of the skills with $p < 0.05$ for all the skills categories as illustrated below:

Table 6.19: Significant differences between the SMEs on importance

Skills variables	Successful group			Less successful group			Chi-square value	P value
	Not NB	Just NB	Very NB	Not NB	Just NB	Very NB		
Business systems	3.05	44.67	52.28	24.13	34.32	41.55	40.9482	<0.0001
Business linkages	8.63	44.16	47.21	32.71	42.36	24.93	50.3438	<0.0001
Communication	3.05	48.22	48.73	23.59	49.06	27.35	49.9923	<0.0001
Computer literacy	9.14	30.46	60.41	31.64	30.56	37.80	41.79	<0.0001
Opportunity ID	4.06	48.73	47.21	10.72	39.95	49.33	9.2301	0.0099
Finances	4.06	30.96	64.97	17.43	29.49	53.08	21.2617	<0.0001
Human Resource	11.17	65.48	23.35	52.82	34.32	12.87	94.5579	<0.0001
Legal	11.17	37.06	51.78	11.53	32.71	55.76	24.2332	<0.0001
Life skills	5.58	68.02	26.40	21.98	53.98	24.13	25.8986	<0.0001
Literacy	1.02	46.70	52.28	28.42	31.37	40.21	25.0563	<0.0001
Marketing	3.05	39.59	57.36	11.26	35.66	53.08	11.3016	0.0035
Operations	4.06	31.47	64.47	11.53	34.05	54.42	10.538	0.0051
Research	27.92	52.28	19.80	59.79	26.54	13.67	54.0098	<0.0001
Risk Taking	47.72	43.15	9.14	39.41	41.29	19.30	10.6474	0.0049

Role Models	41.12	46.70	12.18	42.36	29.76	27.88	24.586	<0.0001
Resources	4.06	28.43	67.51	13.67	30.63	55.50	14.876	0.0006
Motivation	2.54	26.9	70.56	5.9	34.58	59.52	7.9358	0.0189
Planning	12.18	45.18	42.64	35.12	37.80	27.08	36.3002	<0.0001
Value chain skills	6.6	43.65	49.75	23.59	30.03	46.38	28.2093	<0.0001
Technical	21.32	52.28	26.40	44.50	28.69	26.81	38.4822	<0.0001

Confidence interval: 95%

$\alpha = 0.05$

Proposition 3.1: Successful SMEs are not likely to consider technical skills to be more important than less successful SMEs. Proposition 3.1 is therefore rejected.

Proposition 4.1 to 4.4: Successful SMEs are not likely to consider the following personal skills to be more important than less successful SMEs:

- Proposition 4.1: Motivation skills – rejected.
- Proposition 4.2: Life skills - rejected.
- Proposition 4.3: Literacy skills – rejected.
- Proposition 4.4: Communication – rejected.

Proposition 10.1 to 10.4: Successful SMEs are not likely to consider the following entrepreneurial skills to be more important than less successful SMEs:

- Proposition 10.1: Opportunity identification, creativity and innovation – rejected.
- Proposition 10.2: Risk taking – rejected.
- Proposition 10.3: Role models – rejected.
- Proposition 10.4: Securing and controlling resources – rejected.

Proposition 7.1 to 7.11: Successful SMEs are not likely to consider the following business skills to be more important for business success than less successful SMEs:

- Proposition 7.1: Business systems – rejected.
- Proposition 7.2: Business linkages – rejected.
- Proposition 7.3: Computer literacy – rejected.
- Proposition 7.4: Financial – rejected.
- Proposition 7.5: Human resource – rejected.

- Proposition 7.6: Legal – rejected.
- Proposition 7.7: Marketing – rejected.
- Proposition 7.8: Operations – rejected.
- Proposition 7.9: Research – rejected.
- Proposition 7.10: Planning – rejected.
- Proposition 7.11: Supplier management – rejected.

The majority (between 47.21% and 67.51%) of the successful SMEs considered 9 of the 20 skills categories to be extremely important (marked blue). The 9 categories considered extremely important to successful SMEs are business systems, business linkages, communication, computer literacy, financial management, legal, literacy, value chain and securing resources. In contrast the majority (larger than 50%) of the less successful SMEs considered only 6 of the 9 skills to be extremely important namely business systems, computer literacy, legal, securing resources, value chain skills and financial management, while another large number (between 39.95% and 53.98%) considered the other two skills namely communication and business linkages to be just important.

The large number of the successful SMEs (between 45.18% and 68.02%) considered another 6 skills to be just important (marked in green). These are planning, technical, human resource, life skills, research and role models. In contrast a large majority of the less successful SMEs considered 4 of these 6 skills not important. These four are technical, human resource, research and role models. The other two namely planning and life skills are also considered to be just important by the less successful SMEs.

There was less indication of significant differences between the two groups in terms of the 5 remaining skills categories namely opportunity alertness, marketing, operations, risk taking and self motivation. Most successful SMEs (48.73%) considered opportunity alertness skills to be just important while more of the less successful SMEs (49.33%) considered opportunity alertness to be very important but there was some significant difference as $p < 0.05$. Most of both successful and less successful SMEs considered risk taking to be just important for business success. Most of both successful and less successful SMEs considered marketing and operations skills to be just important for business success.

This result does imply that more successful SMEs are likely to consider skills more important than the less successful SMEs consider them. This finding is expected, considering that for a business to succeed the SMEs require certain competencies to function in all areas related to the entrepreneurial trade (Nieman et al, 2003:7).

Competence

There was significant difference ($p < 0.0001$) between how the successful SMEs and those that are less successful rate themselves in terms of competence in all 19 categories of skills except the risk management where $p = 0.1807$ which is > 0.05 as illustrated below:

Table 6.20: Significant differences between the SMEs on competence

Skills variables	Successful group			Less successful group			Chi-square value	P value
	not	just	very	not	just	very		
Business systems	2.03	62.44	35.53	41.94	37.90	20.16	101.5864	<0.0001
Business linkages	9.64	70.05	20.30	51.61	37.10	11.29	97.2709	<0.0001
Communication	5.58	73.60	20.81	43.01	43.01	13.98	86.2005	<0.0001
Computer literacy	8.63	47.21	44.16	71.51	15.05	13.44	203.7124	<0.0001
Opportunity ID	4.06	64.97	30.96	20.43	46.51	33.06	31.8574	<0.0001
Financial	3.05	46.70	50.25	42.20	32.80	25.00	99.9041	<0.0001
Human Resource	10.66	78.68	10.66	66.94	26.88	6.18	166.405	<0.0001
Legal	20.81	28.07	51.12	61.29	22.04	16.67	87.2649	<0.0001
Life skills	8.12	65.99	25.89	27.96	57.80	14.25	35.0022	<0.0001
Literacy	2.54	50.76	46.70	13.71	48.66	37.63	19.0444	<0.0001
Marketing	3.05	45.69	51.27	22.85	40.59	36.56	39.0636	<0.0001
Operations	1.52	39.59	58.88	23.12	39.52	37.37	51.7076	<0.0001
Research	42.13	47.72	10.15	73.39	20.43	6.18	54.8892	<0.0001
Risk Taking	55.33	38.58	6.09	50.27	39.25	10.48	3.4214	0.1807
Role Models	40.10	50.76	9.14	47.58	30.38	22.04	28.1051	<0.0001
Resources	40.10	24.87	35.03	55.91	29.84	14.25	33.4473	<0.0001
Motivation	2.03	26.9	71.07	8.06	43.55	48.39	29.0701	<0.0001
Planning	15.23	48.73	36.04	47.58	39.78	12.37	75.0038	<0.0001

Value chain	5.08	53.30	41.62	30.65	37.10	32.26	49.7381	<0.0001
Technical	27.41	51.27	21.32	60.48	25.81	13.71	51.4126	<0.0001

Confidence interval: 95%

$\alpha = 0.05$

The majority of successful SMEs (above 50%) considered themselves to be extremely competent in 5 out of 19 skills categories namely financial management, marketing; legal, operations and self motivation skills. In contrast many less successful SMEs considered themselves to be just competent in marketing and operations; and not competent at all in financial and legal skills. Interestingly a substantial number of less successful SMEs rated themselves very competent in self motivation.

Most successful SMEs considered themselves to be just competent in 13 of the 19 skills categories while most of the SMEs considered themselves not competent at all in these skills. Only in the securing resources category were the many (40.10%) successful SMEs who indicated that they were not competent at all in that skill. Still there were more less successful SMEs (55%) who had indicated that they were not competent in this same skill category. Thus the significant difference between the two sets.

With the p-value > 0.001 there was no statistical significant difference between successful and less successful SMEs in terms of competence in risk taking.

Proposition 3.2: Successful SMEs are not likely to be more competent in technical skills than less successful SMEs - rejected.

Proposition 5.1 to 5.4: Successful SMEs are not likely to be more competent in the following personal skills than less successful SMEs:

- Proposition 5.1: Motivation skills – rejected.
- Proposition 5.2: Life skills – rejected.
- Proposition 5.3: Literacy skills – rejected.
- Proposition 5.4: Communication skills – rejected.

Proposition 8.1 to 8.11: Successful SMEs are not likely to be more competent in the following business skills than less successful SMEs:

- Proposition 8.1: Business systems – rejected.
- Proposition 8.2: Business linkages – rejected.
- Proposition 8.3: Computer literacy – rejected.
- Proposition 8.4: Financial – rejected.
- Proposition 8.5: Human resource – rejected.
- Proposition 8.6: Legal – rejected.
- Proposition 8.7: Marketing – rejected.
- Proposition 8.8: Operations – rejected.
- Proposition 8.9: Research – rejected.
- Proposition 8.10: Planning – rejected.
- Proposition 8.11: Supplier – rejected.

Proposition 11.1 to 11.4: Successful SMEs are not likely to be more competent in the following entrepreneurial skills than less successful SMEs:

- Proposition 11.1: Opportunity alertness – rejected.
- Proposition 11.2: Risk taking – accepted.
- Proposition 11.3: Role models – rejected.
- Proposition 11.4: Securing and controlling resources – rejected.

Key and supportive skills

From the chi square test results the study can induce what these SMEs view points were in terms of what skills can be considered key skills. It was noted that the majority of both successful SMEs and less successful SMEs considered the following skills to be extremely important namely motivation, securing resources, operations, financial management, legal and marketing. It was also noted that using chi-square test, majority of the successful SMEs considered themselves extremely competent in 4 skills namely financial management, marketing, operations and self motivation skills.

This means that be the study can acceptance or reject the propositions on key skills and supporting skills. In terms of importance 4 (finance, marketing, self motivation and securing resources) of the 7 propositions skills were indicated as key, while in terms of competence 3 (finance, marketing and self motivation) of the seven proposed key skills were identified.

This implies that while human resources, opportunity identification and technical skills were not extremely important and so could be said to be important supporting skills. This finding also implies that operations and legal skills were wrongly identified as supporting but should be categorised as key or extremely important. Interestingly, only few of the successful SMEs considered themselves to be extremely competent in the securing of resources skill category that was considered by both groups as extremely important.

Propositions 1: The following skills are not likely to be considered to be key skills:

- Proposition 1.1 Marketing – rejected.
- Proposition 1.2 Finance – rejected.
- Proposition 1.3 Human resource – accepted.
- Proposition 1.4 Motivation – rejected.
- Proposition 1.5 Gathering of resources – rejected.
- Proposition 1.6 Opportunity identification – accepted.
- Proposition 1.7 Technical – accepted.

Propositions 2: The following skills are not likely to be considered to be supportive skills:

- Proposition 2.1 Life skills – rejected.
- Proposition 2.2 Literacy skills – rejected.
- Proposition 2.3 Communication – rejected.
- Proposition 2.4 Business systems – rejected.
- Proposition 2.5 Business linkages – rejected.
- Proposition 2.6 Computer literacy – rejected.
- Proposition 2.7 Legal – accepted.
- Proposition 2.8 Operations management – accepted.
- Proposition 2.9 Research and development – rejected.
- Proposition 2.10 Strategy and business planning – rejected.

- Proposition 2.11 Supplier management – rejected.
- Proposition 2.12 Risk taking – rejected.
- Proposition 2.13 Role models – rejected.

Training

For all the training that was tested (with the exception of literacy and numeracy), there was a statistically significant difference ($p < 0.0001$) between the successful and the less successful SMEs.

Table 6.21: Significant differences between the SMEs on training

Skills variables	Successful group		Less successful group		Chi-square value	P value
	yes	no	yes	no		
Business systems	90.36	9.64	43.82	56.18	116.1582	< 0.0001
Business linkages	85.28	14.72	34.14	65.86	134.9150	< 0.0001
Communication	89.34	10.66	40.59	59.41	125.2231	< 0.0001
Computer literacy	92.39	7.61	33.06	66.94	182.2378	< 0.0001
Opportunity alertness	85.79	14.21	42.47	57.53	98.8573	< 0.0001
Finances	91.88	8.12	40.59	59.41	139.3945	< 0.0001
Human Resource	86.80	13.20	30.38	69.62	164.0257	< 0.0001
Legal	74.62	25.28	31.45	68.55	96.5017	< 0.0001
Life skills	87.31	12.69	40.86	59.14	113.3368	< 0.0001
Literacy	97.97	2.03	92.47	7.53	7.3309	0.0680
Marketing	88.32	11.68	40.70	59.30	119.2207	< 0.0001
Operations	92.39	7.61	45.70	54.30	118.9894	< 0.0001
Research	70.05	29.95	25.27	74.73	106.9571	< 0.0001
Risk Taking	54.31	45.69	34.68	65.32	20.4611	< 0.0001
Role Models	75.63	24.37	34.41	65.59	87.6192	< 0.0001
Securing resources	85.28	14.72	30.11	69.89	156.8548	< 0.0001
Motivation	76.65	23.35	39.25	60.75	72.2097	< 0.0001
Planning	82.23	17.77	43.01	56.99	80.6575	< 0.0001

Value chain skills	89.23	10.66	36.56	63.44	144.8733	< 0.0001
Technical	81.73	18.27	39.52	60.48	92.4179	< 0.0001

Confidence interval: 95%

$\alpha = 0.05$

Therefore the study can accept the proposition that successful SMEs are more likely to have received training than less successful SMEs.

Proposition 3.3: Successful SMEs are less likely to have been trained in technical skills than less successful SMEs – rejected.

Proposition 6.1 to 6.4: Successful SMEs are less likely to have been trained in the following personal skills than less successful SMEs:

- Proposition 6.1: Motivation skills – rejected.
- Proposition 6.2: Life skills – rejected.
- Proposition 6.3: Literacy – accepted.
- Proposition 6.4: Communication – rejected.

Proposition 9.1 to 9.11: Successful SMEs are less likely to have been trained in the following business skills than less successful SMEs:

- Proposition 9.1: Business systems – rejected.
- Proposition 9.2: Business linkages – rejected.
- Proposition 9.3: Computer literacy – rejected.
- Proposition 9.4: Financial management – rejected.
- Proposition 9.5: Human resource management – rejected.
- Proposition 9.6: Legal – rejected.
- Proposition 9.7: Marketing – rejected.
- Proposition 9.8: Operations management – rejected.
- Proposition 9.9: Research and development – rejected.
- Proposition 9.10: Strategy and business planning – rejected.
- Proposition 9.11: Supplier management – rejected.

Proposition 12.1 to 12.4: Successful SMEs are less likely to have been trained in the following entrepreneurial skills than less successful SMEs:

- Proposition 12.1: Opportunity identification, creativity and innovation – rejected.
- Proposition 12.2: Risk taking – rejected.
- Proposition 12.3: Role models – rejected.
- Proposition 12.4: Securing and controlling resources – rejected.

In each skills category, at least 70.05% to 97.97% of the respondents in the successful sample indicated that they had been trained in that skill category. This is in contrast with the figures of between 34 and 45% of the less successful respondents who had been trained in the said skills categories (meaning between 56% and 74% of the respondents in the less successful sample indicating that they have not been trained in those skills categories). Risk was the only one skill set where only 54% of the successful respondents had indicated being trained in this category.

There was no significant difference between the two samples in respect of training in literacy and numeracy. Data shows that both the successful and the less successful SMEs were both trained in this skill factor.

These results imply that more successful SMEs have received training in more skills categories than the less successful SMEs. This finding is expected, as skills that help an SME run its business towards success are trainable. This implies that successful SMEs prepare well for their enterprise endeavours by continually improving their human resource skills. What was a surprising result is that the successful SMEs were as trained as less successful SMEs in enterprising skills.

This is contrary to many studies that show that while most SMEs are exposed to business and technical skills training, the majority of these SMEs are not exposed to entrepreneurial and personal skills training. On closer observation, though it seems that the average of the respondents who indicated that they had been trained in technical and business skills is above 80% (except for legal and research which are around 70%) while for the

entrepreneurial skills it is between 50 and 79%, with the exception of creativity which reflects more than 80%.

These results necessitated other tests to probe further these initial results from the chi-square.

6.6.6 t-tests

The t-tests were executed on the successful and less successful groups by comparing whether there were significant differences between the mean scores of the variables categorised in the two factors namely functional skills and enterprising skills. The Levene F for variability t test was used; then the pooled or separate t-tests were done as appropriate (refer to Table 6.22).

Table 6.22: Independent t-test - on importance

Importance - Factor	Mean		Std Deviation		P value
	Successful	Less successful	Successful	Less successful	
Functional skills	3.4013	2.9970	0.3240	0.6603	0.0000
Enterprising skills	3.2673	3.2028	0.3922	0.5618	0.2213

Confidence interval: 95%

$\alpha = 0.05$

There were significant differences ($p = 0.0000$ which is < 0.05) in the way the successful group rated the importance of functional skills as compared to the less successful group. On average, the successful group perceived functional skills as extremely important while less successful group rated functional skills as less than just important.

There was no significant difference ($p = 0.2213$ which is > 0.05) in the way the two groups perceived the importance of enterprising skills. They both considered enterprising skills to be just important for business success.

Therefore the following propositions are rejected / accepted:

Proposition 3: Successful SMEs are not likely to consider technical skills to be more important for business than less successful SMEs - rejected.

Proposition 4.1 to 4.4: Successful SMEs are not likely to consider the following personal skills to be more important for business than less successful SMEs:

- Proposition 4.1: Motivation skills – accepted.
- Proposition 4.2: Life skills – rejected.
- Proposition 4.3: Literacy – rejected.
- Proposition 4.4: Communication – rejected.

Proposition 7.1 to 7.11: Successful SMEs are not likely to consider the following business skills to be more important for business success than less successful SMEs:

- Proposition 7.1: Business systems – rejected.
- Proposition 7.2: Business linkages – rejected.
- Proposition 7.3: Computer literacy – rejected.
- Proposition 7.4: Financial management – rejected.
- Proposition 7.5: Human resource management – rejected.
- Proposition 7.6: Legal – rejected.
- Proposition 7.8: Operations management – rejected.
- Proposition 7.10: Strategy and business planning – rejected.
- Proposition 7.11: Supplier management – rejected.

Proposition 10.1 to 10.4: Successful SMEs are not likely to consider the following entrepreneurial skills to be more important for business success than less successful SMEs:

- Proposition 10.1: Opportunity alertness – accepted.
- Proposition 10.3: Role models – accepted.
- Proposition 10.4: Securing and controlling resources – rejected.

Table 6.23: Independent *t*-test - on competence

Competence Factor	Mean		Std Deviation		P value
	Successful	Less successful	Successful	Less successful	
Functional skills	3.2475	2.5243	0.3153	0.6705	0.0000
Enterprising skills	3.1154	2.8185	0.4632	0.5985	0.0000

Confidence interval: 95%;

$\alpha = 0.05$

There was a significant difference ($p=0.0000$ which is < 0.05) in the way the successful group perceived themselves to be competent in skills in factor 1 and factor 2 (functional and enterprising skills). The successful group considered themselves very competent in both the functional and enterprising skills while the less successful group considered themselves not very competent or just competent in both skills categories. Interesting enough the successful group considered themselves to be more competent on functional skills while the less successful group considered themselves to be more competent in enterprising skills.

All propositions on competence are rejected as follows.

Proposition 3.2: Successful SMEs are not likely to be more competent in technical skills than less successful SMEs. - rejected

Proposition 5.1 to 5.4: Successful SMEs are not likely to be more competent in the following personal skills than less successful SMEs:

- Proposition 5.1: Motivation skills – rejected.
- Proposition 5.2: Life skills – rejected.
- Proposition 5.3: Literacy – rejected.
- Proposition 5.4: Communication skills – rejected.

Proposition 8.1 to 8.11: Successful SMEs are not likely to be more competent in the following business skills than less successful SMEs:

- Proposition 8.1: Business systems – rejected.
- Proposition 8.2: Business linkages – rejected.
- Proposition 8.3: Computer literacy – rejected.
- Proposition 8.4: Financial management – rejected.
- Proposition 8.5: Human resource management – rejected.
- Proposition 8.6: Legal – rejected.
- Proposition 8.7: Marketing – rejected.
- Proposition 8.8: Operations management – rejected.
- Proposition 8.9: Research and development – rejected.
- Proposition 8.10: Strategy and business planning – rejected.
- Proposition 8.11: Supplier management – rejected.

Proposition 11.1 to 11.4: Successful SMEs are not likely to be more competent in the following entrepreneurial skills than less successful SMEs:

- Proposition 11.1: Opportunity identification, creativity and innovation – rejected.
- Proposition 11.2: Risk taking – rejected.
- Proposition 11.3: Role models – rejected.
- Proposition 11.4: Securing and controlling resources – rejected.

This confirms the chi-square tests above.

t-tests were also executed on the successful and less successful groups by comparing the number of different areas trained by the two groups. The Levene F for variability t test was used; then the pooled or separate t-tests were done as appropriate.

Table 6.24: Independent t-test – on the number of courses attended

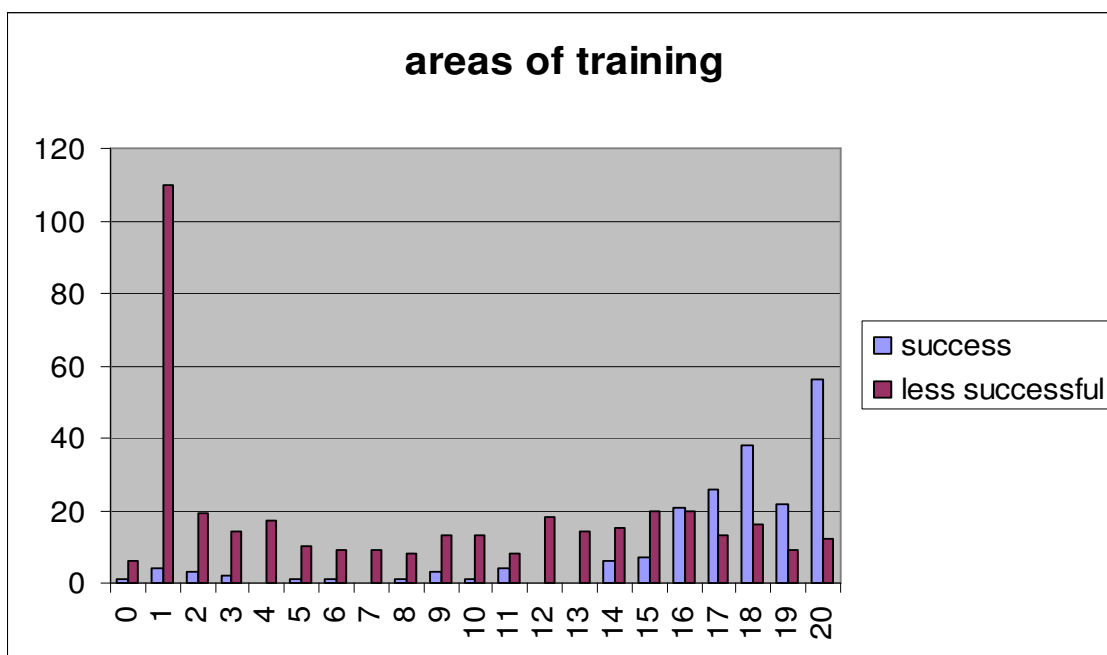
Mean		Std Deviation		P value
Successful	Less successful	Successful	Less successful	
16.7762	7.9677	4.4229	6.6112	0.0000

Confidence interval: 95%;

$\alpha = 0.05$

The variability between the samples is not equal and there is significant difference between the samples in terms of number of areas trained. On average the successful group were trained in at least 16 courses of the identified 20 skill categories; while the less successful group had been trained in less than 8 of the identified 20 skills categories. This was confirmed by the frequencies as illustrated in figure 6.11 below:

Figure 6.11: Areas of training comparing the two samples



Furthermore t-tests were executed on the successful and less successful groups to show that there is significant differences between the training in the different areas even when analysed by comparison of training in factors in the two groups and from the two main questions on importance and competence.

Table 6.25: Comparison of factor training areas - by success

Factor	Mean		Std Deviation		Mann Whitney
	Successful group	Less successful group	Successful group	Less successful group	
Importance factor 1 - Functional skills	12.2690	5.80690	3.1467	4.6396	0.0000
Importance factor 2 - Enterprising skills	2.3807	1.1581	0.8644	1.2781	0.0000
Competence factor 1 - Functional skills	11.4162	5.5066	2.9206	4.3444	0.0000
Competence factor 2 - Enterprising skills	3.2335	1.4584	1.0625	1.5245	0.0000

Confidence interval: 95%;

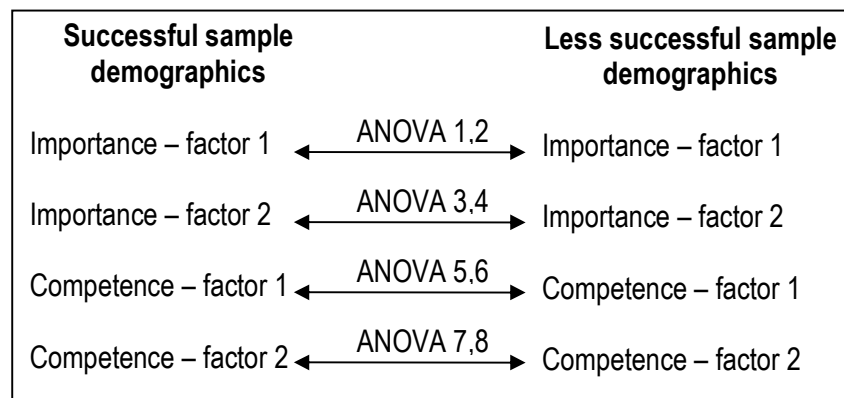
$\alpha = 0.05$

This confirmed the frequencies and the chi square results. After analyzing the chi-square and the t-tests, it became scientifically prudent to find out the differences between the same groups of variables and factors. This is done through the Analysis of Variance (ANOVA) method.

6.6.7 One way ANOVA

Eight one-way ANOVA tests (using SAS) were done to compute the mean factor scores of the successful and the less successful groups separately. The ANOVA was aimed at identifying differences in the factors between demographic variables. SAS (1988) works out a p-value that automatically incorporates the values in the F statistical tables.

Figure 6.12: ANOVA tests computed



The standard way of summarising the results of ANOVA contains the sources of variation, the degrees of freedom, sum of squares, mean squares and calculated F-value. The probability of rejecting the null proposition is computed up to 100% alpha that is the probability value column reports the exact significance for the F ration being tested. In cases where a statistically significant difference exists, the proposition is rejected. Where a statistically significant difference does not exist, the proposition is accepted.

Importance of factor 1

The first ANOVA (Analysis of variance) test results were for factor 1 – functional skills by all demographics for the successful group in terms of the importance of the skills. The overall ANOVA result for the functional skills factor is shown in Table 6.29 below. The results indicate that $p = 0.0353$. That p is less than $\alpha = 0.05$ means that it can be concluded that

there was statistically significant differences in the successful group demographics (one or more variables) in terms of the importance of functional skills.

Table 6.26: ANOVA 1 results - importance of factor 1 - successful

Source	DF	Sum of squares	Mean square	F Value	P value
Model	10	1.99918194	0.19991819	2.00	0.0353
Error	186	18.57452572	0.099856304		
Corrected total	196	20.57370766			

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

Proposition 13 stated that statistically significant variance does not exist between how successful SMEs view importance of functional skills regarding the demographics. Therefore the proposition is rejected. However the results in table 6.29 does not indicate which individual mean or means are different from the consensus value and in what direction they deviate. A more detailed ANOVA checked for any differences in each of the demographic variables in terms of the importance of factor1 - functional skills; to establish which demographic variables of the successful group show these significant differences:

Table 6.27: Detailed ANOVA 1 results

Independent variable	DF	Sum of squares	Mean square	F Value	P value
Age	1	0.90620998	0.90620998	9.07	0.0030***
Education	1	0.51865004	0.51865004	5.19	0.0238***
Ethnic group	1	0.27292975	0.27292975	2.73	0.1000
Forms of business	1	0.41498751	0.41498751	4.16	0.0429***
Gender	1	0.27357581	0.27357581	2.74	0.0996
Location	1	0.038827378	0.03882738	0.39	0.5337
Region	2	0.06675435	0.03337718	0.33	0.7163
Sector	1	0.08705373	0.08705373	0.87	0.3517
Work experience	1	0.01132146	0.01132146	0.11	0.7367

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

At a significant level of 5% ($\alpha = 0.05$) there is significant differences between three variables namely age (p-value = $0.0030 < \alpha = 0.05$), education (p-value = $0.0238 < \alpha = 0.05$) and forms of business (p-value = $0.0429 < \alpha = 0.05$). It is also found that there is not statistically significant differences for the rest of the variables whose p value $> \alpha = 0.05$.

Proposition 13.1 to 13.9 stated that a statistically significant variance does not exist between how successful SMEs view importance of functional skills in the following demographic variables age (**P13.1**); education (**P13.2**); ethnic group (**P13.3**); gender (**P13.4**); work experience (**P13.5**); region (**P13.6**); subsector (**P13.7**); form of business (**P13.8**) and place where business is operated (**P13.9**). Applying the acceptance rule that the proposition is acceptable if and only if the p-value is $>$ than $\alpha = 0.05$, else it must be rejected; the results are summarised below:

- Proposition 13.1: rejected.
- Proposition 13.2: rejected.
- Proposition 13.3: accepted.
- Proposition 13.4: accepted.
- Proposition 13.5: accepted.
- Proposition 13.6: accepted.
- Proposition 13.7: accepted.
- Proposition 13.8: rejected.
- Proposition 13.9: accepted.

The demographic variables that had a p-value of < 0.05 are examined for the differences between each pair of means and table 6.31 below indicated the significantly different stratification group means at a specified level as follows:

Table 6.28: Variables that show significant differences from ANOVA 1

Variable	N	Mean	Std Deviation
AGE			
< 40	76	3.32142857	0.35254179
≥ 40	121	3.45159386	0.29525944
EDUCATION LEVEL			

Matric or below	63	3.359341043	0.26384265
Above matric and other	134	3.42110874	0.34786760
FORM OF BUSINESS			
Close corporation	111	3.36293436	0.34715049
Other forms of business	86	3.45099668	0.28576924

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

The results show that there is statistical difference between the age group of successful SMEs that are older than 40 years who consider functional skills to be more important and those who are less than 40 years. This result implies that age does affect how successful SMEs view the importance of functional skills. This supports the assertion that increasing age of the entrepreneur/SME owner manager is positive correlated with successful SMEs (Rwigema & Venter 2004:70; Ucbasaran et al, 2004:432).

The SME owners with educational level more than matric were found to consider functional skills to be more important than those who have matric or less. This result implies that education levels do affect how successful SMEs view the importance of functional skills. This supports the assertion that increasing education levels is positively correlated with successfully developing skills key for entrepreneurship (Markman & Baron, 2003:287; Guzman & Santos, 2001:217).

Those successful SMEs whose business form is not close corporation consider functional skills to be more important than those whose business form is close corporation. This implies that the form of business does affect how successful SMEs view the importance of functional skills. The results indicate that the proposition was not erroneously rejected.

The second ANOVA (Analysis of variance) test results were for factor 1 - functional skills by all demographics for the less successful group in terms of the importance. The ANOVA result is shown in Table 6.32 below. That the p-value = 0.0003 is also less than 0.05. Therefore it can be concluded that there was statistically significant differences in the less successful group demographics (one or more variables) in terms of how they view the importance of functional skills.

Table 6.29: ANOVA 2 results - importance of factor 1 - less successful

Source	DF	Sum of squares	Mean square	F Value	P value
Model	11	14.7497676	1.3408880	3.28	0.0003
Error	361	147.4665425	0.4084946		
Corrected total	372	162.2163101			

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

Proposition 14 stated that statistically significant variance does not exist between how less successful SMEs view importance of functional skills regarding the demographics. The proposition is rejected. However the results in table 6.32 does not indicate which individual mean or means are different from the consensus value and in what direction they deviate. A more detailed ANOVA checked for any differences in the demographic variables of the less successful group in terms of the importance of factor 1 - functional skills; to establish which demographic variables of the less successful group show these significant differences. These are illustrated in figure 6.33 below:

Table 6.30: Detailed ANOVA 2 results

Independent variable	DF	Sum of squares	Mean square	F Value	P value
Age	1	0.16535285	0.16535285	0.40	0.5250
Education	1	0.50322650	0.50322650	1.23	0.2678
Ethnic group	1	0.05079811	0.05079811	0.12	0.7246
Forms of business	2	3.14605616	1.57302808	3.85	0.0221
Gender	1	0.15429624	0.15429624	0.38	0.5392
Location	1	3.38608164	3.38608164	8.29	0.0042
Region	2	2.47013426	1.23506713	3.02	0.0499
Sector	1	0.04624545	0.04624545	0.11	0.7367
Work experience	1	0.10792112	0.10792112	0.26	0.6076

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

At a significant level of 5% ($\alpha = 0.05$) there is significant differences between three variables namely forms of business (p-value = $0.0221 < \alpha = 0.05$); location (p-value = $0.0042 < \alpha = 0.05$) and region (p-value = $0.0499 < \alpha = 0.05$). It is also found that there is not statistically significant differences for the rest of the variables whose p value $> \alpha = 0.05$.

Proposition 14.1 to 14.9 stated that a statistically significant variance does not exist between how less successful SMEs view importance of functional skills in the following demographic variables age (**P14.1**); education (**P14.2**); ethnic group (**P14.3**); gender (**P14.4**); work experience (**P14.5**); region (**P14.6**); subsector (**P14.7**); form of business (**P14.8**) and place where business is operated (**P14.9**). Applying the acceptance rule that the proposition is acceptable if and only if the p value is $>$ than $\alpha = 0.05$; else it must be rejected; the results are summarised below:

- Proposition 14.1: accepted.
- Proposition 14.2: accepted.
- Proposition 14.4: accepted.
- Proposition 14.4: accepted.
- Proposition 14.5: accepted.
- Proposition 14.6: rejected.
- Proposition 14.7: accepted.
- Proposition 14.8: rejected.
- Proposition 14.9: rejected.

The demographic variables that had a p-value of < 0.05 are examined for the differences between each pair of means and table 6.34 below indicated the significantly different stratification group means at a specified level as follows:

Table 6.31: Variables that show significant differences from ANOVA 2

Variable	N	Mean	Std Deviation
FORMS OF BUSINESS			
Close corporation	121	3.08264463	0.59647549
Not registered	192	2.87388393	0.70707756
Other registered forms	60	3.21904762	0.54109352

LOCATION			
City centre	250	2.89600000	0.71097938
Other	123	3.20267131	0.48413903
REGION			
1	65	3.17802198	0.41460176
2	296	2.94280888	0.70172047
3	12	3.35714286	0.35649292

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

The location of less successful SMEs that are in the other areas either than the city centre consider functional skills to be more important than those who are in the city centre. This result implies that location does affect how less successful SMEs view the importance of functional skills. This supports the assertion that success depends on location of the business operations (Tustin, 2001:102; Dahlqvist et al, 2000:7).

To analyse the forms of business and the regions demographics a Scheffe's multiple comparison procedure was conducted for the less successful groups as both these variables had more than two groups.

Table 6.32: Scheffe's comparisons for regions for ANOVA 2

Region comparison	Difference between means	Simultaneous 95% confidence	Limits
3 and 1	0.17912	-0.31446	0.67271
3 and 2	0.41433	-0.04826	0.87693
1 and 3	-0.17912	-0.67271	0.31446
1 and 2	0.23521	0.02003	0.45040 ***
2 and 3	-0.41433	-0.87693	0.04826
2 and 1	-0.23521	-0.45040	-0.02003 ***

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

There were only significant differences between region 1 and 2 (indicated by ***) while there was no significant differences between region 1 and 3 and regions 2 and 3. This result

implies that less successful SMEs in region 1 and 3 considered functional skills to be more important than those in region 2. This result supports the location result above that implies that regions do affect how less successful SMEs view the importance of functional skills.

There were significant differences between less successful SMEs that were not registered and those who were registered either as close corporation or other registrations (indicated by *** in table 6.33 below). SMEs that were registered as close corporation and other registration considered functional skills to be more important than those not registered.

Table 6.33: Scheffe's comparisons for form of company for ANOVA 2

Region comparison	Difference between means	Simultaneous 95% confidence	Limits
Other and close corporation	0.13640	-0.11164	0.38445
Other and not registered	0.34516	0.11282	0.57751 ***
Close corporation and other	-0.13640	-0.38445	0.11164
Close corporation and not registered	0.20876	0.02642	0.39111 ***
Not registered and other	-0.34516	-0.57751	-0.11282 ***
Not registered and close corporation	-0.20876	-0.39111	-0.02642 ***

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

This result implies that the form of a company does affect how less successful SMEs view the importance of functional skills. This supports the assertion that increasing age of the entrepreneur/SME owner manager is positive correlated with successful SMEs (Kangasharju, 2000:38).

b) Importance of factor 2

The third ANOVA (Analysis of variance) test results were for factor 2 - enterprising skills. The ANOVA result is shown in Table 6.34 below. The p-value = 0.0023 which is less than $\alpha = 0.05$. Therefore it can be concluded that there was statistically significant differences in the successful group demographics (one or more variables) in terms of the importance of enterprising skills.

Table 6.34: ANOVA 3 results - importance of factor 2 - successful

Source	DF	Sum of squares	Mean square	F Value	P value
Model	11	4.04738563	0.40473856	2.88	0.0023
Error	186	26.09474635	0.14029434		
Corrected total	196	30.14213198			

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

Proposition 15 stated that statistically significant variance does not exist between how successful SMEs view importance of enterprising skills regarding the demographic variables. The proposition is rejected. However the results in table 6.34 does not indicate which individual mean or means are different from the consensus value and in what direction they deviate. A more detailed ANOVA checked for any differences in each demographic variables of the successful group in terms of the importance of factor 2 - enterprising skills to establish which demographic variables show these significant differences as illustrated in Table 6.35 below.

Table 6.35: Detailed ANOVA 3 results

Independent variable	DF	Sum of squares	Mean square	F Value	P value
Age	1	0.41923241	0.41923241	2.99	0.0855
Education	1	0.65257151	0.65257151	4.65	0.0323
Ethnic group	1	0.06756632	0.06756632	0.48	0.4886
Forms of business	1	0.48143835	0.48143835	3.43	0.0655
Gender	1	0.31988359	0.31988359	2.28	0.1327
Location	1	0.08725648	0.08725648	0.62	0.4313
Region	2	0.78507719	0.39253860	2.80	0.0635
Sector	1	0.02909172	0.02909172	0.21	0.6494
Work experience	1	0.85314501	0.85314501	6.08	0.0146

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

At a significance level of 5% ($\alpha = 0.05$) there are significant differences between two variables namely education ($p\text{-value} = 0.0323 < \alpha = 0.05$) and work experience ($p\text{-value} = 0.0146 < \alpha = 0.05$). It is also found that there is not statistically significant differences for the rest of the variables whose $p\text{ value} > \alpha = 0.05$.

Proposition 15.1 to 15.9 stated that a statistically significant variance does not exist between how successful SMEs view importance of enterprising skills in the following demographic variables age (**P15.1**); education (**P15.2**); ethnic group (**P15.3**); gender (**P15.4**); work experience (**P15.5**); region (**P15.6**); subsector (**P15.7**); form of business (**P15.8**) and place where business is operated (**P15.9**). Applying the acceptance rule that the proposition is acceptable if and only if the $p\text{ value}$ is $>$ than $\alpha = 0.05$, else it must be rejected; the results are summarised below:

- Proposition 15.1: accepted.
- Proposition 15.2: rejected.
- Proposition 15.3: accepted.
- Proposition 15.4: accepted.
- Proposition 15.5: rejected.
- Proposition 15.6: accepted.
- Proposition 15.7: accepted.
- Proposition 15.8: accepted.
- Proposition 15.9: accepted.

The demographic variables that had a $p\text{-value}$ of < 0.05 are examined for the differences between each pair of means and table 6.36 below indicated the significantly different stratification group means at a specified level as follows:

Table 6.36: Variables that show significant differences from ANOVA 3

Variable	N	Mean	Std Deviation
EDUCATION LEVEL			
Matric or below	63	3.20634921	0.34614400
Above matric and other	134	3.29601990	0.41010716
WORK EXPERIENCE			

0 to 4 years	69	3.13526570	0.39323877
4 + years	128	3.33854167	0.37410582

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

The successful SMEs with educational level more than matric consider enterprising skills to be more important than those who have matric or less. This result implies that education levels do affect how successful SMEs view the importance of enterprising skills. This also supports the assertion that increasing education levels are positively correlated with successful development of key entrepreneurship skills.

The group of successful SMEs that have more than 4 years working experience consider enterprising skills to be more important than those who have less than 4 years experience. This result implies that working experience does affect how successful SMEs view the importance of enterprising skills. This supports the assertion that work experience is positively correlated with successful development of key entrepreneurship skills and improves their capacity in performing various tasks (Guzman & Santos, 2001:217; Markman & Baron, 2003:287).

The fourth ANOVA (Analysis of variance) test results were for analysing the importance of factor 2 - enterprising skills by all demographics for the less successful group. The ANOVA result is shown in Table 6.37 below. The p-value = 0.0043 which is less than $\alpha = 0.05$ therefore the less successful group, it can be concluded that there was statistically significant differences in the less successful group demographics in terms of the importance of enterprising skills.

Table 6.37: ANOVA 4 results - importance of factor 2 - less successful

Source	DF	Sum of squares	Mean square	F Value	P value
Model	11	8.4257396	0.7659763	2.54	0.0043
Error	361	109.0023212	0.3019455		
Corrected total	372	117.4280608			

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

Proposition 16 stated that statistically significant variance does not exist between how less successful SMEs view importance of enterprising skills regarding the demographics. The proposition is rejected. However the results in table 6.37 does not indicate which individual mean or means are different from the consensus value and in what direction they deviate. A more detailed ANOVA (see Table 6.38) checked for any differences in each demographic variables in terms of the importance of factor 2 - enterprising skills to establish which demographic variables of the less successful group show these significant differences. Location, education and region are the demographics with significant differences as illustrated below:

Table 6.38: Detailed ANOVA 4 results

Independent variable	DF	Sum of squares	Mean square	F Value	P value
Age	1	0.00216462	0.00216462	0.01	0.9326
Education	1	2.37931022	2.37931022	1.23	0.0053
Ethnic group	1	0.00648624	0.00648624	7.88	0.8836
Forms of business	2	0.15154640	0.07577320	0.25	0.7782
Gender	1	0.33408361	0.33408361	1.11	0.2936
Location	1	1.26127061	1.26127061	4.18	0.0417
Region	2	2.28738747	1.14369373	3.79	0.0236
Sector	1	0.26627713	0.26627713	0.88	0.3483
Work experience	1	0.37380426	0.37380426	1.24	0.2666

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

At a significant level of 5% ($\alpha = 0.05$) there is significant differences between three variables namely location (p-value = $0.0417 < \alpha = 0.05$), region (p-value = $0.0236 < \alpha = 0.05$) and education (p-value = $0.0053 < \alpha = 0.05$). It is also found that there is not statistically significant differences for the rest of the variables whose p value $> \alpha = 0.05$.

Proposition 16.1 to 16.9 stated that a statistically significant variance does not exist between how less successful SMEs view the importance of enterprising skills in the following

demographic variables age (**P16.1**); education (**P16.2**); ethnic group (**P16.3**); gender (**P16.4**); work experience (**P16.5**); region (**P16.6**); subsector (**P16.7**); form of business (**P16.8**) and place where business is operated (**P16.9**). Applying the acceptance rule that the proposition is acceptable if and only if the p-value is $>$ than $\alpha = 0.05$; else it must be rejected; the results are summarised below:

- Proposition 16.1: accepted.
- Proposition 16.2: rejected.
- Proposition 16.3: accepted.
- Proposition 16.4: accepted.
- Proposition 16.5: accepted.
- Proposition 16.6: rejected.
- Proposition 16.7: accepted.
- Proposition 16.8: accepted.
- Proposition 16.9: rejected.

The demographic variables that had a p-value of < 0.05 are examined for the differences between each pair of means and table 6.39 below indicated the significantly different stratification group means at a specified level as follows:

Table 6.39: Variables that show significant differences from ANOVA 4

Variable	N	Mean	Std Deviation
EDUCATION LEVEL			
Matric or below	242	3.14049587	0.55371176
Above matric and other	131	3.31806616	0.56062022
LOCATION			
City centre	250	3.16533333	0.57327667
Other	123	3.27913279	0.53198940
REGION			
1	65	3.08205128	0.44107968
2	296	3.21734234	0.58582078
3	12	3.50000000	0.38924947

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

The location demographics of less successful SMEs that are in areas other than the city centre consider enterprising skills to be more important than those who are in the city centre. This result implies that location does affect how less successful SMEs view the importance of skills. This supports the assertion that success depends on location of the business operations.

As with the successful SMEs above, the less successful SMEs with educational level more than matric consider enterprising skills to be more important than those who have matric or less. This supports the theory that education levels do affect how even less successful SMEs view the importance of enterprising skills. This also supports the assertion that increasing education levels is positively correlated with successful development of key entrepreneurship skills.

To analyse the regions demographics a Scheffe's multiple comparison procedure was conducted for the less successful groups as this variable has more than two groups.

Table 6.40: Scheffe's comparisons for regions for ANOVA 4

Region comparison	Difference between means	Simultaneous 95% confidence	Limits
3 and 2	0.28266	-0.11506	0.68037
3 and 1	0.41795	-0.00641	0.84231
2 and 3	-0.28266	-0.68037	0.11506
2 and 1	0.13529	-0.04972	0.32030
1 and 3	-0.41795	-0.84231	0.00641
1 and 2	-0.13529	-0.32030	0.04972

The Scheffe's procedure shows that there are no significant differences between the three regions. This type of result was expected due to that the factor 2 is not reliable, so the results are not predictable. It is possible that a true proposition may have been wrongly rejected.

c) Competence factor 1

The fifth ANOVA (Analysis of variance) test results was for analysing if there are difference in how the successful group rates their competence in factor 1 - functional skills by all demographics. The ANOVA result is shown in Table 6.41 below. The p-value is = 0.0074 is smaller than $\alpha=0.05$, therefore it can be concluded that there was statistically significant differences in the successful group demographics in terms of their competence in functional skills.

Table 6.41: ANOVA 5 results - competence in factor 1 - successful

Source	DF	Sum of squares	Mean square	F Value	P value
Model	10	2.31988537	0.23198854	2.51	0.0074
Error	186	17.16895613	0.09230622		
Corrected total	196	19.48884150			

*** indicates a statistical significant variance at $\alpha=0.05$, confidence interval: 95%

Proposition 17 stated that statistically significant variance does not exist between how successful SMEs rate their competence in functional skills regarding the demographics. The proposition is rejected. However the results in table 6.41 does not indicate which individual mean or means are different from the consensus value and in what direction they deviate. A more detailed ANOVA (see table 6.42) checked for any differences in each demographic variables in terms of the competence of factor1 – functional skills; to establish which demographic variables of the successful group show these significant differences:

Table 6.42: Detailed ANOVA 5 results

Independent variable	DF	Sum of squares	Mean square	F Value	P value
Age	1	0.60072687	0.60072687	6.51	0.0115
Education	1	0.23807828	0.23807828	2.58	0.1100
Ethnic group	1	0.04885484	0.04885484	0.53	0.4678
Forms of business	1	0.94676269	0.94676269	10.26	0.0016

Gender	1	0.00035618	0.00035618	0.00	0.9505
Location	1	0.20169366	0.20169366	2.19	0.1410
Region	2	0.35778841	0.17889420	1.94	0.1469
Sector	1	0.02897522	0.02897522	0.31	0.5760
Work experience	1	0.01808876	0.01808876	0.20	0.6585

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

At a significant level of 5% ($\alpha = 0.05$) there is significant differences between two variables namely age (p-value = $0.0115 < \alpha = 0.05$) and forms of business (p-value = $0.0016 < \alpha = 0.05$). It is also found that there are no statistically significant differences for the rest of the variables whose p value $> \alpha = 0.05$.

Proposition 17.1 to 17.9 stated that a statistically significant variance does not exist between how successful SMEs rate their competence in functional skills in the following demographic variables age (**P17.1**); education (**P17.2**); ethnic group (**P17.3**); gender (**P17.4**); work experience (**P17.5**); region (**P17.6**); subsector (**P17.7**); form of business (**P17.8**) and place where business is operated (**P17.9**). Applying the acceptance rule that the proposition is acceptable if and only if the p-value is $>$ than $\alpha = 0.05$; else it must be rejected; the results are summarised below:

- Proposition 17.1: rejected.
- Proposition 17.2: accepted.
- Proposition 17.3: accepted.
- Proposition 17.4: accepted.
- Proposition 17.5: accepted.
- Proposition 17.6: accepted.
- Proposition 17.7: accepted.
- Proposition 17.8: rejected.
- Proposition 17.9: accepted.

The demographic variables that had a p-value of < 0.05 are examined for the differences between each pair of means and table 6.43 below indicated the significantly different stratification group means at a specified level as follows:

Table 6.43: Variables that show significant differences from ANOVA 5

Variable	N	Mean	Std Deviation
AGE			
< 40	76	3.18016194	0.31216054
>= 40	121	3.28989193	0.31116000
FORM OF BUSINESS			
Close corporation	111	3.18572419	0.28071768
Other forms of business	86	3.32737030	0.34038655

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

The age group of the successful entrepreneurs that are older than 40 years consider themselves to be more competent in functional skills than those who are less than 40 years. This result implies that age does affect the competence of successful SMEs in functional skills. This supports the assertion that increasing age of the entrepreneur/SME owner manager is positive correlated with fostering the development of skills (Aldrich, 1999:397).

There was a significant difference between successful SMEs whose business form is not close corporation and those registered as close corporation. Those successful SMEs whose business form is not close corporation consider themselves to be more competent in functional skills than those whose are registered as close corporation.

The sixth ANOVA (Analysis of variance) test results were for analysing if there are differences in how the less successful group rates their competence in terms of factor 1 - functional skills by all demographics. The ANOVA result is shown in Table 6.44 below. For the less successful group the p-value (< 0.0001) is also than 0.05 therefore it can be concluded that there was statistically significant differences in the less successful group demographics in terms of their competence in functional skills.

Table 6.44: ANOVA 6 results - competence in factor 1 - less successful

Source	DF	Sum of squares	Mean square	F Value	P value
Model	11	34.2241332	3.1112848	8.45	<0.0001
Error	360	132.5662212	0.3682395		
Corrected total	371	166.7903544			

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

Proposition 18 stated that statistically significant variance does not exist between how less successful SMEs rate their competence in functional skills regarding the demographics. The proposition is rejected. However the results in table 6.44 does not indicate which individual mean or means are different from the consensus value and in what direction they deviate.

A more detailed ANOVA (see table 6.45) checked for any differences in each demographic variables in terms of the competence in factor 1 - functional skills; to establish which demographic variables of the less successful group show these significant differences.

Table 6.45: Detailed ANOVA 6 results

Independent variable	DF	Sum of squares	Mean square	F Value	P value
Age	1	0.12073672	0.12073672	0.33	0.5673
Education	1	0.40398395	0.40398395	1.10	0.2956
Ethnic group	1	1.18943243	1.18943243	3.23	0.0731
Forms of business	2	4.39786016	2.19893008	5.97	0.0028
Gender	1	0.25904137	0.25904137	0.70	0.4022
Location	1	4.93895320	4.93895320	13.41	0.0003
Region	2	2.66533424	1.33266712	3.62	0.0278
Sector	1	0.03843990	0.03843990	0.10	0.7468
Work experience	1	0.42299913	0.42299913	1.15	0.2845

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

At a significant level of 5% ($\alpha = 0.05$) there is significant differences between three variables namely forms of business ($p\text{-value} = 0.0028 < \alpha = 0.05$); location ($p\text{-value} = 0.0003 < \alpha =$

0.05) and region ($p\text{-value} = 0.0278 < \alpha = 0.05$). It is also found that there is not statistically significant differences for the rest of the variables whose $p\text{ value} > \alpha = 0.05$.

Proposition 18.1 to 18.9 stated that a statistically significant variance does not exist between how less successful SMEs rate their competence in functional skills in the following demographic variables age (**P18.1**); education (**P18.2**); ethnic group (**P18.3**); gender (**P18.4**); work experience (**P18.5**); region (**P18.6**); sub sector (**P18.7**); form of business (**P18.8**) and place where business is operated (**P18.9**). Applying the acceptance rule that the proposition is acceptable if and only if the $p\text{ value}$ is $>$ than $\alpha = 0.05$; else it must be rejected; the results are summarised below:

- Proposition 18.1: accepted.
- Proposition 18.2: accepted.
- Proposition 18.3: accepted.
- Proposition 18.4: accepted.
- Proposition 18.5: accepted.
- Proposition 18.6: rejected.
- Proposition 18.7: accepted.
- Proposition 18.8: rejected.
- Proposition 18.9: rejected.

The demographic variables that had a $p\text{-value}$ of < 0.05 are examined for the differences between each pair of means and table 6.48 below indicated the significantly different stratification group means at a specified level as follows:

Table 6.46: Variables that show significant differences from ANOVA 6

Variable	N	Mean	Std Deviation
FORMS OF BUSINESS			
Close corporation	121	2.69675779	0.65469760
Not registered	191	2.31574708	0.65571074
Other registered forms	60	2.84102564	0.51647546
LOCATION			
City centre	250	2.38584615	0.69847485

Other	122	2.80832282	0.50352039
REGION			
1	65	2.88402367	0.46911314
2	296	2.43285528	0.68003221
3	12	2.82692308	0.65855973

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

The location of less successful SMEs that are in the other areas either than the city centre consider themselves to be more competent in functional skills than those who are in the city centre. This result implies that location does affect the competence of less successful SMEs in functional skills.

To analyse the forms of business and the regions demographics a Scheffe's multiple comparison procedure was conducted for the less successful groups as both these variables had more than two groups.

Table 6.47: Scheffe's comparisons for regions for ANOVA 6

Region comparison	Difference between means	Simultaneous 95% confidence	Limits
1 and 3	0.05710	-0.41154	0.52574
1 and 2	0.45117	0.24679	0.65554 ***
3 and 1	-0.05710	-0.52574	0.41154
3 and 2	0.39407	-0.04518	0.83331
2 and 1	-0.45117	-0.65554	-0.24679 ***
2 and 3	-0.39407	-0.83331	-0.04518

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

There were only significant differences between region 1 and 2 (indicated by ***) while there were no significant differences between region 1 and 3 and regions 2 and 3. SMEs in region 1 and 3 considered themselves to be more competent in functional skills than those in region 2.

Table 6.48: Scheffe's comparisons for form of company for ANOVA 6

Form comparison	Difference between means	Simultaneous 95% confidence	Limits
Other and close corporation	0.14427	-0.09124	0.37978
Other and not registered	0.52528	0.30454	0.74602 ***
Close corporation and other	-0.14427	-0.37978	0.09124
Close corporation and not registered	0.38101	0.20771	0.55431 ***
Not registered and other	-0.52528	-0.74602	-0.30454 ***
Not registered and close corporation	-0.38101	-0.55431	-0.20771 ***

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

There were significant differences between less successful SMEs that were not registered and those who were registered either as close corporation or other registrations (indicated by ***). SMEs that were registered as close corporation and other forms of registration considered themselves to be more competent in functional skills than those not registered.

d) Competence factor 2

The seventh ANOVA (Analysis of variance) test results was for analysing if there are difference in how the successful group rates their competence in terms of factor 2 - enterprising skills by all demographics. The ANOVA result is shown in Table 6.51 below. The p-value is <0.0001 which is less than 0.05 therefore it can be concluded that there was statistically significant differences in the successful group demographics in terms of how they rate their competence in enterprising skills.

Table 6.49: ANOVA 7 results - competence in factor 2 - successful

Source	DF	Sum of squares	Mean square	F Value	P value
Model	10	10.67102578	1.06710258	6.32	<0.0001
Error	186	31.38925341	0.16875943		
Corrected total	196	42.06027919			

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

Proposition 19 stated that statistically significant variance does not exist between how successful SMEs rate their competence in enterprising skills regarding the demographics. The proposition is rejected. However the results in table 6.49 does not indicate which individual mean or means are different from the consensus value and in what direction they deviate. A more detailed ANOVA (see table 6.50) checked for any differences in each demographic variables in terms of the competence in factor 2 - enterprising skills; to establish which demographic variables of the successful group show these significant differences:

Table 6.50: Detailed ANOVA 7 results

Independent variable	DF	Sum of squares	Mean square	F Value	P value
Age	1	0.69437359	0.69437359	4.11	0.0439
Education	1	1.77765081	1.77765081	10.53	0.0014
Ethnic group	1	0.04323488	0.04323488	0.26	0.6133
Forms of business	1	0.63173851	0.63173851	3.74	0.0545
Gender	1	0.00056828	0.00056828	0.00	0.9538
Location	1	0.61290457	0.61290457	3.63	0.0582
Region	2	2.77025783	1.38512892	8.21	0.0004
Sector	1	0.09429989	0.09429989	0.56	0.4557
Work experience	1	1.93456933	1.93456933	11.46	0.0009

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

At a significant level of 5% ($\alpha = 0.05$) there are significant differences between four variables namely age (p-value = $0.0439 < \alpha = 0.05$); education (p-value = $0.0014 < \alpha = 0.05$); region (p-value = $0.0004 < \alpha = 0.05$) and forms of business (p-value = $0.0009 < \alpha = 0.05$). It is also found that there is not statistically significant differences for the rest of the variables whose p value $> \alpha = 0.05$.

Proposition 19.1 to 19.9 stated that a statistically significant variance does not exist between how successful SMEs rate their competence in enterprising skills in the following demographic variables age (**P19.1**); education (**P19.2**); ethnic group (**P19.3**); gender (**P19.4**); work experience (**P19.5**); region (**P19.6**); subsector (**P19.7**); form of business (**P19.8**) and

place where business is operated (P19.9). Applying the acceptance rule that the proposition is acceptable if and only if the p value is $>$ than $\alpha = 0.05$; else it must be rejected; the results are summarised below:

- Proposition 19.1: rejected.
- Proposition 19.2: rejected.
- Proposition 19.3: accepted.
- Proposition 19.4: accepted.
- Proposition 19.5: rejected.
- Proposition 19.6: rejected.
- Proposition 19.7: accepted.
- Proposition 19.8: accepted.
- Proposition 19.9: accepted.

The demographic variables that had a p-value of < 0.05 are examined for the differences between each pair of means and table 6.51 below indicated the significantly different stratification group means at a specified level as follows:

Table 6.51: Variables that show significant differences from ANOVA 7

Variable	N	Mean	Std Deviation
AGE			
< 40	76	2.99671053	0.41531799
≥ 40	121	3.19008264	0.47765136
EDUCATION LEVEL			
Matric or below	63	2.96825397	0.40033268
Above matric and other	134	3.18470149	0.47585410
WORK EXPERIENCE			
0 to 4 years	69	2.91304348	0.42837348
4 + years	128	3.22460938	0.44571433
REGION			
1	92	3.20108696	0.44972386
2	93	2.99193548	0.43839442
3	12	3.41666667	0.50377364

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

The group of successful entrepreneurs that are older than 40 years consider themselves to be more competent in enterprising skills than those who are less than 40 years. This result implies that age does affect the competence of successful SMEs in enterprising skills. This also supports the assertion that increasing age of the entrepreneur/SME owner manager is positive correlated with fostering the development of skills.

The group of successful SMEs that have more than 4 years working experience consider themselves to be more competent in enterprising skills than those who have less than 4 years work experience. This result implies that working experience does affect the competence of successful SMEs in enterprising skills. This supports the assertion that work experience is positively correlated with higher their entrepreneurial quality skills (Barreira, 2004:43; Tustin, 2001:88).

The successful SMEs with educational level more than matric consider themselves to be more competent in enterprising skills than those who have matric or less. This result implies that education levels do affect the competence of successful SMEs in terms of enterprising skills. This also supports the assertion that increasing education levels are positively correlated with how successful SMEs develop skills that are key for entrepreneurship.

To analyse the region demographics a Scheffe's multiple comparison procedure was conducted as both these variables had more than two groups. There was significant differences between region 1 and 2 plus region 3 and 2 (indicated by ***) while there was no significant differences between region 1 and 3. SMEs in region 1 and 3 considered themselves to be more competent in enterprising skills than those in region 2.

Table 6.52: Scheffe's comparisons for regions for ANOVA 7

Region comparison	Difference between means	Simultaneous 95% confidence	Limits
3 and 1	0.21558	-0.09555	0.52671
3 and 2	0.42473	0.11380	0.73567 ***
1 and 3	-0.21558	-0.52671	0.09555
1 and 2	0.20915	0.06009	0.35821 ***
2 and 3	-0.42473	-0.73567	-0.11380 ***
2 and 1	-0.20915	-0.35821	-0.06009 ***

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

This result implies that successful SMEs in region 1 and 3 considered themselves more competent in enterprising skills than those in region 2. This result supports the location result above that implies that regions do affect the competence of successful SMEs in enterprising skills.

The eighth ANOVA (Analysis of variance) test results was for analysing if there are difference in how the less successful group rates their competence in terms of factor 2 – enterprising skills by all demographics. For the less successful group the p-value (< 0.0001) is also less than 0.05 therefore it can be concluded that there was statistically significant differences in the less successful group demographics in terms of how they rate their competence in enterprising skills.

Table 6.53: ANOVA 8 results - competence in factor 2 - less successful

Source	DF	Sum of squares	Mean square	F Value	P value
Model	11	22.7058473	2.0641679	6.74	<0.0001
Error	360	110.1711689	0.3060310		
Corrected total	371	132.8770161			

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

Proposition 20 stated that statistically significant variance does not exist between how less successful SMEs rate their competence in enterprising skills regarding the demographics. The proposition is rejected. However the results in table 6.29 does not indicate which individual mean or means are different from the consensus value and in what direction they deviate. A more detailed ANOVA checked for any differences in each demographic variables in terms of the competence in factor 2 – enterprising skills; to establish which demographic variables of the less successful group show these significant differences.

Table 6.54: Detailed ANOVA 8 results

Independent variable	DF	Sum of squares	Mean square	F Value	P value
Age	1	1.80931493	1.80931493	5.91	0.0155
Education	1	11.25457764	11.25457764	36.78	<0.0001
Ethnic group	1	0.01892188	0.01892188	0.06	0.8038
Forms of business	2	0.01779436	0.00889718	0.03	0.9713
Gender	1	0.00128541	0.00128541	0.00	0.9484
Location	1	3.16322595	3.16322595	10.34	0.0014
Region	2	2.78859366	1.39429683	4.56	0.0111
Sector	1	0.28626335	0.28626335	0.94	0.3341
Work experience	1	0.34659170	0.34659170	1.13	0.2879

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

At a significant level of 5% ($\alpha = 0.05$) there is significant differences between four variables namely age (p-value = 0.0155 < $\alpha = 0.05$); education (p-value = 0.0001 < $\alpha = 0.05$); location (p-value = 0.0014 < $\alpha = 0.05$) and region (p-value = 0.0499 < $\alpha = 0.0111$). It is also found that there are no statistically significant differences for the rest of the variables whose p value > $\alpha = 0.05$.

Proposition 20.1 to 20.9 stated that a statistically significant variance does not exist between how successful SMEs rate their competence in enterprising skills in the following demographic variables age (**P20.1**); education (**P20.2**); ethnic group (**P20.3**); gender (**P20.4**); work experience (**P20.5**); region (**P20.6**); subsector (**P20.7**); form of business (**P20.8**) and place where business is operated (**P20.9**). Applying the acceptance rule that the proposition is acceptable if and only if the p value is > than $\alpha = 0.05$; else it must be rejected; the results are summarised below:

- Proposition 20.1: rejected.
- Proposition 20.2: rejected.
- Proposition 20.3: accepted.
- Proposition 20.4: accepted.

- Proposition 20.5: accepted.
- Proposition 20.6: rejected.
- Proposition 20.7: accepted.
- Proposition 20.8: accepted.
- Proposition 20.9: rejected.

The demographic variables that had a p-value of < 0.05 are examined for the differences between each pair of means and table 6.39 below indicated the significantly different stratification group means at a specified level as follows:

Table 6.55: Variables that show significant differences from ANOVA 8

Variable	N	Mean	Std Deviation
AGE			
< 40	174	2.75431034	0.59287322
> = 40	198	2.87500000	0.59914808
EDUCATION LEVEL			
Matric or below	242	2.68904959	0.55333197
Above matric and other	130	3.05961538	0.60665227
LOCATION			
City centre	250	2.75900000	0.59462874
Other	123	2.94057377	0.59008096
REGION			
1	65	2.72307692	0.58816963
2	295	2.82457627	0.59792533
3	12	3.18750000	0.55519243

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

The less successful SMEs with educational level more than matric consider themselves to be more competent in enterprising skills than those who have matric or less. This result implies that education levels do affect the competence of less successful SMEs in terms of enterprising skills. This also supports the assertion that lower education levels are negatively correlated with the development of skills key for entrepreneurship.

The age group of less successful entrepreneurs that are older than 40 years consider themselves to be more competent in enterprising skills than those who are less than 40 years. This result implies that age does affect the competence of less successful SMEs in enterprising skills. This also supports the assertion that increasing age of the entrepreneur/SME owner manager is positively correlated with fostering the development of skills.

The less successful SMEs that are located in the areas either than the city centre consider themselves to be more competent in enterprising skills than those who are in the city centre. This result implies that location does affect how less successful SMEs view the importance of skills. This supports the assertion that success depends on location of the business operations.

To analyse the regions demographics a Scheffe's multiple comparison procedure was conducted for the less successful groups as this variable has more than two groups.

Table 6.56: Scheffe's comparisons for region for ANOVA 8

Region comparison	Difference between means	Simultaneous 95% confidence	Limits
3 and 2	0.36292	-0.03751	0.76335
3 and 1	0.46442	0.03720	0.89165 ***
2 and 3	-0.36292	-0.76335	0.03751
2 and 1	0.10150	-0.08481	0.28781
1 and 3	-0.46442	-0.89165	-0.03720 ***
1 and 2	-0.10150	-0.28781	0.08481

*** indicates a statistical significant variance at $\alpha = 0.05$, confidence interval: 95%

There were significant differences between region 1 and 3 (indicated by ***) while there was no significant differences between region 1 and 2 or regions 3 and 2. SMEs in region 3 and 2 considered themselves to be more competent in enterprising skills than those in region 1. This result implies that successful SMEs in region 1 and 3 considered themselves more

competent in enterprising skills than those in region 2. This result supports the location result above that implies that regions do affect the competence of successful SMEs in enterprising skills.

In summary there are significant differences in the two groups in terms of demographics with the following standing out namely age, education which is linked and work experience, form of business and location which is linked with region

The successful group had variances more in personal demographics (age and education) while the less successful group had more variances in company demographics (location, region and form)

There were no significant differences in both groups of SMEs in terms of the following demographics: Ethnic groups, language, gender, sub-sector and product type.

Furthermore the ANOVA outputs and significance of source tested for factor 1 and factor 2 comparing the successful and less successful SMEs in terms of their views of the importance of the skills in the two factors. This showed differences between the two groups namely the successful and the less successful SMEs.

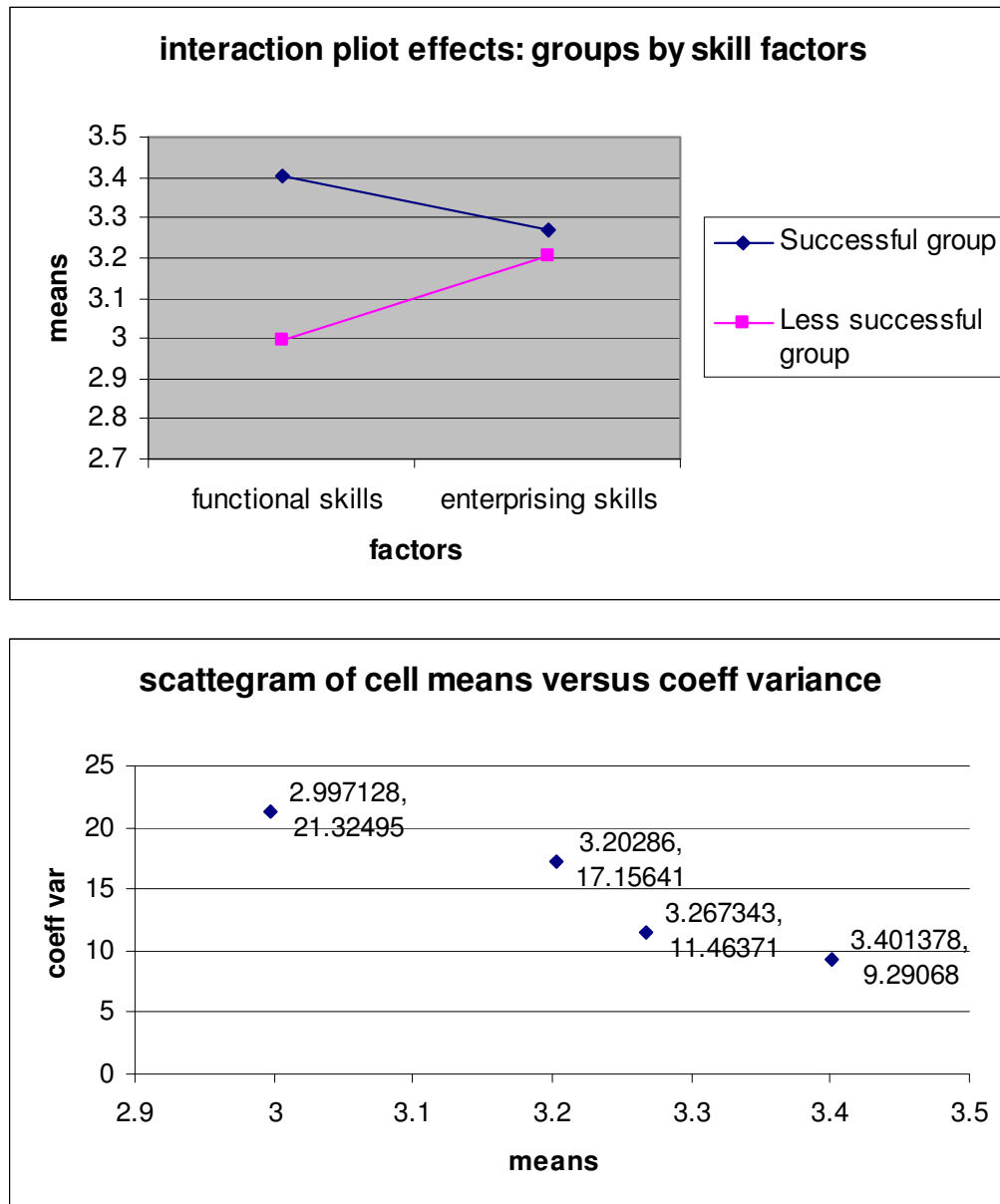
Table 6.57: ANOVA of the difference between the SMEs on importance

Factor	Mean		Coeff Var		R square	
	Successful group	Less successful group	Successful group	Less successful group	Successful group	Less successful group
Factor 1	3.401378	2.997128	9.290680	21.32495	0.097172	0.090927
Factor 2	3.267343	3.202860	11.46371	17.15641	0.134277	0.071752

R square cannot exceed 1

A graphical plot of the mean scores on each of the factors gives an indication of the difference between the groups in terms of how they view the importance of the skills in each factor.

Figure 6.13: Comparing the two samples on importance



The successful group of SMEs consider functional skills to be more important than the less successful group. However both groups are very close in terms of how they view the importance of enterprising skills factor. The successful group has less variance in terms of their views than the less successful group.

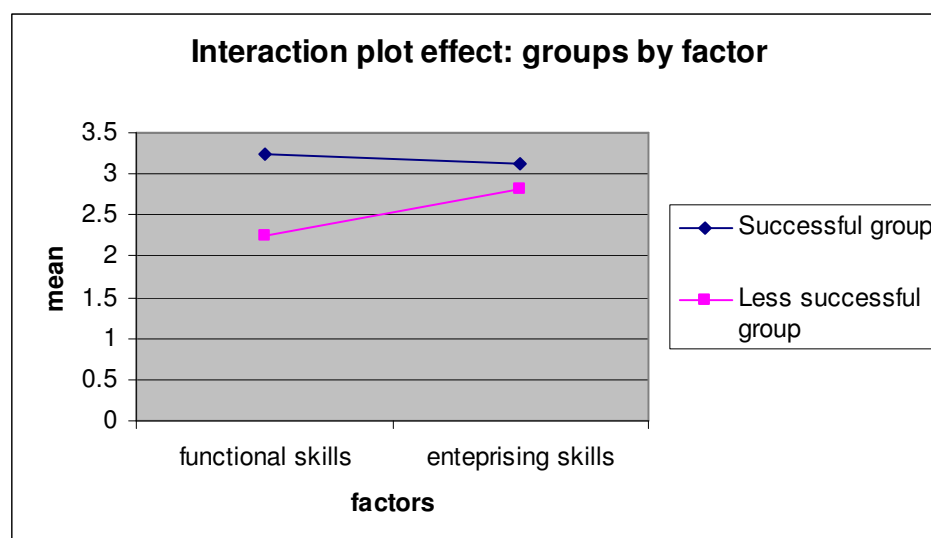
Table 6.58: ANOVA of the difference between the SMEs on competence

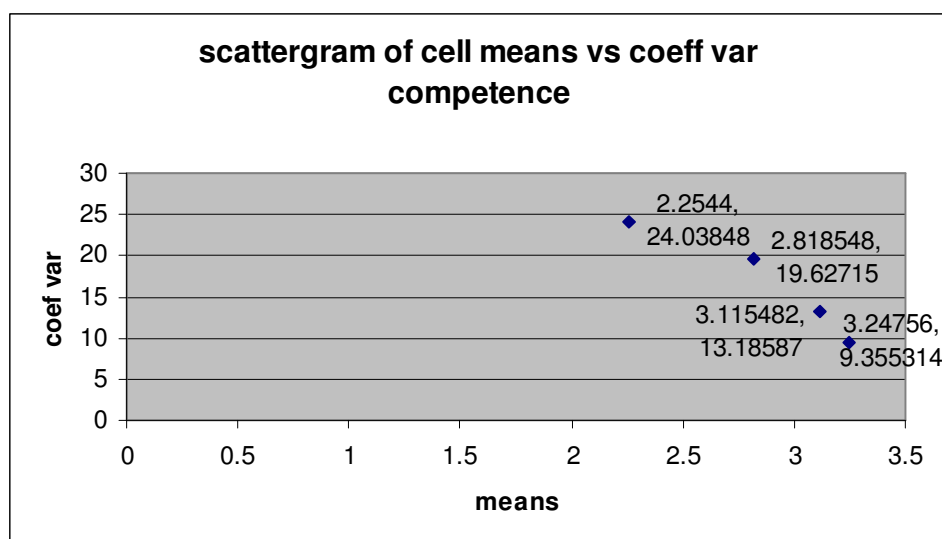
Factor	Mean		Coeff Var		R square	
	Successful group	Less successful group	Successful group	Less successful group	Successful group	Less successful group
Factor 1 – functional skills	3.247560	2.254400	9.355314	24.03848	0.119037	0.205193
Factor 2 – enterprising skills	3.115482	2.818548	13.18587	19.62715	0.253708	0.170879

R square cannot exceed 1

A graphical plot of the mean scores on each of the factors gives an indication of the difference between the groups in terms of how they view their competence in the skills in each factor:

Figure 6.14: Comparing the two samples on competence





The successful group of SMEs consider themselves to be more competent in functional skills than the less successful group. Although the ANOVA results show that both groups are close in terms of how they rate their competence in the enterprising skills factor, the successful group of SMEs consider themselves to be more competent in enterprising skills than the less successful group. The successful group has less variance in terms of how they rated themselves than the less successful group.

6.6.8 Impact

More of the successful group (average 90.78%) found the training they attended much more helpful in terms of performance indicators than the less successful group (average 53.17%).

Table 6.59: Impact of training as perceived by the two groups

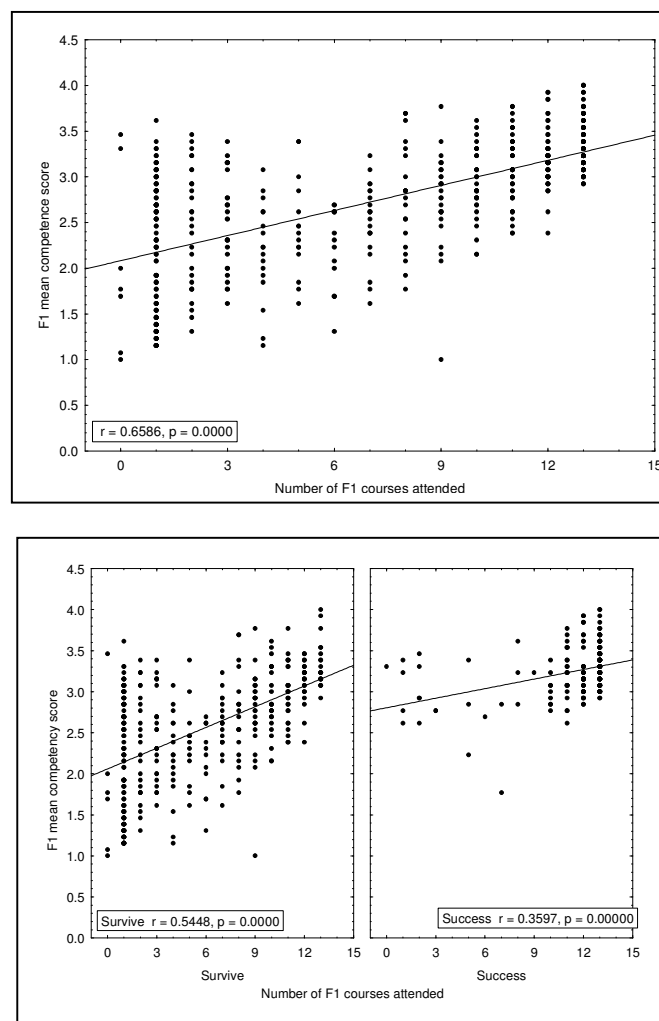
Variable	Successful group			Less successful group		
	Agree/strongly agree	Don't know	Disagree/strongly disagree	Agree/strongly agree	Don't know	Disagree/strongly disagree
Product quality	93.91	5.08	1.02	56.84	36.46	6.7
Productivity	89.85	5.58	4.57	54.96	38.34	6.71
Sales	78.68	16.75	4.57	49.86	39.95	10.19
Operations	92.38	7.61	0	55.49	35.92	8.58
Skills	94.92	4.57	0.51	43.44	47.99	8.58
Motivation	94.93	5.08	0	58.45	33.78	7.77

Whereas more of the less successful group didn't know whether the training received was useful or not.

Correlation between factors and training

Correlation procedure indicated that the competence is related to the increase in the number of training for functional skills. Pearson correlation coefficients = 0.65859 with $p < 0.0001$.

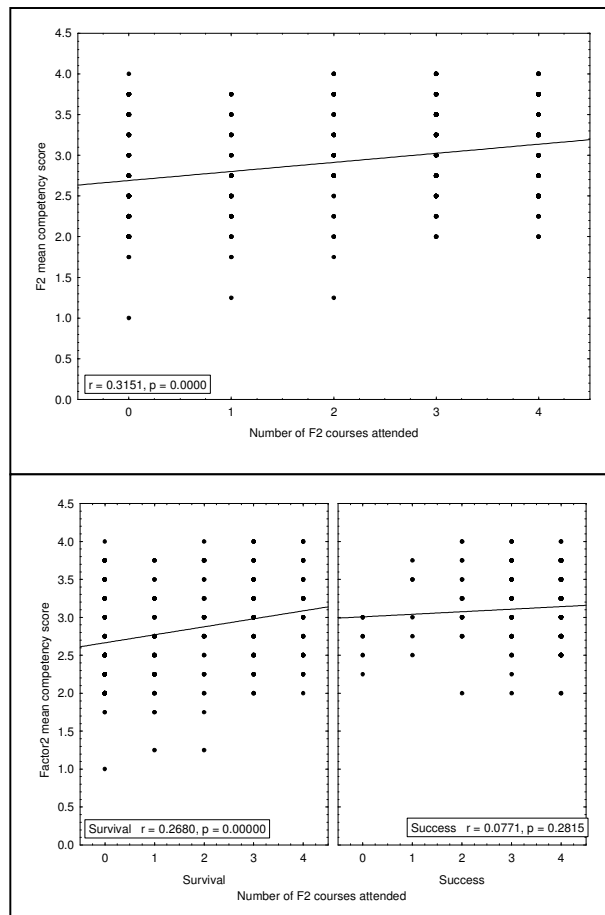
Figure 6.15: Correlation between training and factor 1 - competence



However, the correlation procedure also fails to show clear correlation between competence and the increase in the number of training for enterprising skills. Pearson correlation

coefficients = 0.31509 with $p < 0.0001$; is weak and thus there is no correlation between number of training areas and competency in enterprising skills.

Figure 6.16: Correlation between training and factor 2 – competence



6.7 Conclusion

This chapter presented the main findings of the empirical study. During the course of this chapter, relevant information was obtained and explained by means of descriptive and inferential statistics. Relevant data was captured and provided in tabular and figure format. The various statistical techniques and methods as discussed within the scope of chapter 5 (research design and methodology of the study) were practically applied within chapter 6.

The personal demographic information of the respondents (successful and less successful SMEs) showed normal distribution. The descriptive statistics for the demographics data

showed normal distribution. Based on the demographic data, the SMEs population appears to be made up of informal, micro, small and very small business with no evidence of medium enterprises participating in the survey. The data also that over 70% of the respondents have at least matric and that they are mainly black SA and mainly female.

The business demographic information also showed normal distribution. These factor analyses confirmed two main factors namely functional and enterprising skills. Except for one of the four factors, the factor analysis indicated relatively high construct validity of the measuring instruments as evidenced by the high Cronbach alphas. Item analysis showed scale mean score that were higher than the midpoint of all factors indicating that all items were contributing to the two factors.

The chi-square test, the t-test, Mann-Whitney tests and the one way ANOVA tests were executed to present the statistical differences between the successful and less successful groups. ANOVA showed some significant differences among the successful and less successful groups. For functional skills, there were significant differences for age, educational level, ethnicity and size of business. For enterprising skills, there were significant differences for experience, region and type of business. Significant different factors identified by the ANOVA were investigated further by comparing the scale means for demographic variables through the Scheffe's multiple comparison procedure. This showed varying degrees of significant differences some of which call for further investigation through separate research.

The next chapter revisits the objectives, discusses the findings, makes final conclusions, provides recommendations for policy makers and makes suggestions on areas for further research.

Chapter 7: Conclusion

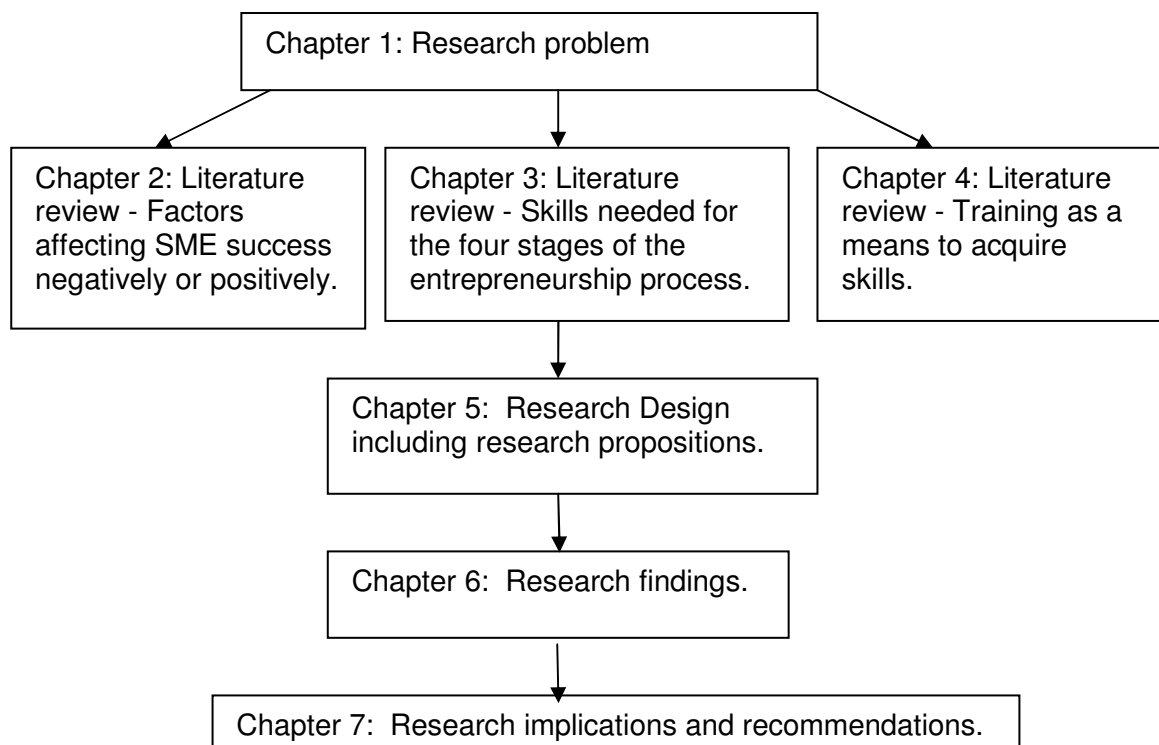
7.1 Introduction

While research in the area of entrepreneurship training is growing, one of the aspects where little research has been conducted in is the area of skills development in the context of SME survival and growth. This study explores this area and presents a framework for future training programmes.

This study was undertaken to investigate the skills (and related training) necessary for the survival and the growth of informal, very small, small, medium and micro businesses (SMEs) in the textile and clothing (T&C) industry in the city of Johannesburg, in the Gauteng Province of South Africa (SA).

This thesis is made up of seven chapters as illustrated in Figure 7.1 below:

Figure 7.1: Research approach



This chapter is made up of three parts. The first part (sections 7.2 and 7.3) provides an overview of the research problem, the research questions, the research objectives and the literature review relevant to the main findings. The second part (section 7.4)

interprets the study propositions and why the propositions were rejected or accepted on the basis of the statistical techniques executed in Chapter 6. This section discusses in brief the implications of the findings of this study as presented in the last chapter. The third part (section 7.5, 7.6, 7.7 and 7.8) discusses the contribution of this study, outlines the limitations of the study and presents the study recommendations (including further research areas).

7.2 Overview of the literature study

The literature review was covered in chapters 1, 2, 3 and 4. The following is a short overview of these chapters. Explanatory theories were also obtained from the literature review which then provided indications of what to expect logically in terms of the research propositions. The questions asked in the research instrument were grounded on the literature on the topic.

The literature study began in chapter 1 with a discussion highlighting the importance of SMEs in the development and growth of a healthy economy (Miller et al, 2003:217; Rwigema & Venter, 2004:315; Tustin 2001:5). SMEs are said to contribute towards wealth creation, job creation, economic flexibility, innovation, technology transfer, use of local resources, development of skills, socio-economic transformation and mechanisms for coping with national crisis (Rogerson, 2001:267; Honig, 1998:371; Robertson et al, 2003:308; Lange et al, 2000:7; Luiz, 2001:53).

It was noted that South Africa still suffers from the turbulence of the socio-economic conditions brought about by apartheid and the country's re-entry into the global economy (Berry et al, 2002:1). Among other factors, the lack of global competitiveness of South Africa firms has reduced employment opportunities (Nasser, du Preez & Herrmann, 2003:393). The South African government has prioritized the development and support of SMEs to redress the inequalities of apartheid and to provide an alternative employment source (Morris & Zahra, 2000:92).

It is clear that there is no scarcity of nascent entrepreneurs as new enterprises are being established at a rapid rate, with many younger members of the population now considering self-employment as a career option (GEM, 2006:27). The problem is the alarmingly high rate of SMEs closure, implying that SMEs are limited in their ability to

create long-term sustainable employment. One theme expounded in chapter 1 was that to sustain jobs, the SMEs should grow (Kangasharju, 2000:37; Clover & Darroch, 2005:238). Therefore any method that can aid in the successful growth of SMEs is important not only to these SMEs but also to the entire economy of the country (Pretorius et al, 2005b:414; Way, 2002:766).

It became clear that critical to aiding SME growth is understanding the factors which determine success or failure (Dockel & Ligthelm, 2005:57). By relying on the literature reviews, it was thus possible to get a good indication of what to expect the outcome of this research to be. The propositions derived from the literature reviewed enabled the author to gather information to empirically determine the validity of the proposed relationships identified.

In chapter 2, the literature identified various internal and external factors. The study focused on identifying “capabilities, abilities and skills” as significant internal growth factors for SMEs. Chapter 2 also reviewed entrepreneurial performance models that listed the skills necessary for SMEs to be able to perform effectively.

The bases of the models were linked to the van Vuuren and Nieman’s (1999) model, where entrepreneurial performance (E/P), motivation (M), entrepreneurial skills (E/S) and business skills (B/S) are linked as $\uparrow E/P = a + bM.[c.E/S \times d.B/S]$. Through integration with seven other entrepreneurial performance models from authors namely Glancey, (1998), van Vuuren & Nieman (1999), Erikson (2002), Wickham (1998), Man et al (2002), Ucbasaran et al (2004), Darroch & Clover (2005) and Perks & Struwig (2005); the study detailed individual skills within each construct.

The identified skills are divided into three business areas, namely:

- Key product development and service differentiation abilities. This includes the ability to ensure the product and or service is produced at acceptable quality and depends entirely on technical skills.
- Key enterprising competencies. These abilities are responsible for the booster/energizer/entrepreneurial functions that assist with business development and depend on entrepreneurial competencies and personal skills.

- Key functional capabilities. These abilities include all the business management skills that assist the entrepreneur to run the company efficiently and balance opportunity, resources and the entrepreneurial team.

Based on this integrated entrepreneurship performance model, several propositions aimed at investigating how SMEs view the importance and their competence in the enterprising, product development and functional skills categories.

The chapter concludes by simplifying the detailed integrated model was simplified into the simplified integrated model $\uparrow E/P = f(\text{key skills}) \times [1 + h.(\text{supporting skills})]$. Key skills were represented by multiplicative functions, signifying that the absence or very low levels of skills like motivation, opportunity, ability to gather resources, financial management, human resource management, marketing and technical skills would lead to zero performance, while weakness in a particular element would decrease effectiveness in the overall performance of the venture. This thus means that the increase in the capacity of any of these skills can lead to an increase in the entrepreneurial performance of the entrepreneur.

On the other hand supporting skills were represented by additive functions, signifying that the absence of any of these skills would reduce performance, yet not completely destroy the business. When all the supportive skills are absent $\uparrow E/P = \text{function of the key skills}$. This also means that an increase in the capacity of any of these supporting skills will also assist with SME performance.

Chapter 3 checked the model in all the stages in the entrepreneurship process, which proved that the model was robust and applicable to all the four steps. It was found that in the first stage the key skills needed were the enterprising and technical skills; the second and third stages needed mostly functional and technical skills, and finally the fourth stage needed enterprising skills most. This chapter concluded by formulating propositions around identifying key and supportive skills.

Chapter 4 investigated the means of acquiring essential skills. This chapter reviewed three entrepreneurial training models namely a) the entrepreneurial performance education model (E/P model), b) the entrepreneurial education model (E/E model) and c) the education for improved entrepreneurial performance model (E for E/P model). The

last section formulated more propositions linking the identified skills (in the model) and training. The propositions posited that successful SMEs were more likely to be trained in key skills than less successful SMEs. This completed the exploratory study and finalised the model (propositions) that was being prepared for empirical testing.

While it is widely accepted that management ability plays a significant role in developing a business, the question remains whether the crucial set of competencies is a universal one or whether it differs between different economies or industrial sectors (Way, 2002:767). Thus the specific purpose of this study was to identify those skills factors which are key to setting up, running and growing SMEs in the textile and clothing industry in the city of Johannesburg.

As one of the oldest sectors in the history of industrial development, the textile and clothing industry is often referred to as a traditional industry and is considered to have a great potential to generate employment opportunities and enhance national economic growth. However, in South Africa major problems exist in this sector, by 2001 the sector was referred to as the “shrinking manufacturing sector”, characterized by retrenchments. However as there were some SMEs in this sector that were successful in spite of the unfavourable business environment and market conditions, this study was aimed at highlighting the skills that assisted the more successful SMEs in their success.

7.3 Research objectives revisited

The study sought to answer the following research questions:

1. Which skills factors are associated with successful SMEs/entrepreneurs?
2. How important are these skills as perceived by SMEs owners in the textile and clothing industry in Johannesburg?
3. How competent do these SME owners view themselves and their teams to be in these skills?
4. In which of the skills has training been received?

The primary aim of this study was to establish which set of competencies (or skills) as identified in theory are perceived as affecting (negatively or positively) the success of textile and clothing SMEs in the South African context. This was achieved as highlighted in the discussions below.

The study had undertaken the following objectives:

1. To review literature to determine whether there are any common management competences that contribute to the success of SMEs. This objective was achieved through an extensive literature review and through the development of a detailed model that integrated eight models by Glancey (1998), van Vuuren & Nieman (1999), Erikson (2002), Wickham (1998), Man et al (2002), Ucbasaran et al (2004), Darroch & Clover (2005) and Perks & Struwig (2005).
2. To investigate the importance of these skills as perceived by SMEs in the textile and clothing industry in the city of Johannesburg. This objective was achieved. The empirical study first asked the SMEs in the textile and clothing industry how they viewed the importance of these sets of skills for their business.
3. To investigate whether this set of competencies applies to successful and less successful SMEs in the textile and clothing industry in the city of Johannesburg. This objective was achieved. The empirical study asked the SMEs in the textile and clothing industry how they rated their competence in these sets of skills.
4. To analyze entrepreneurship and business training of SMEs in the textile and clothing industry in Johannesburg in terms of the identified key skills, and if the said SME training has any impact on the success of SMEs. This objective was achieved firstly through the findings of the literature review, which identified training models, and secondly through empirical testing, which asked if the SMEs had received any training in that skills category and if that specific training had any impact on success indicators.
5. To suggest areas of improvement in the supporting of SMEs and in the research needed to help bridge the information gap in addressing problems relating to entrepreneurship and SME development in Africa. This objective will be addressed in the recommendations section below.

7.4 Results revisited

The cross-sectional, ex post facto, formal empirical study involved interviewing 570 manufacturing SMEs (197 successful and 373 less successful SMEs). The instrument used was a structured questionnaire. The statistical analyses included descriptive statistics, frequencies, factor analysis, Cronbach alpha coefficient, chi-square, t-test and one-way ANOVA tests. The analysis was concluded by conducting a Scheffe's multiple comparison procedure.

A successful SME was defined as a business that had been in operation for more than three years and generated more than R150,000 annually and employed more than 5 people. A less successful SME was defined as a business that had been in operation for less than three years or generated less than R150,000 annually or employed less than 5 people.

Demographic profile

The personal demographics profile of the sample showed that there were more female respondents than male respondents, but the successful group had more males than the less successful group. The average age of the respondents from the successful group was above 40 while the less successful group was under 40 years. The respondents of the successful group were mainly whites whose home language was mainly English; while those of the less successful were mainly black whose home language was mainly Zulu. The majority of the successful group on average had received education above matric, while the majority of the less successful group had only matric and below. More of the successful group had on average worked more than 6 years prior to starting their own businesses, as compared with the less successful group, most of whom had had two or less years of experience.

In terms of business demographics, the majority of the SME respondents indicated that their businesses were in the clothing or apparel sub-sector. Within the apparel sector the successful SMEs focused more on niche products, while the less successful group traded in market-flooded products. More than a third of the SMEs respondents were trading from the Johannesburg city centre. The majority of the less successful SMEs were operating in the downtown regions of Johannesburg, while the more successful SMEs operated in up-town regions. All successful SMEs had formally registered their businesses, while the majority of the less successful group was not registered formally.

Factor analysis

A factor analysis was conducted. The three variables marketing, risk taking and research were omitted, as they had high double loadings and thus were not included in the statistical tests to analyse the factors. Four factors were identified, two focusing on the importance of skills and two focusing on the competence in skills.

Since the technical skills were included as part of the functional skills constructs, it was acceptable that there were only two factors that covered the three business area constructs identified in the literature review.

On the question of importance, the two factors were named functional skills factor and enterprising skills factor. Factor 1 labelled “functional skills” included business systems, business linkages, communication, computer literacy; financial management; human resource, legal, life skills, literacy and numeracy, operations, securing resources, strategy and planning, value chain skills and technical/vocational ability. Factor 2 labelled “enterprising skills” included creativity, innovation, opportunity identification, role models, and self motivation. The functional skills factor was acceptable with eigenvalue large than 1 and the Cronbach alpha larger than 0.6. Although the eigenvalue was > 1 for factor 2, it was not so strong as the Cronbach alphas < 0.6 . However the researcher decided to go ahead with the analysis since the factor items were the same as those identified in the literature review as enterprising skills.

On the question of competence, the two factors were also named functional skills factor and enterprising skills factor. Factor 1 labelled “functional skills” included business systems, business linkages, communication, computer literacy, financial management, human resource management, legal, life skills, literacy and numeracy, operations, strategy development and planning, value chain skills and technical/vocational ability. Factor 2 labelled “enterprising skills”, includes creativity, innovation, opportunity identification, role models, self motivation and securing resources. Both functional skills and enterprising skills factors were acceptable as they had eigenvalues large than 1 and Cronbach alphas larger than 0.6.

Using Chi-square, t-tests, ANOVA and Scheffe multiple procedures, the study tested and accepted or rejected the following propositions:

Importance of skills

Using Chi-square the study rejected propositions 3.1, 4.1, 4.2, 4.3, 4.4, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 7.10, 7.11, 10.1, 10.2, 10.3 and 10.4 that checked how successful SMEs viewed the importance of the each of the 20 skill categories as compared with less successful SMEs. This result implies that more successful SMEs are likely to consider skills more important than the less successful SMEs consider them.

Yet there were significant differences, with some more significantly different than others in terms of the smallest p values. So further t -tests were conducted to further probe the rejection of the propositions. It must be mentioned those three skills marketing (7.7), research (7.9) and risk taking (10.2), were omitted from the factors, so chi-squared tests are the only ones used for these three variables.

The t -test examined the significant difference between how the successful SMEs viewed the importance of the factors as compared with how less successful SMEs viewed the importance of the factors. This resulted in the following propositions (3.1, 4.2, 4.3, 4.4, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.8, 7.10, 7.11, 10.4) being confirmed as rejected, as there were significant differences between the two groups in terms of how they viewed the importance of factor 1 - functional skills. Furthermore, the ANOVA outputs and significance of source tested for factor 1, comparing the successful and less successful SMEs in terms of how important they thought the skills in the two factors were. The ANOVA results showed that the successful group of SMEs considered functional skills to be much more important did the less successful group.

From the t -tests the following propositions were accepted (4.1, 10.1, 10.3), as there were no significant differences between how the two groups viewed the importance of factor 2, “enterprising” skills. Also the ANOVA tests results indicated that both groups were very close in terms of how they viewed the importance of enterprising skills factor.

Competence in skills

Using Chi-square tests results, the study rejected proposition 2, which that stated that successful SMEs are not likely to be more competent in skills than less successful SMEs. This rejection was valid for 19 categories of skills except risk management. There were significant differences ($p < 0.0001$) between how the successful SMEs and those that are less successful rated themselves in terms of competence in all 19 categories of skills. Thus all the related sub-propositions were rejected (3.2; 5.1, 5.2, 5.3, 5.4, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 8.10, 8.11, 11.1, 11.3, 11.4). This implies that more successful SMEs considered themselves to be more competent in most skills categories than the less successful SMEs did.

In the risk management category, however, the p -value was greater than the alpha value, suggesting no significant differences between how the successful SMEs and

those that are less successful rated themselves in terms of competence in risk management. Both groups indicated that they felt not competent in this skill category. Thus 11.2 was accepted.

t-tests were conducted to confirm these results. There was a significant difference in the way the successful group perceived themselves to be competent in factor 1 and factor 2 (functional and enterprising skills). The successful group considered themselves very competent in both the functional and enterprising skills. The less successful group considered themselves not very competent in both skills categories. Thus the rejection of propositions 3.2, 5.1, 5.2, 5.3, 5.4, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.8, 8.10, 8.11, 11.1, 11.3 and 11.4) were confirmed.

The ANOVA results showed that the successful group of SMEs considered themselves to be more competent in functional skills than the less successful group. Although the ANOVA results showed that both groups were close in terms of how they rated their competence in the enterprising skills factor, the successful group of SMEs considered themselves to be more competent in enterprising skills than did the less successful group. This confirmed the t-test results.

Key and supportive skills

From the chi square test results the study can deduce what these SMEs viewpoints were in terms of what skills can be considered key skills and what could be considered to be supportive skills. It was also noted that the majority of both successful SMEs and less successful SMEs considered the following skills to be very important: motivation, securing resources, operations, financial management, legal and marketing.

It was also noted that using the chi-square test, the majority of the successful SMEs considered themselves extremely competent in five skills, namely financial management, legal, marketing; operations and self motivation skills. In terms of importance, four (finance, marketing, self motivation and securing resources) of the seven propositions skills were indicated as key. In terms of competence three skills (finance, marketing and self motivation) of the seven proposed key skills were identified.

This implies that while human resources, opportunity identification and technical skills were important, they were not considered as extremely important and could therefore be

said to be just important supporting skills. This finding also implies that operations and legal skills were wrongly identified as supporting but should be categorized as key or extremely important. Interestingly, only a few of the successful SMEs considered themselves to be extremely competent in the resource gathering skill category that was considered by both groups as extremely important.

This can be translated into the acceptance of propositions 1.1.3, 1.1.6 and 1.1.7 on key skills. Propositions 1.1.1, 1.1.2, 1.1.4 and 1.1.5 were rejected. In terms of supportive skills, sub-propositions 2.1.7 and 2.1.8 were accepted, while all the others (2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 2.1.6, 2.1.9, 2.1.11, 2.1.12 and 2.1.13) were rejected.

Training

Using chi-square tests results, the study rejected proposition 3, which stated that successful SMEs are not more likely to have been trained in skills than less successful SMEs. Consequently all sub-propositions (3.3, 6.1, 6.2, 6.3, 6.4, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 9.11, 12.1, 12.2, 12.3, 12.4) that stated whether successful SMEs received more training compared to less successful SMEs were also rejected.

T-tests were conducted to confirm these results. On average the successful group were trained in at least 16 courses of the identified 20 skill categories. The less successful group had been trained in less than 8 of the identified 20 skills categories. This was confirmed by the initial frequencies test and by another t-test investigating the differences in training based on the two factors in the two questions. This seems to imply that the more successful SMEs were trained more than the less successful SMEs.

Variances between demographics

ANOVA tests were conducted to investigate whether there were significant differences between demographic variables in terms of how these SMEs viewed the importance and rated their competence in these two factors. The results showed that there were statistically significant differences in the group's demographics in terms of the importance/competence of functional/enterprising skills, as illustrated in the table 7.1 below:

Table 7.1: Variance between demographics - comparing the two samples

Factor	Successful group variables with variance	Less successful group variables with variance
Importance of factor 1- functional skills	<ul style="list-style-type: none"> • Age • Education • Form of business Propositions 13.1; 13.2, 13.8 rejected. Propositions 13.3; 13.4, 13.5, 13.6, 13.7, 13.9 accepted.	<ul style="list-style-type: none"> • Form of business • location • Region Propositions 14.6; 14.8; 14.9 rejected. Propositions 14.1, 14.2, 14.4, 14.5, 14.7 accepted.
Importance of factor 2 - enterprising skills	<ul style="list-style-type: none"> • Education • Work experience Propositions 15.2, 15.5 rejected. Propositions 15.1, 15.3, 15.4, 15.6, 15.7, 15.8, 15.9 accepted.	<ul style="list-style-type: none"> • Education • Location • Region Propositions 16.2, 16.6, 16.9 rejected. Propositions 16.1, 16.3, 16.4, 16.5, 16.7, 16.8 accepted.
Competence in factor 1 - functional skills	<ul style="list-style-type: none"> • Age • Form of business Proposition 17.1, 17.8 rejected. Proposition 17.2, 17.3, 17.4, 17.5, 17.6, 17.7, 17.9 accepted.	<ul style="list-style-type: none"> • Form of business • location • Region Proposition 18.6, 18.8, 18.9 rejected. Proposition 18.1, 18.2, 18.3, 18.4, 18.5, 18.7 accepted.
Competence in factor 2 - enterprising skills	<ul style="list-style-type: none"> • Age • Education • Region • Work experience Propositions 19.1, 19.2, 19.5, 19.6 rejected. Propositions 19.3, 19.4, 19.7, 19.8, 19.9 accepted.	<ul style="list-style-type: none"> • Age • Education • location • Region Propositions 20.1, 20.2, 20.6, 20.9 rejected. Propositions 20.3, 20.4, 20.5, 20.7, 20.8 accepted.

The variance analysis showed that the demographics variables of age, education, work experience, forms of business, location and region have a significant effect on how SMEs view the importance of the two factors and how they rate their competence in the said factors. Successful SMEs are more affected by age, work experience and

education, while the less successful SMEs are more affected by location, region and form of business. There were no significant differences in both groups of SMEs in terms of the following demographics: ethnic groups, language, gender, subsector and product focus.

7.5 Contribution of the study

The contributions of this study, being a critical analysis of skills essential for SME and entrepreneurship development, may be assessed in terms of the following:

1. This study makes a distinct contribution to the field of entrepreneurship theory related to manpower requirements for successful SMEs. The study incorporated eight models from authors namely Glancey (1998), Vuuren & Nieman (1999), Erikson (2002), Wickham (1998), Man et al (2002), Ucbasaran et al (2004), Darroch & Clover (2005) and Perks & Struwig (2005) into an integrated and more versatile model. This facilitates the synthesis of existing research and helps to address the gaps existing in theories. This could have significant benefits for entrepreneurship education, entrepreneurial learning, entrepreneurial support, public policy and the entrepreneurship practice itself.
2. This study generated two factors, namely functional and enterprising skills, which encompassed most of the business skills and entrepreneurship skills constructs of the eight models. This integrated model offers concrete guidance on the combination of skill factors that make some people more successful as SME owners and entrepreneurs than others in the same sector. The study presents these factors as important and should be taken seriously in terms of policy formulation and training planning and implementation.
3. This study conducted an industry/geography validation of the integrated model. This study investigated whether the set of assignable competencies as identified by the eight models reviewed (as presented in the detailed model) can be applied to a specific industry (the textile and clothing industry) at a specific geographic location (Johannesburg). The study showed that in the textile and clothing industry, successful SMEs were more competent in these skills than less competent SMEs, implying that skill acquisition does contribute towards SME success. This research contributes towards answering the question of whether this crucial skill set is universal or whether it differs in different economies or industrial sectors.

4. In terms of value judgements, this study demonstrates that the perception of the importance of skills impacted on the actions of SMEs. The more successful group of SMEs had indicated that they considered skills more important than the indication given by less successful SMEs. This translated to the more successful SMEs being trained in more skill than less successful SMEs.
5. This study investigated whether competence in the said skills is associated with specific prior training in that industry. This implies that training has got a big role to play in the development of SMEs. This can assist facilitate the construction of a relevant skills development plan for these SMEs and the provision of more appropriate training programmes.
6. This study contributes to the body of knowledge in the field and adds to the massive and ongoing research gathering of reliable and accurate information about SMEs in South Africa.
7. To the international community the results of this research can be used as a case study upon which various measures could be taken. The results serve as a lesson for other counties embarking on SME development.

7.6 Limitations of the study

This study has devoted considerable attention to explaining the relationship between perception, a certain set of competencies, its training and SME success. However as it is widely accepted that all forms of research have certain limitations (Cooper & Schindler, 2001:616; Dahlqvist et al, 2000:17); the reader should therefore be aware of the following limitations of this study:

- This study developed a model based on reviewing literature that was mainly focusing on USA and European contexts, which made it difficult to apply the theory to non-USA contexts.
- Based on the stochastic nature of business venturing, there are views that reject the notion that business success can be equated with entrepreneurial competence. If these views are valid then the fundamental assumptions underlying this PhD study are null and void (Watson et al, 1998:217; Botha, 2006:291).
- It must be noted that skill development is only a part of the complex set of variables needed for success in SMEs. This study only focuses on investigating one variable (skills competence) as contributing to SMEs success. However in reality it is not possible to separate factors that influence the entrepreneurial process.

- The study focuses only on SMEs as interviewed in 2006. The cross-sectional survey methodology has inherent weaknesses as the relationship is only correlational (Gurol & Atsan, 2006:35; Kodithuwakhu & Rosa, 2002:437). As the entrepreneurial process occurs over time, it is difficult to research this process using conventional cross-sectional methodologies which capture respondents in various stages of their firm's life cycle (Gundry & Welsch, 2001:457; Rogerson 2001a:117). It has been argued that the dynamics of SME development can only be fully understood only in the light of longitudinal studies that seek to monitor the condition of the SME economy over a period of time (MacMahon & Murphy, 1999:27; Erikson, 2002:277).
- This study's research design relies on the perspective of the individuals who are respondents. There are potential validity problems with a perceptual measure of competence as the self-evaluation is regarded as inherently biased. Furthermore many businesses are not willing to supply researchers with the information needed for objective measures because of to their suspicion of academic research and its motives (Lange et al, 2000:7; Miller et al, 2003:215; Rauch & Frese, 2000:15; Delmar et al, 2003:190).
- Another limitation is the categorizing of the skills where the boundaries between skill categories are not distinct and occasionally overlapped with other categories. Some skills categories included variables that use basically diverse skills; for example, competitor analysis was in the marketing category; cash flow management in financial skills and creativity / innovation in the opportunity alertness category. This may have caused varying understanding of the skills category construct from the researcher to respondent to analyst, creating conceptual confusion. This might also mean that the study did not distinguish sufficiently between the variations in the definition of the skill/competency within each category. This reduces the possibility of direct comparison with other studies and hence the possibility of drawing far-reaching conclusions on the basis of similarities and differences compared with their results (Baron 2003:253). Future studies should separate these variables further.
- It must never be assumed that what holds true for entrepreneurs in one part of the world can therefore form a legitimate basis for studies elsewhere (Renolds & White, 1997; Gadenne, 1998:37; Drakopoulou & Patra, 2002:117); thus one of the limitations of this study is that its generalization is limited to South Africa.

In spite of all the limitations, entrepreneurship research has been instrumental in clarifying and articulating many of the key internal factors necessary to encourage entrepreneurial activity (Mueller & Thomas, 2000:53).

7.7 Recommendations

This research has attempted to break new grounds on relations between skills competence, the training and SME success. In so doing section the study has unveiled various skills issues that need to be address and incorporated key training implications for South Africa. This subsection outlines the following recommendations that were identified during the course of the study.

Firstly, the study recommends that the training of SMEs should focus on the development of those skills identified as key success factors for SMEs. Based on the model developed and tested, the study recommends that SME skills development and training programmes should apply the model as described by equations 7.1, 7.2 and 7.3:

$$\text{Training for } \uparrow E/P = \text{training in key skills} \times [1 + \text{training in supporting skills}]. \quad (7.1)$$

$$\text{Key skills} = [a.PM \times q.EG \times (s.BF \times t.BM \times y.BL \times \alpha.BO)] \quad (7.2)$$

$$\text{Supportive skills} = [(1 + e.PLS + j.PN + f.PC) \times (m.EO + n.EC + o.El)] \times (1 + p.EM) \times r.(1/(1-ER)) \times ((1 + v.BB + w.BG + x.BI + z.BN + u.BH + \beta.BP + \chi.BR + \delta.BV) \times d.T/S] \quad (7.3)$$

Where:

- PM = Motivation (need for achievement)
- PLS = Life skills including problem solving, adaptability to change, decision making, negotiating, learning abilities and time management
- PN = Numeracy and literacy
- PC = Communication
- BB = Business systems management
- BG = General management
- BF = Financial management

- BH = Human resources
- BI = ICT skills
- BL = Legal
- BM = Marketing
- BN = Networking
- BO = Operational
- BP = Planning
- BR = Research and development
- BV = Value chain management
- EC = Creativity
- EI = Innovation
- EO = Opportunity recognition
- EM = Role model interpretation
- EG = Ability to gather and control resources
- ER = Calculated risk taking – unit is percentage
- a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z α , β , χ and δ are constant coefficients.

These equations imply that the training programmes must have a content that covers functional and enterprising skills as outlined in table 7.2 below:

Table 7.2: List of functional and enterprising skills required by SMEs

FUNCTIONAL SKILLS		ENTREPRISING SKILLS	
Key skills		Key skills	
BM	Marketing management	EG	Ability to Gather & control resources
BF	Financial management	PM	Motivation (need for achievement)
BO	Operational		
BL	Legal		
Supportive skills		Supportive skills	
BG	General management	EC	Creativity
BI	ICT skills	EI	Innovation
BH	Human resources management	EM	Role Model interpretation
BN	Networking	EO	Opportunity recognition
BP	Planning	ER	Calculated Risk taking

BR	Research and development		
BS	Business Systems management		
BV	Value chain management		
T/S	Technical Skills		
PN	Numeracy and literacy		
PC	Communication		
PLS - Personal life skills including adaptability to change, decision making, negotiating skill learning abilities, problem solving, time management skills			

From the table 7.1 as well as equations 7.1, 7.2 and 7.3 above the following are recommended:

1. Key functional skills (namely finance, marketing, operations and legal skills) should be integrated into all training programmes of SMEs in all the stages of the entrepreneurial process.
2. Key enterprising skills (motivation and the securing/controlling of resources skills) should be integrated into all training programmes of SMEs in all the stages of the entrepreneurial process.
3. Training should also incorporate all the identified supporting skills. Supporting skills must be analysed into those that are important for the stage that the SME is at in terms of the entrepreneurship process and the training incorporate the relevant supporting skill with the SME training. The training of supportive skills must be aimed at giving the SME basic comprehension and practical application of that skill in business usage. It can also help the SME know where to source the skill.
4. Emerging entrepreneurs and school leavers who intend to undertake entrepreneurship should ensure they know about the skills that are important for business success. They should also test themselves to check their level of ability in all the identified skill areas and from there should seek assistance to formulate skill development plans that will ensure that they have a plan that will get them the required skills as they prepare to enter into entrepreneurship.
5. Existing SMEs should analyse their strengths and weaknesses in each of the skills categories. They should also enrol themselves in outcome based skills development programmes (training or mentorship) that furnish them with competence in the identified key skill areas needed for SMEs' success and then strive to acquire all the

relevant support skills according to the requirements for each of the entrepreneurship process stage.

6. Private training consultancies, mentors, tertiary institutions; non government organisations, community-based organizations and industry training organizations who focus on entrepreneurship development should be able to determine the level of competence for each trainee in each area, be able to deliver a basic course focusing on transferring the basic comprehension level and be able to give customized focal area for all the key skills categories.
7. Local Business Service Centres (LBSCs), government agencies, government-sponsored organizations and foreign donor agencies that support small business and youth development should ensure that the programmes they support include training of the key skills and the supporting skills specified by this study.
8. Policy makers should reflect whether the target groups are aware of the skills needed and if they are being equipped with the skills that will enable them to engage in entrepreneurial action.

The field of entrepreneurship is young with the number of people teaching and / or researching in the field not being many (Markman & Baron 2003:287; Man et al 2002:139). It is hoped that the findings of this study will spur further research in this area.

Further research that could come out of this study includes:

- Studies that will extend or replicate these results through statistical validation of the integrated model as presented by equations 7.1, 7.2 and 7.3. Such studies can compare different industries and different areas (inter-industry, cross-cultural or cross-city comparisons).
- Studies that further break down competence area constructs into individual skill factors.
- Studies that will investigate additional factors related to the success and failure of SMEs would be a vital next step in the research agenda and ultimately essential to assisting SMEs in the textile and clothing sector in, for instance, rural and poor urban communities.
- Empirical studies investigating key/supporting skills in the various stages of the entrepreneurial process.
- Longitudinal studies which will indicate changes in skill acquisition process over designated periods to verify the findings/recommendations of this study.

- Mathematical models which will quantify the importance of each skill and qualify the relationship between skill acquisitions and the productivity of the SMEs. This would give guidelines on the intensity of training and the combination of functional and enterprising skills that should be targeted to SMEs for optimum impact.

7.8 Conclusion

Researchers in South Africa have undertaken a number of studies on the impact of skills training on SME success and failures. These occasional appraisals are necessary to enable South Africans to monitor programs in the development of the SMEs. This study has attempted to make a contribution to this research and has come out with interesting findings and recommendations.

The literature review introduced various important elements within the field of SME development, especially in the skills development programmes. During this chapter the objectives were revisited and it was indicated that all objectives had been met. Furthermore the propositions were revisited and explained as accepted or rejected.

The main findings of this study are summarized as:

1. Key skills that enhance SME success include the ability to gather resources, marketing, motivation, legal, financial and operational management skills.
2. Successful SMEs considered key skills to be more important and rated themselves more competent in most of the identified skills than did less successful SMEs.
3. Successful SMEs had been trained in more skills categories than less successful SMEs, with most of the successful SMEs having received training in all the key skills identified.

The findings from the empirical part of this study have helped to highlight the key role played by skills in business success. One dominant theme in this research is that skills training can make a difference to the way the SMEs operate and their chances of survival and success. The study has shown that entrepreneurship programmes aimed at increasing capacity/competencies relevant to setting up and running and growing a business can help create and sustain jobs.

This research has been informed by the cardinal development principle that skills' training empowers people to mobilise resources to produce change in their communities. Skills' training then constitutes one important vehicle underlying the development and transformation in specific regions. This study recommends that the less successful SMEs in Johannesburg be exposed to outcome based training aimed at developing key skills and accessing supporting skills.

It is hoped that the findings of this study could make an important contribution in the areas of theory, the development appropriate training programmes and methodology as well as policy formulation in the various departments connected with the promotion of the SME sector. Hopefully future research would endeavour to open new avenues in this important area.

Unless the categorising of skills is taken seriously by researchers in the SME development field, the products of research may not be that illuminating. Skill analysis seeks to provide answers to questions related to empowering the business owners. By linking skills analysis to the empowerment imperative it would be possible to produce a report which is perception and theoretically informed, as well as development sensitive. The various acts of skill development are locally sensitive and therefore, by implication, critical in addressing the SME development issues in Johannesburg.

REFERENCES

- Addis, M. 2003. Basic Skills and Small Business Competitiveness: Some Conceptual Considerations, *Education and Training*, 45(3):152-161.
- Ahwireng-Obeng, F. & Piaray, D. 1999. Institutional obstacles to South African entrepreneurship. *South African Journal of Business Management*, 30(3):78-98.
- Ahwireng-Obeng, F. 2003. Youth economic empowerment in South Africa: entrepreneurship versus small business policy. *Proceedings at the 48th Conference of the International Council for small business (ICBS)*, Dublin, 9 – 11 June:1-18.
- Al-Madhoun M & Analoui F. 2002. Developing managerial skills in Palestine. *Education and Training* 44(8/9):431-442.
- Alvord, S.H., Brown, L.D. & Letts, C.W. 2001. Social entrepreneurship – leadership that facilitates societal transformation – an exploratory study. [Online] Available from: <http://www.hks.harvard.edu/leadership/Pdf/AlvordBrownLettsWorkingPaper.pdf> [Accessed: 2008-11-20].
- Andries, P. & Debackere, K. 2007. Adaptation and Performance in New Businesses: Understanding the Moderating Effects of Independence and Industry. *Small Business Economics*, 29(1/2):81-89.
- Antonites, A.J. 2003. *Action learning to entrepreneurial creativity, innovation and opportunity finding*. Unpublished DCom Thesis. University of Pretoria.
- Ardichvili, A., Cardozo, R. & Ray, S. 2003. A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1):105-123.
- Ayotte, K. 2007. Bankruptcy and Entrepreneurship: The Value of a Fresh Start. *Journal of Law, Economics and Organization*, 23(1):161-185.
- Baard, V.C. & Van den Berg, A. 2004. Interactive information consulting system for South African small businesses: part 1. *South African Journal of Information Management*, 6(2):1-19.

- Baines, S. & Robson, L. Being self employed or being enterprising? The case of creative work for the media industries. *Journal of Small Business and Enterprise Development*, 8(4):349-362.
- Baron, R.A. 1998. Cognitive mechanisms in entrepreneurship: Why and when entrepreneurs think differently than other people. *Journal of Business Venturing*, 13(4):275-294.
- Baron, R.A. 2003. Human resource management and entrepreneurship: Some reciprocal benefits of closer links. *Human Resource Management Review*, 13(2):253-256. Editorial.
- Baron, R.A. 2004a. Potential benefits of the cognitive perspective: Expanding entrepreneurship's array of conceptual tools. *Journal of Business Venturing*, 19(2):169-172. Editorial.
- Baron, R.A. 2004b. The cognitive perspective: a valuable tool for answering entrepreneurship's basic why questions. *Journal of business venturing*. 19(2):221-239.
- Batjargal, B. 2006. The Dynamics of Entrepreneurs' Networks in a Transitioning Economy: The Case of Russia. *Entrepreneurship and Regional Development*, 18(4):305-320.
- Barreira, J.C.D. 2004. *The influence of business knowledge and work experience, as antecedents to entrepreneurial success*. Unpublished PHD thesis. University of Pretoria.
- Bateman, M. 2000. Neo-liberalism, SME development and the role of business support centres in the transition economies of Central and Eastern Europe. *Small Business Economics*, June 2000, 14(4):275-298.
- Baum J.R., Locke, E.A. & Smith, K.G. 2001. A multi-dimensional model for venture growth. *Academy of management Journal*, 44(2):292-303.
- Besser, T.L. 1999. Community involvement and the perception of success among small business operators in small towns. *Journal of Small Business Management*, 37(4):16-29.

- Berry, A., Von Bottnitz, M., Cassim, R., Kesper, A., Rajaratnam, B. & Van Seventer, D. E. 2002. The economics of SMMEs in SA. Trade and industry policy strategies: draft for comment. [Online] Available from: <http://www.TIPS.org.za> [Accessed: 2007-12-20].
- Bhave, M.P. 1994, A process model of entrepreneurial venture creation. *Journal of Business Venturing*, 9(3):223-242.
- Bird, B.J. 1988. Implementing Entrepreneurial Ideas: The Case for Intention. *The Academy of Management Review*, 13(3):442- 463.
- Bolton, B. & Thompson, J. 2002. *The entrepreneur in focus – achieve your potential*. Cengage Learning EMEA, Thomson.
- Bolton, B. & Thompson, J. 2004. *Entrepreneurs: Talent, Temperament and Technique*. 2nd edition, Butterworth-Heinemann, Elsevier.
- Botha, M. 2006. *Measuring the effectiveness of the women entrepreneurship programme as a training intervention, on potential, start-up and established women entrepreneurs in South Africa*. Unpublished PHD thesis, University of Pretoria.
- Bradley, E. 2002. I want to start my own business. *Women in Business*, 54(5):14-16, Sep/Oct.
- Bridges. 2002. Measuring success in entrepreneurship support initiatives: what works and what more is needed. [Online] Available from: <http://topics.developmentgateway.org/evaluation/rc/BrowseContent.do?source=RCContentUser&folderId=5014> [Accessed: 2007-12-20].
- Bryant & Yarnold. 1995. Principal component analysis and Exploratory and Confirmatory Analysis. In L.G. Grimm and P.R. Yarnold, Ed. *Reading and Understanding Multivariate Statistics*. American Psychological Association. Washington D.C. USA.
- Bruyat C. & Julian, P. 2000. Defining the field of research in entrepreneurship. *Journal of Business Venturing*, 16(165-180).
- Bygrave, W.D. 1993. Theory building in the entrepreneurship paradigm. *Journal of Business Venturing*, 8(3):255-280.

- Bygrave, W.D. 1997. *The portable MBA in entrepreneurship*. New York: John Wiley & Sons.
- Carter, N.M., Gartner, W.B. & Reynolds, P.D. 1996. Exploring start-up event sequences. *Journal of Business Venturing*, 11(3):151-166.
- Chapman, P., James-Moore, M., Szczygiel, M. & Thompson, D. 2000. Building Internet capabilities in SMEs. *Logistics Information Management*, 13(6):353-361.
- Clinton, M., Totterdell, P. & Wood, S. 2006. A Grounded Theory of Portfolio Working - Experiencing the Smallest of Small Businesses. *International Small Business Journal*, 24(2):179-203.
- COJ. 2004. City of Johannesburg. Strategic framework for skills development. Unpublished report compiled by Resolve Workplace Solutions for the Economic Development Unit.
- Clover, T.A. & Darroch, M.A.G. 2005. Owners' perceptions of factors that constrain the survival and growth of small, medium and micro agribusinesses in KwaZulu-Natal, South Africa. *Agrekon*, 44(2):238-263.
- Collins, L. Hannon, P.D. & Smith, A. 2004. Enacting entrepreneurial intent: the gaps between student needs and higher education capability. *Education and training*. 46(8/9):454-463.
- Cope, J. 2003. Entrepreneurial learning and critical reflection. Discontinuous events as triggers for higher level learning. *Management learning*. 34(4):429-450.
- Cope, J. & Watts, G. 2000. Learning by doing - An exploration of experience, critical incidents and reflection in entrepreneurial learning. *International Journal of Entrepreneurial Behaviour and Research*, 6(3):104-124.
- Cook, R.G., Belliveau, P & Sandberg, M.E. 2004. Training and learning as drivers of US micro enterprise business plan quality. *Education and Training*. 46(8/9):398-405.
- Cooper, D.R. & Schindler, P.S. 2008. *Business research methods*. 10th edition. Boston: McGraw-Hill Irwin.

- Cornwall, J.R. & Naughton, M.J. 2003. Who is the Good Entrepreneur? An Exploration within the Catholic Social Tradition. *Journal of business ethics*, 44:61-75.
- Coughlin P, Rubin M, Darga L.A. 2001. *The SADC Textile and Garment Industries - Constraints and Opportunities: Myopia or Global Vision*. Study commissioned by the Southern African Development Community, August.
- Czinkota, M.R. & Ronkainen, I.A. 2003. Have Lunch or Be Lunch. *Marketing Management*, 12(2):48-50.
- Dahlqvist, J., Davidsson, P. & Wiklund, J. 2000. Initial Conditions as Predictors of New Venture Performance: A Replication and Extension of the Cooper et al study. *Enterprise and Innovation Management Studies*, 1(1):1-17.
- Dana, L.P. 2001. The Education and Training of Entrepreneurs in Asia. *Education and Training*, 43(8/9):405-415.
- Darroch, M.A.G. & Clover, T.A. 2005. The effects of entrepreneurial quality on the success of small, medium and micro agri-businesses in KwaZulu-Natal, South Africa. *Agrekon*, 44(3):321-343.
- Davies, T. 2001. Enhancing competitiveness in the manufacturing sector: Key opportunities provided by inter firm clustering. *Competitiveness Review*, 11(2):4-16.
- Davila, A., Foster, G. & Gupta, M. 2003. Venture capital financing and the growth of startup firms. *Journal of Business Venturing*, 18(6):689-708.
- Dawson, S., Breen, J. & Satyen, L. 2002. The ethical outlook of micro business operators. *Journal of Small Business Management*, 40(4):302-313.
- De Faoite, D., Henry, C., Johnston, K. & Van der Sijde, P. 2004. Entrepreneur's attitudes to training and support initiatives: evidence from Ireland and the Netherlands. *Journal of small business and enterprise development*, 11(4):440-448.
- Deakins, D. & Freel, M. 1998. Entrepreneurial Learning and the Growth Process in SMEs. *Learning Organization*, 5(3):144-155.
- Dees, J.G. 1998. The meaning of social entrepreneurship. Paper by the Kauffman Centre for Entrepreneurial leadership. [Online] Available from:

<http://www.fntc.info/files/documents/The%20meaning%20of%20Social%20Entreneurship.pdf>
[Accessed: 2008-11-20].

- Delmar, F., Davidson, P. & Gartner, W.B. 2003. Arriving at the high growth firm. *Journal of Business Venturing*, 18(2):189-216.
- Dess, G.G., Lumpkin, G.T. & McGee, J.E. 1999. Linking corporate entrepreneurship to strategy, structure, and process: Suggested research directions. *Entrepreneurship Theory and Practice*, 23(3):85-10.
- Devins, D., Johnson, S & Sutherland, J. 2004. Employer characteristics and employee training outcomes in UK SMEs: a multivariate analysis. *Journal of small business and enterprise development*, 11(4):449-457.
- Dimantopoulos, A. & Schlegelmich, B.B. 2002. *Taking the fear out of data analysis*. London, U.K: Thomson Learning.
- Dockel, J.A. & Ligthelm, A.A. 2005. Factors Responsible for the Growth of Small Businesses. *South African Journal of Economic and Management Sciences*, N.S., 8(1):54-62.
- Dollinger, M.J. 1999. *Entrepreneurship: strategies and resources*. 2nd edition. Prentice Hall, Upper Saddle River, N.J.
- Drakopoulou Dodd, S. & Patra, E. 2002. National differences in entrepreneurial networking". *Entrepreneurship & regional development*, 14(2):117–134.
- Drakopoulou Dodd, S. & Anderson, A.R. 2007. Mumpsimus and the Mything of the Individualistic Entrepreneur. *International Small Business Journal*, 25(4):341-360.
- Dreisler, P., Blenker, P. & Nielsen, K. 2003. Promoting entrepreneurship - changing attitudes or behaviour? *Journal of Small Business and Enterprise Development*, 10(4):383-392.
- Drucker, P.F. 1985. *Innovation and entrepreneurship: practice and principles*. Heinemann, London.

- Durand, D. E. 1975. Effects of achievement motivation and skill training on the entrepreneurial behavior of black businessmen. *Organizational Behavior and Human Performance*, 14(1):76-90.
- Erikson, T. 2002. Entrepreneurial capital: the emerging venture's most important asset and competitive advantage. *Journal of business venturing*, 17(3):275-290.
- Eriksson, T & Kuhn, J.M. 2006. Firm spin offs in Denmark 1981 – 2000 – patterns of entry and exit. *International journal of Industrial organization*, 24:1021-1040.
- Fernald, L Jr, Solomon, G. & Bradley, D. 1999. Small business training and development in the United States. *Journal of Small Business and Enterprise development*. 6(4):310-325.
- Fielden, S.L., Davidson, M.J. & Makin, P.J. 2000. Barriers encountered during micro and small business start-up in North West England. *Journal of Small Business and Enterprise Development*, 7(4):295-304.
- Finmark. 2006. *Finmark Trust: making financial markets work for the poor*. [Online] Available from: www.finscope.co.za/documents/2006/PR_smallbusiness.pdf [Accessed: 2007-11-27].
- Fletcher, D.E. 2006. Entrepreneurial Processes and the Social Construction of Opportunity. *Entrepreneurship and Regional Development*, 18(5):421-440.
- Fox, C. 2004. *Some thoughts on Intrapreneurship*. [Online] Available from: <http://www.chrisfoxinc.com/> [Accessed: 2006-07-27].
- Freel, M.S. & Robson, P.J.A. 2004. Small Firm Innovation, Growth and Performance - Evidence from Scotland and Northern England. *International Small Business Journal*, 22(6):561-575.
- Freeman, S. 2000. Partnerships between small and medium enterprises and universities that add value. *Education and Training*, 42(6):372-377.
- Friedrich, C., Glaub, M., Gramberg, K. & Frese, M. 2003. *Does Training Improve the Business Performance of Small Scale Entrepreneurs: An Evaluation Study*. Unpublished document, Cape Town.

- Gadenne, D. 1998. Critical Success Factors for Small Business: An Inter-industry Comparison. *International Small Business Journal*, 17(1):36-58.
- Gartner, W., Starr, J. & Bhat, S. 1999. Predicting new venture survival: An analysis of "anatomy of a start-up." cases from Inc. Magazine. *Journal of Business Venturing*, 14(2):215-232.
- Gbadamosi, G. 2002. Entrepreneurial behaviour: research issues and agenda in Africa. An article in "Entrepreneurship Africa: the Road to freedom". 1st International Conference. Pretoria. October 3-4:95-101.
- GEM. 1999. Reynolds, P.D., Hay, M. & Camp, S.M. *Global Entrepreneurship Monitor*, Babson College. [Online] Available from: <http://www.esbri.se/gem-rapport.pdf> [Accessed: 2007-12-20].
- GEM. 2001a. Driver, A., Wood, E., Segal, N & Herrington, M. *Global Entrepreneurial Monitor*. South African Executive Report. [Online] Available from: <http://www.gemconsortium.org/> [Accessed: 2006-05-20].
- GEM. 2001b. Galloway, L. & Levie, J. *Global entrepreneurship monitor*. University of Strathclyde. Scotland. [Online] Available from: <http://www.gemconsortium.org/> [Accessed: 2008-05-07].
- GEM. 2002a. Foxcroft, M.L., Wood, E., Kew, J., & Segal, N. *Global Entrepreneurship Monitor*. South Africa Executive report. Cape Town: University of Cape Town. [Online] Available from: <http://www.gemconsortium.org/> [Accessed: 2004-07-03].
- GEM. 2002b. Levie, J., Brown, W. & Galloway, L. *Global Entrepreneurship Monitor*. University of Strathclyde. Scotland. [Online] Available from: <http://www.gemconsortium.org/> [Accessed: 2007-08-20].
- GEM 2002c. Neck, H.M., Zacharakis, A.L., Bygrave, W.D. & Reynolds, P.D. *Global Entrepreneurship Monitor*. Executive Report. [Online] Available from http://www.kauffman.org/pdf/us_gem_2002.pdf [Accessed: 2007-12-20].
- GEM. 2003a. Foxcroft, M.L., Wood, E., Kew, J., Herrington, M. & Segal, N. Global Entrepreneurship Monitor (GEM) South African executive report, The Graduate

Business School University of Cape Town, Cape Town. [Online] Available from: <http://www.gemconsortium.org/> [Accessed: 2005-09-13].

- GEM. 2003b. Orford, J., Wood, E., Fisher, C., & Segal, N. *Global Entrepreneurship Monitor*. South African Report. University of Cape Town: Cape Town. [Online] Available from: <http://www.gemconsortium.org//> [Accessed: 2006-07-03].
- GEM. 2004. Orford, J, Herrington, M. & Wood, E. 2004. *Global Entrepreneurship Monitor: South African Report*. Cape Town. University of Cape Town. [Online] Available from: <http://www.gemconsortium.org//> [Accessed: 2007-03-27].
- GEM 2005a. Minniti, P. Bygrave, W.D. & Autio, E. 2005. *Global Entrepreneurship Monitor*. London. London school of business and Babson College. [Online] Available from: <http://www.gemconsortium.org//> [Accessed: 2007-02-05].
- GEM. 2005b. Von Broembsen, M., Wood, E. & Herrington, M. 2005. *Global entrepreneurship Monitor*. The South African Report. UCT Centre for Innovation and Entrepreneurship. [Online] Available from: <http://www.gemconsortium.org//> [Accessed: 2007-10-21].
- GEM. 2006. Bosma, N. & Harding, R. *Global Entrepreneurship Monitor*. Summary Results. Babson College and London Business School. [Online] Available from: <http://www.gemconsortium.org//> [Accessed: 2008-02-20].
- GEM. 2007. Autio, E. *Global Entrepreneurship Monitor*. Global Report on High Growth entrepreneurship. Babson College and London Business School. [Online] Available from: <http://www.gemconsortium.org//> [Accessed: 2008-03-17].
- Gibb, A.A. 1993. The enterprise culture and education. *International Small Business Journal*, 11(3):1-12.
- Gibbon, P. 2004. South Africa and the global commodity chain for clothing: export performance and constraints. Article in "*Clothing and Footwear in African Industrialisation*". Edited by McCormick D and Rogerson C. Africa Institute of South Africa.
- Glancey, K. 1998. Determinants of growth and profitability in small entrepreneurial firms. *International Journal of Entrepreneurial Behavior and Research*, 4(1):18-27.

- Glancey, K., Greig, M. & Pettigrew, M. 1998. Entrepreneurial dynamics in small business service firms. *International Journal of Entrepreneurial Behaviour and Research*, 4(3):249-268.
- GMAP. 2007. Small Business Survival – a joint report to the governor. By the state of Washington's department of economic trade and economic development; employment security department; department of land and industry and the department of revenue. [Online] Available from: <http://dor.wa.gov/docs/reports/BusinessSurvivalReportOct2007.pdf>. [Accessed 2007/09/10].
- Goolnik, G. e-Learning for smaller rurally based businesses: A demand-led challenge for Scottish Educational Institutions. Online Journal of Distance Learning Administration. [Online] Available from: <http://0nurs.westga.edu.innopac.up.ac.za:80/~distance/ojdla/summer52/goolnik52.pdf>. [Accessed 2007/09/10].
- Govender, K.K. 1994. Problems and training needs of small business in Transkei, *Development Southern Africa*, 11(1):113-119.
- Gruber, M. 2002. *Transformation as a challenge – new ventures on their way to viable entities*. pages 193-201. [Online] Available from: http://www.igw.unisg.ch/rencontres/band2002/C_03_Gruber.pdf [Accessed 2007/09/10].
- Gundry, L.K. & Welsch, H.P., 2001. The Ambitious Entrepreneur: High growth strategies for women-owned enterprises. *Journal of business venturing*, 16(5):453-470.
- Gurol, Y. & Atsan, N. 2006. Entrepreneurial characteristics amongst university students. *Education and training*, 48(1):25-38.
- Guzman, J. & Santos, F.J. 2001. The Booster Function and the Entrepreneurial Quality: An Application to the Province of Seville. *Entrepreneurship and Regional Development*, 13(3):211-228.
- Hair, J.F. Jr., Anderson, R.E., Tatham R.R. & Black, W.C. 1998. *Multivariate Data Analysis. 5th edition*. Prentice Hall, Upper Saddle River, NJ.

- Hankinson, A. 2000. The key factors in the profiles of small firm owner-managers that influence business performance. The South Coast Small Firms Survey, 1997-2000. *Industrial and Commercial Training*, 32(3):94-98.
- Harris, S, Forbes, T & Fletcher, M. 2000. Taught and enacted strategic approaches in young enterprises. *International Journal of Entrepreneurial Behaviour and Research*, 6(3):125-144.
- Harris, S. & Wheeler, C. 2005. Entrepreneurs' relationships for internationalisation: functions, origins and strategies. *International Business Review*, 14(2005):187-207.
- Hellmann, T. 2007. Entrepreneurs and the Process of Obtaining Resources. *Journal of Economics and Management Strategy*, 16(1):81-109.
- Henning, J.J. 2003. Optimising the closely held corporation to enhance commercial participation and development: The Southern African experience in comparative perspective. *Journal for Juridical Science*, 28(2):1-32.
- Henry, C., Hill, F. & Leitch, C. 2005. Entrepreneurship education and training: can entrepreneurship be taught? Part 1. *Education and Training*, 47(2):98-111.
- Hill, R. & Stewart, J. 2000. Human resource development in small organizations. *Journal of European Industrial Training*, 24(2/3/4):105-117.
- Hisrich, R.D. & Peters, M.P. 2002. *Entrepreneurship. International 5th ed.* McGraw Hill/Irvin; Higher Education.
- Hisrich, R.D., Peters, M.P. & Shepherd, D.A. 2005. *The entrepreneurial process. Entrepreneurship. 6th Edition.* New York: McGraw-Hill Irwin.
- Hite, J.M. 2005. Evolutionary processes and paths of rationally embedded network ties in emerging entrepreneurial firms. *Entrepreneurship Training and Education*, 1084-2087(January):113-144. T & P. Baylor University.
- Hofstede. G. 1980. *Culture's consequences: international differences in work related values.* Beverly Hills. CA: Sage publications.

- Honig, B. 1998. What determines success? Examining the human, financial, and social capital of Jamaican microentrepreneurs. *Journal of Business Venturing*, 13(5):371-394.
- Hudson, M., Smart, A. & Bourne, M. 2001. Theory and practice in SME performance measurement systems. *International Journal of Operations and Productions Management*. 21(8):1096-1115.
- Hupalo, P.I. 2003. Thinking like an entrepreneur: Measuring Success in Small Business and Entrepreneurship. [Online] Available from: Micro Internet e-Journal. <http://www.hcmpublishing.com> [Accessed 2007/07/17].
- Ibrahim, A.B. & Soufani, K. 2002. Entrepreneurship education and training in Canada: a critical assessment. *Education and training*. 44(8/9):421-430.
- Ibrahim, A.B., Soufani, K., Poutziouris, P. & Lam, J. 2004. Qualities of an effective successor: the role of education and training. *Education and training*. 46:8/9:474-480.
- Jack, S. & Robson, J.A. 2002. *A comparative study of the usefulness and impact of forma and informal networks for entrepreneurship*. University of Aberdeen and USA Babson College, Boston.
- Jansen, D. 2003. *Supporting newly founded firms – personal and professional networks*. TV discussion papers. Forschungsinstitut fur offentliche verwaltung.
- Jennings D.F. 1994. *Multiple Perspectives of Entrepreneurship*. Cincinnati, Ohio: South-Western Publishing Co.
- Joubert, C.S., Schoeman, N.J & Blignaut, J.N. 1999. Small, medium and micro-sized Enterprises (SMMEs) and the housing Construction Industry: A possible solution to South Africa's Socio-Economic problems. *South African Journal of Economic and Management Science*, 2(1):21-33.
- Kamaha, A.P. 2004. South Africa's Clothing Industry: The Case of Successful SMEs in Johannesburg. An article in D. McCormick and C.M. Rogerson (eds), *Clothing and Footwear in African Industrialisation*, Africa Institute of South Africa, Pretoria, 426-456.

- Kangasharju, A. 2000. Growth of the smallest: Determinants of small firm growth during strong macroeconomic fluctuations. *International Small Business Journal*, 19(1):28-43.
- Kekale, T. Pirolt, K & Falter, C. 2002. IT tools in personal training in Small enterprises: results of project "apply". *Journal of workplace learning*. 14(7):269-277.
- Keough, J. 2003. A better year in 2003. *Industrial Distribution*. 92(1):17-19.
- Kickul, J. & Gundry, L.K. 2002. Prospecting for strategic advantage: The proactive entrepreneurial personality and small firm innovation. *Journal of Small Business Management*, 40(2):75-97.
- Kim, J.,O. & Mueller, C. W. 1988. *Factor analysis: Statistical methods and practical issues*. Beverly Hills, CA: Sage.
- Kirzner, I.M. 1973. *Competition and entrepreneurship*. University of Chicago Press, Chicago.
- Kitching, J. 1998. Book Review: Investing in Training and Small Firm Growth and Survival: An Empirical Analysis for the UK in 1987-97. *International Small Business Journal*, 17(1):110-113.
- Klofsten, M. 2000. Training entrepreneurship at universities: a Swedish case. *Journal of European Industrial Training*, 24(6):337- 344.
- Klofsten, M & Spaeth, M. 2004. *Entrepreneurship training for regional growth and innovation: A Swedish case study and ten year retrospective*. Entrepreneurship training for regional Growth and Innovation. [Online] Available from <http://www.sbaer.uca.edu/research/icsb/2004/Papers%20pdf/130.pdf>. [Accessed 2008/08/17].
- Knight, F.H. 1964. *Risk, uncertainty and profit*, Augustus M. Kelley, New York.
- Kodithuwakku, S.S. & Rosa, P. 2002. The entrepreneurial process and economic success in a constrained environment. *Journal of Business Venturing*, 17(5):431-465.

- Kuratko, D.F. 2001. *Strategic entrepreneurial growth*. Harcourt College Publishers, Fort Worth ; London.
- Ladzani, W.M. & van Vuuren, J.J. 2002. Entrepreneurship training for emerging SMEs in South Africa, *Journal of Small Business Management*, 40(2):151-161.
- Lange, T., Ottens, M. & Taylor, A. 2000. SMEs and barriers to skills development: a Scottish perspective. *Journal of European Industrial Training*, 24(1):5-11.
- Larsson, E., Hedelin, L. & Garling, T. 2003. Influence of expert advice on expansion goals of small businesses in rural Sweden. *Journal of Small Business Management*, 41(2):205-212.
- Lawless, N., Allan, J. & O'Dwyer, M. 2000. Face to face or distance training: two different approaches to motivate SMEs to learn. *Education and Training*. 42(4/5):308-317.
- Leah, J. & Tucker, J. 2000. *Information asymmetry and small firm finance*. Paper presented at the 23rd ISBA National Small firms policy and research conference. Aberdeen. November.
- LeBrasseur, R., Zanibbi L., & Zinger, T.J. 2003. Growth Momentum in the Early Stages of Small Business Start-Ups. *International Small Business Journal*, 21(3):315-330.
- Lee, S.M., Lim, S. Pathak, R.D. Chang, D & Li, W. 2006. Influences on student attitudes towards entrepreneurship: A multi country study. *Entrepreneurship mgt*, 2:351-366.
- Li, D. & Ferreira, M.P. 2006. The Evolutionary Model of Entrepreneurial Firms' Dependence on Networks: Going beyond the Start-Up Stage. *Notas Economicas*, 24(06):48-63.
- Ligthelm, A.A. & Cant, M.C. 2002. *Business success factors of SMEs in Gauteng: A proactive entrepreneurial approach*. UNISA. Bureau of market research. Research report no 311. Faculty of economic and management science.
- Lowe, R & Marriott, S. 2006. *Enterprise, Entrepreneurship and Innovation – Concepts, Contexts and Commercialization*. Butterworth-Heinemann.

- Luiz, J. 2002. Small Business Development, Entrepreneurship and Expanding The Business Sector In A Developing Economy: The Case Of South Africa. *Journal of Applied Business Research*, 18(2):53-65.
- Lussier, R.N. & Pfeifer, S. 2001. A crossnational prediction model for business success. *Journal of Small Business Management*, 39(3):228-239.
- Lumsdaine, E. & Lumsdaine, M. 1995. *Creative Problem Solving. Thinking skills for a changing world. International Editions*. New York: McGraw-Hill Inc.
- MacMahon, J. & Murphy, E. 1999. Managerial effectiveness in small enterprises: implications for HRD. *Journal of European Industrial Training*, 23(1):25-35.
- Man, T.W.Y., Lau, T. & Chan, K.F. 2002. The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing*, 17(2):123-142.
- Markman, G. & Baron, R. 2003. Person–entrepreneurship fit: why some people are more successful as entrepreneurs than others. *Human Resource Management Review*, 13(2):281-301.
- Marri, H.B., Gunasekaran, A. & Kobu, B. 2003. Implementation of computer-integrated manufacturing in small and medium enterprises. *Industrial and Commercial Training*, 35(4/5):151-157.
- Martin, R.L. & Osberg, S. 2007. Social entrepreneurship: The case for definition. *Stanford Social Innovation Review*, Spring 2007:27-39
- Martinez, D., Mora, J. & Vila, L.E. 2007. Entrepreneurs, the Self-Employed and Employees amongst Young European Higher Education Graduates. *European Journal of Education*, 42(1):99-117.
- Massey, C. 2004. Is the training train out of control? A case evaluation failure from New Zealand. *Journal of Small Business and enterprise development*, 11(4):448-466.
- Matlay, H. 2001. Entrepreneurial and vocational education and training in central and eastern Europe. *Education and training*, 43(8/9):395-404.

- Matlay, H. 2004. Contemporary training initiatives in Britain: a small business perspective. *Journal of Small Business and enterprise development*, 11(4):504-513.
- Mayrhofer, A.M & Hendriks, S.L. 2003. Service provision for street based traders in Pietermaritzburg, KwaZulu-Natal: comparison local findings to lessons drawn from Africa and Asia. *Development Southern Africa*, 20(5):595-604.
- Mazzarol, T., Volery, T., Doss, N. & Thein, V. 1999. Factors influencing small business start-ups A comparison with previous research. *International Journal of Entrepreneurial Behaviour and Research*, 5(2):48-130.
- Mazzarol, T. 2003. A model of small business HR growth management. *International Journal of Entrepreneurial Behaviour and Research*. 9(1):27-49.
- McClelland, D.C. 1961. *The achieving society*, Van Nostrand, Princeton, N.J.
- McClelland, D.C. 1987. Characteristics of Successful Entrepreneurs. *Journal of Creative Behavior*, 21(3):219-233.
- McCline, R.L., Bhat, S. & Baj, P. 2000. Opportunity recognition: An exploratory investigation of a component of the entrepreneurial process in the context of the health care industry. *Entrepreneurship Theory and Practice*, 25(2):81-94.
- McCormick, D. & Rogerson, C.M. (eds). 2004. Introduction: researching clothing and footwear in African Industrialisation. Article in *Clothing and Footwear in African Industrialisation*, Africa Institute of South Africa, Pretoria.
- McKeiver, C. & Gadenne, D. 2005. Environmental Management Systems in Small and Medium Businesses. *International Small Business Journal*, 23(5):513-537.
- McMahon, R.G.P. 2001. Growth and Performance of Manufacturing SMEs: The Influence of Financial Management Characteristics. *International Small Business Journal*. 19(3):100-31.
- McPherson, M.A. 2000. Structural Adjustment and Small Enterprises: The Case of Zimbabwe. *South African Journal of Economics*, 68(3):514-536.
- Mead, D.C. & Liedholm, C. 1998. The Dynamics of Micro and Small Enterprises in Developing Countries. *World Development*, 26(1):61-74.

- Miller, N.J., Besser, T.L., Gaskill, L.R., Sapp, S.G. 2003. Community and managerial predictors of performance in small rural US retail and service firms. *Journal of retailing and consumer services*, 10(2003):215-230.
- Miruna Radu, M. & Redien-Collot, R. 2008. The Social Representation of Entrepreneurs in the French Press. Desirable and Feasible Models? *International Small Business Journal*, 26(3):259-298.
- Mogale, M.M. 2005. Local governance and poverty reduction in South Africa. *Progress in development studies*, 5(2):135-143.
- Monk, R. 2000. Why small businesses fail. *CMA Management*, 74(6):12-15.
- Morris, M.H., Pitt, L.F. & Berthon, P. 1996. Entrepreneurial activity in the Third World informal sector. The view from Khayelitsha. *International Journal of Entrepreneurial Behaviour & Research*, 2(1):59-76.
- Morris, M.H. & Zahra, S. 2000. Adaptation of the business concept over time: The case of historically disadvantaged South African owner/managers. *Journal of Small Business Management*, 38(1):92-100.
- Morrison, A. 2000. Initiating entrepreneurship in *Enterprise and Small Business: Principles, Practise and Policy*. Carter, S and Jones-Evans, D. (eds). Financial Times, Prentice-Hall, London.
- Mueller, S.L. & Thomas, A.S. 2001. Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1):51-75.
- Mughan, T., Lloyd-Reason, L. & Zimmerman, C. 2004. Management Consulting and International Business Support for SMEs: Need and Obstacles. *Education and Training*, 46(8/9):424-432.
- Nafukho, F.M. 1998. Entrepreneurial skills development programs for unemployed youth in Africa: A second look. *Journal of Small Business Management*, 36(1):100-103.
- Nasser, M.E., du Preez, J. & Herrmann, K. 2003. Flight of the young flamingoes: alternative futures for young entrepreneurs in South Africa. *Futures*, 35(4):393-401.

- Nieman, G. 2000. *Study guide for MPhil in Entrepreneurship and small business management*. Unpublished document. Department of business management. University of Pretoria.
- Nieman, G. 2001. Training entrepreneurs and small business enterprises in South Africa: A situational analysis. *Education and Training*, 43(8/9):445- 450.
- Nieman, G. 2006. *Small business management: a South African approach*, Van Schaik, Pretoria, South Africa.
- Nieuwenhuizen, C. & Kroon, J. 2002. Identification of entrepreneurial success factors of entrepreneurs in small and medium enterprises. *South African Journal of Higher Education*, 16(3):157-166.
- Nieuwenhuizen, C. & Kroon, J. 2003. The Relationship between Financing Criteria and the Success Factors of Entrepreneurs in Small and Medium Enterprises. *Development Southern Africa*, 20(1):129-142.
- Norda, H.K. 2004. *The global textile and clothing industry, past the agreement on textiles and clothing*. World Trade Organisation, Geneva.
- Krueger, JR. N.F., Reilly, M.D. & Carsrud, A.L. 2000. Competing models of entrepreneurial intentions. *Journal of Business Venturing* Volume 15(5-6):411-432.
- North, E. 2002. A decade of entrepreneurship education in South Africa. *South African Journal of Education*, 22(1):24-27.
- NTSIKA, 2001. *The state of small business in South Africa, 2000 annual review*. Pretoria: Department of Trade and Industry.
- OECD. 2002a. *OECD Information technology Outlook*. Organisational for economic cooperation and development. Paris.
- OECD. 2002b. *Small and medium enterprises*. Organisational for economic cooperation and development. Paris.
- Orser, B.J., Hogarth-Scott, S. and Riding, A.L. 2000. Performance, firm size and management problem solving. *Journal of Small Business Management*, 38(4):42-53.

- Otiso, K.M. 2004. *The African Growth and Opportunity Act and the textile and footwear industry in Africa*. Article in Clothing and Footwear in African Industrialisation. Edited by McCormick D and Rogerson C. Africa Institute of South Africa.
- Oxford dictionary. 2005. [Online] Available from: <http://www.askoxford.com> [Accessed: 2006-11-23].
- Panco, R. & Korn, H.J. 1999. Understanding factors of organizational mortality: considering alternatives to firm failure. [Online] Available from: <http://www.eaom.org/AnnualMeetings/Philadelphia1999/Papers/PancoRobert.html> [Accessed: 2006-11-23].
- Patton, D., Marlow, S. & Hannon, P. 2000. The Relationship between Training and Small Firm Performance; Research Frameworks and Lost Quests. *International Small Business Journal*, 19(1):11-27.
- Peberdy, S. & Rogerson, C. 2000. Transnationalism and Non-South African Entrepreneurs in South Africa's Small, Medium and Micro-Enterprise (SMME) Economy. *Canadian Journal of African Studies / Revue Canadienne des Etudes Africaines*, 34(1):20-4. Special Issue: Transnationalism, African Immigration, and New Migrant Spaces in South Africa.
- Perks, S. & Struwig, M. 2005. Skills Necessary to Grow Micro Entrepreneurs into Small Business Entrepreneurs. *South African Journal of Economic and Management Sciences*, N.S., 8(2):171-186.
- Pittaway, L. & Thedham, J. 2005. Mind the Gap - Graduate Recruitment in Small Businesses. *International Small Business Journal*, 23(4):403-426.
- Porter, S. 2000. Building business success: a case study of small business coaching. *Industrial and Commercial Training*, 32(7):241-244.
- Praag, C.M. & Versloot, P.H. 2007. What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, 29:351-382.
- Pretorius, M. 2001. *A training model to enhance micro and small business start-ups in South Africa*. Unpublished DTech thesis. Pretoria: Technikon Pretoria.

- Pretorius, M. & Shaw, G. 2004. Business plans in bank decision-making when financing new ventures in South Africa. *South African Journal of Economic and Management Sciences*, 7(2):221-241.
- Pretorius, M., & van Vuuren, J. 2003. Contribution of support and incentive programs to entrepreneurial orientation and start-up culture in South Africa. *South African Journal of Educational Management*, 19(5):413-427.
- Pretorius, M., van Vuuren, J. J. & Nieman, G.H. 2005. Critical evaluation of two models for entrepreneurial education: An improved model through integration. *The International Journal of Educational Management*, 9(5):413-427 (Pretorius et al, 2005b).
- Pretorius, M., Millard, S.M. & Kruger, M.E. 2005. Creativity, innovation and implementation: Management experience, venture size, life cycle stage, race and gender as moderators. *South African Journal of Business Management*, 36(4):55-68 (Pretorius et al, 2005a).
- Probst, G. & Raisch, S. 2005. Organisational crisis: The logic of failure. *Academy of Management Executive*, February 2005. 19(1):90-105.
- Rae, D. 2000. Understanding entrepreneurial learning: a question of how? *International Journal of Entrepreneurial Behaviour and Research*, 6(3):145-159.
- Rauch, A. & Frese, M. 2000. *Human capital of small scale business owners and business success: A longitudinal study of moderators and mediators*. ICSB World Conference.
- Robertson, M., Collins, A., Medeira, N. & Slater, J. 2003. Barriers to start-up and their effect on aspirant entrepreneurs. *Education and Training*, 45(6):308-316.
- Robertson, P.L. 2003. The role of training and skilled labour in the success of SMEs in developing economies. *Education and Training*, 45(8/9):461-473.
- Rogerson, C.M. 2000. Emerging from apartheid's shadow: South Africa's informal economy. *Journal of international affairs*, 022197X, Spring, 53(2):673-695.

- Rogerson, C.M. 2001b. Growing the SME manufacturing economy of South Africa: Evidence from Gauteng Province. *Journal of contemporary African Studies*, 19(2):267-291.
- Rogerson, C.M. 2001a. In search of the African miracle: debates on successful small enterprise development in Africa. *Habitat International*, 25(1):115-142.
- Rogerson, C. 2004. The impact of the South African government's SMME programmes: a ten-year review (1994-2003). *Development Southern Africa*, 21(5):765-784.
- Rogerson, C.M. 2004b. Sunrise or Sunset Industries? South Africa's clothing and footwear sectors. Article in *Clothing and Footwear in African Industrialisation*. Edited by McCormick, D and Rogerson C. Africa Institute of South Africa.
- Romijn, H. 2001. Technology Support for Small-Scale Industry in Developing Countries: A Review of Concepts and Project Practices. *Oxford Development Studies*, 29(1):57-76.
- Rowden, R.W. 2002. High performance and human resource characteristics of successful small manufacturing and processing companies. *Leadership & Organization Development Journal*, 23(1/2):79-83.
- Rwigema, H. & Karungu, P. 1999. SMME development in Johannesburg's Southern Metropolitan Local Council: an assessment. *Development Southern Africa*, 16(1):107-125.
- Rwigema, H. & Venter, R. 2004. *Advanced entrepreneurship*. Oxford University Press, Oxford.
- Sackett, P., Rose, T. & Adamson, V. 2003. The importance of business process clarification within the virtual enterprise. *Journal of Small Business and Enterprise Development*, 10(3):298-305.
- Santarelli, E. & Vivarelli, M. 2007. Entrepreneurship and the Process of Firms' Entry, Survival and Growth. *Industrial and Corporate Change*, 16(3):455-488.
- Schamp, T. & Deschoolmeester, D. 1998. Strategic and operational planning attitudinal changes and the survival and growth of business start-ups revisited *Management*

- training matters. *International Journal of Entrepreneurial Behaviour & Research*, 4(2):141-177.
- Schumpeter, J.A. (1934b), *Business cycles: a theoretical, historical and statistical analysis of the capitalist process*. 2 vols, Porcupine Press, Philadelphia.
- Schumpeter, J.A. 1934a. *The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle*. Harvard U.P, Cambridge, Mass.
- Senjem JC & Reed K 2002. *Social Capital and Network Entrepreneurs*. Boston, Babson College.
- Shane, S. & Venkataraman, S. 2000, The promise of entrepreneurship as a field of research. *The Academy of Management Review*, 25(1):217-226.
- Simpson, M., Tuck, N. & Bellamy, S. 2004. Small business success factors: the role of education and training. *Education and Training*. 46(8/9):481-491.
- SME Survey. 2003. [Online] Available from <http://www.smesurvey.co.za> [Accessed: 21 May 2007].
- Solymossy, E. & Penna, A. A. 2001. *Sustainable growth for the small business: A theory of organizational transition*. Paper presented at the 2001 usasbe/sbida conference, Orlando, fl.
- South Africa. 1995. White paper on National strategy for the development and promotion of Small Business in South African. Government Gazette. 357, 16317, Government printers: Cape Town.
- South Africa. 1996. Republic of South Africa. National Small Business Act, no 102 of 1996, Government Gazette, 377, 17612.
- South Africa. 1998. Department of Labour. *The skills development Act*. South African Act No. 97, No, 19420. Government Gazette. 2 November 1998.
- South Africa. 2001a. *Budget Speech 2001/2002 by the Minister of Finance, T.A. Manuel*. 21 February 2001. [Online] Available from: <http://www.info.gov.za/speeches/2001/010221345p1002.htm> [Accessed: 2006-11-23].

- South Africa. 2001b. Department of Labour. The National Skills Development Strategy. April 2001 – March 2005. Unpublished report. Department of Labour, Pretoria.
- South Africa. 2002. Department of Education. *Improvements in the senior certificate examination*. [Online] Available from <http://education.pwv.gov.za> [Accessed: 2006-07-23].
- South Africa. 2003. Department of Labour. *National Skills Fund Social Development Funding Window – Implementation report*: Unpublished report. DOC Placement Verification Study.
- South Africa. 2004. The DTI. *Annual Review of Small Business in South Africa*. Enterprise Development Unit: The Department of Trade in Industry, Pretoria. [Online] Available from: <http://www.thedti.gov.za/publications/SMME.pdf> [Accessed: 2004-07-23].
- South Africa. 2005a. Gauteng Enterprise Propeller ACT, 2005, GEP Gauteng Enterprise Propeller, Gauteng Provincial Legislature. No. 5. [Online] Available from: http://www.gep.co.za/files/download_file/11Gauteng_Enterprise_Propeller_Act_2005.pdf [Accessed: 2004-07-23].
- South Africa. 2005b. CTFL SETA. *Annual Report of the Clothing and Textile Education and Training Authority*. [Online] Available from: www.ctflseta.co.za [Accessed: 2008-05-03].
- South Africa. 2006. Statistics South Africa. 2001-2006 labour force survey. [Online] Available from: <http://www.statssa.gov.za> [Accessed: 2006-03-06].
- Stengg, W. 2001. The textile and clothing industry in the EU: a survey. *Enterprise papers*, No. 2, July. Published by DG: Enterprise.
- Sternberg, R & Wennekers, S. Determinants and Effects of Small Business Creation Using Global Entrepreneurship Monitor Data. *Small Business Economics*. 2005:293-203.
- Stewart, W.H., Carland, J.C., Carland, J.W., Watson, W.W. & Sweo, R. 2003. Entrepreneurial dispositions and goal orientations: A comparative exploration of United States and Russian entrepreneurs. *Journal of small business management*. 41(1):27-47.

- Strydom, J. W. & Tustin, D. 2003, *Small business skills audit in PERI-URBAN areas of Northern Tshwane*. Bureau of Market Research, Research report 315.
- Sullivan, R. 2000. Entrepreneurial learning and mentoring. *International Journal of Entrepreneurial Behaviour and Research*, 6(3):160-175.
- Terre Blanche, M & Durrheim, K. 2002. *Research in practice: Applied methods for the social sciences*. Unpublished document. University of Cape Town.
- Themba, G. Chamme, M., Phambuka, C.A. & Makgosa, R. 1999. *Impact of macro-environmental factors on entrepreneurship development in developing countries*. In African Entrepreneurship and Small Business Development, L Kinunda-Rutashobya and DR Olomi (eds.), pp. 103-119. University of Dar-Es-Salaam.
- Thornhill, S. & Amit, R. 2003, "Learning about failure: bankruptcy, firm age and the resource based view", *Organisation Science*, 14(5):497-509.
- Thomas, A.S. & Mueller, S.L. 2000. A Case for Comparative Entrepreneurship: Assessing the Relevance of Culture. *Journal of International Business Studies*, 31(2):287-301.
- Timmons, J.A. 1999, *New venture creation: entrepreneurship for the 21st century*, 5th ed. Irwin/McGraw-Hill, Boston: London.
- Toye, J. 2002. *Research summary, centre for the study of African economies*. University of Oxford.
- Tustin, D.H. 2001. *Economic growth prospects for SMEs in the Greater Johannesburg research*. UNISA: Bureau of market research. Research report no. 284. Faculty of economic and management science.
- Tustin, D.H. 2003. *Small business skills audit in peri-urban areas on Northern Tshwane*. UNISA: Bureau of market research. Research report no. 315. Faculty of economic and management science.
- Ucbasaran, D., Westhead, P. & Wright, M. 2004. Human capital based determinants of opportunity recognition. *Frontiers of Entrepreneurship Research*, pp.430-444, Wellesley, M.A., Babson College.

- Umsobomvu. 2002. *Entrepreneurial Skills development and business support needs of potential and existing young entrepreneurs*. Unpublished company report. 28 June. Midrand.
- Umsobomvu. 2004. *Leading entrepreneurship education providers in South Africa*. Unpublished company report. Study conducted by the University of Western Cape (not quoted).
- Urban, B. & van Vuuren, J.J. 2006. Entrepreneurial motivation in a multicultural society the effects of ethnicity and entrepreneurial self efficacy. *South African Journal of Industrial Psychology*, 32(1):2-10.
- USAID. 2003. *USAID and Microenterprises*. [Online] Available from: <http://www.usaidmicro/about> [Accessed: 2008-05-03].
- Van Aardt, I., Van Aart, C. & Bezuidenhout, S. 2000. *Entrepreneurship and new venture creation*. Oxford: Oxford University Press.
- Van Dyk, P.S., Nel, P., van Loedolff, Z. & Haasbroek, G.D. 2001. *Training management: a multidisciplinary approach to human resources development in Southern Africa*, 3rd ed. Oxford: Oxford University Press.
- Van Eeden, S., Viviers, S., & Venter, D. 2003, A comprehensive study of selected problems encountered by small business in the Nelson Mandela Cape Town and Egoli Metropoles. *Management dynamics*, 12(3):13-23.
- Van Vuuren, J.J. & Nieman, G.H. 1999. *Entrepreneurship education and training: A model for syllabi/curriculum development*. Proceedings at the 45th Conference of the International Council for Small Business (ICSB) Naples.
- Vesselov, Y. 2002. *Training in the informal sector Belarus*. Geneva: International Labour Office, 29:1-29. [Online] Available from: <http://www.ilo.org/public/english/employment/infe> [Accessed: 2008-05-03].
- Visser, D. 2002. *Constraints facing tourism entrepreneurs in South Africa. A study in the Gauteng and Mpumalanga provinces, South Africa*. Unpublished D Com thesis. University of Pretoria.

- Viviers, S., Van Eeden S. & Venter, D. 2001. *Identifying small business problems in the South African Context for proactive entrepreneurial education*. Paper read at the 11th global Int-Ent conference: Kruger national park, 2-4 July 2001.
- Volkman, C. 2004. Entrepreneurship Studies in Higher education – An Ascending Academic Discipline in the Twenty-First Century. *Higher Education in Europe*, 29(2):177-185.
- Von Broembsen, M. 2003. *Poverty alleviation: beyond the national small business strategy*. Occasional papers. IDASA Budget information Service. [Online] Available from: <http://www.idasa.org.za> [Accessed: 2008-05-03].
- Wasilczuk, J. 2000. Advantageous competence of owner/managers to grow the firm in Poland: empirical evidence. *Journal of Small Business Management*, 38(2):88-90.
- Way, S. A. 2002. High performance work systems and intermediate indicators of firm performance within the US small business sector. *Journal of Management*, 38(6):765-786.
- Watson, J. & Everett, R. 1999. Small Business Failure Rates: Choice of definition and Industry Effects. *International Small Business Journal*, 17(2):31-47.
- Watson, J., Everett, R & Newby, R. 2000. Improving the odds of success: the effect of screening and professional advice. Occasional papers, SBAER. [Online] Available from: <http://www.sbaer.uca.edu/research/icsb/2000/pdf/49.PDF> [Accessed: 2008-05-03].
- Watson, K., Hogarth-Scott, S. & Wilson, N. 1998. Small business start-ups: success factors and support implications. *International Journal of Entrepreneurial Behavior and Research*, 4(3):217-238.
- Weber, M. 1930. *The Protestant Ethic and the Spirit of Capitalism*. Translated by Talcott Parsons. With a foreword by R. H. Tawney, London, pp. xi. 292. G. Allen & Unwin.
- Westhead, P., Ucbasaran, D. Wright, M. 2005. Experience and Cognition, Do Novice, Serial and Portfolio Entrepreneurs Differ? *International Small Business Journal*, 23(1):72-98.

- Wickham, P.A. 2001. *Strategic entrepreneurship: a decision-making approach to new venture creation and management*, 2nd edition. Financial Times Prentice Hall, Harlow.
- YTKO. 2003. *The Management Skills Gap in Technology SMEs: Real or Perceived?* Report to East of England Development Agency, YTKO, Cambridge.
- Yusof, S.M. & Aspinwall, E. 2000. Total quality management implementation frameworks: comparison and review. *Total Quality Management*. 11(3):281-296
- Zhao, L. & Aram, J. 1995. Networking and growth of young technology-intensive ventures in China. *Journal of Business Venturing*. 10():349-370. New York, NY
- Zikmund W.G. 2003. *Business research methods*. 7th edition. Ohio: Thomson Learning South-Western.

Annexure A

Research Questionnaire

Questionnaire for the SMME survey – PhD Studies

Department of Business Management
Faculty of Economics and Management

DEAR RESPONDENT

The following questionnaire is part of an extensive doctorate study on the training of entrepreneurs and small business owners in the Textile and Clothing Industry in the Gauteng Province.

It will be highly appreciated if you, the owner and or manager of the business, would participate in the interview that is aimed at answering the questions as thoroughly as possible.

All the information will be treated as **STRICTLY CONFIDENTIAL** and will only be used for academic purposes. Please feel free to contact the researcher or the promoter in cases of any queries:

Researcher: Ms. Thandeka Kunene; Telefax number: 016 362 1022, Cell: 072 148 0920,
email: houseofhemp@telkomsa.net or thandeka@houseofhemp.co.za

Promoter: Prof. Van Vuuren; Phone number: 012 420 3401; Fax: 012 362 5198
Email: jvuuren@hakuna.up.ac.za

1. Instructions for completion

1. Please read the questions and instructions to answer them carefully.
2. Please answer the questions as objectively and honestly as possible.
3. Please answer based on your own business and experiences as much as possible.
4. Please mark the option which reflects your answer the most accurately by making an **(X)** in the space provided.
5. Where asked for comments or to express own opinion, keep answers short and to the point.
6. Please answer all the questions as this will provide more information to the researcher so that an accurate analysis and interpretation of data can be made.
7. You are kindly requested to complete the questionnaire and return it by fax or email between 30 October 2005 to 30 February 2006.

RESPONDENT NUMBER

FOR OFFICE USE

A. DEMOGRAPHIC INFORMATION:

1. Your gender:

Male	1
Female	2

2. Your ethnic group:

Indian	1
Coloured	2
Black	3
White	4
Other (please specify)	5

3. Which region in the Gauteng Province do you operate your business in?

1. Joburg Diepsloot	2. Joburg Midrand / Ivory Park
3. Joburg Sandton / Rosebank	4. Joburg Northcliff
5. Joburg Roodepoort	6. Joburg Doornkop / Soweto
7. Joburg Alexandra	8. Joburg Central Region
9. Johannesburg South	10. Joburg Diepkloof / Meadowlands
11. Joburg Ennerdale/Orange farm	12. Tshwane South
13. Tshwane North	14. Ekurhuleni Westt
15. Ekurhuleni East	16. Sedibeng East
17. Sedibeng West	18. Gauteng West
19. Gauteng North	20. Other please specify

4. What is your home language?

1. Afrikaans	7. Tsonga
2. English	8. Tswana
3. Ndebele	9. Venda
4. Pedi	10. Xhosa
5. Sotho	11. Zulu
6. Swazi	12. Other Please specify

5. What is your age?

V1 1-3

V2 4

V3 5

V4 6-7

V5 8-9

V6 10-11

B. BUSINESS INFORMATION:

6. How long have you been in business?

Less than 3 years	1
3 years or more	2

V7

12

7. Which one subsector best describes your business?

Design & Manufacturing of Textiles (fabrics)	1
Design & Manufacturing of Clothing (wearing apparel)	2
Design & Manufacturing of footwear	3
Design & Manufacturing of other accessories e.g. bags, hats, belts, leather, ties, scarves, socks, handkerchiefs, gloves	4
Design and manufacturing of Home textiles and décor	5
Support of textile industry e.g. dyeing, finishing, printing, Trims & Accessories, fasteners,	6
Wholesale Trade & Distributors of textiles, clothing & footwear & accessories	7
Retail of textiles, clothing & footwear & accessories	8
Machinery & IT for textiles, clothing & footwear	9
Business services (Studios, exhibition & conferences, management consulting, training & education, research, packaging & display)	10
Other subsectors – please specify	11

V8

13-14

8. What form of business do you have?

Not registered	1
Sole Proprietorship	2
Partnership	3
Close Corporation	4
Company (PTY) Ltd	5
Business Trust	6
Other. Please specify	7

V9

15

9. Where do you operate your business?

City Centre	1
Township	2
Rural area	3
Suburb	4
Other please specify	5

V10

16

10. What is the main product or service of your business?

V11

17

11. Please indicate the annual turnover of your business:

Below or equal to R12,000 per year	1
Above R12,000 but not exceeding R150,000 per year	2
Above R150,000 but not exceeding R1 million per year	3
Above R1 million but not exceeding R5million per year	4
More than R5 million per year	5

V12

18

12. What is the number of employees in your business (including yourself)?

V13

19-21

C. SKILLS TRAINING

13. What is the highest education level you have attained?

Below Matric	1
Matric	2
Graduate	3
Postgraduate	4
Company based diplomas	5
Other please specify	6

V14

22

14. How many years did you work in formal employment before running this business?

0 – 2 years	1
2 – 4 years	2
4 – 6 years	3
>6 years	4

V15

23

15. How IMPORTANT are the following skills for your business?

List of types of skills training:	Not at all	Moderately	Very	Extremely
Business systems, procedures, processes and records				
Business linkages, industry clusters and networking				
Communication and access to relevant information				
Computer literacy and information technology (ICT applications)				
Creativity, innovation and opportunity Identification				
Financial Management including cash flow, forecasting, pricing and costing				
Human Resource Management and organisational planning				
Legal (Business registration, government requirements, regulations and incentives)				
Life skills (problem solving, time management, decision making, ability to learn, change management)				
Literacy and numeracy				
Marketing, promotions, customer relations and competitor analysis				
Operations including quality control and production planning				
Research & development including technical, market and product development.				
Risk taking (Calculated)				
Role Models (Learning from others)				
Securing resources and finances to start, run and grow business				
Self Motivation, commitment, resilience and confidence building				
Strategy development, business planning, contingency plans and organisational control				
Supplier, purchasing and inventory management.				
Technical and vocational skills				

V16	<input type="text"/>	24
V17	<input type="text"/>	25
V18	<input type="text"/>	26
V19	<input type="text"/>	27
V20	<input type="text"/>	28
V21	<input type="text"/>	29
V22	<input type="text"/>	30
V23	<input type="text"/>	31
V24	<input type="text"/>	32
V25	<input type="text"/>	33
V26	<input type="text"/>	34
V27	<input type="text"/>	35
V28	<input type="text"/>	36
V29	<input type="text"/>	37
V30	<input type="text"/>	38
V31	<input type="text"/>	39
V32	<input type="text"/>	40
V33	<input type="text"/>	41
V34	<input type="text"/>	42
V35	<input type="text"/>	43

16. Please rate your COMPETENCY in the following skills?

List of types of skills training:	Not at all	Moderately	Very	Extremely
Business systems, procedures, processes and records				
Business linkages, industry clusters and networking				
Communication and access to relevant information				
Computer literacy and information technology (ICT applications)				
Creativity, innovation and opportunity Identification				
Financial Management including cash flow, forecasting, pricing and costing				
Human Resource Management and organisational planning				
Legal (Business registration, government requirements, regulations and incentives)				
Life skills (problem solving, time management, decision making, ability to learn, change management)				
Literacy and numeracy				
Marketing, promotions, customer relations and competitor analysis				
Operations including quality control and production planning				
Research & development including technical, market and product development.				
Risk taking (Calculated)				
Role Models (Learning from others)				
Securing resources and finances to start, run and grow business				
Self Motivation, commitment, resilience and confidence building				
Strategy development, business planning, contingency plans and organisational control				
Supplier, purchasing and inventory management.				
Technical and vocational skills				

V36	<input type="text"/>	44
V37	<input type="text"/>	45
V38	<input type="text"/>	46
V39	<input type="text"/>	47
V40	<input type="text"/>	48
V41	<input type="text"/>	49
V42	<input type="text"/>	50
V43	<input type="text"/>	51
V44	<input type="text"/>	52
V45	<input type="text"/>	53
V46	<input type="text"/>	54
V47	<input type="text"/>	55
V48	<input type="text"/>	56
V49	<input type="text"/>	57
V50	<input type="text"/>	58
V51	<input type="text"/>	59
V52	<input type="text"/>	60
V53	<input type="text"/>	61
V54	<input type="text"/>	62
V55	<input type="text"/>	63

17. Have you or anyone in your company RECEIVED TRAINING in this skill?

Types of training	Yes	No
Business systems, procedures, processes and records		
Business linkages, industry clusters and networking		
Communication and access to relevant information		
Computer literacy and information technology (ICT applications)		
Creativity, innovation and opportunity Identification		
Financial Management including cash flow, forecasting, pricing and costing		
Human Resource Management and organisational planning		
Legal (Business registration, government requirements, regulations and incentives)		
Life skills (problem solving, time management, decision making, ability to learn, change management)		
Literacy and numeracy		
Marketing, promotions, customer relations and competitor analysis		
Operations including quality control and production planning		
Research & development including technical, market and product development.		
Risk taking (Calculated)		
Role Models (Learning from others)		
Securing resources and finances to start, run and grow business		
Self Motivation, commitment, resilience and confidence building		
Strategy development, business planning, contingency plans and organisational control		
Supplier, purchasing and inventory management.		
Business systems, procedures, processes and records		

V56	<input type="checkbox"/>	64
V57	<input type="checkbox"/>	65
V58	<input type="checkbox"/>	66
V59	<input type="checkbox"/>	67
V60	<input type="checkbox"/>	68
V61	<input type="checkbox"/>	69
V62	<input type="checkbox"/>	70
V63	<input type="checkbox"/>	71
V64	<input type="checkbox"/>	72
V65	<input type="checkbox"/>	73
V66	<input type="checkbox"/>	74
V67	<input type="checkbox"/>	75
V68	<input type="checkbox"/>	76
V69	<input type="checkbox"/>	77
V70	<input type="checkbox"/>	78
V71	<input type="checkbox"/>	79
V72	<input type="checkbox"/>	80
V73	<input type="checkbox"/>	81
V74	<input type="checkbox"/>	82
V75	<input type="checkbox"/>	83

D: ATTITUDES

18. To what extent do you agree or disagree with the following statements about training received?

Statement	Disagree strongly	Disagree	Don't know	Agree	Agree Strongly
Product quality has improved due to training you received					
The training quality received met your expectations.					
Productivity in your business has improved due to the training.					
Training received was useful to your business					
Sales improved due to the training received.					
Training received was relevant to your needs					
Training has enhanced your ability to operate a small business					
Skills level of your employees has improved due to the training received.					
Your motivation & confidence levels improved due to the training received.					

V76 84

V77 85

V78 86

V79 87

V80 88

V81 89

V82 90

V83 91

V84 92

V85 93

E. GENERAL

19. Please fill in the table below giving all the training you have received.

Name of course	Details of service provider

20. Please give your general comments on skills necessary to run a small business & what you think would improve the training intervention for SMEs.

21. Please give your general comments on factors leading to the success of SMEs

22. Please give your general comments on barriers to SME development

Thank you for your cooperation and participation. Please indicate if you would be interested in receiving a copy of the finalised research work for future use and reference work.