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Critical Success Factors for Start-up Companies

Stephan Sparrius

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfillment of the requirements for the degree of Master of Business Administration

Johannesburg
September 2006

ABSTRACT

Start-up companies are becoming increasingly important in contributing to the South African economy growth. The start-up's business and job-creation are major contributors to economic growth. This research investigated the critical success factors for start-up companies in the South African environment, the relative importance of each factor and then developed a framework of aspects to consider when starting a company.

The research developed four propositions as critical success factors based on the literature study of success factors. The research then used a Delphi-based study to investigate and confirm the opinions of entrepreneurs, service providers, capital providers, academics and government as principle stakeholders in the success of start-up companies. Fifty-two panel members participated in three rounds of the Delphi-study and reached consensus for ten critical success factors. The panel represented the South African stakeholders in the success of start-up companies.

The research found that the entrepreneur and entrepreneurial team, the start-up's strategy, the chosen industry of the start-up, the start-up team's ability to manage their finances and the operational efficiencies of the company are the framework of the critical success factors for start-up companies in South Africa. Ten factors and the relative importance of each factor were developed from this framework.

DECLARATION

I, Stephan Sparrius, declare that this research report is my own, unaided work. It is submitted in partial fulfillment of the requirements for the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

……

Stephan Sparrius

11 September 2006

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- Max Mackenzie, my supervisor, for his guidance, encouragement and time;
- My panel of respondents of their contribution and time taken to complete the surveys; and
- Ilan Sparrius, Ashwin Lakhan and Selina Beagle for their advice and support during the completion of this research.

DEDICATION

To my parents, for their love and support.

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1 INTRODUCTION

1.1 CONTEXT OF THE STUDY

The role of start-up companies in the economy includes numerous diverse aspects. Of critical importance is the contribution to the economy in general, consumer choices and impact on existing business. Vesper (1983) defines the societal contribution of new ventures as primarily the addition of new products and services to widen the options available to consumers and secondarily as building national barriers to entry for foreign competitors. New ventures also bring competition to the market, which introduces enhanced quality and price competition amongst new and existing firms in the industry, thus ultimately benefiting the society of consumers as a whole. New ventures generate employment and subsequently, economic wealth grows, which has practical national economic benefits. Furthermore, individuals have broader choices for employment and have the opportunity to become leaders, thus decentralizing economic power in the economy, which in turn strengthens the basis for democracy.

Luiz (2002:53) contributes the importance of start-up companies specific to South Africa by stating, “A dynamic small business sector can make an important contribution, not only in employment creation, but also in lessening concentration in South Africa’s generally oligopolistic industrial structure. However, for the small business[1] needs integration into the mainstream economy for it to make a meaningful contribution to the economy. This is going to require a concerted effort both from government and the formal sector.”

The international survival rate for start-up companies is slim, and the question is therefore what factors do new ventures need to focus on to improve their chances for survival in the South African context, specifically to ensure their contribution to the economy at large?

[1] Small business is considered as start-up companies. Refer to section 1.3.

1.2 THE PROBLEM AND SUB-PROBLEMS

1.2.1 PROBLEM STATEMENT

The researcher proposed to identify and qualify critical success factors influencing the success of start-up companies in South Africa.

1.2.2 SUB-PROBLEMS

- The first sub-problem was to determine a set of common critical success factors amongst start-up companies in various industries of the economy.
- The second sub-problem was to rank the identified critical success factors leading to the success of start-up companies in their specific industry.
- The third sub-problem was to develop a framework of critical success factors that the start-up company needs to manage in order to increase their chances of success.

1.3 DELIMITATION AND LIMITATIONS

- The research focused on start-up companies launched within the last ten years (1996-2006) in the South African economy. There was no limit to the current turnover or employment figures of the company. This is because successful start-up companies are able to evolve to large, medium or small businesses over a period of ten years. For a definition of a start-up company, refer to section 2.3.

- The Global Entrepreneurship Monitor (GEM) report for South Africa, by Orford, Wood, Fischer, Herrington, & Segal (2003), distinguishes between opportunity start-up entrepreneurs and necessity start-up entrepreneurs. Opportunity entrepreneurship, and therefore the opportunity start-up company, seeks to take advantage of a new and innovative business opportunity. People who have no better alternative to working drive necessity entrepreneurship, therefore the necessity start-up company. The researcher was more interested in opportunity start-up companies, which seem to be a greater source of economic growth, because of their employment and growth potential, than necessity start-up companies.
- The success of a start-up company was either a company that is still operational and profitable or a company that was sold and integrated into a larger operation. Therefore a company that was either financially successful, or that realized shareholder value through the proceeds of a merger and acquisition process. This is consistent with the definition proposed by Watson & Everett (1996), where they defined failure as either bankruptcy or failure to deliver to the stakeholders in the start-up (employees, shareholders, communities, or suppliers).
- There were no limitations to the industry sector investigated. It is important to understand the broad spectrum of critical success factors for start-up companies, regardless of their specific industry. Luiz (2002) states that the small business sector makes an important economic contribution to the economy, with no regard for the specific industry. There was therefore no industry bias in the research.
- This research does not consider franchise holders as start-up companies. The research rather focused on companies with original and innovative ideas, therefore companies who take an idea, develop the idea and package the idea as a competitive product or service to their clients.

- It is apparent that companies need certain fundamental factors in place in order to ensure their continued success. These factors vary per industry, but at the most basic level include that their legal and regulatory framework is in place, as well as that their tax framework is in place. The legal framework includes regulatory, statutory and licensing, or patenting aspects. The tax framework includes company tax registration, employees tax registration and tax legalities (indemnities, special tax provisions etc). These factors, amongst others, are essentially qualifying factors, and were therefore not critical success factors as such. The study assumed that the qualifying factors were already in place.

1.4 SIGNIFICANCE OF THE STUDY

Small businesses, and specifically start-up companies, are the catalyst to solving the unemployment problem persisting in South Africa, according to Luiz (2002). Successful start-up companies evolve to small, medium or larger businesses and thus contribute to the growth of the South African economy. In 2002, micro, small and medium enterprises employed 54% of overall employed people in the private sector, up from 44% in 1995, according to the Business Day (2002a). The article further states that small businesses contributed more than 50% of the total gross domestic product contribution in the agriculture, forestry and fishing and construction sectors. The Department of Trade and Industry (DTI) estimates that small businesses overall contribute roughly 35% of GDP, where they should be contributing between 60% and 80% of GDP as is found internationally, as mentioned in Business Day (2002b).

The importance of successful new ventures, rather than failures, is obvious to financial institutions. According to the World Bank (2003), there are three distinct attractions to small to medium enterprise finance from financial institutions. Firstly small and medium businesses account for a significant part of economic activity (about two-thirds in many developing countries). Secondly, small and medium businesses can generate above average market returns (ranging from 20% to 40%). Thirdly, small and medium businesses usually demonstrate significant revenue and profit performance (accounted for

about 30% of total bank profitability in the USA). These attractions are on a global basis, and research investigated the South African factors. Orford, *et al.* (2003) finds that entrepreneurial activity in South Africa is low when compared to similar developing country trends. The report provides numerous reasons for this low entrepreneurial activity, which this research analyzed in more detail, yet the concern is that the lack of entrepreneurial activity in starting new firms hampers the potential for new job creation.

The research report therefore aimed to provide an overall framework for success to the relevant stakeholder groups. Watson & Everett (1996) confirmed these stakeholders as the crucial stakeholders in the success, or failure, of start-up companies. The stakeholders and their interest in the research are, specifically:

- The research provides start-up company management teams, specifically the entrepreneur, with a framework of critical success factors to ensure the sustainable success of the start-up.
- The research gives guidance to service providers to start-up companies, such as professional services, or vendors, to evaluate the start-up companies with whom they engage, in order for them to deal with start-up companies with a better chance of success.
- The research further assists capital providers to start-up companies, specifically financial institutions, to enhance decisions to minimize the risk of investing in start-up companies, by evaluating the probability of success based on the identified factors of success.
- The research provides government stakeholders with a framework for success in small businesses. It gives them insight into policies and actions that government can take to enable the establishment of successful start-up firms.

1.5 ASSUMPTIONS

- The first assumption is that critical success factors can be generalized for start-up companies, based on international experience and based on the South African business environment.
- The second assumption is that start-up companies that are successful at present will continue to be successful for the near future, barring any unforeseen events, such as the terror attacks in the USA.

2 LITERATURE REVIEW

2.1 OVERVIEW

The literature available defines numerous factors for success in start-up companies or new ventures. This section synthesizes the available literature and derives a specific set of propositions. The study of factors for success in South African start-up companies used these propositions. It further defines factors for success specific to South African start-up companies based on literature for the environment.

2.2 LITERATURE DEFINITION OF CRITICAL SUCCESS FACTORS

The concept of critical success factors is widely used in literature. This research utilizes the definition provided by Dickinson, Ferguson & Sitcar (1984), who summarized critical success factors, based on a combination of available literature review, as "…events, circumstances, conditions, or activities that require special attention because of their significance. They can be internal or external and can influence success either positively or negatively. Their essential character is the need for a special awareness or early warning system to avoid unpleasant surprises or missed opportunities."

Chung (1987) states that critical success factors are specific aspects that should be focused on to ensure the success of managers or organizations. Critical success factors therefore represent focus areas and require special attention to bring about high performance for the manager or organization. Rockart (1979) constructed a research methodology for investigating critical success factors. Section 5 incorporates this methodology.

2.3 START-UP COMPANY

In the literature, there are many definitions for start-up and small businesses. The South African Government (2003) policy definition of a small business defines start-up companies for purposes of this research. A small business is thus an independent business where management owns a portion of the business and has full control of business operations. The business has an annual turnover of less than R 10 million and employs less than 50 personnel at the launch phase of the company. The business also has total gross asset value (fixed property excluded) of less than R 4 million. This definition is extended to include the further limitation identified by Watson & Everett (1996), where start-up companies are defined as not having publicly traded stock. Again, it is vital to realize that this is the definition of a start-up company, which may subsequently have grown to a large enterprise in the economy. These conditions and limitations are thus only valid at the launch of the company, therefore when it is a start-up company.

2.4 CRITICAL SUCCESS FACTORS

The body of literature regarding critical success factors for start-up companies is quite immense. This section draws on the strengths of the numerous models for success to develop a set of hypotheses for critical success factors, as previously defined by Dickinson, *et al.* (1984) and Chung (1987) in section 2.2. In some factors for success, the sheer amount of literature outweighs the added utility of evaluating more literature sources, since many of the sources repeatedly document the central idea. In other areas, there is a relatively small body of knowledge, also confirmed by Huyhebaert, Gaeremynck, Roodhooft & Van de Gucht (2000). In these areas, the literature source is integrated to form a comprehensive model. The coverage (breadth) of the model is more crucial than the detail (depth) of any specific factor.

2.4.1 MODELS

This section describes the prominent models found in the literature review. Hofer & Sandberg (1987), Huyhebaert, *et al.* (2000) and Grab & Scott (1985) provide the three prominent models for critical success factors.

The subsequent sections of the research further develop and integrate these prominent models by comparing the models and consolidating them with further literature-based findings. The product is therefore a holistic model of critical success factors for start-up companies. The researcher derived a theoretical framework for critical success factors for start-up companies by integrating the three eminent models. The following sub-sections discuss these three models.

2.4.1.1 HOFER & SANDBERG (1987)

Hofer & Sandberg (1987) propose three broad factors for success in new venture performance.

- Firstly, and most importantly, is the structure of the industry in which the new venture operates;
- Secondly is the business strategy for the new venture; and
- Thirdly are the behavioral characteristics of the entrepreneur and the entrepreneur's start-up company.

2.4.1.2 HUYHEBAERT, *ET AL*. (2000)

The Huyhebaert, *et al.* (2000) research finds that the management of funds flow ratios is the most significant financial management tool for start-up companies. They find that financial flow management is better than traditional financial ratio management to increase the probability of success for the start-up company. A summary of the variables investigated is included in Figure 1: Relationship between failure & explanatory variables. They specifically find that liquidity constraints are a major factor for failure within the first five years of operations of the start-up company. The liquidity constraints are primarily because of internal cash flow problems in the start-up, rather than undercapitalization or gearing ratios. The financial funds flow factor was added to those identified by Hofer & Sandberg (1987).

Expected Relationship between the Likelihood of Failure and the Explanatory Variables

Variable	*Expected Sign (predicting failure)*
Funds Flow Measures (Source +/ Use -)	
Operating Cash Flow Variables	
GMARGIN (gross margin) (+)	-
LABOUR (labour expenses) (-)	-
FOPRES (residual cash flow) (+/-)	-
Financing and Investment Funds Flows	
FEQ (equity financing) (+)	-
FDEBT (financial debt) (+)	+
FDIV (dividends) (-)	?
FCE (fixed coverage expenses) (-)	-
FCAP (capital expenditure) (-)	+
Working Capital Variables	
FINVENT (inventories) (-)	+
FAR (accounts receivable) (-)	+
FAP (accounts payable) (+)	+
FCC (cash and marketable securities) (-)	+
FOTHER (other current assets and liabilities) (+/-)	?
Traditional Financial Ratios	
NI/ TA (net income/ total assets)	-
EBIT/ TA (earnings before interest payments and taxes/ total assets)	-
TD/ TA (total debt/ total assets)	+
CF/ TD (cash flow/ total debt)	-
NWC/ TA (net working capital/ total assets)	-
CA/ CL (current assets/ current liabilities)	-
C/ CL (cash and marketable securities/ current liabilities)	-

Figure 1: Relationship between failure & explanatory variables. Source: Huyhebaert, *et al.* (2000)

2.4.1.3 GRAB & SCOTT (1985)

Grab & Scott (1985) propose a model for the success factors in companies in the United Kingdom. The model describes the process followed by start-up companies to institute growth and identifies five key influences on start-up companies to develop business during this change. The authors identify that the change can be because of market demand for new products or equally be rooted in the establishment of a new company. The latter change is particularly relevant to the research problem of factors influencing success in start-up companies. The flowerpot model identifies the five key influences and orders them in the shape of a flowerpot, as depicted in Figure 2: Flowerpot model of growth. Source Grab & Scot (1985). The following list discusses the key influences:

- *Performance base*: relates to the company's performance in recent years.
- *Base potential for development*: includes resources, accumulated experience, leadership and ideas bases within the organization.
- *Key internal influences*: includes strategic awareness, management time or commitment to the company and environmental awareness as broad factors.
- *Key external influences*: includes market complexity, competition, external assistance and market demand or growth as broad factors.
- *Process of development*: includes the internal company process of developing the business from concept to execution of the business idea.

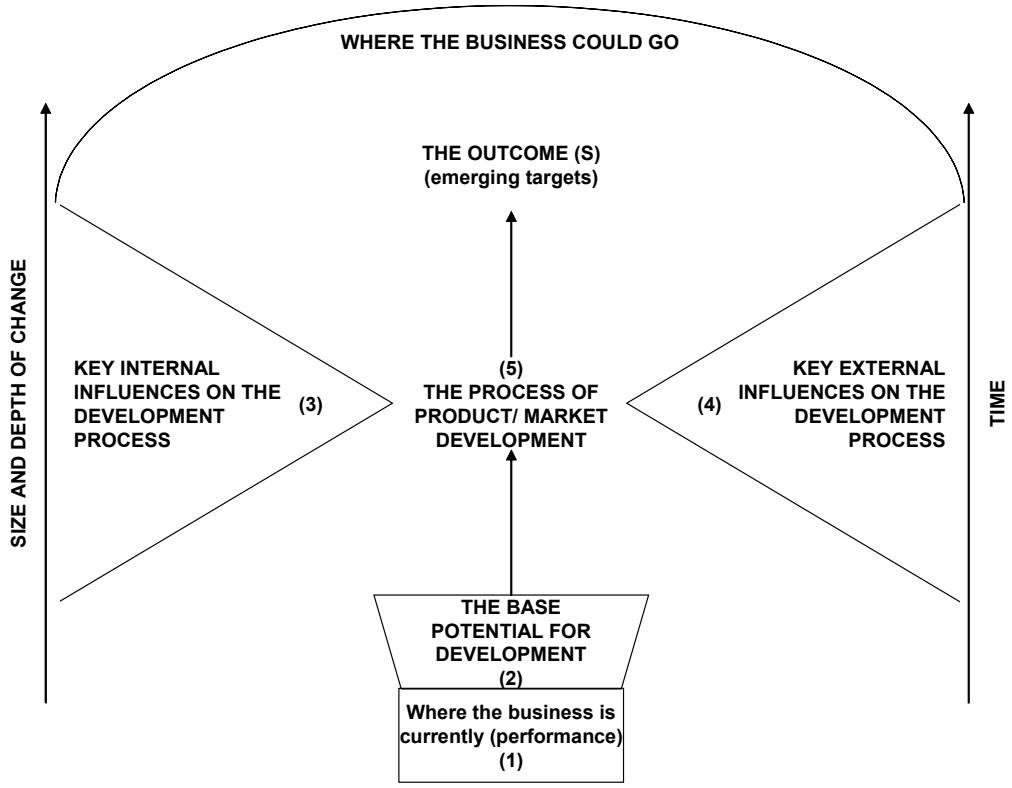

Figure 2: Flowerpot model of growth. Source Grab & Scot (1985)

The base potential for development (2), internal influences (3), external influences (4) and process of development (5) are of particular relevance to the start-up company, since the performance base (1) is not relevant to start-up companies. The Hofer & Sandberg (1987) model in the industry structure and business strategy factors incorporates the internal influences (3) and external influences (4). The Hofer & Sandberg (1987) model aspect of behavior of the entrepreneur and company deals with the base potential (2) and development process (5) aspects.

2.4.1.4 ALIGNMENT OF IDENTIFIED MODELS

The starting point for the identification of critical success factors for start-up businesses in South Africa were the models of Hofer & Sandberg (1987), Huyhebaert, *et al.* (2000) and Grab & Scott (1985). The integration of these models forms a holistic model of critical success factors. Figure 3: Model alignment indicates the alignment of these three models. Subsequent sections of the research investigate these models in further detail.

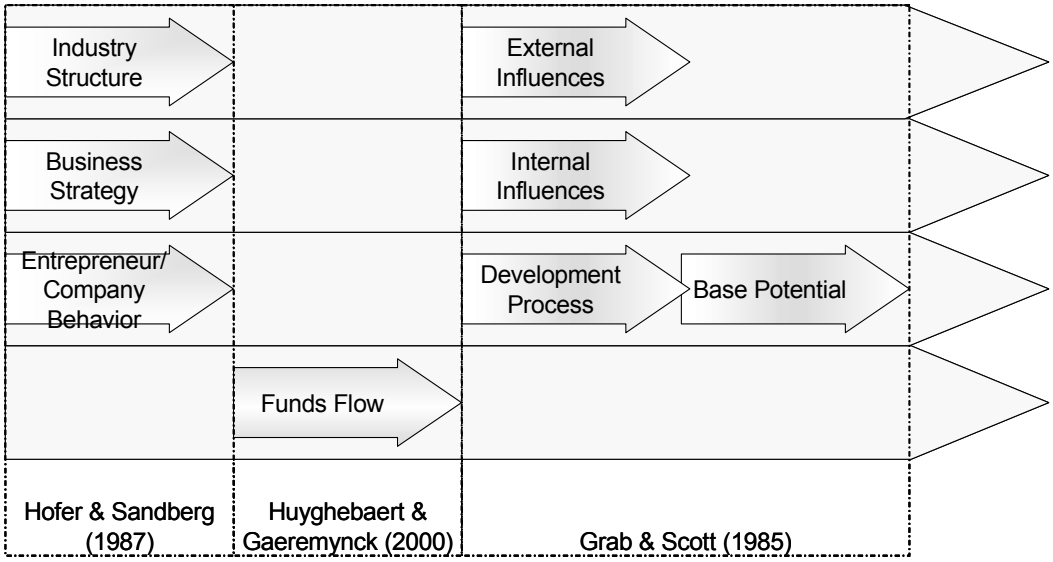

Figure 3: Model alignment

2.4.2 INDUSTRY STRUCTURE

Hofer & Sandberg (1987) propose that five industry characteristics influence the performance of new ventures. These industry characteristics are used to analyze the industry structure as a critical success factor.

Porter (1985) argues that industry structure is a function of the classical five forces: the bargaining power of supplier, bargaining power of buyers, threat of new entrants, existence of substitute products and rivalry within the industry. The characteristics inform the level of competition that the new venture will encounter upon entering the industry, which is the effect of all of Porter's five competitive forces. The following subsections discuss the influential characteristics.

2.4.2.1 INDUSTRY STABILITY

New ventures are more likely to succeed when they enter industries in disequilibrium. The timing of entry is equally important: timing is a trade-off to offset first-mover disadvantage against the late-entry drawbacks. It is critical to enter the industry at the right time with reasonable, though not necessarily perfect, products or services, as reported in the Hofer & Sandberg (1987) study.

2.4.2.2 COMPETITIVE STRUCTURE

Start-up companies increase their performance when they enter industries where the market leader is dominant (> 49 percentage market share). The start-up thus becomes a niche player to compete with the small and fragmented competitors for the remaining market share. According to information cited by Hofer & Sandberg (1987), new ventures should enter markets where the competition is the weakest. Porter (1985) argues that market share amongst competitors determines the industry structure, and that the degrees of differentiation or switching costs define the industry segmentation. Firms can coexist, without attacking each other, in industries with high segmentation or high levels of differentiation. Peterson & Lill (1981) concur with the competitive structure informing the market situation that the new venture faces. Gaskill, Van Auken & Manning (1993) find that the competitive environment and the start-up company's operations within a specific competitive landscape, is a major factor for failure, when executed inadequately.

2.4.2.3 STAGE OF EVOLUTION

Hofer & Sandberg (1987) further contend that start-up companies increase their chances of survival with early entry into industries that exhibited high potential for growth after their entry. This is because all firms benefit from the growth of the industry, rather than cannibalizing each other's market share. Entering high growth potential industries, in early stages of evolution, allow companies to experiment with strategy, with the added benefit of lesser penalties for wrong strategy decisions and the ability to correct them. Overall stage evolution diminishes competition within the industry, since mature industries tend to consolidate players.

2.4.2.4 BARRIERS TO ENTRY

Start-up companies benefit where they face lower barriers to entry into the industry. The start-up company's participation in the selected industry can also help increase the barriers to entry for future entrants into the industry according to Hofer & Sandberg (1987). Barriers to entry vary by industry, yet the most significant barrier across all industries is a limited number of customers. The use of either niche strategies, or the lock-in of a relatively low number of potential buyers, can exploit the concentration of customer. This factor again benefits the start-up company by limiting, or avoiding, competitions within the marketplace.

2.4.2.5 PRODUCT CHARACTERISTICS

Hofer & Sandberg (1987), find that start-up companies benefit firstly, from product heterogeneity, and secondly from the relative importance of the product to the customer's purchasing needs. Firms benefit from heterogeneous products because they could potentially avoid competition by differentiation, rather than face competition from homogenous product offerings. Start-up companies further benefit from choosing products that are relatively unimportant in the customer's overall purchasing needs because customers are not willing to experiment with start-up companies' unproven records of accomplishment on strategically important purchases. The research by Peterson & Lill (1981) confirms the product characteristics to inform the market situation faced by the new venture.

2.4.2.6 PROPOSITION

Based on the five aspects of the industry structure identified in the literature, the following proposition was developed:

> ***Proposition 1: the industry structure is a critical success factor for start-up companies. Specifically, the stability of the industry, structure of competition, evolutionary stage, entry barriers and product characteristics are critical success factors related to industry structure.***

2.4.3 CHOICE OF STRATEGY FOR NEW VENTURE

Hofer & Sandberg (1987) propose that four strategic choices influence the performance of new ventures. The analysis of the options of strategy for the new venture used these four choices. Subsequent sections discuss the influential strategic choices.

2.4.3.1 GENERIC STRATEGIC OPTIONS

Porter (1985) argues that firms have four generic strategic options. The options are broad or narrow competitive scope with either a cost or differentiating competitive advantage. Hofer & Sandberg (1987) argue that start-up companies cannot rely on a cost-based competitive advantage, since, because of the inherent cost structure of new ventures, existing market players can sustain price competition for much longer than new ventures. Ventures will thus increase their chances of success by differentiating themselves from the customer's perspective. Peterson & Lill (1981) concur with the view that successful start-up companies have specific customer goals, and develop targeted product bundles to fulfill the customer needs, therefore differentiating strategy with narrow market focus. The key to this differentiation is to sell quality products, at a premium price, to specific customers, with a strong service orientation afterwards.

Start-up companies should also consider stage of evolution of the industry (refer to section 2.4.2.3) when considering broad or focused strategies. Start-up companies should consider broad-based strategies during early stages of evolution of the industry according to Hofer & Sandberg (1987). They should then consider focused strategies during later stages of evolution of the industry. During early stages of evolution, customer needs and demands are still evolving and the market will therefore penalize focused strategies since their demands are still evolving. In more mature industries, existing players will serve the more attractive segments of the market and new ventures should thus concentrate resources on under serviced niche segments to increase performance.

2.4.3.2 DOMINATION OF MARKET OR SEGMENT

Hofer & Sandberg (1987) find that differentiation on quality products, at premium prices, with excellent service, is of no use if leveraging these aspects does not lead to domination of the market or chosen market segment. It is thus critical for the start-up company to meet and exceed customer's product needs and thereby dominate the target customer's product purchase volume to achieve quasi-monopolistic profits required to succeed.

The fulfillment of demand needs to take cognizance of the fact that the customer's demands are still evolving during early stages of evolution of the market. Start-up companies should therefore constantly assess customers' changing demands as the market matures.

2.4.3.3 CONTINUED INNOVATION

Differentiation and domination will lead to the short-term success of the start-up company, as noted by Hofer & Sandberg (1987). The key to longer-term success is continued innovation of product and service offerings to continue meeting and exceeding customer's evolving product and service demands.
Successful start-up companies spend more on research and development than competitors do in their first two years of operation according to Hobson & Morrison (1983). This ensures that start-up companies are able to maintain their competitive differentiation position in the market.

2.4.3.4 NATURAL AND PROFITABLE GROWTH

Hofer & Sandberg (1987) contend that successful start-up companies pursue organic growth and pursue growth opportunities that their limited cash flow can sustain. New ventures only expand into new areas of business where their core skills or competence offer keys to further success. It is therefore critical for the start-up company to grow organically, rather than grow for the sake of growing at the cost of delaying economic breakeven point for the cash-hungry start-up company, as per the Hofer & Sandberg (1987) study. The Gaskill, *et al.* (1993) report states that poor management of growth and expansion opportunities is a failure factor for start-ups. Therefore, the proper management of growth and expansion potentially is a critical success factor for the start-up company.

2.4.3.5 PROPOSITION

Based on the four aspects of the choice of strategy identified in the literature, the following proposition was developed:

> ***Proposition 2: the choice of strategy for the start-up company is a critical success factor for the success of the new venture. Specifically, the generic strategy choice, market domination, innovation and growth aspects of the strategy choice relate to this critical success factor.***

2.4.4 THE ENTREPRENEUR

Research by Hofer & Sandberg (1987) proposes that four entrepreneurial factors contribute to the overall performance of the start-up company. Ibrahim & Goodwin (1986) confirm that entrepreneurial behavior and management skills are key critical success factors in small business success. Pena (2002) states that the intellectual capital of the entrepreneur partially explains the success of new start-ups. Subsequent sections discuss the influential entrepreneurial factors.

2.4.4.1 RECOGNIZING THE NEEDS OF A CHANGING ENVIRONMENT

Hofer & Sandberg (1987) find that successful entrepreneurs are intelligent enough to be able to understand the implications of events that occur in the world around them. They perceive the external environment very accurately, learning from experience and continuously improving their own performance without rationalizing negative feedback or glowing in positive feedback. They focus on opportunities rather than problems, and where problems exist, they turn problems into opportunities. Successful entrepreneurs then develop fresh and integrative ways to exploit the identified opportunities through the creation of an innovative start-up company.

The GEM report for South Africa, Orford, *et al.* (2003), suggests that most entrepreneurial activity in South Africa is opportunity entrepreneurship, as opposed to necessity entrepreneurship. Opportunity entrepreneurship seeks to take advantage of new business opportunity, whereas people who have no better alternative to work drive necessity entrepreneurship. It is thus evident that the recognition of changing environment is a major entrepreneurial driver in South Africa.

Abdelsamad & Kindling (1978) warn that over-optimism amongst entrepreneurs is a major cause of failure for start-ups. They cite that over-optimism detracts from the entrepreneur's ability to deal with problems in the new company adequately. This reason for failure adds to the entrepreneur's ability to deal with the needs of a changing environment.

Pena (2002) finds that one of the critical success factors for start-up companies is their organizational capital, which two aspects define: firstly, the firm's ability to adapt quickly to changes in the market and their environment. Secondly, the firm's ability to define and implement pragmatic strategies to ensure survival and growth. The organizational capital is part of the overall intellectual capital component, required by the start-up company to succeed in the market.

These mentioned aspects collectively define the entrepreneurs' ability to recognize the needs of a changing environment in which the start-up company operates.

2.4.4.2 Possessing the Motivation to Act

Successful entrepreneurs are ambitious and optimistic, leading them to perceive that they can be successful if they take action, according to the research by Hofer & Sandberg (1987). They have a need for achievement and control, which usually drives them to turn their unique solutions into action. They also have a keen sense of urgency that leads them to take action sooner, rather than later. Ibrahim & Goodwin (1986) confirm this factor as the most critical contribution to success. According to them, intuition, creativity, independence and risk taking defines entrepreneurial values. Pena (2002) concurs, by finding that the entrepreneur's human capital component contains the entrepreneur's motivation to act. The research states this as part of the overall intellectual capital component that ensures the start-up company's success. However, Abdelsamad & Kindling (1978) warn of the risks of over-optimism for entrepreneurs, as discussed in the previous section. They continue to state that an ineffective board of directors, filled with "yes-men", is a cause of failure, since this fails to challenge the entrepreneur's views. The aforementioned aspects combine in the entrepreneurs' possessing the motivation to act.

2.4.4.3 Acting on Own Perceptions

Hofer & Sandberg (1987) state that successful entrepreneurs require keen dedication to their start-up company in order for them to be motivated to act. Successful entrepreneurs often work for longer than normal employment hours, since they have the required dedication. Effective action further requires detailed knowledge of the start-up process and key success factors for the chosen industry together with decisiveness to get the venture started. Ibrahim & Goodwin (1986) identified the above as the managerial skills success factor in their study. They associate strategic planning, cash flow management, experience and education with managerial skills.

Two opposing schools of thought emerge regarding the entrepreneur's experience as a critical success factor. Firstly, Lee & Tsang (2001) find that the entrepreneur's experience, in terms of both industry and management, is the single factor that has the greatest impact on venture growth, and thus success. They find that personality traits (locus if control, need to achieve and extroversion) are not critical success factors for venture success. Venture capital providers support their view, as mentioned in European Venture Capital Journal (2002) and Timmons & Gumpert (1982). Venture capitalists therefore view the entrepreneur's prior industry sector experience as a proxy for the success of the start-up company. Secondly, the Hofer & Sandberg (1987) study contradicts the common belief that experience is critical for the success of the new venture. In certain ventures, failure to understand success factors or understand environmental changes lead to the failure of the venture. It is thus not a critical success factor that the entrepreneur has detailed prior experience in the chosen industry, since this often leads to complacency rather than action. The GEM report for South Africa confirms this school of thought.

Orford, *et al.* (2003) state that a major reason for low entrepreneurial activity in South Africa is the low proportion of males who believe they have the skills to start a new business. They find that in gender classification of entrepreneurship, South African males are lower, and females are on par, with other developing countries. They report that only 45% of males under 45 believe they have the skills to start a new business, which is slightly more than half that of the average for developing countries. The South African education and training system's failure to focus on entrepreneurship informs this lack of belief in adequate skills amongst potential entrepreneurs. The lack of entrepreneurial role models (because of the low entrepreneurial activity) also contributes to low self-perception amongst potential entrepreneurs. The entrepreneur's own perceptions of the skills to start a new business are thus a major contributor to the entrepreneurial activity, which highlights the factor identified in this research. Pena (2002) further concludes that the entrepreneur's education, overall business experience and network of productive business contacts define their overall human capital component. Again, this component is part of the intangible intellectual capital required to

succeed as a new start-up. All aspects listed here translate to the entrepreneurs' ability to act on own perceptions.

2.4.4.4 MOTIVATING OTHERS TO ACT EFFECTIVELY

Hofer & Sandberg (1987) find that start-up companies are typically a team effort and the entrepreneur needs to motivate the start-up company team to act effectively. This relies heavily on the entrepreneur's ability to seek the best people, share the rewards of success and create a climate that encourages the team to perform. The entrepreneur's ability to motivate the team to act effectively links to her own motivation to act and acting on own perceptions, as discussed in the previous sections. Ibrahim & Goodwin (1986) confirm the entrepreneur's interpersonal skills, with both internal and external parties, as a factor for success.

Abdelsamad & Kindling (1978) find that nepotism amongst entrepreneurs and their individual team members is a major reason for failure, because of declining staff and team morale. They also find that the entrepreneur's inability to delegate tasks causes failure. This inability to delegate diminishes the evolution of strong leaders amongst the team members. The Gaskill, *et al.* (1993) research concurs, by finding that overall poor management skills is a factor for failure amongst start-ups. Conversely, good managerial skills are thus a critical success factor. The combination of these aspects culminates in the motivation of others to act effectively.

2.4.4.5 PROPOSITION

Based on the four aspects of the entrepreneur identified in the literature, the following proposition was developed:

> ***Proposition 3: the entrepreneur is a critical success factor for the success of the new venture. Specifically, the entrepreneur's needs recognition, motivation, ability to act, and team motivation relate to the critical success factor of the entrepreneur.***

2.4.5 FINANCIAL MANAGEMENT

The financial status of the start-up company is an eventual outcome indicating the relative success or failure faced by the new enterprise. Financial status is an eventual outcome, since the previously mentioned critical success factors would most probably culminate in eventual financial status. The management of finances is therefore a tool for the entrepreneur to measure the relative success of the new venture. Gaskill, *et al.* (1993) concludes that poor financial management in start-ups is a factor for failure, and thus asserts that financial management is a critical success factor for the start-up company.

Entrepreneurs have the choice of traditional financial ratio management or managing funds flow ratios in the new enterprise. The Huyhebaert, *et al.* (2000) report compares the use of traditional financial ratios to the use of funds flow measurements as indicators for the success or failure of new firms during their first five years of operation.

In the GEM Report for South Africa, Orford, *et al.* (2003) report that lack of financial assistance from capital providers does not hamper entrepreneurial activity in South Africa. Rather, they find that the lack of financial management skills amongst entrepreneurs is the greatest contributor to financial distress in start-up companies. The link is causal, since poor financial management leads to financial distress and capital providers use the entrepreneur's ability to manage finances as a vital qualifying factor for debt financing. If the entrepreneur can therefore not manage finances, that entrepreneur would risk failure and thus not qualify for debt financing.

The Huyhebaert, *et al.* (2000) model combine many previous research efforts to develop a funds flow model consisting of the elements of operating cash flows, financing & investing funds flows and funds flow from working capital. Subsequent sections compare the funds flow model to the traditional ratios model in the subsequent sections. The traditional model is an integration of previous models and consists of the elements of profitability ratios, solvency ratios and liquidity ratios.

2.4.5.1 FUNDS FLOW MODEL

Huyhebaert, *et al.* (2000) constructs a model for funds flow in start-up companies based on the integration of many prior research efforts. They find three major funds flow categories based on cash-based fund flows: operating cash flows; financing & investing funds flows; and funds flow from working capital. Each of these funds flow categories then decomposed into components acting either as a cash inflow (source) or cash outflow (use) of cash.

Refer to Table 1: Funds flow variables and failure prediction for an analysis of each variable. Note that the net effect of (Source or Use) * (Failure predictor) is considered as the indicator of failure. Consider the fixed coverage expense (FCE) variable: if FCE increases (- * - = +), this is considered as a predictor of failure, since a larger part of the company's total funds flow is consumed by debt holders, leaving less retained income for further investments. Variables with no clear link to failure prediction are marked with a question mark (?) as failure predictor. Dividend payments (FDIV) have no clear link to failure, and FDIV is thus marked as question mark (?) for the failure indictor.

Note that, based on funds flow, the net sum of all the variables is always equal to zero. Thus, the closed system of the start-up company generates and consumes the net fund flows: GMARGIN + LABOUR + FOPRES+ FEQ + FDEBT + FDIV + FCE + FCAP + FINVENT+ FAR + FAP + FCC + FOTHER = 0.

Variable		**Source +/ Use -**	**Failure predictor**
Operating cash flow variables			
GMARGIN	Gross margin	+	-
LABOUR	Labour	-	-
FOPRES	Residual cash flow (including operating expenses and revenues or cost for extraordinary activities)	+/ -	-
Financing and investing funds flow variables			
FEQ	Equity financing	+	-
FDEBT	Debt financing	+	+

Variable		Source +/ Use -	Failure predictor
FDIV	Dividends	-	?
FCE	Fixed coverage expenses (fixed obligations for the firm, typically debt and interest repayments).	-	-
FCAP	Capital expenditure (investments in tangible and intangible assets).	-	+
Working capital cash flow variables			
FINVENT	Inventories	-	+
FAR	Accounts receivable (trade credit to customers).	-	+
FAP	Accounts payable (trade credit from suppliers).	+	+
FCC	Cash and marketable securities	-	+
FOTHER	Other current assets and liabilities	+/ -	?

Table 1: Funds flow variables and failure prediction. Source: Huyhebaert, *et al.* (2000)

Orford, *et al.* (2003) find that the probability of cash flow difficulties experienced by start-up companies in South Africa significantly reduce for those firms that implement the following practices:

- Proper cash management;
- Recording and tracking accounts receivable;
- Recording and managing inventory purchases and levels; and
- Actively managing debtors.

Successful financial management practices ensure that companies are able to survive financially, and increase the willingness of financial institutions to provide external capital in the formal market. These findings therefore support the model developed by Huyhebaert, *et al.* (2000).

2.4.5.2 TRADITIONAL RATIOS

The Huyhebaert, *et al.* (2000) model integrates numerous previous studies on traditional financial ratios to devise a model for failure prediction based on the traditional financial ratios. The model uses profitability ratios, solvency ratios and liquidity ratios as indicators of failure for start-up companies. Table 2: Traditional ratios and failure prediction discusses the variables included in each ratio. The failure predictor is clear to interpret, so as an example, when a start-up company's debt increases without a corresponding increase in cash flows the CF/ TD ratio will decrease (-) while the TD/ TA ratio will increase (+) if not used to purchase assets, thus predicting possible failure.

Variable		**Failure predictor**
Profitability ratios		
NI/ TA	Net income/ Total assets	**-**
EBIT/ TA	Earnings before interest and taxes/ Total assets	**-**
Solvency ratios		
TD/ TA	Total debt/ Total assets	**+**
CF/ TD	Cash flow/ Total debt	**-**
Liquidity ratios		
NWC/ TA	Net working capital/ Total assets	**-**
CA/ CL	Current assets/ Current liabilities	**-**
C/ CL	Cash and marketable securities/ Current liabilities	**-**

Table 2: Traditional ratios and failure prediction. Source: Huyhebaert, *et al.* (2000)

Thomas & Evanson (1987) argue that financial ratio analysis provides information to the management of the company regarding historic performance, specifically profitability and efficiency. Their argument contends that management can foresee business failure by extending historical ratio performance with trend analysis. Financial ratios can therefore predict the failure of companies, for which the authors provide literature evidence. They argue however, that the effective management of key financial ratios can improve the performance of small businesses.

Thomas & Evanson (1987) use traditional financial ratios to predict the failure of start-up companies. Their thirteen ratios are included in the selection presented in Table 2. Ross, Westerfield, Jordan & Firer (2001) argue that the cash ratio and cash overage ratios are important financial ratios. The cash ratio is an effective measure of short-term credit for the start-up company. The cash coverage ratio provides insight into the long-term solvency of the start-up company. They further argue that the acid-test ratio should exclude inventory, since this is the least liquid current asset for the company. These ratios are included in Table 2. Lumpkin & Ireland (1988) argue that four broad financial ratios are relevant to the success of new ventures. The ratios are:

- Liquidity: ability to cover short-term obligations and cash flow as an indication of downside risk for the new venture (supported by liquidity ratios in Table 2);
- Profitability: return on investment and margins as an indication of the new venture's earning power (supported by profitability ratios in Table 2);
- Asset utilization: productivity of the firms' assets as an indication of how assets are producing sales or earnings (supported by solvency ratios in Table 2); and
- Debt utilization: percentage of debt versus equity financing as an indication of degrees of risk (supported by solvency ratios in Table 2).

The literary evidence from Thomas & Evanson (1987), Ross *et al.* (2001) and Lumpkin & Ireland (1988) therefore support the Huyhebaert, *et al.* (2000) model of traditional financial ratios used as start-up failure predictors.

2.4.5.3 MODEL COMPARISON AND FINDINGS

The Huyhebaert, *et al.* (2000) model uses a multivariate estimation methodology to compare traditional financial ratios to financial flows as detectors and predictors of start-up success. The conclusion indicates that financial flows have a superior ability to detect start-up characteristics that influence subsequent failure of the start-up company. Liquidity constraints during start-up are a major cause of failure for new firms. They specifically find that liquidity constraints originate from the lack of internal cash flow generation, rather than mere undercapitalization. Table 3: Influence of funds flow variables on survival presents a summary of their findings and the significant determinants of survival.

Variable		**Explanation**	**Failure predictor**
Operating cash flow variables			
GMAR-GIN	Gross margin	Firms with high or increasing gross margins are more likely to survive. This is a **significant** determinant of survival.	+ * - = +
LABOUR	Labour	Firms paying out more of their internal cash flows to labour expenses have a higher failure rate. This is a **significant** determinant of survival.	- * - = +
FOPRES	Residual cash flow	Firms deriving more revenues from extraordinary activities are more likely to survive. Likewise, firms paying less for extraordinary activities are more likely to survive. This is a **significant** determinant of survival.	+ * - = - (revenue) or - *- = + (cost).

Variable		Explanation	Failure predictor
Financing and investing funds flow variables			
FEQ	Equity financing	The proportion of funds obtained from equity financing does not have a significant impact on survival. However changes in equity financing, specifically because of residual cash flow generation, is a **significant** determinant of survival.	+ * - = -
FDEBT	Debt financing	The gearing of a company has no significant impact on survival. Yet the change in debt financing indicates problems with internal cash flow and is thus a **significant** determinant of survival.	+ * + = +
FDIV	Dividends	Funds distribution to equity holders is no different between failed or successful start-up firms. It is thus **not a significant** determinant of survival.	?
FCE	Fixed coverage expenses	Funds distribution to debt holders is no different between failed or successful start-up firms. It is thus **not a significant** determinant of survival.	- * - = +
FCAP	Capital expen-diture	The amount or changes to capital expenditure are no different between failed or successful firms. The effective application of capital expenditure is, yet the level of capital expenditure is **not a significant** determinant of survival.	- * + = -

Variable		Explanation	Failure predictor
Working capital cash flow variables			
FINVENT	Inven-tories	Start-up firms that constrain their inventory levels as compensation for liquidity problems are more likely to fail. This is a **significant** determinant of survival.	- * + = -
FAR	Accounts receiv-able	Failed firms impose with liquidity problems impose stricter trade credit terms for their customers to compensate for lack of working capital. This is therefore a **significant** determinant of survival.	- * + = -
FAP	Accounts payable	Start-up firms who compensate for liquidity problems by availing themselves of rather expensive trade credit finance are more likely to fail. This is a **significant** determinant of survival.	+ * + = +
FCC	Cash and market-able securities	Firms that are able to build a safety margin for working capital are more likely to survive. This is thus a **significant** determinant of success.	- * + = -
FOTHER	Other current assets and liabilities	The changes to current assets or liabilities have no bearing on the success of start-up firms. This is therefore **not a significant** determinant of survival.	?

Table 3: Influence of funds flow variables on survival. Source: Huyhebaert, *et al.* (2000)

The management of the following funds flows are critical success factors for the start-up company, based on the findings by Huyhebaert, *et al.* (2000):

- Gross margin;
- Labour;
- Residual cash flow;
- Equity financing;
- Debt financing;
- Inventories;
- Accounts receivable;
- Accounts payable; and
- Cash & marketable securities.

2.4.5.4 PROPOSITION

Based on the nine critical success factors for funds flow management, identified in the literature, the following proposition was apparent:

> ***Proposition 4: the effective management of funds flow aspects is a critical success factor influencing the success of the start-up company. Specifically, the management, and control, of the flowing funds flow variables are critical success factors: gross margin; labour; residual cash flow; equity financing; debt financing; inventories; accounts receivable; accounts payable; and cash & marketable securities.***

3 PROPOSITIONS

The literature review from section 2 informs this summary of the propositions. The causal analysis of the critical success factors is not the purpose of this research, yet the mere presence of any of the critical success factors is what this research is seeking to identify. The right entrepreneur would select the ideal industry for her company, and by choosing the appropriate strategy, would generate adequate cash flows to continue to operate and expand her company. This causal loop is interesting, yet this research is concerned with what these critical success factors are, more than their causal loop sequence. This section summarizes the propositions.

3.1 PROPOSITION 1

The industry structure is a critical success factor for start-up companies. Specifically, the stability of the industry, structure of competition, evolutionary stage, entry barriers and product characteristics are critical success factors related to industry structure.

3.2 PROPOSITION 2

The choice of strategy for the start-up company is a critical success factor for the success of the new venture. Specifically, the generic strategy choice, market domination, innovation and growth aspects of the strategy choice relate to this critical success factor.

3.3 PROPOSITION 3

The entrepreneur is a critical success factor for the success of the new venture. Specifically, the entrepreneur's needs recognition, motivation, ability to act, and team motivation relate to the critical success factor of the entrepreneur.

3.4 PROPOSITION 4

The effective management of funds flow aspects is a critical success factor influencing the success of the start-up company. Specifically, the management, and control, of the flowing funds flow variables are critical success factors: gross margin; labour; residual cash flow; equity financing; debt financing; inventories; accounts receivable; accounts payable; and cash & marketable securities.

4 RESEARCH QUESTIONS

The set of research questions were formulated based on the research problem (section 1.2) and the subsequent literature review established propositions (section 3). Table 4: Research questions aligned to problem statement defines the research questions.

Problem	Sub-problem	Research question
The researcher proposes to identify and qualify critical success factors influencing the success of start-up companies in South Africa	The **first** sub-problem is to determine a set of common critical success factors amongst start-up companies in various industries of the economy	What are the actual critical success factors for start-up companies in South Africa?
	The **second** sub-problem is to rank the identified critical success factors leading to the success of start-up companies in their specific industry.	How important is each critical success factor for start-up companies in South Africa?
	The **third** sub-problem is to develop a framework of critical success factors that the start-up company needs to manage in order to increase their chances of success.	What framework of critical success factors should start-up companies in South Africa consider?

Table 4: Research questions aligned to problem statement

5 METHODOLOGY

This section defines the methodology used by the researcher to answer the research questions. The Delphi technique was employed to analyze the propositions described in section 3. This section explores the reasons for the selecting the Delphi technique, discussing the reasons for choice and overall design considerations for the research. The next section (6) discusses the findings of each round of the survey. The last section (7) then interprets the results.

5.1 PARADIGM

The qualitative research paradigm was the basis for this research. It is important to note that the functional and qualitative research paradigms are synonymous with each other. Whittaker (2003b) offers the following salient features associated with the functional paradigm:

- The paradigm ensures that explanations of social affairs are rational;
- The approach of the functional paradigm is problem-oriented;
- The approach employs models and methods; and
- The functional paradigm includes the management science field of study.

Whittaker (2003b) illustrates the process of research in the functional paradigm as depicted in Figure 4: Process of the functional research paradigm. This research was therefore conducted in the functional research paradigm, which is best suited for the discovery of critical success factors for start-up companies in South Africa.

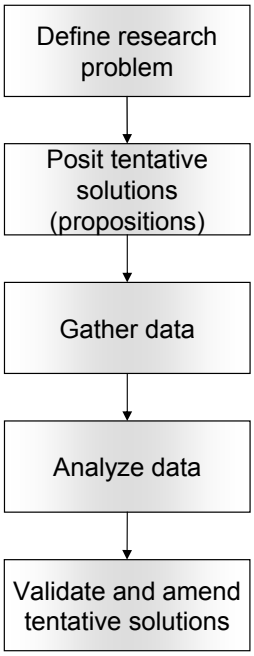

Figure 4: Process of the functional research paradigm. Source: Whittaker (2003b)

5.2 THE DELPHI TECHNIQUE

The RAND Corporation first employed the Delphi technique to facilitate group decision-making process in military applications in the 1950's. According to Hornsby, Smith & Gupta (1994) the major objective of the Delphi technique is to achieve improved consensus amongst a panel of experts through successive rounds of anonymous group judgments. This improved consensus would lead to more accurate predictive judgments, yet lacks in the ability to explore individual disagreements in the judgments of individual panel members. It is the accurate predictive judgments of a panel of experts in decision-making that made the Delphi technique ideal for the purposes of this research into the critical success factors of start-up companies in South Africa.

5.2.1 OVERVIEW OF THE DELPHI TECHIQUE

Story, Hurdley, Smith & Saker (2001) describe the Delphi technique as a method of judgmental forecasting based on anonymous collective knowledge and experience of a panel of experts, elicited in a number of rounds of data collection. The group judgment emerges without the normal negative psychological drawbacks of group interaction, since responses were solicited anonymously and independently of each other. The judgmental forecasting techniques rely on the opinions, rather than mathematics, of the aggregate collective knowledge of multiple panel experts. This research therefore used the Delphi technique to engage with a group of heterogeneous and independent experts who made anonymous forecasts in three rounds. The researcher summarized and analyzed all responses subsequent to each round, as presented in section 6 and 7.

Story, *et al.* (2001) state that the first round of data collection is typically a semi-structured solicitation of experts' opinions allowing them the relative freedom to propose their views qualitatively. These opinions were then reviewed and aggregated to provide structured feedback for the next round.

The objective of the second round is to allow the panel to review and alter their opinions based on the structured feedback of the entire panel from the first round. The greatest improvement in accuracy usually occurs between the first and the second round of the Delphi technique. A third round of interaction with the panel then presents controlled, anonymous and aggregated feedback to the panel, and allows them to refine their forecasts and opinions.

The Delphi technique typically consists of two to ten rounds of interactions, as mentioned by Story, *et al.* (2001). Gutierrez (1989), as reported in Story, *et al.* (2001). This research used three rounds of Delphi survey interactions with the panel. The results clustered around a few distinct values and served the purpose of achieving consensus amongst the panel of experts. These few distinct values were the critical success factors with which this research was concerned.

5.2.2 TYPES OF DELPHI TECHNIQUES

Story, *et al.* (2001) summarizes three distinct types of Delphi techniques. The first is Classical Delphi where the purpose is to estimate a set of unknown parameters. The second is Policy Delphi, where panelists assume different standpoints in a matter, and the technique clarifies the principle arguments taken by panelists to assume these standpoints. The third is Decision Delphi technique, where the panel is prepared and assisted to make critical decisions.

This study employed the Classical Delphi technique as a basis to estimate the unknown parameters of critical success factors for start-up companies in South Africa. The research was clearly neither a Policy formulation, nor a Decision problem.

5.2.3 ADVANTAGES OF THE DELPHI TECHNIQUE

Story, *et al.* (2001) assesses the advantages of the Delphi technique along the dimensions of broad & unique methodology, practicality and learning. Table 5: Benefits of the Delphi technique summarizes these advantages specific to the research problem, and related to the specific problem statement of this research.

Broad Methodological Benefits
Story, *et al.* (2001) finds that the Delphi technique is used where there is no evident historical data set, or when dilemmas are ethically and socially sensitive. There was little historical data for critical success factors of start-up companies in South Africa.
Story, *et al.* (2001) states that the technique incorporates a wide range of opinions between complex and interrelated variables, specifically useful for discovering the critical success factors of start-up companies in South Africa. Halpern, Thompson & Schaffer (2000) add that the technique allows adaptable strategies for the collection of diverse data in diverse experience settings.
Story, *et al.* (2001) concludes that the technique estimates both facts and opinions of experts regarding the critical success factors for start-up companies in South Africa.

Unique Methodological Benefits
Story, *et al.* (2001) finds that the technique eliminates the problems of direct interaction between panel members, such as dominance of, and potential conflict situations between specific panel members in the critical success factor research. Since this research considered the opinions of a diverse panel of experts, this advantage was useful to the research.
Story, *et al.* (2001) states that the technique allows panel members to contribute their opinions anonymously, also allowing them to alter their opinions without personal scrutiny of the panel. Halpern, *et al.* (2000) confirms the advantage of negated peer pressure.
Story, *et al.* (2001) concludes that the technique enables panel members to form their opinions independently on a gradual basis with regular controlled feedback from the entire panel.
Practical Benefits
Story, *et al.* (2001) states that the technique is an inexpensive method to organize the aggregate global opinion of a panel of experts who are physically not in close proximity. The panel of experts would thus also effectively gain the benefit of group learning with the feedback of responses summarized by the researcher. This was particularly useful to establish the critical success factors, where there is a limited budget and experts are not in physical proximity of each other. Halpern, *et al.* (2000) states that this benefit is amplified with the advent of modern Internet and email technology options for obtaining opinions.
Learning Benefits
Story, *et al.* (2001) concludes that the technique allows learning and research to be conducted in parallel while using the concept that the whole is larger than the sum of its parts. This was useful in establishing the critical success factors, since no one individual had insight into all the critical success factors. The aggregate consensus therefore provided a better framework of critical success factors, since it was based on the aggregate opinions of experts in the various aspects of these factors for start-up companies in South Africa.

Table 5: Benefits of the Delphi technique. Source: Multiple literature sources as indicated

There were therefore considerable benefits to the Delphi technique in establishing and analyzing the critical success factors for start-up companies in South Africa. These advantages were considered with respect to the disadvantages of the Delphi technique to evaluate the applicability of the technique.

5.2.4 DISADVANTAGES OF THE DELPHI TECHNIQUE

Story, *et al.* (2001) states the disadvantages of the Delphi technique along the dimensions of process and panelist disadvantages. Table 6: Disadvantages of Delphi technique summarizes their findings, and relates the findings to the specific research problem.

Process disadvantages
Story, *et al.* (2001) finds that the technique does not specify situation-specific adaptations to the methodology. Specifically, for the critical success factors, there was no clear modification of the methodology defined in any literature, and the researcher hence had the freedom to modify the methodology as necessary and appropriate.
Story, *et al.* (2001) states that it is almost impossible to establish the validity and reliability of the study into critical success factors. Section 5.6 details the mitigation for this specific disadvantage.
Story, *et al.* (2001) affirms that too much iteration of response rounds may lead to boredom of the panelists. This may influence their commitment and ultimately the quality of their responses in each successive round. Halpern, *et al.* (2000) further contend that the technique has long turn-around times in the interaction with the panel, and if traditional media is used (mail surveys), the cost increases considerably. Section 5.5.1.2 deals with this disadvantage.
Story, *et al.* (2001) reveals that the anonymous responses of experts may lead to compromise, rather than consensus, amongst the members. The researcher controlled this, since the researcher was responsible for question formulation and for feedback to panel members. The researcher was thus not biased and provided equal feedback on all opinions raised during any specific round of the Delphi responses.

Panelist disadvantages
Story, *et al.* (2001) concludes that it is relatively difficult to analyze the degree of expertise of each panel member. The absence of metrics to assess relative expertise made the panel composition challenging. The findings by Halpern, *et al.* (2000) confirm that the technique includes difficulty in defining, and locating, experts in the area of study, here specifically the area of start-up companies. This disadvantage was mitigated by the self-classification of the panel, and the number of panelists involved (refer to section 6.1)

Table 6: Disadvantages of Delphi technique. Source: Multiple literature sources as indicated

Although the Delphi technique posed some disadvantages in establishing the critical success factors, it was apparent that the advantages outweigh the disadvantages. The design of the research, mentioned in section 5.3, would overcome some of the disadvantages summarized in Table 6: Disadvantages of Delphi technique. The Delphi technique was therefore the optimal possible research methodology for the stated research problem of establishing the critical success factors.

5.3 RESEARCH DESIGN

Story, *et al.* (2001) finds three basic issues in the design of a Delphi-study.

- The first is to have a clear understanding of the objective of the study. This research clearly identified the objective in the problem statement, delimitations and subsequent literature review of the critical success factors (sections 1.2 and 2).
- The second issue is the formation of the panel of experts, thus experts will collectively participate in the responses and contribute to the aggregate consensus of critical success factors. This issue was dealt with in proper panel formation (refer to section 5.4).

- The third issue is the ability of the researcher to conduct the study. Since the study of critical success factors is a complex research problem, the accuracy of the Delphi-study relies greatly on the ability of the researcher to formulate the questions and summarize the responses to provide feedback to the panel. Basing the research on a thorough literature review, which defined the propositions, overcame this issue. The research methodology incorporated the adapted framework for the Delphi framework proposed by Story, *et al.* (2001), and strategy recommendations by Halpern, *et al.* (2000) by using a Web-based research tool that ensured a thorough and systematic procedure to administer the research.

The consideration of these issues therefore negated the disadvantages of the Delphi technique. This further informed the choice of the Delphi technique for this research.

5.4 POPULATION AND SAMPLE: PANEL FORMATION

The formation of the panel of experts is a critical aspect in the Delphi-study's design. It was accepted that no single panel expert could possibly have insight into all critical success factors of start-up companies in South Africa. It was therefore crucial to establish a panel of experts with different insights and experiences into the critical success factors.

Story, *et al.* (2001) contends that the composition of the panel has a profound impact on the accuracy and validity of the research. They state that there should be at least one expert in each area of the critical success factors and that every expert does not necessarily have to incorporate expertise in each area of critical success factors. Their research suggests that between five and twenty panel experts are adequate for the Delphi-study, with cognizance of the fact that a larger number of panelists provide logistical and time challenges, with no tangible improvements in results for the research. The Halpern, *et al.* (2000) findings state that panel sizes of at least eleven members can make accurate predictions (leading to correlations in excess of 0.7 with true data).

The literature review for this research identified four broad dimensions for success in start-up companies in section 3. The broad factors were Industry structure, start-up Strategy Choice, the Entrepreneur and Funds flow management.

Section 1.4 identified the entrepreneur, service providers and governmental organizations as major stakeholders in the success of start-up companies. Additionally, the academic discipline[2] would add invaluable insights into the critical success factors of start-up companies in South Africa. These groups were therefore the basis for the construction of the Delphi panel of experts for this research. The list below summarizes each group's expertise.

- Successful or unsuccessful *Entrepreneurs* would provide expert first-hand experience in reasons for success, and failures of new ventures. This group provided insights on all dimensions identified in literature.
- *Service Providers* would provide expert opinions in factors that have lead to the success of both successful and failed companies that they have serviced. Group provided insights into strategy choice, entrepreneur and funds flow dimensions identified in literature.
- *Capital Providers* would provide expert insights to factors that they have seen in financing start-up companies. Group provided insights into strategy choice, entrepreneur and funds flow dimensions identified in literature.
- *Government* experts would provide expert opinions in environmental factors, which have lead to success or failure of companies. Group provided insights into industry structure and entrepreneur dimensions identified in literature.
- *Academic* experts would provide expert opinions in frameworks and models, as well as literature view of critical success factors. Group provided insights into industry structure and strategy choice dimensions identified in literature.

[2] Academics dealing with entrepreneurship, economics and finance for start-ups.

The entrepreneur group expanded to include both successful and failed entrepreneurs. Successful entrepreneurs provided valuable insights into reasons for success; yet, failed entrepreneurs likewise provided insights into specific reasons for unsuccessful start-up companies.

Groups were not limited to providing insights into only the dimension identified for them: this is merely an indication of the potential contribution along the identified dimensions. As an example, the governmental group provides insights into industry structure and entrepreneur dimensions, yet equally contribute to the dimensions of funds flow and strategy choice. These were merely the perceived dimensions of expertise suggested for each group.

The high number of initial respondents allowed for the possible attrition of panel members in subsequent stages. Although such attrition was actively discouraged through reminder emails, the researcher could foresee that unanticipated events could force panel members to stop responding. This allowed for adequate remaining panel members according to the more than five, less than twenty panel members guideline set by Story, *et al.* (2001). Findings by Halpern, *et al.* (2000) state that the average Delphi-study response rate of 50% can be improved considerably by the proper use of Internet and email technology (for an overview of the interaction channels refer to section 5.5.1.1). They contend that eleven continuous panel members are adequate to get a significant consensus opinion from a panel. The panel formation thus followed a non-probability sampling strategy with convenient sampling, quota sampling and purposive sampling characteristics, as mentioned by Whittaker (2003b). The researcher would therefore attempt to ensure that at least eleven members actively participated in the survey.

5.5 DATA COLLECTION AND ANALYSIS

Story, *et al.* (2001) states that the iterative Delphi rounds usually varies between two and ten rounds. They estimate that the greatest improvement of accuracy occurs between round one and round two, and that experts suffer Delphi fatigue after subsequent iterations that, in turn, lead to attrition of experts participating in the study. This study therefore employed three rounds of responses from panel experts. This ensured adequate accuracy in the panel's consensus, whilst mitigating the risk of Delphi fatigue experienced by experts. Story, *et al.* (2001) further suggests three distinct stages to the classical Delphi technique in their research framework methodology.

- Stage one is the *exploratory* phase of the research, where the critical success factors were explored according to the problem definition presented in this paper. The individual experiences and opinions of panel members informed this stage.
- The second stage is the *synthesis* of the aggregate responses of all panel members from the first phase. The outcome of the second stage lead to the consensus of the panel as to critical success factors for start-up companies in South Africa. Panel members could augment or change their specific opinions of critical success factors based on the collective feedback of the entire panel's experiences.
- The third stage is essentially a *verification* of all responses and serves to provide stability of the consensus of the panel, as confirmed by Whittaker (2003a). This stage allowed panel members to rank the collective feedback of the entire panel's experiences and opinions of critical success factors.

It was therefore appropriate to have three rounds of interaction with the panel of experts, based on the modified Delphi technique presented by Story, *et al.* (2001). Schmidt (1997) states that the Delphi rounds have the following purposes: firstly to *discover* the issues according to the panel, secondly to determine the *importance and relevance* of issues amongst panel members and thirdly to *rank* the issues. This parametric technique was combined with the Story, *et al.* (2001) technique.

According to Halpern, *et al.* (2000), the following actions will mitigate the risks associated with the Delphi-study, as analyzed in section 5.2.4:

- Recruit a panel of experts representing all stakeholders in the critical success factors of start-up companies. This was done in the panel selection, as detailed in section 6.1;
- Obtain written permission from each expert to serve on the panel in the study. This was done in the first round, with panel members consenting to participation by replying to the invitation to complete the first round, as detailed in section 6.2.1;
- Fully explain the entire research process to experts participating in the study. This was done in each round of the survey, and specifically detailed in the first round (refer to section 5.5.2.2);
- Ensure that questionnaires are easy to comprehend and understood by the experts. This was done by the use of an interactive Web-based survey tool, and also clearly communicating the purpose and instructions of each survey (refer to addendums B, C and D);
- Avoid over-structuring the questionnaire, as this leads to the researcher influencing the results. Avoid under-structuring the questionnaire, this leads to excessive time delays in obtaining responses from experts. This was done appropriately, using free text and simplistic designs in each survey (refer to addendums B, C and D);
- Ask a reasonable number of questions to avoid boredom of panel members. An upper limit of 25 questions per questionnaire is suggested. This was ensured by no round containing more than ten questions, refer to sections 5.5.2.2, 5.5.3.2 & 5.5.4.2 for a summary of each survey's design;
- Fully explore areas of disagreement between panel members. This will lead to earlier consensus. No serious disagreement emerged in the survey, which negated this requirement;
- The researcher should refrain from inserting personal opinions into the feedback provided to the panel of experts. This decreases the validity and reliability of the study's results. The researcher did not influence the results, which was further ensured by the second round review of the researcher's interpretations of the first round;

- Beware of, and do not underestimate, the panel's response burden and fatigue during the study. Careful consideration will reduce the risk of expert attrition during the study. Ensuring that surveys did not take long to complete managed this consideration. The overall 60% participation of the panel in any round was evidence that the burden was not too onerous on the panel;
- Ensure cognizance of response turn-around times. Mailed responses require at least a month before results are available to the researcher. Emailed questionnaires offer the advantage of less turn-around time, greater response rates and improved accuracy in results. The survey therefore used email and Web-based surveys;
- Beware of technical problems in email (or Internet) questionnaire transmission and administration. Their results indicate that constraints on email functionality at the expert's organizations (reliability, access, availability of attachments and applications versions & capabilities for responses), as well as change of email addresses hamper the availability of results. This factor was not a constraint on the research, since enough respondents participated in the survey (refer to section 7.1.2);
- Avoid over-generalization of the results of the study. The results represent the aggregated consensus of the specific panel, and should not be over-generalized. The conclusion (section 8) deals with this consideration.

The purpose description of each round, contained in the following sections, discusses further reasons for the choice of three rounds.

5.5.1 SURVEY CHANNEL MEDIA

This section provides an overview of the channel options for the Delphi-study, and then describes the channels used for this research.

5.5.1.1 DELPHI INTERACTION MEDIA CHANNEL OVERVIEW

Halpern, *et al.* (2000) argues that the proper use of Internet and email technology will considerably increase the response rate of the panel in the Delphi-study. These channels minimize the costly and timely turn-around times of mailed surveys, as mentioned in numerous studies (Halpern, *et al.* (2000), Story, *et al.* (2001) and also by Schmidt (1997)). This research therefore employed the Internet, and email, as the preferred channel of interaction of each round of the Delphi-study with the panel.

5.5.1.2 TOOLS USED

An electronic Web-based research tool generated and administered the surveys. The tool allows respondent list management and survey designs to incorporate all logic and question types in the surveys. The tool further allows the researcher to monitor who has responded to the survey, and analyze all responses. The respondents' answers remained anonymous, since no results interpretation bias based on the respondent is desired. A status indicator could track each panel member's response status: responded; has not yet responded, or declined. The tool used was http://www.surveymonkey.com, which required a monthly subscription fee.

5.5.2 FIRST ROUND METHODOLOGY

This section describes the methodological considerations and actual survey used for the first round and then discusses the options for analysis of the first round. Sections 6.2 and 7.2 respectively present the actual results and subsequent interpretations of round one.

5.5.2.1 FIRST ROUND DELPHI PURPOSE

The purpose of the first round Delphi-study was twofold: firstly to invite panel members to participate in the research, and secondly to gather their opinions of critical success factors.

All potential members of the panel received the initial invitation to participate in the Delphi-study. Findings by Halpern, *et al.* (2000) contend that email recruitment of panel members is faster and more effective than traditional mailed invitations. The panel members would therefore be recruited speedily and without geographical limitations imposed by turn-around times of mailed invitations. Panel members then participated in the three rounds of the Delphi-study, as described in the subsequent sections.

The secondary purpose of the first round of the Delphi-study was to elicit the opinion of each panel member as to critical success factors. Schmidt (1997) suggests that an explanation of the nominated issue be included, since different experts can have different terminology for similar concepts. Experts were asked to state the definition of the factor. This provided the researcher with further insight into the nature and content of the critical success factor.

The format was an open-ended semi-structured questionnaire, which provided the expert with a free text field to suggest the critical success factors contributing to the success of start-up companies. The use of a semi-structured questionnaire ensured that experts had guidelines for providing their responses, which would have taken longer when there is no structure to the questionnaire, as mentioned by Story, *et al.* (2001). The opinions of other panel members did not influence experts, nor did the findings of the literature review influence them. The semi-structured questionnaire did however guide them through the brainstorming process.

The use of the four broad dimensions of critical success factors identified in the literature provided the semi-structured nature required for the Delphi-study. These dimensions are the industry, strategy choice, entrepreneur and the funds flow management.

A limit of no more than ten factors in the first round was based on the recommendation of twenty-five maximum questions per Delphi round, as per Halpern, *et al.* (2000). The reason for ten factors was for practical reasons, since most panel members would struggle to nominate more than five factors. Schmidt (1997) agrees with the maximum limit imposed on panel members for nomination of issues.

5.5.2.2 FIRST ROUND SURVEY

Panel members had five working days to complete the first round of the survey. The invitation sent for the first round contained a brief summary of the research and an electronic link to complete the survey, indicated below.

Dear Stephan,
I am conducting a survey, for the purposes of my MBA research into the Critical Success Factors for Startup Companies in the South African business environment, and your response would be appreciated. This is the first part of a three round survey, which should not take more than approximately an hour of your time for all three rounds.
The background to the research and the first round questions can be found by clicking on this link:
http://www.surveymonkey.com/s.asp?A=137492370E89009
Thanks for your participation,
Stephan Sparrius
Contact Number: +27 83 643 0650
Please note: If you do not wish to receive further emails from me, please click the link below, and you will be automatically removed from the mailing list.
http://www.surveymonkey.com/r.asp?A=137492370E89009

A reminder email was sent to the panel the day before the closing of the survey. Once a survey closed, no panel member could gain access to the survey site thus ensuring that all results were consistent and no duplication or double counting occurred during the processing of the results.

The section below describes the contents of the first round survey. Refer to Addendum B for the detailed survey.

Introduction, which explained the background to the survey and provided the contact details of the researcher.

Overview and Purpose, which explained the purpose of this survey and the methodology that would be followed to conduct the research (Delphi-study in three rounds). It provided the basic definitions for panel members to be able to participate in the survey on a level playing field. The basic definitions contained the definition of a start-up company and the definition of critical success factors. It also stipulated that all results would be anonymous.

How this research works, which contained the outline of the timeline of each round (duration) of the survey as well as how long each round would take to complete.

About Yourself, which allowed panel members to classify themselves and provide basic demographic details (name and contact details). The self-classification was to validate the responses and analyze the stakeholder group represented by the respondent. Members could classify themselves as:

- An *entrepreneur*, who is involved in starting a company, as part of the entrepreneurial team; or
- A *capital provider*, who provides funding to start-up companies, directly or as a representative; or
- A *service provider*, who provides a service, other than capital, to start-up companies; or
- A government representative (*government*), who works as part of a government initiative to assist start-up companies, other than as a capital provider; or
- An academic (*academia*), who are involved in start-up companies from an academic perspective; or
- *Other*, who thought that their expertise did not fit the identified stakeholder groups, and then had to specify their expertise as free text.

Instructions for the Critical Success Factors Section, which described to the panel how to complete the first round of the survey and develop their opinions about critical success factors. It allowed the panel members to add a minimum of two critical success factors, or a maximum of ten critical success factors.

The next sections allowed the panel members to nominate between two and ten critical success factors. Each factor required the following information:

- Name – a name for the critical success factor;
- Description – a description to clarify the critical success factor; and

- Classification – a self-selection for the panel member to associate each factor logically to a defined group of critical success factors. The defined classifications could be one of the following: *Industry structure*, *Choice of strategy*, *Entrepreneur*, *Effective management of funds flow* or *Other* with a please-specify text-box. Refer to section 3 for a full definition of each of these classifications.

The last section thanked panel members for their contribution, and indicated the when the second round would commence.

5.5.2.3 DELPHI FIRST ROUND SYNTHESIS

The responses to the round one questionnaire were used to examine the experts' opinions of critical success factors in a detailed and systematic way to look for patterns, themes or biases, as stated by Leedy & Ormrod (2001). The researcher used content analysis to encode each statement according to the theme represented by the statement. Several themes and sub-themes thus emerged from the literature review and these themes were the coding used to examine the responses. The researcher analyzed whether the experts confirmed these themes. Whittaker (2003a) confirms that the number of times a specific theme is mentioned strengthens the probable validity of that theme.

Schmidt (1997) contends that the researcher will consolidate and aggregate all identified factors into a single list of factors. Where different terminology or definitions were found for similar factors, these definitions were amalgamated and were included in the second round Delphi-study. The examination of the responses detected new critical success factor themes The definitions of these success factors, as stated by experts, were investigated to assess the relevance and similarity of these themes.

5.5.3 SECOND ROUND METHODOLOGY

This section describes the methodological considerations and actual survey used for the second round, and then discusses the options for analysis of the second round. Sections 6.3 and 7.3 respectively present the actual results and subsequent interpretations of round two.

5.5.3.1 SECOND ROUND DELPHI PURPOSE

The purpose of the second round of the Delphi-study was for the experts to review the panel's aggregate critical success factors for start-up companies in South Africa. Each critical success factor had an explanation of the nature of the factor. The survey asked the expert to agree, or disagree, with each critical success factor. Experts also had the opportunity to add new critical success factors to the list of reviewed critical success factors.

This round thus provided experts with the opportunity to review the findings of the round one Delphi-study and amend their opinions on critical success factors. Schmidt (1997) argues that this is a critical step in the research process, allowing the panel to review the aggregate opinions of the first round of the Delphi-study. He contends that this round repeats until the panel has reached consensus and all areas of disagreement are resolved.

5.5.3.2 SECOND ROUND SURVEY

The second round of the survey requested the panel to review the aggregated statements of critical success factors, and validate whether they agreed with each of the aggregated statements. It also allowed them to add additional critical success factors. Each result had a two-choice option of Yes or No, with the explanation that:

- Yes indicated that the panel member agreed that the proposed aggregated critical success factor, i.e. more than just a required or qualifying factor, is critical to the success of the start-up;
- No indicated that the panel member did not believe that the factor is critical to the success of the start-up. It meant that the factor can be important, but is not critical to the success of the start-up

Panel members had five working days to complete the second round of the survey and all results were anonymous. The invitation sent for the second round contained a brief summary of the research and an electronic link to complete the survey, indicated below.

Dear Stephan,
I am conducting a survey into the Critical Success Factors for Start-up Companies in the South African business environment, and your response would be appreciated. This is the second part of a three round survey, which should not take you more than 10 minutes to complete.
The background to the research and the second round questions can be found by clicking on this link:
http://www.surveymonkey.com/s.asp?A=137492370E79658
Thanks for your participation,
Stephan Sparrius
Contact Number: +27 83 643 0650
Please note: If you do not wish to receive further emails from me, please click the link below, and you will be automatically removed from the mailing list.
http://www.surveymonkey.com/r.asp?A=137492370E79658

A reminder email was sent to the panel the day before the closing of the survey. Once a survey closed, no panel member could gain access to the survey site thus ensuring that all results were consistent and no duplication or double counting occurred during the processing of the results.

The section below describes the contents of the second round survey. Refer to Addendum C for the detailed survey.

Introduction, which explained the background to the survey and provided the contact details of the researcher.

Overview and Purpose, which explained the aggregation of the statements of critical success factors and provided an overview of the time lines for completion of the second round.

Review of the Panel's Proposed Critical Success Factors, which contained the instructions for the completion of the second round. This section explained that the panel should consider each factor in isolation, and then use either the Yes-option or the No-option to agree or disagree with the factor as a critical success factor. The panel could choose Yes-options for no more than fifteen statements. This limitation ensured that panel members would consider each statement and provide their opinion of whether they consider it critical for the success of start-up companies. The aggregated statements of critical success factors were then listed, with radio-buttons for Yes, or No-options, for each statement. The sequence of the aggregated critical success factors were randomly sorted for each panel member, as per the Schmidt (1997) recommendation. This was to ensure that there was no selection bias because of the sequence of factors listed.

Additional Critical Success Factors, which allowed the panel to add any additional statements of critical success factors, if they perceived that there were any critical success factors missing in the list of aggregated statements of critical success factors. This was a free text box, allowing the addition of one or more factors.

The last section thanked panel members for their contribution, and indicated the when the third round would commence.

5.5.3.3 DELPHI SECOND ROUND SYNTHESIS

The responses to the second round questionnaires were used to examine the consensus opinion of critical success factors for start-up companies. Critical success factors each had a measure of support from the panel of experts. The number of respondents who agreed with each critical success factor provided a relative ranking of the level of support for each factor. A factor that all experts agreed with had a higher ranking than a factor which only one expert agreed with. Factors that no expert agreed with were eliminated. Schmidt (1997) states that the second round of the Delphi-study serves to reduce the number of issues investigated by the panel, which will be ranked in the third round. He contends that research indicates that twenty is a meaningful maximum number of issues to focus the panel. The researcher decided that a maximum of ten factors was a more practical approach, since it would be too onerous and not add much value to the panel to rank the relative importance of twenty factors. Factor 20 and Factor 19 had little difference in their relative ranking for a panel member. The list would therefore be no longer than ten factors.

The outcome of the second round Delphi-study results was therefore a first draft of consensus reached on the top critical success factors for start-up companies amongst the experts on the panel.

5.5.4 THIRD ROUND METHODOLOGY

This section describes the methodological considerations and actual survey used for the third round, and then discusses the options for analysis of the third round. Sections 6.4 and 7.4 respectively present the actual results and subsequent interpretations of round three.

5.5.4.1 THIRD ROUND DELPHI PURPOSE

The purpose of the third round of the Delphi-study was for the panel to rank the importance of each critical success factor with support amongst the panel of experts. Story, *et al.* (2001) argues that the interval scale ranking of issues is the proper way of communicating the aggregate opinion of the panel, as well as exposing areas of disagreement, using statistical summary tools such as means and medians. Schmidt (1997) suggests that the top factors be arranged in a random order when communicating them back to the panel. The purpose of this round was for experts to examine specific trade-offs between the importance of all factors. Experts thus had to choose between the most important factor, the second most important factor and so forth. There was an inherent trade-off made by stating that Factor A is more important than Factor B.

Hair, Bush and Ortinau (2001) define a rank order rating scale as "… a scale point format that allows respondents to compare their responses to each other by indicating their first preference, then their second preference, then their third preference, etc., until all the desired responses are placed in some type of rank order, either highest to lowest or lowest to highest".

Experts ranked the randomly ordered top ten critical success factors on a ten point forced rank order scale according to the expert's opinion of the importance of the critical success factor, providing an ordinal numerical set of data. The appropriate rank order scale thus ranked critical success factors as follows:

1. Least important factor (rank order one);
2. Second least important factor (rank order two);
9. Second most important factor (rank order nine); or
10. Most important factor (rank order ten).

The expert could only select one factor to be of rank order ten. Likewise only one factor could be rank order nine and so forth. Care was taken of the potential pitfalls of rank-order scale questions, by avoiding loaded questions, double-barreled questions and any ambiguous or misleading statements, as mentioned by Story, *et al.* (2001) as potential pitfalls.

5.5.4.2 THIRD ROUND SURVEY

The third round of the survey requested the panel to rank the top ten agreed critical successes factors from the second round (Table 21: Top ten critical success factors from second round). This allowed the panel to review the outcome of the second round, as well as forcing them to rank each agreed critical success factor in order of importance.

Panel members had three working days to complete the third round of the survey and all results were anonymous. The invitation sent for the third round contained a brief summary of the research and an electronic link to complete the survey, indicated below.

Dear Stephan,
This is the last part of a three round survey into the Critical Success Factors for Start-up Companies, and your response would be appreciated. The survey should not take you more than 10 minutes to complete. I kindly request your response before close of business on Wednesday 2 August 2006.
The background to the research and the third round questions can be found by clicking on this link:
http://www.surveymonkey.com/s.asp?A=137492375E43032
Thanks for your participation,
Stephan Sparrius
Contact Number: +27 83 643 0650
Please note: If you do not wish to receive further emails from me, please click the link below, and you will be automatically removed from the mailing list.
http://www.surveymonkey.com/r.asp?A=137492375E43032

The section below describes the contents of the third round survey. Refer to Addendum D for the detailed survey.

Introduction, which explained the background to the survey and provided the contact details of the researcher.

Overview and Purpose, which explained the determination of the top critical success factors and provided an overview of the time lines for completion of the second round.

Ranking of the Panel's Top Ten Critical Success Factors (Mandatory), which required the panel to use a ten-point ranking scale to rank the relative importance of each of the ten top critical success factors. Each factor could only be scored once, and each factor had to be scored. The ten-point ranking scale thus forced the panel member to make trade-offs between all ten factors, thus ranking the factors in relative importance.

The last section thanked panel members for their contribution and overall participation in the survey.

5.5.4.3 DELPHI THIRD ROUND SYNTHESIS

The mean ranked importance of each success factor revealed which of the factors were indeed critical success factors. These were the factors with the highest rankings. A quantitative analysis of the rankings revealed the relative importance of all factors. The analysis employed descriptive statistical summarization tools, thus the average, mean and the median of each critical success factor. Schmidt (1997) argues that the mean rank of each factor is the best indication of consensus amongst panel members.

5.6 VALIDITY AND RELIABILITY

This section defines the context of validity and reliability of the research. The validity and reliability found in each round of the survey is discussed separately after the interpretation of the specific round's results (refer to sections 0, 0 and 7.4.3 respectively). In summary, it was found that all three rounds were valid and reliable. Refer to sections 7.2.7, 7.3.3 and 7.4.3 respectively. In summary, the researcher could therefore consider the research to valid and reliable.

How well the measurement instrument measures, what it is supposed to measure, define the validity of the data. The reliability of the data depends on the accuracy and consistency with which the measurement instrument produces results. The Delphi measuring instrument measured the aggregate consensus opinion of critical success factors for start-up companies in South Africa amongst a panel of experts of start-up companies. The validity would thus regard how well the Delphi-study measured the consensus of these critical success factors. The reliability would regard the accuracy and consistency of the results produced for critical success factors.

5.6.1 INTERNAL VALIDITY

The internal validity of the research seeks to confirm and extend the propositions for critical success factors in start-up companies found in the literature. The use of the Delphi-study's subsequent rounds of feedback to the panel of experts served as a mechanism for ensuring the internal validity of the research. The responses of all panel members were analyzed thoroughly, and anonymously posed back to the panel members for scrutiny after each round of the study. This ensured that the tool measured the consensus of critical success factors for start-up companies in South Africa.

Whittaker (2003a) contends that the panel review and anonymity of responses contribute to the overall validity of the Delphi method. The statistical analysis of the responses in the third round validated that consensus had indeed been reached within the panel by analyzing quantitative measures of the rankings of the critical success factors. This made sure that the aggregated opinion was stable, as described by Story, *et al.* (2001) and confirmed by Whittaker (2003a). The application of propositions further served to assess whether the measurement tool actually measured the critical success factors by providing a template of critical success factors grounded in academic research.

5.6.2 EXTERNAL VALIDITY

The composition of the panel of experts ensured that a wide range of diverse areas of expertise was considered for the critical success factors. No one expert had insight into all the factors for success.

The aggregate opinions of the entire panel thus lead to a consensus-based opinion of experts as to the critical success factors. The construction of each round of the Delphi-study allowed the research to cover a wide range of opinions in detail with the panel. The feedback of the results of each round in the subsequent round allowed self-assessment of the panel of the interpretative findings of the researcher.

Story, *et al.* (2001) contends that the purpose of the Delphi-study technique is to gain insights and understanding of the experts' view of critical success factors, rather than generalizing the findings. Because of the wide range of opinions amongst the panel of experts, it was possible to interpret the findings of the study in general for any start-up company in South Africa. This interpretation is possible because of the expert status of panel members and the consensus-based aggregate opinion of the Delphi-study.

Findings by Halpern, *et al.* (2000) confirm that if the panel of experts is truly representative of the community of experts, the results from one panel to the next will not differ widely. It was therefore possible to apply the findings of the study as a generalization of critical success factors for start-up companies. Whittaker (2003a) confirms this generalization based on the expert nature of the panel as a valid approach.

Furthermore, the statistical techniques employed in round three allowed for a statistical interpretation of the results of the aggregate opinions of the panel as a generalization of the critical success factors. Story, *et al.* (2001) argues that the external validity of the Delphi-study is enhanced by the removal of person-specific biases, when expert-specific biases are removed with proper randomization of the composition of the panel of experts. This research thus endeavored to achieve proper selection of the choice of experts to serve on the panel. This selection ensured that all stakeholders in the critical success factors of start-up companies had representation on the panel of experts. These stakeholder groups were identified in section 1.4 and explicitly been listed as groups with appropriate representation on the panel as designed in section 5.4.

Story, *et al.* (2001) further suggests that the external validity is enhanced by the removal of situation-specific biases through proper panel size, effective questionnaire design, adequate content within the questionnaire and adequate explanation of the Delphi process in interaction with the panel. The research into critical success factors thus considered eighty-five experts on the panel for round one to ensure that a wide range of expert opinions is included. Care was taken to ensure that the process was adequately explained and that questions were not biased in each round of the Delphi-study, as detailed in Addendums B, C and D. Consideration for the strategies recommended by Halpern, *et al.* (2000) also increased the external validity of the Delphi-study as mentioned in section 5.5.

5.6.3 RELIABILITY

The reliability of the study regards the accuracy and consistency of the measuring instrument. All questionnaires and subsequent interpretation and feedback of each round were administered by the researcher self. This ensured that there was consistency in the measurement of results. The researcher refrained from passing judgment or influencing the results of each round and subsequent feedback by not adding personal bias to the results or interpretations.

Industry-specific jargon phrases were removed from results; thus removing specific biases held by experts on the panel from the consensus opinion of the panel. Panel review of the feedback further ensured that any specific bias of either an individual expert, or the researcher self, was excluded in the final findings of the research. Whittaker (2003a) argues that the use of standardized questionnaires in each Delphi round will increase the reliability of the results, and thus ensure that experts all review and respond on exactly the same information.

The use of a statistically founded interpretation processes ensured the reliability of the study, specifically in the third round of the Delphi-study. Again, the coverage of the survey data ensured that the measurement instrument would produce reliable and statistically correct results by considering the wide range of opinions held by diverse industry experts. Story, *et al.* (2001) argues that the reliability of the Delphi-study centers around the random error found in the researcher's judgment of responses to each round. They further contend that the presence of person-specific and situation-specific factors, such as experience or knowledge influence the reliability of the study. They suggest careful question formulation and a self-assessment tool presented to the panel to assess their experience as two ways of enhancing the reliability of the study. The researcher adhered to these facts in the research.

6 PRESENTATION OF RESULTS

This section describes the results of all three rounds of the Delphi survey. Where the previous section answered the overall design considerations, this section states the outcomes of each round. The last section then interprets the results.

6.1 PANEL FORMATION

The panel was formed through a mixture of both formally asking potential panel members whether they would be willing to participate and requesting their email address, or alternatively sourcing potential panel member's email addresses from magazines, newspapers or the Internet, thus unsolicited potential panel members. Each potential panel members' perceived stakeholder group representation informed their selection as a potential panel member; the availability of a valid email address further informed the selection.

The researcher identified eighty-five potential panel members and ensured that there was a balanced representation of the groups of stakeholders in the success of start-up companies. Table 7: Stakeholder group representation indicates the perceived stakeholder group representation, therefore indicating that the researcher ensured adequate stakeholder group representation prior to the first survey. The panel was thus formed by formally asking 56% of potential members and sending to a further 44% unsolicited potential panel members.

Stakeholder Group	% of Potential Panel
Entrepreneur	36%
Academic	19%
Service Provider	19%
Capital Provider	18%
Government	8%

Table 7: Stakeholder group representation

All stakeholder groups were adequately represented, there was however a slight bias towards entrepreneurs in the panel formation. Refer to section 7.1 for an interpretation of the panel formation.

6.2 FIRST ROUND

This section summarizes the results for the first round, as per the methodology described in section 5.5.2.

6.2.1 RESULTS OF THE FIRST ROUND

The first round of the survey achieved a 52% response rate out of eighty-five potential panel members. Table 8: Responses from first round summarizes the responses.

Response	%
Responded	52%
Did not respond	35%
Declined	13%

Table 8: Responses from first round

Table 9: Summary of self-classification by panel members indicates the self-classification statistics of the panel. The discrepancy between Table 7: Stakeholder group representation and Table 9: Summary of self-classification by panel members is because there is a difference between the *perceived* representation and the *actual* panel members' stakeholder group representation. It indicates that the researcher did not select the panel randomly,

Classification	%
Entrepreneur	45%
Capital Provider	23%
Service Provider	20%
Academia	11%
Government	0%

Table 9: Summary of self-classification by panel members

A total of 105 critical success factors statements were gathered from the panel.

6.2.2 PROCESSING OF FIRST ROUND RESULTS

A set of themes, and associated sub-themes emerged from analysis of the results of the round one survey. The full interpretation of the first round statements and the interpretation thereof are contained in section 7.2. This explains how the researcher aggregated 105 factors to thirty-three factors. The aggregated statements of critical success factors, after interpreting each statement, are:

- The determination, perseverance, motivation, passion, self-discipline and candor of the entrepreneur to believe and continue believing in their start-up idea. The ability to make personal sacrifices required to make the start-up work.
- The entrepreneur's ability and willingness to take on calculated financial or operational risks and manage these risks continuously.
- The development of a fact-based business plan with adequate consideration of contingencies and worst-case scenarios. The ability to react to ongoing changes to the business plan. The ability of the business plan to consider short, medium and long-term horizons.
- Successful start-up companies have a single focus and determination to succeed on a single business idea. Successful start-up companies do not aspire to be all things to all people; neither do they sell a concept only for its novelty value.
- The ability to articulate the business idea to stakeholders (capital providers, equity providers, customers and employees alike) and convince or inspire them to join the entrepreneur.
- The ability to develop a uniquely differentiated value proposition to match customer needs feasibly (right price, right location, right time). This requires a true understanding of the customer's needs, or conversely the ability to shift the customer paradigms for them to understand the needs fulfilled by the value proposition of the start-up.
- It is important that the entrepreneur has extensive experience in the start-up company's industry. This experience will be in addition to the qualifying factor of merely having general business acumen.

- It is beneficial if the entrepreneur has no prior experience in the start-up company's industry, for then the ability to innovate and critically question all prior industry assumptions is a benefit. This statement does not imply that the entrepreneur has no business experience, which the entrepreneur needs as a qualifier in any case.
- The self-knowledge of the entrepreneur, the ability to distinguish between their strengths and engaging an entrepreneurial team to mitigate their weaknesses. This factor is coupled with the entrepreneur's ability to know when to lead and when to follow in starting or operating the start-up company.
- The ability to manage the raised capital within the start-up company, including the application and re-financing required at the various stages of the business development cycle. This requires stringent internal control procedures to gauge performance, and inform the start-up's start-stop and exit conditions.
- The ability to understand and interpret the environment in which the start-up company operates. This includes the market, competitors, legislation (laws & tax), substitute offerings, customer trends and technological evolutions. The ability to develop a realistic business plan to account for the environment in which the start-up operates.
- Certain start-up companies succeed because of luck, albeit in timing, product development, customer acquisition or any combination of these. The entrepreneur needs to be able to recognize and exploit this luck.
- The entrepreneurial team's ability to think out-of-the box and configure their thinking by drawing on diverse skills within the group. This includes the ability to source skills externally where they lack within the start-up company.
- The entrepreneur needs to be a visionary, see beyond the limitations of today, and clearly communicate this vision to all the start-up's stakeholders. The visionary aspect should be coupled with the ability to execute a plan to seize the opportunity in the market.
- The entrepreneur's motivation should be broader than only self-interest. Successful entrepreneurs believe that rewards will come to those who create a better world, be that through a product or a service.

- The ability to structure a business model realistically to cater for adequate time-to-market or cater for appropriate sales cycles in their chosen industry, before funding becomes an issue. The success includes the ability to select the correct legal entity type, support network and partners to position the company correctly within the chosen industry.
- The ability to fund the start-up costs and working capital requirements to start the company. This requires the ability to predict the operating costs accurately for the company, and ensuring that revenues adequately cover all capital and operating expenses in the long term.
- The ability to develop an entrepreneurial team able to function effectively in the high-pressure environment of starting a company. This includes the ability to manage internal conflicts; complement each other's weaknesses and response to crises in the start-up phase.
- The entrepreneur's ability to manage the balance between new ideas, whilst running a day-to-day business. Coupled with this is the entrepreneurial team's ability to compliment the strength and mitigate the weaknesses of the founding entrepreneur. The team is required to manage crises pro-actively before they arise, rather than taking retroactive remedial steps to address the crisis.
- The entrepreneur's ability to self-fund adequate start-up finance even though many entrepreneurs have insufficient credit records (i.e. bad listings or no proven track record for the start-up) to access retail credit. Coupled to this is the ability to minimize capital requirements by maximizing working capital turn-around time, debt financing and vendor financing.
- The ability to network and leverage the network of people or companies to increase the market position of the start-up company. Networks may include customers, suppliers, affiliated companies, joint ventures, partnerships, influential individuals, government, service providers or competitors.

- The ability to use external information gathered through both formal and informal networks. This would include trends, new ideas, contacts and consultants to assist in gathering or interpreting information. Aspects could include any form of input information, be it official or unofficial, this does not advocate unethical behavior, but rather hot tips and leads to events, and the ability to access these. It acknowledges that a company operates in a symbiotic relationship to its environment.
- The discipline and honesty required to develop an internal operating strategy for the start-up company and taking corrective actions to compensate for contingency situations that arise. The operating strategy should be defined with clear milestones and deliverables balanced across all the intended objectives of the company.
- The ability to plan the source of capital, with an understanding of the impacts of these choices. The debt versus equity funding implications (equity, angel capital, venture capital, debt, self-funding) and costs associated with these sources of capital as well as the associated risks. Also an understanding of how working capital will be financed within the start-up.
- The ability to use both internal and external information and take action upon it. This includes using internal performance information and making continuous operational or financial adjustments, or acting upon external information regarding industry developments and adjusting the business plan accordingly. This is highly dependent on the experience of the entrepreneur, and her ability to leverage the entrepreneurial team's diverse skills to action the information.
- The choice of location of the start-up, i.e. access to resources, proximity and access to customers is a critical success factor.
- Insight into the company resources, their costs and limitations and life cycle adequacy is critical to start-ups. Resources include employees, contractors, vendors, plant, equipment, technology, hardware, software and stock.

- The ability to plan for resource requirements during all phases of the start-up. Resources include equipment, stock, employees, partnerships and finance though the cycles of the chosen industry. The start-up should have contingency plans for excessive resources as well as resource shortages.
- The start-up's BEE strategy and implementation of the strategy, including own, partner's and supplier's BEE credentials. This is critical for success in South Africa and should be aligned to the chosen industry's best BEE practices. The start-up needs to utilize their BEE status tactically, partnerships or alliances to ensure that the company is successful in the chosen industry.
- The ability to be the first mover in the chosen market i.e. the first to offer a new value proposition to customers. Often this creates trust and loyalty with customers because of the innovative nature of the offering.
- The ability to harvest the investments made by competitors to educate and convince the market of their needs. The second mover advantage reduces the capital requirements for a start-up since they do not have to spend effort on consumer education.
- The business needs to switch from entrepreneurial to operational at the correct time, so that operations become more important than continuous innovation. The entrepreneurial team needs to manage this switch responsibly.
- A start up requires a certain amount of resources to further the growth of the company, which can also include specialized skills. Without sufficient resources, certain skills may be lacking in the business, which could affect the ability to execute and therefore success.

6.3 SECOND ROUND

This section summarizes the results for the second round, as per the methodology described in section 5.5.3.

6.3.1 RESULTS OF SECOND ROUND

The researcher sent the invitation to the entire panel, excluding those panel members who declined the first round invite. The second round of the survey achieved a 51% response rate out of seventy-five potential panel members, as indicated in Table 10: Responses to second round.

Response	%
Responded	51%
Did not respond	48%
Declined (excluding round 1 declines)	1%

Table 10: Responses to second round

The second round results processed according to the percentage agreements with each factor. Table 11: Results from second round states the results obtained in declining order of Yes-options selected for factors.

Rank	Aggregated Statement of Critical Success Factor	YES	NO
1.	The determination, perseverance, motivation, passion, self-discipline and candor of the entrepreneur to believe and continue believing in their start-up idea. The ability to make personal sacrifices required to make the start-up work.	87% (33)	13% (5)
2.	The ability to understand and interpret the environment in which the start-up company operates. This includes the market, competitors, legislation (laws & tax), substitute offerings, customer trends and technological evolutions. The ability to develop a realistic business plan to account for the environment in which the start-up operates.	82% (31)	18% (7)
3.	The ability to network and leverage the network of people or companies to increase the market position of the start-up company. Networks may include customers, suppliers, affiliated companies, joint ventures, partnerships, influential individuals, government, service providers or competitors.	79% (30)	21% (8)

Rank	Aggregated Statement of Critical Success Factor	YES	NO
4.	The ability to articulate the business idea to stakeholders (capital providers, equity providers, customers and employees alike) and convince or inspire them to join the entrepreneur.	76% (29)	24% (9)
5.	The ability to fund the start-up costs and working capital requirements to start the company. This requires the ability to predict the operating costs accurately for the company, and ensuring that revenues adequately cover all capital and operating expenses in the long term.	76% (29)	24% (9)
6.	The entrepreneur's ability and willingness to take on calculated financial or operational risks and manage these risks continuously.	74% (28)	26% (10)
7.	The ability to develop a uniquely differentiated value proposition to match customer needs feasibly (right price, right location, right time). This requires a true understanding of the customer's needs, or conversely the ability to shift the customer paradigms for them to understand the needs fulfilled by the value proposition of the start-up.	71% (27)	29% (11)
8.	The entrepreneur needs to be a visionary, see beyond the limitations of today, and clearly communicate this vision to all the start-up's stakeholders. The visionary aspect should be coupled with the ability to execute a plan to seize the opportunity in the market.	68% (26)	32% (12)
9.	The ability to develop an entrepreneurial team able to function effectively in the high-pressure environment of starting a company. This includes the ability manage internal conflicts; compliment each other's weaknesses and response to crisis situations in the start-up phase.	66% (25)	34% (13)

Rank	Aggregated Statement of Critical Success Factor	YES	NO
10.	The entrepreneur's ability to manage the balance between new ideas, whilst running a day-to-day business. Coupled with this is the entrepreneurial team's ability to compliment the strength and mitigate the weaknesses of the founding entrepreneur. The team is required to manage crises pro-actively before they arise, rather than taking retroactive remedial steps to address the crisis.	66% (25)	34% (13)
11.	The ability to structure a business model realistically to cater for adequate time-to-market or cater for appropriate sales cycles in their chosen industry, before funding becomes an issue. The success includes the ability to select the correct legal entity type, support network and partners to position the company correctly within the chosen industry.	61% (23)	39% (15)
12.	The ability to use external information gathered through both formal and informal networks. This would include trends, new ideas, contacts and consultants to assist in gathering or interpreting information. Aspects could include any form of input information, be it official or unofficial, This does not advocate unethical behavior, but rather hot tips and leads to events, and the ability to access these. It acknowledges that a company operates in a symbiotic relationship to its environment.	61% (23)	39% (15)
13.	Successful start-up companies have a single focus and determination to succeed on a single business idea. Successful start-up companies do not aspire to be all things to all people; neither do they sell a concept only for its novelty value.	58% (22)	42% (16)
14.	The entrepreneurial team's ability to think out-of-the box and configure their thinking by drawing on diverse skills within the group. This includes the ability to source skills externally where they lack within the start-up company.	58% (22)	42% (16)

Rank	Aggregated Statement of Critical Success Factor	YES	NO
15.	The ability to plan the source of capital with an understanding of the impacts of these choices. The debt versus equity funding implications (equity, love-money, angel capital, venture capital, debt, self-funding) and costs associated with these sources of capital as well as the associated risks. Also an understanding of how working capital will be financed within the start-up.	58% (22)	42% (16)
16.	Insight into the company resources, their costs and limitations and life cycle adequacy is critical to start-ups. Resources include employees, contractors, vendors, plant, equipment, technology, hardware, software and stock.	58% (22)	42% (16)
17.	The self-knowledge of the entrepreneur, the ability to distinguish between their strengths and engaging an entrepreneurial team to mitigate their weaknesses. This factor is coupled with the entrepreneur's ability to know when to lead and when to follow in starting or operating the start-up company.	55% (21)	45% (17)
18.	The ability to use both internal and external information and take action upon it. This includes using internal performance information and making continuous operational or financial adjustments, or acting upon external information regarding industry developments and adjusting the business plan accordingly. This is highly dependent on the experience of the entrepreneur, and her ability to leverage the entrepreneurial team's diverse skills to action the information.	53% (20)	47% (18)
19.	A start up requires a certain amount of resources to further the growth of the company, which can also include specialized skills. Without sufficient resources, certain skills may be lacking in the business, which could affect the ability to execute and therefore success.	53% (20)	47% (18)

Rank	Aggregated Statement of Critical Success Factor	YES	NO
20.	The ability to manage the raised capital within the start-up company, including the application and re-financing required at the various stages of the business development cycle. This requires stringent internal control procedures to gauge performance, and inform the start-up's start-stop and exit conditions.	50% (19)	50% (19)
21.	The business needs to switch from entrepreneurial to operational at the correct time, so that operations become more important than continuous innovation. The entrepreneurial team needs to manage this switch responsibly.	50% (19)	50% (19)
22.	The development of a fact-based business plan with adequate consideration of contingencies and worst-case scenarios. The ability to react to ongoing changes to the business plan. The ability of the business plan to consider short, medium and long-term horizons.	47% (18)	53% (20)
23.	Certain start-up companies succeed because of luck, albeit in timing, product development, customer acquisition or any combination of these. The entrepreneur needs to be able to recognize and exploit this luck.	47% (18)	53% (20)
24.	The ability to plan for resource requirements during all phases of the start-up. Resources include equipment, stock, employees, partnerships and finance though the cycles of the chosen industry. The start-up should have contingency plans for excessive resources as well as resource shortages.	45% (17)	55% (21)
25.	The entrepreneur's ability to self-fund adequate start-up finance even though many entrepreneurs have insufficient credit records (i.e. bad listings or no proven track record for the start-up) to access retail credit. Coupled to this is the ability to minimize capital requirements by maximizing working capital turn-around time, debt financing and vendor financing.	34% (13)	66% (25)

Rank	Aggregated Statement of Critical Success Factor	YES	NO
26.	The discipline and honesty required to develop an internal operating strategy for the start-up company and taking corrective actions to compensate for contingency situations that arise. The operating strategy should be defined with clear milestones and deliverables balanced across all the intended objectives of the company.	34% (13)	66% (25)
27.	The start-up's BEE strategy and implementation of the strategy, including own, partner's and supplier's BEE credentials. This is critical for success in South Africa and should be aligned to the chosen industry's best BEE practices. The start-up needs to utilize their BEE status tactically, partnerships or alliances to ensure that the company is successful in the chosen industry.	32% (12)	68% (26)
28.	The entrepreneur's motivation should be broader than only self-interest. Successful entrepreneurs believe that rewards will come to those who create a better world, be that through a product or a service.	29% (11)	71% (27)
29.	The choice of location of the start-up, i.e. access to resources, proximity and access to customers is a critical success factor.	29% (11)	71% (27)
30.	The ability to be the first mover i.e. the first to offer a new value proposition to customers. Often this creates trust and loyalty with customers because of the innovative nature of the offering.	29% (11)	71% (27)
31.	It is important that the entrepreneur has extensive experience in the start-up company's industry. This experience will be in addition to the qualifying factor of merely having general business acumen.	24% (9)	76% (29)
32.	The ability to harvest the investments made by competitors to educate and convince the market of their needs. The second mover advantage reduces the capital requirements for a start-up since they do not have to spend effort on consumer education.	24% (9)	76% (29)

Rank	Aggregated Statement of Critical Success Factor	YES	NO
33.	It is beneficial if the entrepreneur has no prior experience in the start-up company's industry, for then the ability to innovate and critically question all prior industry assumptions is a benefit. This statement does not imply that the entrepreneur has no business experience, which the entrepreneur needs as a qualifier in any case.	18% (7)	82% (31)

Table 11: Results from second round

6.3.2 PROCESSING OF SECOND ROUND RESULTS

Analysis of the results from the second round indicates convergence in the panel's opinions regarding the statements were thus found for nineteen statements, factors numbered 1 to 19, since these were statements that had a majority Yes-vote from the panel. Refer to section 7.3 for the interpretation of this round. The methodology required a repetition of this round until consensus was reached. Since there was consensus, there was no reason to repeat this round.

6.4 THIRD ROUND

This section summarizes the results for the third round, as per the methodology described in section 5.5.4.

6.4.1 RESULTS OF THIRD ROUND

The researcher sent the invitation to the entire panel, excluding those panel members who declined the first and second round invites. The third round of the survey achieved a 44% response rate out of 74 potential panel members, as indicated in Table 12: Responses to third round.

Response	%
Responded	44%
Did not respond	51%
Declined (excluding round 1 & round 2 declines)	5%

Table 12: Responses to third round

6.4.2 PROCESSING OF THIRD ROUND RESULTS

The relative score that each factor achieved from the entire panel calculated the relative importance of each factor. Any given factor could score a maximum of 320 amongst the panel, since thirty-two people could have scored any single factor to a maximum of 10 points. The top factor scored 234 out of 320, giving it a score of 73%. Table 13: Ranked importance of critical success factors states the results from the third round.

Rank	Critical Success Factor	Score	Theme
1	The means to understand & interpret the environment in which the start-up company operates: market, competitors, legislation, trends, technological evolutions, sales-cycles & resources. Then to develop a realistic business plan to operate within this environment.	73%	The start-up's industry
2	The determination, perseverance, motivation, passion, self-discipline and candor of the entrepreneur to continue believing in their start-up idea. The ability to make personal sacrifices required to make the start-up work.	66%	The entrepreneur or entrepreneurial team
3	Ability to fund the start-up costs & working capital requirements: predicting operating costs realistically, ensuring that revenues adequately cover all expenses in the long term. Also, understanding the nature & implications of capital structuring options (debt vs. equity).	66%	Financial Management
4	Talent to network, & leverage the network, to increase the market position of the start-up company, including customers, suppliers, joint ventures, partnerships, experts, government, mentors, peers, service providers or competitors.	62%	The entrepreneur or entrepreneurial team

Rank	Critical Success Factor	Score	Theme
5	The capacity to articulate a single focused business idea to stakeholders (capital providers, equity providers, customers and employees alike) and convince or inspire them to join the entrepreneur.	53%	The strategy for the start-up
6	Competence to develop a uniquely differentiated value proposition to match customer needs feasibly. This requires a true understanding of customer's needs, or the ability to shift the paradigms for them to understand the fulfilled needs.	51%	The strategy for the start-up
7	The entrepreneur needs to be a visionary, see beyond the limitations of today, and clearly communicate this vision to all stakeholders; balanced with the ability to execute the plan to seize the opportunity in the market.	47%	The entrepreneur or entrepreneurial team
8	The entrepreneur's capability and willingness to take on calculated financial or operational risks and manage these risks continuously during the start-up phase.	44%	The entrepreneur or entrepreneurial team
9	Skills to develop an entrepreneurial team able to function in the high-pressure environment of starting a company. This includes the ability to manage internal conflicts, mitigate each other's weaknesses & respond to crises.	42%	The entrepreneur or entrepreneurial team

Rank	Critical Success Factor	Score	Theme
10	The entrepreneur's aptitude to manage the balance between new ideas, whilst running a business, thus able to both strategize & execute. The team needs to manage crises pro-actively before they arise, rather than taking retroactive remedial steps to address the crisis.	41%	Operations

Table 13: Ranked importance of critical success factors

7 INTERPRETATION OF RESULTS

This section presents the interpretation of the results of the three rounds of the Delphi-study. It must be read in conjunction with the previous section, where the outcomes were merely stated.

7.1 PANEL

This section interprets the panel formation according to the perceptions found in the literature (refer to section 5.4).

7.1.1 ANALYSIS OF THE PANEL

The perceived panel's stakeholder group representation is contained in Table 7: Stakeholder group representation. This indicates the researcher's perception of respondents' representation, yet respondents refined this with the self-classification of each panel member. The stakeholder groups represented in the actual responses is determined by counting the stakeholder group actually represented by any panel member who responded at least once. The first round self-classification results of stakeholders determined this (refer to Table 9: Summary of self-classification by panel members), yet where the panel member had no self-classification, their perceived classification was used. Table 14: Classification of overall representation indicates the overall representation of stakeholder groups in any round of the survey.

Classification	% Representation in Overall Survey
Entrepreneur	42%
Capital Provider	23%
Service Provider	21%
Academic	12%
Government	2%

Table 14: Classification of overall representation

The results indicate that the overall survey had a bias towards entrepreneurs, with opinions of capital providers and service providers represented equally. Academics and government were also considered, but to a lesser extent. The panel composition is therefore a fair proxy of the market reality: proportionate to the number of people within each of the stakeholder groups, where there would be more entrepreneurs than service providers or capital providers, who in turn would be more than capital providers or government representatives. This ensures the external validity according to the Halpern, *et al.* (2000) condition of representation of the community of experts. It furthermore agrees with Whittaker's (2003A) argument for survey generalization based on the expert nature of the panel. Hence, the results can be generalized.

The analysis indicated that 60% of the potential panel participated in one or more rounds of the survey, through 115 individual responses in all three rounds. This corresponded to the panel size guideline set by Story, *et al.* (2001), where they argue that a valid Delphi panel has between five and twenty members. In this research, the overall panel consisted of fifty-two people, yet overall only twenty-five respondents participated in all three rounds of the survey. This is a higher number than required by the guideline set by Story, *et al.* (2001). The researcher, however, contended that it did not adversely influence the results of the survey but merely ensured to strengthen the expert nature of the panel, as section 5.4 details.

7.1.2 PANEL VALIDITY AND RELIABILITY

The number of respondents, their representation and overall participation ensured that the panel provided enough expertise. They therefore collectively represented an adequate sample of all stakeholders and removed person-specific biases. All three rounds explained the Delphi process stage and gave clear instructions for the completion of the specific round. Panel members responded before each survey's deadline, yet at a time convenient for them, thus removing situation-specific biases in the responses. These aspects ensure external validity of the results, according to Story, *et al.* (2001).

The researcher endeavored to mitigate personal biases in interpreting the outcomes of the first round through the literature-based application of themes. The fact that no responses could be associated with any specific panel member further ensured that no bias emerged during the analysis of any round. A statistical numerical tool analyzed the outcomes of the second and third round, thus removing all personal bias of the researcher. This conforms to Story, Hurdley, Smith and Saker's (2001) prescriptions regarding the reliability of the research. The use of the standardized survey tool in each round supports the Whittaker (2003a) prescriptions of reliability. The results are therefore considered reliable, according to the literature.

7.2 ANALYSIS OF FIRST ROUND STATEMENTS

The statements of critical success factors nominated by the panel in the first round were analyzed individually. Based on the analysis it became apparent that five specific major themes, and eighteen specific sub-themes, appeared in the 105 statements of critical success factors from the panel. The major themes were supported by the propositions found in the literature review (refer to section 3), but a new theme regarding the operations of the start-up company emerged. Table 15: Summary of first round themes indicates the major themes from the first round of the survey. Statements were coded according to the themes, which were supported by the literature study.

Major Theme	Literature supported	Definition
The start-up's industry	Supported by literature: proposition 1	This includes the environment and classical five forces interaction within the environment.
The strategy for the start-up	Supported by literature: proposition 2	This includes long-term strategy, operational strategy and business plan with product, milestones with stop-go decision milestones, positioning, networking, branding and differentiating value propositions.

Major Theme	Literature supported	Definition
The entrepreneur or entrepreneurial team	Supported by literature: proposition 3	This includes individual characteristics and attributes, strength and weaknesses, experience, interaction and overall characteristics.
Financial management	Supported by literature: proposition 4	This includes capital planning, sourcing and application, as well as continuous financial management.
Operations	Not explicitly found in literature	This includes resource planning, as well as monitoring and feedback decision points.

Table 15: Summary of first round themes

The researcher identified a set of sub-themes within these major themes. Sub-themes provided further context to the major themes. The major themes and sub-themes found in the panel's statements, and the frequency of occurrence, are listed in Table 16: Themes and sub-themes from first round. The theme dealing with the entrepreneur or entrepreneurial team (36%) and strategy (33%) appeared most frequently. The sub-team dealing with the personality of the entrepreneur appeared most frequently (18%) within the major theme of entrepreneur or entrepreneurial team. The sub-theme dealing with product appeared second most frequently (11%) across multiple major themes.

Major Theme	Sub-Themes	Total
The entrepreneur or entrepreneurial team	personality	17%
	relationships	8%
	team dynamics	6%
	experience	4%
	communications	1%
The entrepreneur or entrepreneurial team Total		36%
The strategy for the start-up	business plan	10%
	product	10%
	environment	4%
	BEE	2%

Major Theme	Sub-Themes	Total
	market	2%
	resources	2%
	sales	2%
	luck	1%
The strategy for the start-up Total		33%
Financial management	capital formation	7%
	cash flow	6%
	operating expenditure	2%
	financial management	1%
	sales	1%
Financial management Total		17%
The start-up's industry	environment	5%
	product	1%
	relationships	1%
	market	1%
The start-up's industry Total		8%
Operations	environment	2%
	business plan	2%
	management	2%
Operations Total		6%
Grand Total		100%

Table 16: Themes and sub-themes from first round

7.2.1 INTERPRETATION OF THE ENTREPRENEUR OR TEAM

This was the most common theme mentioned by the panel in the first round. Table 16: Themes and sub-themes from first round indicates the analysis of the statements according to the sub-themes identified. The interpretation focused on a summary of the factors mentioned and notes interesting factors mentioned by the panel.

- Many panel members mentioned the personality and internal motivators of the entrepreneur, specifically the motivational aspects that makes the entrepreneur start the company, and likewise continue in believing in the start-up company. The entrepreneur's perseverance and willingness to make sacrifices in order to keep the start-up operating was noted. An interesting statement proposed that the entrepreneur needs a motivation based on more than merely their self-interest. The following round posed this statement to the panel for review.
- The panel frequently mentioned the entrepreneur's relationships with people external to the company, i.e. networks, and their ability to interact and utilize the assistance offered by them. External relationships include relationships with customers, suppliers, competitors, mentors, peers, financiers and the various partners to the start-up. The panel also cited the entrepreneur's relationship with people internal to the start-up as well as their skill to interact, motivate and deploy the team to their strengths.
- Panel members further stated the aspect of team dynamics, specifically the team's multifunctional nature and their ability to multitask and cope with the pressures of the start-up phases. Furthermore, the capacity to know each other's strengths and weaknesses coupled with the ability to harness the team's collective forte. The panel also mentioned the team's ability to think out-of-the box, thus their ability to innovate and challenge existing paradigms within the industry as a factor.
- Members of the panel nominated two opposing factors regarding the entrepreneur's experience in the industry of the start-up. The second round posed these two factors to the panel, in order for the panel to consider and judge the validity of these two opposing factors. The theme of the start-up's chosen industry of operations linked to this point.

a. The first option proposed that it is a critical success factor that the entrepreneur has extensive experience in the start-up's industry prior to starting the company. The entrepreneur's deep understanding of the industry and their experience will allow the start-up to effectively interpret the environment and capitalize on inefficiencies or obvious shortcomings in the industry.
b. The second option proposed that it is critical that the entrepreneur has no prior experience in the start-up's industry. This will position the start-up to challenge and innovate in the chosen industry, since the entrepreneur will have not been constrained by perceived limitations in the industry.

- The panel mentioned the entrepreneur and team's ability to communicate clearly, effectively and motivationally within the start-up company, and likewise to the external world. This factor links to the previous point of relationships, where it is critical to communicate with the start-up company's network of contacts.

7.2.2 INTERPRETATION OF THE START-UP STRATEGY

This was the second most common theme mentioned by the panel in the first round. The statements were analyzed according to the sub-themes identified, as reported in Table 16: Themes and sub-themes from first round. The interpretation focused on a summary of the factors mentioned and notes interesting factors mentioned by the panel.

- The panel mentioned factors relating to the environment in which the company will operate, and specifically the start-up company's strategy to deal with aspects contained within the environment. They mentioned numerous environmental aspects, including the competitors, industry structure, legislative framework, customers, substitutes and new entrants. Interestingly, the panel did not consider any specific strategy planning school of thought as a critical success factor. It is therefore not important to follow the design school, planning school, entrepreneurial school, environmental school or any specific strategic school of thought, as described by Mintzberg (1998).

- The panel proposed that the start-up company's product offering and specifically the differentiated value proposition offered to customers, as a critical success factor. The panel contended that the aspects of customer needs and the ability to understand and meet those needs were critical. Further aspects mentioned were the company's focus on a single value proposition (not being all things to all people), and the aspects regarding product design.
- The panel anticipated that the business plan and the underlying aspects of the start-up's business plan was a factor. The panel mentioned various aspects of the business plan, most notably the research, strategy, target market, marketing plan, accounting for sales cycles, resource planning, all incorporated into a fact-based business case. The business case needs to realistically predict cost and matching revenue figures, and thereafter set milestones and procedures for updating the business case with information regarding the start-up's actual performance. A new sub-theme that emerged as part of the business plan is the choice of location of the start-up, pertaining to the access to customers and likewise the access to resources in order to make the start-up succeed. The next round tested this sub-theme.
- The panel mentioned two opposing themes for the strategy of the start-up dealing with the relative advantage of being the first-mover, or then the second mover with the proposed value position of the start-up. The second round posed both these opposing views of critical success factors to the panel for review. The section below summarizes the options for this factor.
    a. The first-mover advantage proposed that the first mover would have the advantage of retaining the earliest possible lead within product offering to the market. This would create customer lock-in and allow the start-up to capitalize on this.

b. The second-mover advantage would allow the start-up to capitalize on the market position that has been created by the first-mover, and then offer a better product, thus not being constrained by the cash required to educate the market and sell the product, nor be constrained by capturing the research and development cost spent by the first-mover. These cash flows may impose severe cash constraints for a start-up company.

- Members of the panel proposed Black Economic Empowerment (BEE) as a critical success factor. Propositions varied from merely having a BEE partner, to having a fully black empowered company. The researcher tested BEE as a critical success factor, as part of the company's overall strategy. The BEE strategy would be highly dependent on the start-up company's customers, since they would determine whether BEE is a critical success factor. The literature did not explicitly mention the BEE strategy as a critical success factor, and the panel, in the next round, determined the importance in the South African context.
- The panel proposed the market position as a critical success factor, specifically the aspects of the opportunity and the start-up's strategy to approach the identified opportunity. The subsequent round tested this factor as a separate critical success factor; the business plan factor conceptually includes this factor.
- Panel members nominated the factor of resources, specifically production, equipment, technology and human resources as an aspect of the start-up's strategy. The proposition dealt with the ability to plan for the required resources and then the capability to access or acquire the right resources at the required time. The business plan factor implicitly encapsulates this factor is in the; however, the criticality of the factor would be tested in the panel's consensus in the next round.
- The panel also mentioned the start-up's sales strategy. This factor was tested outside of the overarching business plan strategic factor.

- The panel nominated the interesting aspect of luck as a factor to the success of the start-up in the first round. Luck is an interesting factor owing to the inability to pre-plan luck into the start-up company's strategy. The literature never mentioned the luck factor; it did not appear frequently in the panel's nominations in the first round. The next round would however test this interesting factor, since there is no guidance in literature on how to approach it.

7.2.3 INTERPRETATION OF START-UP'S FINANCIAL MANAGEMENT

This was the third most common theme mentioned by the panel in the first round. The statements were analyzed according to the sub-themes identified, as reported in Table 16: Themes and sub-themes from first round. The interpretation focused on a summary of the factors mentioned and notes interesting factors mentioned by the panel.

- The panel frequently mentioned the factor of capital formation as critical to the success of the start-up. The sub-theme deals with the planning of capital requirements, and the subsequent accessing and application of the capital and associated management of the capital. Interestingly, the panel also mentioned the structure of the start-up capital as a critical success factor, which dealt with the trade-off between debt and equity to start the company. This deals with leveraging debt versus equity, and cost of capital in starting a business.
- The next factor dealt with the cash flow management of the start-up. The aspects mentioned described management's ability to plan for operational cash flow cycles, with the associated discipline of accurate reporting to assess the cash flow performance. The panel frequently mentioned the sales cycles and the time lag between paying debtors and receiving payment from creditors. Members of panel thought this was critical, especially in the start-up phase of a company. This factor is linked to the capital formation factor, but it was deemed important enough for the panel to review in the next round.

- The panel mentioned the factor of operating expenses, and the timing and application of capital to manage the operating expenses as a factor. This factor is essentially part of the cash flow management factor, but seemed important enough to be proposed for review in the next round, as it informs the start-stop decision of the start-up.
- The panel identified the aspect of managing the company's finances, and understanding the cost and revenue interactions. Specifically, the panel mentioned marginal versus fully absorbed costing. Again, the factor is contained within cash flow management, yet seemed important enough to be considered separately.

7.2.4 INTERPRETATION OF THE START-UP'S INDUSTRY OF CHOICE

This was the fourth most common theme mentioned by the panel in the first round. The statements were analyzed according to the sub-themes identified, as reported in Table 16: Themes and sub-themes from first round. The interpretation focused on a summary of the factors mentioned and notes interesting factors mentioned by the panel.

- The panel re-iterated the position that the start-up should be aware of the environment and thus the industry that the start-up company chooses. The industry is related to the environment, and thus was mentioned in the start-up strategy theme as well. The panel mentioned the ability to understand, interpret and operate in the environment as the most common aspect. This statement contained factors relating to competitors and legislation, as well as customers. The ability to understand the market also emerged as a sub-theme.
- The panel stated that the start-up's product placement, and associated value proposition to customers in the industry was important. This point was also mentioned in the start-up's strategy theme. The duplication is possibly because of the reason that the industry and strategy theme are closely associated.

- Members of the panel mentioned that the start-up company's network and affiliation within the industry is important. The sub-theme is captured in the industry factor, within the sub-theme of relationships, but is equally prevalent in the theme of entrepreneur and their relationship sub-theme.

7.2.5 INTERPRETATION OF THE START-UP'S OPERATIONS

This was the fifth most common theme mentioned by the panel in the first round. The statements were analyzed according to the sub-themes identified, as reported in Table 16: Themes and sub-themes from first round. The interpretation focused on a summary of the factors mentioned and notes interesting factors mentioned by the panel.

- The panel mentioned the ability of the start-up's management team to gather accurate and reliable information about the performance of the start-up and then compare such information to the projected business plan.
- The panel further proposed that the management of the day-to-day business of the start-up is a factor. Specifically, the ability to switch from innovation-mode to operation-mode, thus to balance strategy with execution of the business idea. The panel also mentioned the ability to manage the entrepreneurial team as a factor, thus being able to mitigate the team's weaknesses by drawing on collective strengths. This sub-theme is also covered in the theme of the entrepreneurial team, yet would be tested with the panel in the next round.
- The final factor mentioned by the panel dealt with the operational means to deal with information gathered from the external environment. This implies that it is critically important to be able to adjust the start-up's operations to new information gathered. The sub-theme was also detected in the theme about the start-up's chosen industry.

7.2.6 AGGREGATION OF FIRST ROUND STATEMENTS

Statements were grouped and analyzed according to major themes and sub-themes identified during content analysis. Logical groupings of statements emerged from identified patterns and themes. Certain statements were encountered repeatedly amongst the original statements, thus indicting the validity of the theme emerging from the statement. There were however numerous statements which were found to be mentioned once only. The interesting themes were Luck, Black Economic Empowerment and Internal Communications. Interesting themes emerged from those statements that were not repeated, which were added to the repeated themes, since they would provide new considerations for the panel in the following round.

The researcher removed jargon and ambiguity, and re-wrote the grouped statements, to derive thirty-three aggregated statements encapsulating the 105 original statements. Table 17: Aggregated statements of success factors indicate the results of the aggregation.

Number	Aggregated Statement of critical success factor	First level theme
1.	The determination, perseverance, motivation, passion, self-discipline and candor of the entrepreneur to believe and continue believing in their start-up idea. The ability to make personal sacrifices required to make the start-up work.	The entrepreneur or entrepreneurial team
2.	The entrepreneur's ability and willingness to take on calculated financial or operational risks and manage these risks continuously.	The entrepreneur or entrepreneurial team
3.	The development of a fact-based business plan with adequate consideration of contingencies and worst-case scenarios. The ability to react to ongoing changes to the business plan. The ability of the business plan to consider short, medium and long-term horizons.	The strategy for the start-up

Number	Aggregated Statement of critical success factor	First level theme
4.	Successful start-up companies have a single focus and determination to succeed on a single business idea. Successful start-up companies do not aspire to be all things to all people; neither do they sell a concept only for its novelty value.	The strategy for the start-up
5.	The ability to articulate the business idea to stakeholders (capital providers, equity providers, customers and employees alike) and convince or inspire them to join the entrepreneur.	The entrepreneur or entrepreneurial team
6.	The ability to develop a uniquely differentiated value proposition to match customer needs feasibly (right price, right location, right time). This requires a true understanding of the customer's needs, or conversely the ability to shift the customer paradigms for them to understand the needs fulfilled by the value proposition of the start-up.	The strategy for the start-up
7.	It is important that the entrepreneur has extensive experience in the start-up company's industry. This experience will be in addition to the qualifying factor of merely having general business acumen.	The entrepreneur or entrepreneurial team
8.	It is beneficial if the entrepreneur has no prior experience in the start-up company's industry, for then the ability to innovate and critically question all prior industry assumptions is a benefit. This statement does not imply that the entrepreneur has no business experience, which the entrepreneur needs as a qualifier in any case.	The entrepreneur or entrepreneurial team

Number	Aggregated Statement of critical success factor	First level theme
9.	The self-knowledge of the entrepreneur, the ability to distinguish between their strengths and engaging an entrepreneurial team to mitigate their weaknesses. This factor is coupled with the entrepreneur's ability to know when to lead and when to follow in starting or operating the start-up company.	The entrepreneur or entrepreneurial team
10.	The ability to manage the raised capital within the start-up company, including the application and re-financing required at the various stages of the business development cycle. This requires stringent internal control procedures to gauge performance, and inform the start-up's start-stop and exit conditions.	Financial Management
11.	The ability to understand and interpret the environment in which the start-up company operates. This includes the market, competitors, legislation (laws & tax), substitute offerings, customer trends and technological evolutions. The ability to develop a realistic business plan to account for the environment in which the start-up operates.	The start-up's industry
12.	Certain start-up companies succeed because of luck, albeit in timing, product development, customer acquisition or any combination of these. The entrepreneur needs to be able to recognize and exploit this luck.	The entrepreneur or entrepreneurial team
13.	The entrepreneurial team's ability to think out-of-the box and configure their thinking by drawing on diverse skills within the group. This includes the ability to source skills externally where they lack within the start-up company.	The entrepreneur or entrepreneurial team

Number	Aggregated Statement of critical success factor	First level theme
14.	The entrepreneur needs to be a visionary, see beyond the limitations of today, and clearly communicate this vision to all the start-up's stakeholders. The visionary aspect should be coupled with the ability to execute a plan to seize the opportunity in the market.	The entrepreneur or entrepreneurial team
15.	The entrepreneur's motivation should be broader than only self-interest. Successful entrepreneurs believe that rewards will come to those who create a better world, be that through a product or a service.	The entrepreneur or entrepreneurial team
16.	The ability to structure a business model realistically to cater for adequate time-to-market or cater for appropriate sales cycles in their chosen industry, before funding becomes an issue. The success includes the ability to select the correct legal entity type, support network and partners to position the company correctly within the chosen industry.	The strategy for the start-up
17.	The ability to fund the start-up costs and working capital requirements to start the company. This requires the ability to predict the operating costs accurately for the company, and ensuring that revenues adequately cover all capital and operating expenses in the long term.	Financial Management
18.	The ability to develop an entrepreneurial team able to function effectively in the high-pressure environment of starting a company. This includes the ability manage internal conflicts; compliment each other's weaknesses and response to crisis situations in the start-up phase.	The entrepreneur or entrepreneurial team

Number	Aggregated Statement of critical success factor	First level theme
19.	The entrepreneur's ability to manage the balance between new ideas, whilst running a day-to-day business. Coupled with this is the entrepreneurial team's ability to compliment the strength and mitigate the weaknesses of the founding entrepreneur. The team is required to manage crises pro-actively before they arise, rather than taking retroactive remedial steps to address the crisis.	The entrepreneur or entrepreneurial team
20.	The entrepreneur's ability to self-fund adequate start-up finance even though many entrepreneurs have insufficient credit records (i.e. bad listings or no proven track record for the start-up) to access retail credit. Coupled to this is the ability to minimize capital requirements by maximizing working capital turn-around time, debt financing and vendor financing.	Financial Management
21.	The ability to network and leverage the network of people or companies to increase the market position of the start-up company. Networks may include customers, suppliers, affiliated companies, joint ventures, partnerships, influential individuals, government, service providers or competitors.	The entrepreneur or entrepreneurial team

Number	Aggregated Statement of critical success factor	First level theme
22.	The ability to use external information gathered through both formal and informal networks. This would include trends, new ideas, contacts and consultants to assist in gathering or interpreting information. Aspects could include any form of input information, be it official or unofficial, This does not advocate unethical behavior, but rather hot tips and leads to events, and the ability to access these. It acknowledges that a company operates in a symbiotic relationship to its environment.	The start-up's industry
23.	The discipline and honesty required to develop an internal operating strategy for the start-up company and taking corrective actions to compensate for contingency situations that arise. The operating strategy should be defined with clear milestones and deliverables balanced across all the intended objectives of the company.	The strategy for the start-up
24.	The ability to plan the source of capital with an understanding of the impacts of these choices. The debt versus equity funding implications (equity, love-money, angel capital, venture capital, debt, self-funding) and costs associated with these sources of capital as well as the associated risks. Also an understanding of how working capital will be financed within the start-up.	Financial Management

Number	Aggregated Statement of critical success factor	First level theme
25.	The ability to use both internal and external information and take action upon it. This includes using internal performance information and making continuous operational or financial adjustments, or acting upon external information regarding industry developments and adjusting the business plan accordingly. This is highly dependent on the experience of the entrepreneur, and her ability to leverage the entrepreneurial team's diverse skills to action the information.	Operations
26.	The choice of location of the start-up, i.e. access to resources, proximity and access to customers is a critical success factor.	The start-up's industry
27.	Insight into the company resources, their costs and limitations and life cycle adequacy is critical to start-ups. Resources include employees, contractors, vendors, plant, equipment, technology, hardware, software and stock.	Operations
28.	The ability to plan for resource requirements during all phases of the start-up. Resources include equipment, stock, employees, partnerships and finance though the cycles of the chosen industry. The start-up should have contingency plans for excessive resources as well as resource shortages.	The strategy for the start-up

Number	Aggregated Statement of critical success factor	First level theme
29.	The start-up's BEE strategy and implementation of the strategy, including own, partner's and supplier's BEE credentials. This is critical for success in South Africa and should be aligned to the chosen industry's best BEE practices. The start-up needs to utilize their BEE status tactically, partnerships or alliances to ensure that the company is successful in the chosen industry.	The entrepreneur or entrepreneurial team
30.	The ability to be the first mover i.e. the first to offer a new value proposition to customers. Often this creates trust and loyalty with customers because of the innovative nature of the offering.	The strategy for the start-up
31.	The ability to harvest the investments made by competitors to educate and convince the market of their needs. The second mover advantage reduces the capital requirements for a start-up since they do not have to spend effort on consumer education.	The strategy for the start-up
32.	The business needs to switch from entrepreneurial to operational at the correct time, so that operations become more important than continuous innovation. The entrepreneurial team needs to manage this switch responsibly.	The entrepreneur or entrepreneurial team
33.	A start up requires a certain amount of resources to further the growth of the company, which can also include specialized skills. Without sufficient resources, certain skills may be lacking in the business, which could affect the ability to execute and therefore success.	The strategy for the start-up

Table 17: Aggregated statements of success factors

The aggregation of statements dictated that the major themes be represented in proportion to their emerging in the first round. Table 18: Themes before and after aggregation summarizes the themes that emerged. The analysis indicates that there is a correlation between the frequency of themes before, and after aggregation, but because of the aggregation the frequency before and after aggregation is not equal. This confirmed the lack of bias because of the researcher's interpretation of statements.

Statement Classification	% before aggregation	% after aggregation
The entrepreneur or entrepreneurial team	36%	45%
The strategy for the start-up	33%	27%
Financial management	17%	12%
The start-up's industry	8%	9%
Operations	6%	6%

Table 18: Themes before and after aggregation

7.2.7 VALIDITY AND RELIABILITY OF THE FIRST ROUND

The validity of the first round was ensured through the number of statements gathered anonymously, as required by Whittaker (2003a) for internal validity, and the adherence to the principle of representation, as required by Halpern, *et al.* (2000) for external validity. The use of the Web-based survey tool removed situation-specific biases, as required by Story, *et al.* (2001). The literature support of the themes emerging in the first round, i.e. propositions matched to statements, further confirms the validity and reliability of the survey data. The coding scheme used the literature-based themes, therefore ensuring the validity and reliability of the content analysis. The researcher therefore considered the first round factors as both internally and externally valid in the context of this research. The validity of the aggregated statements would be confirmed by the panel review of the aggregation in the second round, yet the correlated frequency of occurrence is a good indication of the validity.

The use of a standardized survey tool ensured the reliability of the statements. The review of the aggregated statements in the subsequent rounds further ensured the reliability of the data from the first round. The aggregated statements are hence considered reliable for purposes of this research.

7.3 ANALYSIS OF SECOND ROUND STATEMENTS

The interpretation of the second round results were done in two phases. The first was to interpret the responses, specifically those that reached consensus and those that were rejected, thus did not reach consensus within the panel. The second was to process those factors that reached consensus, and prepare them for the third and final round. Table 11: Results from second round presents the results, and therefore consensus for each factor.

The panel proposed four new critical success factors. An analysis of these four proposed factors yielded that one new factor was actually just a comment from a panel member, the other three turned out to be refinements of the thirty-three aggregated statements of critical success factors. They were therefore not significant enough to justify including any of them as new statements of critical success factors.

7.3.1 INTERPRETATION OF THE LEVEL OF CONSENSUS

Statements with a higher level of consensus amongst the panel received a higher Yes voting in the second round. Those factors with a Yes-vote percentage of higher than 50%, meant that the more than 50% of the panel agreed that the factor was indeed critical to the success of the start-up company. It therefore indicated that the panel reached consensus on those factors. Conversely, those statements with a 50% Yes-vote percentage indicate that the panel could not reach consensus on those factors, and statements with less than 50% Yes-vote percentage indicates that the panel rejected these statements.

All results are equally interpreted, since the survey presented the sequence of aggregated factors randomly to each panel member. The results are therefore not biased by the sequence of appearance to the panel members, as per Schmidt (1997)'s random sequence requirement found in the methodology section (5.5.4.1).

7.3.1.1 INTERPRETATION OF REJECTED AND NON-CONSENSUS STATEMENTS

The panel could not reach consensus on two aggregated statements (rank number 20 and 21), and rejected twelve statements (rank number 22 through 33). This eliminated fourteen of the thirty-three aggregated critical success factors from the first round. The researcher could not obtain the panel's reasoning for eliminating these factors, since the survey was done anonymously, but this analysis poses observations regarding the most interesting of the rejected statements in Table 19: Rejected and non-consensus statements.

Rank	Statement	Interpretation
23.	Certain start-up companies succeed because of luck, albeit in timing, product development, customer acquisition or any combination of these. The entrepreneur needs to be able to recognize and exploit this luck	The panel dismissed the aspect of luck as a critical factor. This may well be because luck is an unmanageable aspect for a start-up company, and could be seen by many as a random coincidental factor, which is impossible to predict, and would thus have a great advantage, but cannot be accepted as critical to the success of the start-up. Many companies could succeed with no luck at all.

Rank	Statement	Interpretation
27	The start-up's BEE strategy and implementation of the strategy, including own, partner's and supplier's BEE credentials. This is critical for success in South Africa and should be aligned to the chosen industry's best BEE practices. The start-up needs to tactically utilize their BEE status, partnerships or alliances to ensure that the company is successful in the chosen industry	The panel rejected BEE as a critical success factor. This may be because BEE is more important in certain industries or sectors of the economy. BEE may very well be a qualifying factor, but not critical to the success of the start-up in general.
28	The entrepreneur's motivation should be broader than only self-interest. Successful entrepreneurs believe that rewards will come to those who create a better world, be that through a product or a service.	The panel rejected the aspect of an entrepreneur being motivated by the creation of a better world. This does not imply that such entrepreneurs would not be successful, but rather that this is not critical to the success of the start-up.
29	The choice of location of the start-up, i.e. access to resources, proximity and access to customers is a critical success factor	The rejection of the location is interpreted as being a qualifying factor, rather than critical to the success of the start-up. This statement is indirectly contained in statement 11, which covers the broader business plan as a critical success factor.
30	The ability to be the first mover i.e. the first to offer a new value proposition to customers. Often this creates trust and loyalty with customers because of the innovative nature of the offering.	The panel rejected both of these opposing statements to be critical to the success of the start-up. The panel did not consider first, or second, mover advantage to be critical to the

Rank	Statement	Interpretation
32	The ability to harvest the investments made by competitors to educate and convince the market of their needs. The second mover advantage reduces the capital requirements for a start-up since they do not have to spend effort on consumer education	success of the start-up. Either factor would be highly dependent on the industry within which the start-up operates, and can therefore not be generalized to be a critical success factor.
31	It is important that the entrepreneur has extensive experience in the start-up company's industry. This experience will be in addition to the qualifying factor of merely having general business acumen	The panel rejected both these opposing statements. The researcher argued that the entrepreneur's experience in the start-up's industry is not critical to the success of the start-up. The prior experience could be dependent on the chosen industry: financial services or banking start-up would require extensive experience, whereas Internet boom companies could not ever have had extensive experience. As an example, eBay did not have auction experience; neither did they have online sales experience. The panel therefore rejected both these statements as a general critical success factor.
33	It is beneficial if the entrepreneur has no prior experience in the start-up company's industry, for then the ability to innovate and critically question all prior industry assumptions is a benefit. This statement does not imply that the entrepreneur has no business experience, which the entrepreneur needs as a qualifier in any case	

Rank	Statement	Interpretation
20	The ability to manage the raised capital within the start-up company, including the application and re-financing required at the various stages of the business development cycle. This requires stringent internal control procedures to gauge performance, and inform the start-up's start-stop and exit conditions.	The panel did not reach consensus on either of these factors. They are therefore eliminated for the third round.
21	The business needs to switch from entrepreneurial to operational at the correct time, so that operations become more important than continuous innovation. The entrepreneurial team needs to manage this switch responsibly.	
22	The development of a fact-based business plan with adequate consideration of contingencies and worst-case scenarios. The ability to react to ongoing changes to the business plan. The ability of the business plan to consider short, medium and long-term horizons.	The panel rejected these factors. The researcher consequently eliminated them from the third round.

Rank	Statement	Interpretation
24	The ability to plan for resource requirements during all phases of the start-up. Resources include equipment, stock, employees, partnerships and finance though the cycles of the chosen industry. The start-up should have contingency plans for excessive resources as well as resource shortages.	
25	The entrepreneur's ability to self-fund adequate start-up finance even though many entrepreneurs have insufficient credit records (i.e. bad listings or no proven track record for the start-up) to access retail credit. Coupled to this is the ability to minimize capital requirements by maximizing working capital turn-around time, debt financing and vendor financing.	
26	The discipline and honesty required to develop an internal operating strategy for the start-up company and taking corrective actions to compensate for contingency situations that arise. The operating strategy should be defined with clear milestones and deliverables balanced across all the intended objectives of the company.	

Table 19: Rejected and non-consensus statements

It was interesting that the panel considered neither prior industry experience (rank number 31), nor no prior experience (rank number 33), as a critical success factor. This implies that the Lee & Tsang (2001), European Venture Capital Journal (2002) and Timmons & Gumpert (1982) findings regarding the criticality of the entrepreneur's previous experience in the industry was thus rejected by the panel. Furthermore, the Hofer & Sandberg (1987) finding that previous experience has no contribution in the success of the start-up was also rejected by the panel. The panel does however consider basic business acumen as a qualifying factor, implying the entrepreneur's basic business acumen as a starting point for success.

The last six eliminated factors (rank number 20, 21, 22, 24, 25 and 26) are also accepted as not being critical to the success of the start-up. The interpretation is that these factors may very well still be important as qualifying factors, but the panel consensus is that they are not critical to the success of the start-up.

7.3.1.2 INTERPRETATION OF CONSENSUS STATEMENTS

The statements that achieved consensus amongst the panel members are self-explanatory. The frequency of the factors that reached consensus, in order of percentage Yes-votes was: the entrepreneur or entrepreneurial team with a frequency of 46%, the strategy for the start-up with a frequency of 21%, and then financial management, start-up's industry, and operations each with a frequency of 11%. This correlates to the frequency of themes nominated in the first round, the fact that it is not exactly equal could be because this is a review round, and therefore the panel has had some time to reflect on their nominations in the first round.

7.3.2 PROCESSING OF CONSENSUS FACTORS

The results of the second round survey are contained in Table 11: Results from second round. Factors with a Yes-vote higher than 50% were considered to have reach consensus amongst the panel, because more than 50% of the respondents agreed that the factor was indeed critical to the success of start-up companies. This implies consensus amongst these 19 factors. Schmidt (1997) states that the second round of the Delphi-study serves to reduce the number of issues investigated by the panel to a maximum number of twenty issues. The researcher decided to reduce the number of factors to a maximum of ten factors. Two reasons informed this decision:

- Firstly, ten factors were easier for the panel to review in the third round, since relative trade-offs had to be made between factors, it would be easier to consider trade-offs between ten, rather than twenty factors.
- Secondly, the analysis of the factors with more than 52% agreement indicates that the factors with agreement between 53% and 61% (i.e. factors numbered 11 to 19) are contained within the factors with agreement higher than 61%. The outcome of this analysis is contained in Table 20: Duplicate second round consensus factors.

Factor Number	Is Contained within Factor Number
11	2
12	2
13	4
14	9
15	5
16	2
17	9
18	2
19	9

Table 20: Duplicate second round consensus factors

The researcher therefore decided to limit the factor reduction to ten factors; influenced by the methodology analysis in section 5.5.3.3. The coding scheme using the literature-based proposition used in the content analysis of the first round was still valid.

This implies that there was convergence amongst ten factors in total. Table 21: Top ten critical success factors from second round indicates the list of factors that the panel considered as critical success factor, with minor alterations as suggested by Table 20: Duplicate second round consensus factors.

Rank	Aggregated Statement of Critical Success Factor	YES
1.	The determination, perseverance, motivation, passion, self-discipline and candor of the entrepreneur to continue believing in their start-up idea. The ability to make personal sacrifices required to make the start-up work.	87%
2.	The means to understand & interpret the environment in which the start-up company operates: market, competitors, legislation, trends, technological evolutions, *sales-cycles & resources*. Then to develop a realistic business plan to operate within this environment.	82%
3.	Talent to network, & leverage the network, to increase the market position of the start-up company, including customers, suppliers, joint ventures, partnerships, experts, government, *mentors, peers*, service providers or competitors.	79%
4.	The capacity to articulate *a single focused* business idea to stakeholders (capital providers, equity providers, customers and employees alike) and convince or inspire them to join the entrepreneur.	76%
5.	Ability to fund the start-up costs & working capital requirements: predicting operating costs realistically, ensuring that revenues adequately cover all expenses in the long term. *Also, understanding the nature & implications of capital structuring options (debt vs. equity).*	76%
6.	The entrepreneur's capability and willingness to take on calculated financial or operational risks and manage these risks continuously during the start-up phase.	74%
7.	Competence to develop a uniquely differentiated value proposition to match customer needs feasibly. This requires a true understanding of customer's needs, or the ability to shift the paradigms for them to understand the fulfilled needs.	71%

Rank	Aggregated Statement of Critical Success Factor	YES
8.	The entrepreneur needs to be a visionary, see beyond the limitations of today, and clearly communicate this vision to all stakeholders; balanced with the ability to execute the plan to seize the opportunity in the market.	68%
9.	Skills to develop an entrepreneurial team able to function in the high-pressure environment of starting a company. This includes the ability to manage internal conflicts, *mitigate* each other's weaknesses & *respond* to crises.	66%
10.	The entrepreneur's aptitude to manage the balance between new ideas, whilst running a business, thus able to both strategize & execute. The team *needs* to manage crises pro-actively before they arise, rather than taking retroactive remedial steps to address the crisis.	66%

Table 21: Top ten critical success factors from second round

7.3.3 SECOND ROUND SURVEY VALIDITY AND RELIABILITY

The fact that ten factors reached consensus amongst the panel confirmed the internal validity of the second round: the panel reviewed the first round aggregation, and then reached consensus amongst themselves on at least 60% of the aggregated statements. Table 19: Rejected and non-consensus statements presents an analysis of the statements rejected by the panel. It seems plausible as to why the panel rejected 40% of the aggregated statements. The instruction limiting the panel to the number of statements that they could agree to, necessarily forced them to trade off the importance of some of the statements. All respondents replied anonymously, which conforms to the Whittaker (2003a) prescription for internal validity.

The application of the rule that only factors with agreement of more than 50% reached consensus ensured the stability and objectiveness of the results. This complies with the Story, *et al.* (2001) stability requirements for internal validity. The rule further guaranteed that none of the researcher's biases influenced the outcome of the second round, because of the statistical nature of the processing of levels of agreement with an expert panel. The random sequence of the appearance of the themes on surveys ensured compliance to the Story, *et al.* (2001) prescription of removing person-specific biases. The 51% response rate from the panel met the Halpern, *et al.* (2000) requirement for a representative panel of experts. It is therefore concluded that the second round is externally valid.

The statistical processing of the thirty-three aggregated statements to determine the top ten factors that reached consensus removed the researcher's error of judgment in interpreting the results, which complies with the Story, *et al.* (2001) requirements. The survey was sent out as a standardized questionnaire, and current industry jargon was removed. It is therefore concluded that the outcome of the second round is reliable.

7.4 ANALYSIS OF THIRD ROUND STATEMENTS

The analysis of the third round survey was done by firstly analyzing the rank of relative importance of each factor, and then by comparing the outcome to the initial propositions.

7.4.1 INTERPRETATION OF RELATIVE IMPORTANCE OF FACTORS

The interpretation of the third round factors relative importance relied on the panel to make trade-off between the importance of the top ten factors relative to each other. It is therefore valid to say that factor one, with a score of 73% is more important than factor two, with a score of 66%. Nothing can be read into the absolute values of the scores: factor one is not seven percentage points more important than factor two; it merely indicates that factor one is relatively more important than factor two. Table 13: Ranked importance of critical success factors indicates the relative importance of each factor. The section below presents a summary of the outcome.

- Firstly, the start-up company needs to be planned and managed according to the ecosystem in which it operates. This ecosystem includes industry competitors, suppliers, buyers, new entrants, substitutes and the legislative frameworks.
- The second and third most important factors had an equal ranking:
    a. The entrepreneur has the determination to start the company and continue to persist in the business idea to make a success.
    b. The cash flow management of the start-up, together with adequate funding to start and operate the company is equally important. The business plan should realistically reflect the environment and continuously be updated to reflect changes to the environment and changes in the company's operations.
- Fourthly, the entrepreneur must make contacts in environment of the start-up and use these contacts for purposes beyond the reason for the initial contact to ensure the success of the start-up company. This network of contacts needs to be managed actively and appropriately.
- Fifthly, the company needs to sell their single-minded proposition to all stakeholders. The company should not try to be all-things-to-all-people, but rather specialize and focus on delivering value to the appropriate stakeholders.
- Sixthly, the company must be able to differentiate themselves from the competitors by using the company's operations to add unique value to the appropriate customers. This is equally applicable to services companies and to product companies.
- Seventhly, the entrepreneur needs to have a clear strategy and vision for the future. This vision is informed by seeing the start-up as it can be, and as they want the start-up to be in the future, yet the entrepreneur must not merely dream about the vision, but rather take actions to make the vision real.
- Eighthly, the entrepreneur must be in a position to assume a calculated risk profile, and understand the implications of such assumed risks. Start-ups are inherently risky, and the downside of risks needs consideration when starting the company.

- Ninthly, the entrepreneur needs a well-balanced team to work with them on starting the company. It seems more important that the team have adequate depth and breadth of skills to draw on, than the mere team size.
- Lastly, the entrepreneur needs to strike the right balance between innovation and operations, thus ensuring that the innovations turn to value for the start-up as early as possible.

7.4.2 COMPARISON BETWEEN FACTORS AND PROPOSITIONS

Five themes emerged in the content analysis of the first round of the survey. All five themes remained present in the subsequent rounds of the survey, after consideration and consensus by the panel. Four of the factors align to the propositions found in the literature. The third round, as indicated in Table 22: Importance of themes matched to propositions, determined the relative importance of each of these factors. Propositions are also matched to the themes. The researcher used the relative frequency of each theme as a guide to the relative importance of the theme.

Rank	Theme	Supporting Proposition
1	The entrepreneur or entrepreneurial team	Proposition 3: the entrepreneur is a critical success factor for the success of the new venture. Specifically, the entrepreneur's needs recognition, motivation, ability to act, and team motivation relate to the critical success factor of the entrepreneur.
2	The strategy for the start-up	Proposition 2: the choice of strategy for the start-up company is a critical success factor for the success of the new venture. Specifically, the generic strategy choice, market domination, innovation and growth aspects of the strategy choice relate to this critical success factor.

Rank	Theme	Supporting Proposition
3	The start-up's industry	Proposition 1: the industry structure is a critical success factor for start-up companies. Specifically, the stability of the industry, structure of competition, evolutionary stage, entry barriers and product characteristics are critical success factors related to industry structure.
4	Financial Management	Proposition 4: the effective management of funds flow aspects is a critical success factor influencing the success of the start-up company. Specifically, the management, and control, of the flowing funds flow variables are critical success factors: gross margin; labour; residual cash flow; equity financing; debt financing; inventories; accounts receivable; accounts payable; and cash & marketable securities.
5	Operations	Not found in literature.

Table 22: Importance of themes matched to propositions

The fact that the panel reached consensus on the relative importance of the ten top factors, and the fact that the literature supports these factors, thus concludes the research.

7.4.3 VALIDITY AND RELIABILITY OF THIRD ROUND

The 44% response rate together with the fact that the panel converged on the rank order of the critical success factors adhered to the Story, *et al.* (2001) prescription of stability of the aggregated opinions. The fact that all but one of the themes is supported by the propositions found in the literature further ensured that internal validity of the ranked factors. The stability found between the second and third round further indicated the internal validity. The researcher consequently considered the ranked factors internally valid for the research purpose. The breadth of experience amongst the panel members and the response rate complied with the Halpern, *et al.* (2000) representation requirement for external validity. The use of a standardized research survey and application of statistical techniques in the third round met the Story, *et al.* (2001) requirement for external validity. The researcher considered the ranked factors externally valid for purposes of this research.

The application of statistical analysis, as required by Story, *et al.* (2001), ensured that the results were considered reliable for this research's purposes. The specific knowledge and experience of the panel, together with the response rate furthered the reliability of the results. The ranked factors are thus reliable for the purposes of this research.

8 CONCLUSION AND RECOMMENDATIONS

This section concludes the research and discusses the limitations of the research. The researcher also proposes suggestions for future research based on this research into critical success factors.

8.1 CONCLUSION

Three research questions defined the research presented here, which require review in order to conclude this research.

8.1.1 BACKGROUND

The critical success factors research was valid and reliable, based on the respective reliability and validity criteria analyzed for the panel, first round, second round and third round survey outcomes. The research is therefore considered valid and reliable. The critical success factors are supported by the propositions, which in turn are based on the literature study. It is thus argued that the critical success factors are valid, reliable and can be generalized for start-up companies in the South African business environment.

The research problem was to identify and qualify critical success factors influencing the success of start-up companies in South Africa. The problem comprised of three basic questions:

- What are the actual critical success factors for start-up companies in South Africa? And
- How important is each critical success factor for start-up companies in South Africa? And
- What framework of critical success factors should start-up companies in South Africa consider?

The outcome of the second and third round of the Delphi-study answered the first two questions. The third question dealt with an overall framework for consideration in South African start-up companies. The framework that emerged from the research was founded on the critical success factors, and their applicability to the start-up.

8.1.2 CRITICAL SUCCESS FACTORS AND ORDER OF IMPORTANCE

The following factors are critical success factors for start-up companies in South Africa, in order of importance:

1. The start-up requires the means to understand & interpret the environment in which the start-up company operates: market, competitors, legislation, trends, technological evolutions, sales-cycles & resources. Then to develop a realistic business plan to operate within this environment.
2. The determination, perseverance, motivation, passion, self-discipline and candor of the entrepreneur to continue believing in their start-up idea. The ability to make personal sacrifices required to make the start-up work.
3. The start-up requires the ability to fund the start-up costs & working capital requirements: predicting operating costs realistically, ensuring that revenues adequately cover all expenses in the long term. Also, understanding the nature & implications of capital structuring options (debt vs. equity).
4. The entrepreneur, or entrepreneurial team, must have the talent to network, & leverage the network, to increase the market position of the start-up company, including customers, suppliers, joint ventures, partnerships, experts, government, mentors, peers, service providers or competitors.
5. The start-up has to have the capacity to articulate a single focused business idea to stakeholders (capital providers, equity providers, customers and employees alike) and convince or inspire them to join the entrepreneur.

6. The start-up needs the competence to develop a uniquely differentiated value proposition to match customer needs feasibly. This requires a true understanding of customer's needs, or the ability to shift the paradigms for them to understand the fulfilled needs.
7. The entrepreneur needs to be a visionary, see beyond the limitations of today, and clearly communicate this vision to all stakeholders; balanced with the ability to execute the plan to seize the opportunity in the market.
8. The entrepreneur's capability and willingness to take on calculated financial or operational risks and manage these risks continuously during the start-up phase.
9. The entrepreneur needs the skills to develop an entrepreneurial team able to function in the high-pressure environment of starting a company. This includes the ability to manage internal conflicts, mitigate each other's weaknesses & respond to crises.
10. The entrepreneur's aptitude to manage the balance between new ideas, whilst running a business, thus able to both strategize & execute. The team needs to manage crises pro-actively before they arise, rather than taking retroactive remedial steps to address the crisis.

The ten statements represent the essence of the critical success factors for start-up companies in South Africa. There is a vast amount of detail embedded within each statement. The statements are, however, a summary of the aspects of a start-up company deemed critical to their success. These factors are inherently linked and in some instances possibly causal. The critical success factors are autonomous enough to consider each individually. It would serve any stakeholder well to bear these critical success factors in mind when starting a company, or dealing with a start-up company.

8.1.3 FRAMEWORK OF CRITICAL SUCCESS FACTORS

The section below summarizes the framework that start-up companies' stakeholders should consider in the South African business environment.

- The success of the start-up is rooted in the individual characteristics and attributes, strength and weaknesses, experience, interaction and overall characteristics of the entrepreneur and the entrepreneurial team. These are the founding partners of the start-up. They will collectively contribute to the success of the start-up.
- The overall strategy of the company contributes to the success of the start-up. This strategy contains the long-term strategy, operational strategy and business plan with product, milestones with stop-go decision milestones, positioning, networking, branding and differentiating value propositions. The appropriateness and originality of the strategy will contribute to the success of the company.
- The industry in which the start-up chooses to operate in informs the start-up's success. This includes the environment and customers, competitors, suppliers, threat of substitutes, threat of new entrants and legislative framework within which the company operates. The consideration of the industry in the start-up's strategy will contribute to the success of the company.
- The start-up's capability to manage their finances contributes to the possibility of the start-up's success. Financial management includes capital planning, sourcing and application, as well as continuous financial management.
- Lastly, the start-up company's operations and operational efficiency adds to their likelihood of success. The company needs proper resource planning, as well as monitoring and feedback decision points embedded within its operations. The ability to adequately plan and manage their operations will contribute to the success of the start-up.

This framework is therefore a guideline to any stakeholder involved in start-up companies, and provides insight into the aspects to consider as critical to the success of the start-up. The framework is sufficiently factual and adequately supported by literature to serve as a general set of considerations for start-up companies, but stakeholders should bear in mind that specific industries would have other factors included in the framework for that specific industry.

8.2 LIMITATIONS

The section below summarizes the major limitations of this research.

- This research used a representative panel of experts to reach consensus on the critical success factors of start-up companies. The panelists qualified their expertise, which indicated adequate coverage from the panel. There is, however, an inherent limitation in the selection of the panel, since the experience of the panel was not qualified objectively. The researcher did not delve into the number of companies that an entrepreneur had started, or the number of deals that a capital provider had financed. The panel findings can thus be generalized; however, this generalization is valid only for this specific panel. The panel did have adequate representation from the identified stakeholder perspectives and experiences, which mitigated this concern.
- The research found ten critical success factors for start-up companies and provided guidance on the relative importance of these factors. It is however crucial to realize that there are numerous qualifying factors that a start-up company needs to be successful. This research did not explicitly investigate qualifying factors for start-up companies, but at a minimum includes the legality of the business idea, ensuring that no violation of intellectual property rights, knowing that there is a market for the idea, having the ability to keep a detailed set of financial records and all matters of basic business functions. It is also imperative to realize that the critical success factors are all interlinked, it is therefore not feasible that a start-up has considered nine of the ten factors and disregarded the tenth factor. A company could thus not have a great idea, a suitable entrepreneurial team, yet not have an industry or financial management to launch the company.

- The critical success factors are furthermore generalized, yet specific companies could have company or industry-specific critical success factors. The critical success factors should therefore be applied with cognizance of company-specific issues, yet serve as a guideline for the roadmap to success for any given start-up company.

8.3 SUGGESTIONS FOR FURTHER RESEARCH

The list below discusses suggestions for further research that stem from this specific research.

- This research assumed that a set of qualifying factors were already in place in the start-up company. These factors include by assumption, the legislative framework, tax framework, basic business acumen, understanding of finances, basic literacy, Black Economic Empowerment (BEE) and basic social skills. These assumptions could provide the basis for research into the basic qualifying criteria for starting a company, specifically in the low-skilled South African environment.
- Research whether there are any industry-specific critical success factors particular to specific industries in South Africa. Part of this research needs to consider whether there is a different relative importance of the critical success factors inherent to the industry.
- A further investigation into whether any of the stakeholder groups have a different relative importance of the factors. This could indicate that entrepreneurs perceive financial management more important than strategy, whereas capital providers do not even rank financial management as an issue at all. This research will thus investigate the stakeholder specific relative importance of critical success factors.

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A. ADDENDUM A: RESEARCH PANEL MEMBERS

The following people were nominated to participate as panel members.

Name	Surname	Representation
Colin	Anthony	Editor of the Business Day Real Business Supplement
Jordan	Beagle	Entrepreneur
Selina	Beagle	Entrepreneur
Johan	Bester	Entrepreneur
Peter	Bezuidenhoudt	CEO of the Wits Enterprise
Wynand	Bezuidenhout	Entrepreneur
Mdu	Bophela	Service Provider to Start-ups at Retail Bank
Theunis	Botha	Entrepreneur
Douglas	Bruce	Capital Provider at Retail Bank
C	Callahan	Representative of the Southern Africa Enterprise Development Fund
Danny	Capovilla	Service Provider to Start-ups at Retail Bank
Rob	Caveney	Research Consultant at the Wits Enterprise
Andries	Coetzee	Entrepreneur
Vincent	Coetzee	Entrepreneur
Margie Cullen	Cullen	Representative of the Nelson Mandela Metropolitan University MBA School
Jaco	de Kok	Entrepreneur
Carel	de Wet	Service Provider of Accounting Solutions
Leonora	Derksen	Service Provider to Start-ups at Retail Bank
Gerhard	du Toit	Entrepreneur
Jaco	du Toit	Entrepreneur
Roux	du Toit	Capital Provider at Retail Bank
Maggie	Duvall	Entrepreneur
Troy	Dyer	CEO of Audax Ideas Management Consulting
Manager	Entrepreneurship Development	Manager at Khula Finance

Name	Surname	Representation
Carina	Fischer	GEM Researcher at the UCT Graduate School of Business
Greg	Fisher	Entrepreneurship Lecturer at Gordon Institute of Business Science (GIBS)
Tanya	Genis	Capital Provider at Retail Bank
Riaan	Goosen	Entrepreneur
Nicolette	Griggs	Small Business Development Manager at the UCT Graduate School of Business
Calvin	Howard	Entrepreneur
Fred-Wei	Huang	Service Provider at University of KwaZulu Natal
Sean	Hydes	Service Provider at Accounting Firm
Janine	Jee	Entrepreneur
Dina	Kaplan	Entrepreneur
Robert	Keip	Capital Provider at Retail Bank
Fathima	Khan	Entrepreneur
Gabake	Khonkhobe	Advisor to Khula Start-up Companies
Sudhir	Kissun	Entrepreneur
Bengt	Klasen	Entrepreneur
Hein	Koen	Entrepreneur
Rene	Kornelius	Capital Provider at Merchant Bank
Ashwin	Lakhan	Capital Provider at Retail Bank
Megan	Laurence	Capital Provider at Retail Bank
Chris	Lister-James	Representative of Vantage Capital
Gideon	Maas	GEM Principal Researcher at the UCT Graduate School of Business
Max	Mackenzie	Lecturer at Wits Business School
Tshepo	Mahloele	Representative of the Development Bank of South Africa
Jonathan	Marks	Lecture at the UCT Graduate School of Business
Teboho	Masiteng	Service Provider at Ericsson Solutions
Sean	Mulcahy	Capital Provider at Retail Bank

Name	Surname	Representation
Jitendra	Naran	Entrepreneur
Manoj	Nathoo	Advisor to Khula Start-up Companies
Noluthando	Ndzotoyi	Representative of the HBD Start-up Fund
Hilgard	Nel	Entrepreneur
Keith	OReilly	Entrepreneur
John	Orford	GEM Coordinator at the UCT Graduate School of Business
Tonia	Overmeyer	Small Business Development Manager at the UCT Graduate School of Business
Xolani	Qubeka	Advisor to Khula Start-up Companies
Adam	Rabinowitz	Entrepreneur
Suveer	Ramdhani	Entrepreneur
Suchita	Ramphal	Student of Entrepreneurship at Gordon Institute of Business Science (GIBS)
Shaun	Rosenthal	Representative of Wipprivate Equity
Jill	Sawers	Representative of the Innovation Hub
Jan	Schoombee	Capital Provider at Retail Bank
Melanie	Schoombee	Capital Provider at Retail Bank
Selwyn	Schrieff	Advisor to Khula Start-up Companies
Malcolm	Segal	Chairman of the South African Venture Capitalists Association
Dean	Shacklock	Entrepreneur
Andre	Sharpe	Entrepreneur
Ian	Sherman	Entrepreneur
Manager	Shuttleworth Foundation	Representative of the Shuttleworth Foundation
Priya	Soobramoney	Service Provider to Start-ups at Retail Bank
Ilan	Sparrius	Service Provider at Accenture
Omesh	Sumpath	Capital Provider at Retail Bank
Colette	Symanowitz	Student of Entrepreneurship at the Gordon Institute of Business Science (GIBS)
Sean	Temlett	Lecture of Entrepreneurship at the Wits Business School

Name	Surname	Representation
Yoni	Titi	Service Provider to Start-ups at Retail Bank
Ben	van As	Service Provider at Deloitte Consulting
Hennie	Van Niekerk	Entrepreneur
Lara	van Rooyen	Entrepreneur
Jako	Volshenck	Researcher at the Africa Centre for Investment Analysis, part of the University of Stellenbosch GSB
Liné	Wiid	Capital Provider at Retail Bank
Ben	Zaaiman	Entrepreneur
Henri	Zietsman	Service Provider at Ericsson Solutions
Julie	Zietsman	Entrepreneur

B. ADDENDUM B: ROUND 1 QUESTIONNAIRE

The actual survey for round 1 is indicated below.

1. Introduction

This survey is part of my MBA research dissertation regarding the Critical Success Factors for Start-up Companies in South Africa at the Wits Business School (WBS). The official research reference number is available on request.

If you have any concerns or queries during the course of this research, please do not hesitate to contact me.

Regards

Stephan Sparrius

MBA Graduate Candidate: Research into Critical Success Factors for Start-up Companies in South Africa.

Telephone: +27 83 643 0650

Email: 31007391@icon.co.za

The next two pages provide you with a background and overview of how this survey will work. It is suggested that you spend a couple of minutes to review the methodology and time lines for your valued input.

Next >>

2. Overview and Purpose

Purpose

The purpose of this communication is twofold: firstly, to acknowledge your participation as one of the experts on the research panel into this subject; and secondly to complete the first round of this three part survey.

Methodology

This research will consist of three rounds of written response to three questionnaires over the next couple of weeks. Invites to all questionnaires will be sent to you via email, and you are kindly requested to use this site to complete each survey. This study is interested in your opinion regarding critical success factors for start-up companies in South Africa during the last ten years. The survey uses the Delphi survey technique, which allows for improved panel consensus formation without the negative factors associated with interactive group dynamics, thus allowing you to consider the responses to questionnaires at your convenience. All responses will be aggregated and reported back to the panel anonymously, providing the panel with the opportunity to review each other's responses and amend their own opinion accordingly.

Definitions

Critical success factors are defined as *"…events, circumstances, conditions, or activities that require special attention because of their significance. They can be internal or external and*

can influence success either positively or negatively. Their essential character is the need for a special awareness or early warning system to avoid unpleasant surprises or missed opportunities".

In the literature, there are many definitions for start-up and small businesses. For purposes of this research start-up companies are defined as an independent business where management owns a portion of the business and has full control of business operations. The business has an annual turnover of less than R 10 million and employs less than 50 personnel at the launch phase of the company. The business also has total gross asset value (fixed property excluded) of less than R 4 million. The start-up company may have grown as a large enterprise during the last 10 years, yet the start-up characteristics are the focus of this research. There will be no industry bias for the start-up companies, yet franchise companies are excluded for purposes of the study.

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3. How this research works

This research will be conducted through this site. You will receive an invitation to participate and complete each round via email. If your email changes during the course of this survey, kindly forward me an email so that I may update the address to which the invitation is sent. The entire survey, i.e. all THREE rounds, will take you 1.5 hours to complete. The rounds are planned as follows:

Round One

Purpose: To solicit your list of critical success factors for start-up companies. You will be required to provide a name, definition, and classification for your list of critical success factors.

Time Required from You: This part of the survey will take you roughly 45 minutes to complete.

Time line: You have received the first part today, 17 July 2006. You will have 7 calendar days to complete this round. You need to submit your response by no later than 21 July 2006, at this date the survey will be closed.

Round Two

Purpose: To review the panel's aggregated consensus list of critical success factors for start-up companies. You will be required to state explicitly whether you agree with the list, and provide further critical success factors, if you deem that the panel is missing factors.

Time Required from You: This part of the survey will take you roughly 30 minutes to complete.

Proposed Time Line: You will receive on 24 July 2006. You will have 5 calendar days to complete. You need to submit your response by no later than 29 July 2006, at this date the survey will be closed.

Round Three

Purpose: To review to top 20 consensus critical success factors found by the panel and to rank the importance of each factor in your opinion.

Time Required from You: This part of the survey will take you roughly 15 minutes to complete.

Proposed Time Line: You will receive on 04 August 2006. You will have 5 calendar days to complete. You need to submit your response by no later than 09 August 2006, at this date the survey will be closed.

The final research report will be available two months subsequent to the completion of round three. You are more than welcome to contact me for an electronic copy of the research outcomes.

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4. About Yourself

You may complete this survey anonymously, but kindly provide some demographic information. All information supplied will be used in the strictest confidence, and will never be disseminated to third parties. Kindly provide the following information; all questions are mandatory, unless marked otherwise:

***1. Which of the following categories would best describe your involvement with start-up companies? This question is required; please select the most appropriate answer.**

- **Entrepreneur** (i.e. you were involved in starting a company (ies), as part of the entrepreneurial team):
- **Capital Provider** (i.e. you provide funding to start-up company(ies), directly or as a representative):
- **Service Provider** (i.e. you provide a service, other than capital, to start-up company(ies)):
- **Government** (i.e. you work as part of a government initiative to assist start-up company(ies), other than as a capital provider):
- **Academia** (i.e. you are involved in start-up company(ies) from an academic perspective):
- Other (please specify)

2. Please provide your full name, contact number and email address, each separated by a comma. This question is optional:

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5. Instructions for the Critical Success Factors Section

The next section requires you to describe your views on the critical success factors for start-up companies in South Africa. I suggest that you spend some time to think about the critical success factors and arrange them into logical groupings that suit your views. I find it easiest then to give the grouping a logical name. Do not worry too much about the groupings, as I will scan through all the mentioned critical success factors and re-group them into logical groupings for the entire panel's survey responses. This will result in a list of condensed statements of the panel's consensus of the critical success factors.

Kindly ensure that you provide at least TWO critical success factors, by giving them a name, a description and a classification. The description is a free text field, where you can provide your entire description, or clarification, of each of the named critical success factors. The classification is a way to align your mentioned critical success factor with those found in the literature, I have endeavored to provide a brief synopsis of each of the classifications from the literature.

The literature suggests the following critical success factors (*CSF*): (*I suggest that you print this set of definitions for reference purposes in the next sections. You can always use the **PREV** button to return to this page if you so choose*).

The **INDUSTRY STRUCTURE** is a critical success factor for start-up companies. Specifically, the stability of the industry, structure of competition, evolutionary stage, entry barriers and product characteristics are critical success factors related to industry structure.

The **CHOICE OF STRATEGY** for the start-up company is a critical success factor for the success of the new venture. Specifically, the generic strategy choice, market domination, innovation and growth aspects of the strategy choice relate to this critical success factor.

The **ENTREPRENEUR** is a critical success factor for the success of the new venture. Specifically, the entrepreneur's needs recognition, motivation, ability to act, and team motivation relate to the critical success factor of the entrepreneur.

The **EFFECTIVE MANAGEMENT OF FUNDS FLOW** aspect is a critical success factor influencing the success of the start-up company. Specifically, the management, and control, of the flowing funds flow variables are critical success factors: gross margin; labour; residual cash flow; equity financing; debt financing; inventories; accounts receivable; accounts payable; and cash & marketable securities.

The survey allows for a maximum of *TEN* critical success factors. You may elect to save your results and return at anytime before the mentioned survey closing date.

Click on the **NEXT>>** button to continue, when you have formed a view of your proposed critical success factors.

<< Prev **Next >>**

6. Your First Critical Success Factor (Mandatory)

Please use the following section to list your view of the critical success factors for start-up companies. You will be required to provide a name, definition, reason and classification for your list of critical success factors. Provide at least two, but no more than ten, critical success factors.

***3. Your chosen NAME for the first critical success factor:**

***4. Provide a DESCRIPTION of the first critical success factor (use as much text as you require):**

***5. How would you classify the second critical success factor? Please choose an option that BEST classifies your CSF.**

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7. Your Second Critical Success Factor (Mandatory)

Please use the following section to list your view of the critical success factors for start-up companies. You will be required to provide a name, definition, reason and classification for your list of critical success factors. Provide at least two, but no more than ten, critical success factors.

***6. Your chosen NAME for the second critical success factor:**

***7. Provide a DESCRIPTION of the second critical success factor (use as much text as you require):**

***8. How would you classify the second critical success factor? Please choose an option that BEST classifies your CSF.**

***9. Would you like to add another CSF to the list?**

<< Prev **Next >>**

16. Thanks!

My sincere thanks for your participation in this survey. I will process the results and provide you with the link to the next survey on 24 July 2006. Kindly contact me if you have any questions, queries or concerns.

Regards

Stephan Sparrius

Contact: +27836430650, email: 31007391@icon.co.za

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C. ADDENDUM C: ROUND 2 QUESTIONNAIRE

1. Introduction

This survey is part of my MBA research dissertation regarding the Critical Success Factors for Start-up Companies in South Africa at the Wits Business School (WBS). The official research reference number is available on request. If you have any concerns or queries during the course of this research, please do not hesitate to contact me.

Regards

Stephan Sparrius, MBA Graduate Candidate: Research into Critical Success Factors for Start-up Companies in South Africa.

Telephone: +27 83 643 0650 ,Email: 31007391@icon.co.za

The next page provides you with a background and overview of how this round of the survey will work.

Next >>

2. Overview and Purpose

Objective

This is the ***SECOND ROUND*** survey into the critical success factors for start-up companies in South Africa. All the responses from the first round have been consolidated and integrated into a set of proposed critical success factors for start-up companies. You will be required to read and review each statement and indicate if you agree with the statement. You may also add new statements to the survey, if you feel that any pertinent critical success factors have been omitted.

Time Lines

This round should take no longer than 10 minutes to complete. All responses are confidential, your name not be associated with your response. You will have 5 calendar days to complete, submitting your response by no later than 29 July 2006, at this date the survey will be closed.

Thanks you for your participation, Click on the **>>NEXT** button to continue.

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3 Review of the Panel's Proposed Critical Success Factors (Mandatory)

Please review the panel's consolidated critical success factors, and select whether you agree with each factor being a critical success factor in your opinion. If you do not consider a factor critical, just indicate that by selecting **NO**. There is no right or wrong answers for each factor; the importance is to explore what the panel's collective opinion is on each factor.

Please ensure that you select the 15 most critical success factors by only providing 15 YES answers.

You will have the opportunity to add additional factors at the end of the survey.

***1. Please indicate whether you agree with each of these factors by clicking on the appropriate radar button next to each question.**
***YES* means that you agree with the factor being critical, i.e. without the factor the company will not survive, whereas *NO* means that you do not consider it as critical, i.e. the company may survive without this factor.**

Please limit the number of YES factors to a maximum of 15, i.e. the 15 factors that you believe are most critical to the success of the company,

	YES	NO
The ability to develop an entrepreneurial team able to function effectively in the high-pressure environment of starting a company. This includes the ability manage internal conflicts; compliment each other's weaknesses and response to crisis situations in the start-up phase.		
It is beneficial if the entrepreneur has no prior experience in the start-up company's industry, for then the ability to innovate and critically question all prior industry assumptions is a benefit. This statement does not imply that the entrepreneur has no business experience, which the entrepreneur needs as a qualifier in any case.		
The entrepreneur's ability and willingness to take on calculated financial or operational risks and manage these risks continuously.		
The ability to understand and interpret the environment in which the start-up company operates. This includes the market, competitors, legislation (laws & tax), substitute offerings, customer trends and technological evolutions. The ability to develop a realistic business plan to account for the environment in which the start-up operates.		
It is important that the entrepreneur has extensive experience in the start-up company's industry. This experience will be in addition to the qualifying factor of merely having general business acumen.		
The start-up's BEE strategy and implementation of the strategy, including own, partner's and supplier's BEE credentials. This is critical for success in South Africa and should be aligned to the chosen industry's best BEE practices. The start-up needs to utilize their BEE status tactically, partnerships or alliances to ensure that the company is successful in the chosen industry.		
The ability to fund the start-up costs and working capital requirements to start the company. This requires the ability to predict the operating costs accurately for the company, and ensuring that revenues adequately cover all capital and operating expenses in the long term.		
The choice of location of the start-up, i.e. access to resources, proximity and access to customers is a critical success factor.		
The entrepreneur's ability to self-fund adequate start-up finance even though many entrepreneurs have insufficient credit records (i.e. bad listings or no proven track record for the start-up) to access retail credit. Coupled to this is the ability to minimize capital requirements by maximizing working capital turn-around time, debt financing and vendor financing.		
The ability to articulate the business idea to stakeholders (capital providers, equity providers, customers and employees alike) and convince or inspire them to join the entrepreneur.		
The development of a fact-based business plan with adequate consideration of contingencies and worst-case scenarios. The ability to react to ongoing changes to the business plan. The ability of the business plan to consider short, medium and long-term horizons.		
The ability to be the first mover i.e. the first to offer a new value proposition to customers. Often this creates trust and loyalty with customers because of the innovative nature of the offering.		
The ability to structure a business model realistically to cater for adequate time-to-market or cater for appropriate sales cycles in their chosen industry, before funding becomes an issue. The success includes the ability to select the correct legal entity type, support network and partners to position the company correctly within the chosen industry.		

The ability to use external information gathered through both formal and informal networks. This would include trends, new ideas, contacts and consultants to assist in gathering or interpreting information. Aspects could include any form of input information, be it official or unofficial, This does not advocate unethical behavior, but rather hot tips and leads to events, and the ability to access these. It acknowledges that a company operates in a symbiotic relationship to its environment.		
A start up requires a certain amount of resources to further the growth of the company that can also include specialized skills. Without sufficient resources, certain skills may be lacking in the business, which could affect the ability to execute and therefore success.		
The entrepreneur's motivation should be broader than only self-interest. Successful entrepreneurs believe that rewards will come to those who create a better world, be that through a product or a service.		
The ability to plan the source of capital with an understanding of the impacts of these choices. The debt versus equity funding implications (equity, love-money, angel capital, venture capital, debt, self-funding) and costs associated with these sources of capital as well as the associated risks. Also an understanding of how working capital will be financed within the start-up.		
The self-knowledge of the entrepreneur, the ability to distinguish between their strengths and engaging an entrepreneurial team to mitigate their weaknesses. This factor is coupled with the entrepreneur's ability to know when to lead and when to follow in starting or operating the start-up company.		
The ability to manage the raised capital within the start-up company, including the application and re-financing required at the various stages of the business development cycle. This requires stringent internal control procedures to gauge performance, and inform the start-up's start-stop and exit conditions.		
The ability to network and leverage the network of people or companies to increase the market position of the start-up company. Networks may include customers, suppliers, affiliated companies, joint ventures, partnerships, influential individuals, government, service providers or competitors.		
The entrepreneur needs to be a visionary, see beyond the limitations of today, and clearly communicate this vision to all the start-up's stakeholders. The visionary aspect should be coupled with the ability to execute a plan to seize the opportunity in the market.		
The discipline and honesty required to develop an internal operating strategy for the start-up company and taking corrective actions to compensate for contingency situations that arise. The operating strategy should be defined with clear milestones and deliverables balanced across all the intended objectives of the company.		
Certain start-up companies succeed because of luck, albeit in timing, product development, customer acquisition or any combination of these. The entrepreneur needs to be able to recognize and exploit this luck.		
The ability to use both internal and external information and take action upon it. This includes using internal performance information and making continuous operational or financial adjustments, or acting upon external information regarding industry developments and adjusting the business plan accordingly. This is highly dependent on the experience of the entrepreneur, and her ability to leverage the entrepreneurial team's diverse skills to action the information.		
The ability to develop a uniquely differentiated value proposition to match customer needs feasibly (right price, right location, right time). This requires a true understanding of the customer's needs, or conversely the ability to shift the customer paradigms for them to understand the needs fulfilled by the value proposition of the start-up.		

Insight into the company resources, their costs and limitations and life cycle adequacy is critical to start-ups. Resources include employees, contractors, vendors, plant, equipment, technology, hardware, software and stock.		
The ability to plan for resource requirements during all phases of the start-up. Resources include equipment, stock, employees, partnerships and finance though the cycles of the chosen industry. The start-up should have contingency plans for excessive resources as well as resource shortages.		
The entrepreneurial team's ability to think out-of-the box and configure their thinking by drawing on diverse skills within the group. This includes the ability to source skills externally where they lack within the start-up company.		
The business needs to switch from entrepreneurial to operational at the correct time, so that operations become more important than continuous innovation. The entrepreneurial team needs to manage this switch responsibly.		
The ability to harvest the investments made by competitors to educate and convince the market of their needs. The second mover advantage reduces the capital requirements for a start-up since they do not have to spend effort on consumer education.		
The entrepreneur's ability to manage the balance between new ideas, whilst running a day-to-day business. Coupled with this is the entrepreneurial team's ability to compliment the strength and mitigate the weaknesses of the founding entrepreneur. The team is required to manage crises pro-actively before they arise, rather than taking retroactive remedial steps to address the crisis.		
The determination, perseverance, motivation, passion, self-discipline and candor of the entrepreneur to believe and continue believing in their start-up idea. The ability to make personal sacrifices required to make the start-up work.		
Successful start-up companies have a single focus and determination to succeed on a single business idea. Successful start-up companies do not aspire to be all things to all people; neither do they sell a concept only for its novelty value.		

***2. Would you like to add any more critical success factors to the list?**

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4. Additional CSFs (Optional)

Please use the following section to list any additional critical success factors for start-up companies. You will be required to use the text box to describe **ALL** additional CSFs. Please use as much text as you require.

***3. Provide a DESCRIPTION of all additional critical success factors that are not listed (use as much text as you require to list all of these):**

<< Prev **Next >>**

5. Thanks!

My sincere thanks for your participation in this survey. I will process the results and provide you with the link to the next survey on 31 July 2006. Kindly contact me if you have any questions, queries or concerns.

Regards, Stephan Sparrius, Contact: +27836430650, email: 31007391@icon.co.za

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D. ADDENDUM D: ROUND 3 QUESTIONNAIRE

1. Introduction

This survey is part of my MBA research dissertation regarding the Critical Success Factors for Start-up Companies in South Africa at the Wits Business School (WBS). The official research reference number is available on request. If you have any concerns or queries during the course of this research, please do not hesitate to contact me.

Regards

Stephan Sparrius

MBA Graduate Candidate: Research into Critical Success Factors for Start-up Companies in South Africa.

Telephone: +27 83 643 0650

Email: 31007391@icon.co.za

The next page provides you with a background and overview of how this round of the survey will work.

Next >>

2. Overview and Purpose

Objective

This is the ***THIRD ROUND*** survey into the critical success factors for start-up companies in South Africa. It will be the last round of this survey.

All the responses from the second round have been review to determine the panel's consensus of the most important factors, i.e. the factors with the highest percentage Yes-votes from round 2. You will be required to rank the relative importance of each of the most important factors.

Time Lines

This round should take no longer than 10 minutes to complete. All responses are confidential. You will have 3 calendar days to complete, submitting your response by no later than 2 August 2006, at this date the survey will be closed.

Thanks you for your participation, Click on the **>>NEXT** button to continue.

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3. Ranking of the Panel's Top Ten Critical Success Factors (Mandatory)

Please indicate the relative importance of each factor, in your opinion. The factor rated 10 will be the most important, 9 the second most important, and 1 the least important. Only one factor can be rated in each relative importance scale (I.e. only one factor can be 10, only one 9, etc.).
Consider each factor in relation to all the other factors, and ensure that each factor is ranked.

*** 1. Please indicate the relative importance of each factor (10 = Most Important, 1 = Least Important). The critical success factors are listed horizontally, their relative rankings are scored vertically. Use the scroll bars to navigate across all factors and scores.**

	The determination, perseverance, motivation, passion, self-discipline and candor of the entrepreneur to continue believing in their start-up idea. The ability to make personal sacrifices required to make the start-up work.	The means to understand & interpret the environment in which the start-up company operates: market, competitors, legislation, trends, technological evolutions, sales-cycles & resources. Then to develop a realistic business plan to operate within this environment.	Talent to network, & leverage the network, to increase the market position of the start-up company, including customers, suppliers, joint ventures, partnerships, experts, government, mentors, peers, service providers or competitors.	The capacity to articulate a single focused business idea to stakeholders (capital providers, equity providers, customers and employees alike) and convince or inspire them to join the entrepreneur.	Ability to fund the start-up costs & working capital requirements: predicting operating costs realistically, ensuring that revenues adequately cover all expenses in the long term. Also, understanding the nature & implications of capital structuring options (debt vs. equity).	The entrepreneur's capability and willingness to take on calculated financial or operational risks and manage these risks continuously during the start-up phase.	Competence to develop a uniquely differentiated value proposition to match customer needs feasibly. This requires a true understanding of customer's needs, or the ability to shift the paradigms for them to understand the fulfilled needs.	The entrepreneur needs to be a visionary, see beyond the limitations of today, and clearly communicate this vision to all stakeholders; balanced with the ability to execute the plan to seize the opportunity in the market.	Skills to develop an entrepreneurial team able to function in the high-pressure environment of starting a company. This includes the ability to manage internal conflicts, mitigate each other's weaknesses & respond to crises.	The entrepreneur's aptitude to manage the balance between new ideas, whilst running a business, thus able to both strategize & execute. The team needs to manage crises pro-actively before they arise, rather than taking retroactive remedial steps to address the crisis.
10										
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1										

2. Please add any comments that you would like the researcher to consider (optional):

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4. Thanks!

My sincere thanks for your participation in this survey: the time and effort from you to complete each round; your input has been extremely valuable in increasing the quality of the results. I will process the results within the next few weeks, after which the outcome of this survey will be available upon request. Kindly contact me if you have any questions, queries or concerns.

Regards

Stephan Sparrius, Contact: +27836430650, email: 31007391@icon.co.za

<< Prev **Done >>**