FACTORS AFFECTING THE SURVIVAL, GROWTH AND SUCCESS OF SMALL, MEDIUM AND MICRO AGRIBUSINESSES IN KWAZULU-NATAL

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DECLARATION

I hereby certify that, unless specifically indicated to the contrary in the text, this dissertation is the result of my own original work, which has not already been accepted in substance for any degree and is not being submitted in candidature for any other degree.

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I hereby certify that the above statement is correct.

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ABSTRACT

The sustained growth of small, medium and micro enterprises (SMMEs) could help to reduce poverty, income inequality and unemployment problems in KwaZulu-Natal (KZN). Public and private sector institutions can identify policies and strategies to increase the survival and growth rates of SMMEs if they have more information about the factors that constrain business performance, and the link between entrepreneurial quality and enterprise success. The owners of 44 agribusiness SMMEs in a stratified random sample of Ithala Development Finance Corporation (Ithala) clients in KZN were, therefore, surveyed during October 2003-February 2004 to identify what they perceive are constraints on business survival and growth, and how entrepreneurial quality affects business success (using loan repayment performance at Ithala as a proxy for success).

Principal Component Analysis of 36 potential constraints ranked by the survey respondents identified eight dimensions of perceived constraints: A lack of access to services; funding constraints at enterprise start-up; a lack of management capacity in the enterprise; access to tender contracts; compliance costs associated with VAT and labour legislation; liquidity stress; a lack of collateral, and a lack of institutional (government and private sector) support. A lack of collateral and access to services seemed to affect the Retailer stratum relatively more, while Speculators considered lack of capital at start-up to be their major constraint. Harvester contractors and Processors seemed to be most affected by compliance costs, while Processors were especially prone to liquidity stress. Possible solutions to ease these constraints include the provision of appropriate infrastructure and training, development of innovative loan products to address cash flow and collateral issues, more transparent tendering processes, and policies to reduce the costs of compliance with legislation.

An empirical logit model showed that strong energizer behaviours (current and planned business expansion and staff training) that reflect entrepreneurial quality, more business experience, and family assistance to become an entrepreneur, promote loan repayment (success), while a lack of access to electricity and training facilities increase the

probability of loan default. This suggests that more focus on the personal characteristics of credit applicants and (again) the development of appropriate infrastructure and training services could help to promote the future success of agribusiness SMMEs in KZN.

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INTRODUCTION

Poverty, inequality and unemployment have been identified as the three most serious constraints to economic development in South Africa (SA) (Parliament of the Republic of South Africa, 1994). The degree of spatial inequality in SA implies that the development challenges faced by the nine provincial governments differ considerably between provinces, and statistics indicate that the KwaZulu-Natal province (KZN) faces disproportionately large development challenges; for example, in 2000, it was the province with the third highest rate of unemployment (39%) in SA of (KZN Department of Economic Development and Tourism, 2000), and 54% of its population survived on an income below the international poverty threshold of US$1 per person, per day, as identified by the World Bank (2000). Rogerson (1999) and a World Bank Task Team (2000) assert that the promotion of small, medium and micro enterprises (SMMEs) is a key area of employment generation, and that a substantial share of new job creation in SA could be provided by agricultural processing and non-agricultural employment in SMMEs. Recent statistics, however, show that most SMMEs in SA are concentrated at the low end of the enterprise size scale, and exist primarily as black survivalist firms with little capacity for sustained survival or growth (Business Referral and Information Network, 2003).

In this context, research that can identify ways to increase the survival and growth rates of agribusiness SMMEs in KZN can contribute to alleviating poverty, income inequality and unemployment by identifying factors that constrain businesses performance. A lack of access to finance has been identified as a major constraint to SMME survival and growth in SA (Rogerson, 1998; Naude, 1998; GEMINI Survey, 2001; Nieuwenhuizen and Kroon, 2003). Guzman (1994) asserts that the entrepreneurial quality of an SMME owner is also a critical factor affecting an SMME's ability to overcome barriers to survival and achieve sustainable growth. This study, therefore, aims firstly to identify what factors agribusiness SMME owners in KZN perceive constrain business survival and growth; and secondly, to analyze whether entrepreneurial quality affects the success of agribusiness SMMEs in KZN. The study is based on a stratified random sample of 44

agribusiness SMME clients who had active loans with the Ithala Development Finance Corporation (Ithala) in KZN between October 2003 and February 2004. Following Guzman and Santos (2001), entrepreneurial quality is a product of personal factors, psychological processes like the capacity to innovate, and motivation, and factors in the entrepreneur's global (external) environment. To the best of the author's knowledge, this is the first local attempt to study the constraints faced by agribusiness SMME owners in KZN, and the link between entrepreneurial quality and agribusiness SMME success.

Identifying the main constraints to agribusiness SMME survival and growth may provide information that financial intermediaries, local and provincial government institutions, and the private sector, can use to develop appropriate policies and strategies that promote the sustained growth of agribusiness SMMEs in KZN. Results from a quantitative model of the relationship between entrepreneurial quality and the likelihood of agribusiness SMME success in KZN may help formal financial institutions to more accurately assess the credit risk posed by such businesses, and to reduce adverse selection problems (borrowers turn out to be a greater risk than believed when granting a loan) and agency costs incurred in structuring, administering and enforcing loan contracts (Barry *et al.*, 1995) when financing SMMEs. This in turn could result in improved access to finance by agribusiness SMMEs in KZN.

Following Harling (1995:22), an agribusiness enterprise is defined in the study as a business 'operating in the food and fibre sector of the economy' or 'having a high degree of interdependence with agricultural production'. In addition, small, medium and micro enterprises are defined in terms of the National Small Business Act (Act 102 of 1996) (1996) in SA as having 50 or less, 100 or less, and five or less full-time equivalent paid employees, respectively. Although such physical measures of size have limited usefulness in comparing different types of businesses (Barry *et al.*, 1995), full information on more appropriate financial measures, such as gross sales, was not readily available for all of the survey respondents. Data for the study were gathered using a survey questionnaire completed by the representative, stratified random sample of Ithala agribusiness SMME clients.

The dissertation is organized as follows: Chapter 1 reviews literature on the economics of SMMEs and entrepreneurship theory. It identifies the potential roles of SMMEs in a market economy, discusses potential constraints to SMME survival and growth, and presents characteristics and constraints associated with agribusiness SMMEs in SA. Theories on the definition of an entrepreneur, the determinants of entrepreneurial quality, and the functions of entrepreneurs are also discussed in Chapter 1. Chapter 2 presents the study research problems and objectives in more detail, and describes the research methodology, focusing on a conceptual model linking entrepreneurial quality and agribusiness SMME success, and the sample survey design, data collection process, and the survey questionnaire. Chapter 3 describes the characteristics of the sample survey respondents and their enterprises, and then discusses the owners' perceptions of constraints to agribusiness SMME survival and growth in KZN using the results of a Principal Component Analysis of these constraints. This chapter also reports results that relate the agribusiness SMME owners' perceptions of constraints on their business survival and growth to their perceptions of potential business opportunities and information available about business opportunities. Chapter 4 reports the results of an empirical logit model of the effect of entrepreneurial quality on agribusiness SMME success in KZN, and chi-square tests of the relationships between components of entrepreneurial quality. A concluding section discusses some policy and management implications of the study results.

CHAPTER 1

LITERATURE REVIEW OF THE ECONOMICS OF SMMEs, AND THEORIES OF ENTREPRENEURSHIP

This chapter examines the potential role of SMMEs in the economy of KZN, and then outlines the dynamic characteristics of SMME growth. The third section discusses some past research on socioeconomic, institutional and firm level constraints to SMME survival and growth. The final section reviews theories of entrepreneurship, focusing on the definition and measures of entrepreneurship in relation to the stage of SMME development.

1.1 The potential role of SMMEs in the economy of KZN

Bannock (2002) identifies three potential roles that SMMEs can play in a market economy; they may develop markets, accumulate capital through trading and develop commercial culture and skills within a region. They may also diversify an economy dominated by agriculture, create jobs and complement larger firms in raising productivity (Liedholm *et al.*, 1994). Successful SMMEs have the potential to stimulate demand for investment or capital goods (Brunetti *et al.*, 1997), and to upgrade human capital when large enterprises in the secondary and tertiary sectors release unskilled labour that SMMEs may employ. An SA study in 2000 shows that people employed in SMMEs are more likely to start their own businesses (World Bank Task Team, 2000). Micro-enterprises may increase the productivity of labour in the economy by engaging previously unemployed, low-skilled labour at little or no opportunity cost, but their productivity has a relatively low ceiling and they typically operate in the informal sector; they may achieve poverty alleviation at most but not necessarily expansion of the middle class (Liedholm *et al.*, 1994). It is, therefore, important to distinguish between an increase in micro-enterprise 'start-ups' and the growth of existing SMMEs or the graduation of micro-enterprises into small and medium size enterprises.

1.2 Characteristics of SMME sector growth

Two components of SMME sector growth should be examined to identify its changes: Net firm *creation* reflects the offsetting elements or firm start-ups and closures, while net firm *expansion* incorporates the expansion and contraction of existing firms (Liedholm *et al.*, 1994). The distinction between net firm creation and expansion provides clues to the nature of jobs being created by these firms and the forces driving the process. When growth in aggregate demand results in more productive rural enterprises, employment growth signals increased employment in 'expansion jobs', yet when growth in agricultural returns is low, or the population growth rate is relatively high, employment growth can signal that rural enterprises are taking up excess workers who cannot readily find formal employment. Jobs from net firm expansion are more likely to reflect demand-pull forces, while start-up jobs reflect supply-push forces. Driver *et al.* (2001) estimate that only a quarter of new rural jobs in Africa result from the net expansion of firms. Jobs resulting from demand-pull forces generally result from a perceived business opportunity, while necessity driven (survivalist) entrepreneurship results from supply-push forces. Net firm expansion, therefore, is positively associated with an increase in a country's rate of economic growth.

A lack of investment and working capital has been identified by SMMEs in SA as a major constraint on firm survival and growth (Rogerson, 1998). Escalante (1996) reports that business failures are more prevalent among firms in the early stage of business development, and often result from difficulties that SMMEs have in accessing finance. These may result from entrepreneurs' difficulty in understanding and completing the loan application procedure, or from financial institutions being reluctant to finance SMMEs due to the relatively high costs of administering relatively small loans and relatively higher risk perceived to be associated with financing these types of operations (Bannock, 2002; Rogerson, 1998; Naude, 1998). The GEMINI Survey (2001) found that access to formal lenders in SA is difficult until a firm has more than five employees and has been in operation for three to five years. Inadequate property rights and a lack of alternative collateral may compound this problem in developing economies (Bannock, 2002).

1.3 Past research on constraints on SMME survival and early growth

Guzman and Santos (2001) developed a conceptual model showing that socioeconomic and institutional factors, such as macroeconomic policies, in an entrepreneur's external environment, and personal characteristics of the entrepreneur, directly affect enterprise success and economic development. Extending work by Shane (1994a), they propose that these socioeconomic and institutional factors also influence the types of, and information about, such opportunities that are available to the entrepreneur. According to Mintzberg (1989), barriers to SMME survival and growth are likely to occur in all four functional areas of business operation - management, marketing, operations and finance – and may be directly related to the size and start-up conditions of an SMME. The next three sections review potential socioeconomic, institutional and firm-level constraints to SMME survival and growth that have been identified in past local and international research.

1.3.1 Socioeconomic constraints

Constraints such as a lack of public infrastructure services and of access to profitable markets, may result from an SMME's spatial distance from urban areas. Rogerson (1998) found that the availability of infrastructure services is often directly linked to the location of business. The SMMEs located closer to urban centers often have better access to services compared to those in poorer rural areas (Naude, 1998; Berry *et al.*, 2002; Klitgaard and Fitschen, 1997; Matungul *et al.*, 2001). Necessary services for business survival and growth include access to water, electricity, serviceable roads, telecommunications, postal services and protection from crime (Rogerson, 1998; Rogerson, 1999).

Lack of access to markets in a SA and KZN context is inseparable from, and inexplicable without reference to, the history of displaced communities that have been separated from mainstream markets (Berry *et al.*, 2002). These rural communities have been spatially isolated in areas that typically have a sparse resource base, limited cash circulation, and

negligible information about product opportunities outside of survivalist trading, services or production activities. Consequently, rural entrepreneurs often compete within a small, location specific market for relatively low-income clients, where fewer prospective customers can afford their product. Larger, more developed markets may be situated at prohibitive distances from the entrepreneur's home. Lack of own transport markedly increases the transaction costs for enterprises based in remote rural areas or at large distances from main roads (Rogerson, 1998). Moser (1997) found that rural SMMEs in SA, as a result of their greater distance from developed markets, place a high value on social capital or contact networks. A lack, or absence, of such networks thus potentially places a major constraint on agribusiness SMME survival and growth in rural areas (Fenwick and Lyne, 1999).

1.3.2 Institutional constraints

Institutional constraints may arise directly or indirectly from a perceived lack of either government or private sector support for SMMEs.

1.3.2.1 Lack of government support for SMMEs

Entrepreneurs may interpret the administrative and financial burdens placed on their enterprise by having to comply with a range of government legislated procedures and laws as a lack of government support for agribusiness SMMEs. Lack of investment, or start-up, capital and difficulty in accessing investment capital have been identified by SMME owners in SA as a major constraint to their business survival and growth. Inadequate property rights and an absence of title deeds in many developing countries results in a lack of collateral necessary to access investment capital, and creates a lack of incentive to make fixed improvements to land, which compounds the problem of low collateral (Bannock, 2002).

Smaller business owners often perceive that SA labour legislation is overly complex and favourably biased toward businesses with less labour relative to capital employed.

Bannock (2002) cites the success of labour brokers in SA as evidence of an overly complex labour regulatory system. Specific aspects of SA labour legislation identified as imposing either financial or administrative constraints on SMME operations include paying a skills levy, and managing employees' Unemployment Insurance Fund (UIF) payments (Rogerson, 1998). Many owners of SMMEs also perceive that government-legislated Value Added Tax (VAT) imposes a disproportionate burden on smaller businesses in SA. This burden is attributed to the complexity of VAT registration and administration, and to cash flow stress - interest is lost prior to receipt of VAT refunds, and VAT is paid to the Receiver at the point of invoice rather than at the point of receipt (Bannock, 2002).

Some harvester contractors in KZN have cited the Forestry Act as a constraint on their business performance. Sugarcane harvest contractors, for example, report that legislation stipulating 'no controlled burning during weekends' hampers their productivity, as they cannot burn sugar cane tops - which is necessary prior to harvesting - during two days of the week (Pringle, 2003). There is also dissatisfaction with the SA government's procurement and tender policies, access to government tenders and the transparency with which government tenders are awarded. Some SMME owners suggest that government could provide support for the SMME sector by awarding more tenders to smaller businesses and disseminating more information to this sector about upcoming tenders (Naude, 1998). At firm level, however, a lack of skills or training may reduce an entrepreneur's understanding of, and ability to complete, the application process for such tenders (Rogerson, 1999). Fuller (2003) believes that access to government-supplied skills training is a key factor affecting the success or failure of SMMEs in SA. Increased skills training may also improve an entrepreneur's ability to overcome many of the constraints discussed previously in this section.

1.3.2.2 Lack of private sector support for SMMEs

Once a business has started up, access to expansion or working capital may be restricted by an entrepreneur's difficulties in understanding private sector loan financing schemes, weak organizational arrangements, overly complex application procedures, and the reluctance of private lending institutions' to finance SMMEs (Naude, 1998). Access to markets may also be a constraint if appropriate intermediary and private institutions do not interface with SMMEs to link entrepreneurs with potential buyers and suppliers of inputs. Subcontracting linkages between large enterprises and emerging SMMEs are an important element in facilitating SMME sector growth (Naude, 1998). Private intermediaries and parastatal organizations, like development financiers, can provide SMME support through training activities, business counseling, advice on contract tenders, and help in securing loans (Mead, 1998).

1.3.3 Firm level barriers

An SMME owner's lack of knowledge or management skills, or inability to multi-task, rather than competing products, may cause business failure (El Namaki, 1990; Hoad and Rosko, 1964). Young, small firms may also face severe under-capitilisation and liquidity problems. Knight (1981) states that most enterprises are started with a small equity base that only grows when the firm generates retained earnings from operations. Owners and managers frequently lack the ability to present a convincing business plan to lending institutions, and lending institutions are often biased against financing small businesses. The issue of loan collateral is important for small businesses, as they seldom own sufficient fixed assets to qualify for bank loans. Cash flow problems can be exaggerated when entrepreneurs invest heavily in start-up equipment (Bhide, 2000).

Escalante (1996) cites low quality, and high turnover, of labour as common obstacles encountered by newly established firms. Smaller firms may not be able to afford the wage rates necessary to attract highly qualified or skilled labour, and employees rarely remain in small firms as they accept more lucrative employment opportunities from

larger, more established firms. The physical facilities and business premises used by many small businesses are also often inadequate to provide any long-run competitive threat to larger established enterprises, and many small businesses can seldom afford sufficient technology at start-up (Karlson, 1994).

The biggest threat to new SMMEs in the early part of their business operations is often the well-entrenched, secure position of strong competitors who have already captured a portion of the existing market (Porter, 1979). Combined with the firm level barriers described above, this makes them particularly vulnerable to rivalry from competing sellers, the bargaining power of buyers and input suppliers, the threat of new entrants to their product markets, and the threat from substitute products in other industries (Porter, 1980). A comprehensive review of 98 articles on factors responsible for the success of SMMEs around the world by Nieuwenhuizen and Kroon (2003) identifies business knowledge, market orientation, financial knowledge and management, and creativity and innovation, as key firm-level factors affecting successful business performance.

The above review shows that the potential constraints to survival and growth faced by SMMEs may result from one, or a combination of, factors such as lack of access to public infrastructure, a perceived lack of public sector support, restrictive government policies, the organizational nature of an emerging SMME, an entrepreneur's lack of management and/or innovation skills, or a perceived lack of private sector intermediary support. There may also be inter-industry differences between agribusiness and non-agribusiness SMMEs. A higher incidence of one-person agribusiness SMME start-ups may result from agribusiness entrepreneurs having more business and management skill deficiencies, as non-agribusiness firm owners have often acquired training and skills from their previous employment (Barry and Boehlje, 1986). Escalante (1996) found that competitors in the agribusiness sector are usually other relatively small businesses, while the non-agribusiness group competed mostly against the larger players in various industries. This is consistent with the view that the agricultural sector has traditionally been characterized by largely non-corporate forms of business organization (Barry and Boehlje, 1986).

Niche marketing is also more dominant in agribusiness industries as these firms are able to develop market niches that are less profitable for their larger competitors. Customized products may be too costly in terms of resources and time for larger corporations. Product diversification is most frequently adopted by agribusiness firms in order to compete with the diversified operations of their equally flexible small business competitors. Diversification also helps to mitigate the effects of the cyclical nature of agribusiness activities on the firm's cash-flow position. The additional cost of product differentiation or niche market creation inevitably raises the cost of products or services. Successful product differentiation for a niche market requires that the premium earned for meeting the niche customers' needs exceeds the cost of differentiation (Thompson and Strickland, 1998).

Quantitative research in SA on the constraints to SMME survival and growth is limited, and while the quality of the entrepreneur seems to affect SMME success, neither entrepreneurial quality nor its link to success has been researched in an SA agribusiness SMME context. The next section presents literature on the theory of entrepreneurship as background to developing an empirical model of how entrepreneurial quality affects the success of agribusiness SMMEs in KZN.

1.4 Theories of entrepreneurship

The literature on entrepreneurship is fragmented and at times controversial. Many people who perceive themselves as entrepreneurs may not easily fit with past or current definitions of the concept. The topic of entrepreneurship has been discussed by economists, sociologists, psychologists, and political scientists. This section shows how researchers have attempted to define the concept of entrepreneurship and to identify characteristics associated with successful entrepreneurs.

1.4.1 Definitions of entrepreneurship

The term *"entrepreneur"* that most people recognize is one meaning someone who organizes and assumes the risk of a business in return for profits. According to economist Richard Cantillon's original formulation, the entrepreneur is a specialist in taking on risk. The term came into much wider use after John Stuart Mill popularized it in his 1848 Principles of Political Economy (Casson, 1982). One of the reasons for the past lack of economic theory of the entrepreneur lies in the extreme assumptions about access to information implicit in the neoclassical school of economic thought. Simple neoclassical models assume that everyone has free access to all the information that they require for taking decisions. This assumption reduces decision-making to the mechanical application of mathematical rules for optimization. It trivializes decision-making, and makes it impossible to analyze the role of entrepreneurs in taking decisions of a particular kind. Thus, the basic objection to the neoclassical view of the entrepreneur is that it depersonalizes the market process; transactors are faceless economic agents and the only personal characteristics significant in this paradigm are their tastes for consumer goods and their utility maximizing behaviour. New economic theories on the entrepreneur, acknowledge that individuals differ not only in their tastes, but also in their access to information. Individuals with similar tastes, acting under similar circumstances but with different information, may well make different decisions (Casson, 1982).

1.4.2 Alternative theories of the entrepreneur

More recent economic theories on the entrepreneur include the X-efficiency theory of Liebenstein, the market process theory of Hayek, the risk bearing theory of Knight and Schumpeter's innovation theory. Liebenstein's X-efficiency theory has been applied to analyze the role of the entrepreneur. X-efficiency is the degree of inefficiency in the use of a firm's resources. It arises either because a firm's resources are used in the wrong way or because they are not used at all. This theory assumes that there are 'psychological costs' to being fully rational and that these limit the extent to which individuals plan to exploit all the opportunities available, and to satisfy all the constraints to which they are

subject. The psychological costs are the anticipation of disequilibrium due to the discrepancy between *ex ante* and *ex post* plans resulting from approximate planning to constraints. Liebenstein regards entrepreneurship as a creative response to X-efficiency (Hebert and Link, 1982).

Hayek's main contribution to the theory of the entrepreneur is to point out that the absence of entrepreneurs in neoclassical economics is associated with the assumption of market equilibrium. Hayek states that the equilibrium postulate is equivalent to a postulate of full information in the sense that no further information is required in order to modify one's decisions. Knight (1942) identified the entrepreneur as a recipient of pure profit, where profit is the residual income available after all contractual payments have been deducted from the revenue of the enterprise - it is the reward to the entrepreneur for bearing the costs of uncertainty. Knight identifies uncertainty with a situation where the probabilities of alternative outcomes cannot be determined either by *a priori* reasoning or statistical inference.

Schumpeter (1965) is very explicit about the economic function of the entrepreneur. The entrepreneur is the prime mover in economic development and his or her function is to innovate, or to 'carry out new combinations'. Anyone who performs this function is an entrepreneur, and Schumpeter is adamant that the entrepreneur is not necessarily a risk-bearer. Risk bearing is the function of the capitalist who lends his funds to the entrepreneur (Herbert and Link, 1982).

The Austrian school presents the entrepreneur as a player in the dynamic process of economic change. The entrepreneur is alert to opportunities that go unnoticed by other players in the rest of the economy. By venturing into these business potentials, he/she improves the allocation of scarce resources in the economy (Brock and Evans, 1986). Emphasis is placed on the market as a *process* in which prices provide signals to producers and consumers. Entrepreneurial success then hinges on how well the entrepreneur can assess present and future market conditions (Pasour, 1990)

1.4.3 The entrepreneurial process

Cunningham and Lischeron (1991) describe six schools of thought that are useful for defining and understanding the entrepreneurial process. The schools are categorized according to their interest in studying personal characteristics, opportunities, management or the need for adapting an existing venture. Cunningham and Lischeron assert that different entrepreneurial situations of start-up, growth and maturity of a venture may require different skills or entrepreneurial behaviours. Table 1 presents the definitions and criteria of these six entrepreneurial schools. It gives measurable variables (in the form of personal characteristics) associated with each school, and indicates which stages of business development each school is particularly suited to.

Table 1: Summary of definitions and criteria of six entrepreneurial schools of thought

ntrepreneurial Model	Definition	Measures	Stage of business development
;reat Person' school	Extraordinary achiever	Personal principles Personal histories Experiences	Start-up
;ychological Characteristics :hool	Founder Control over the means of production	Locus of control Tolerance of ambiguity Need for achievement	Start-up
lassical School	People who innovate, bearing risk and uncertainty	Decision making Alert to opportunities Creativity	Start-up and early growth
lanagement School	Create value, manage risks, communicative skills	Expertise Technical knowledge Technical plans	Early growth and maturity
eadership School	Promotion and protection of values	Attitudes, style, management of people	Early growth and maturity
ıtrapreneurship School	Those who team up to promote innovation	Decision making	Maturity and change

Source: Adapted from Cunningham and Lischeron (1991).

1.4.3.1 The 'Great Person' school of entrepreneurship

This school proposes that individuals come into the world carrying the genes or inborn capacity to perform entrepreneurial activities. These individuals can present ideas,

concepts and beliefs that others find interesting, intriguing or stimulating. They are endowed with traits that differentiate them from others and an inborn faculty for intuition is characteristic. Iaccoca (1984), cited by Cunningham and Lischeron (1991), described this as 'a feel for the problem and a decisive ability to make decisions when others are still looking for facts'. These entrepreneurs exhibit high levels of vigour, persistence and self-esteem, and have a strong drive for independence and success. Traits associated with them are typically vision and single-mindedness, perseverance, social skills, intelligence, judgment and decisiveness. Yukl (1991) argues that the successful entrepreneur cannot fully be described by specific traits and that situation elements often influence who will be a successful leader.

1.4.3.2 The psychological characteristics school of entrepreneurship

This school proposes that the primary determinants of behaviour are a person's needs, drives, attitudes, beliefs and values. People behave in accordance with their values more often than not (despite variations in situations). This school focuses on personality factors and three personality characteristics have received considerable attention:

- Personal value system

This school believes that entrepreneurs cannot be developed in classroom situations and that entrepreneurial ability relates to a person's style of behaviour that develops over time, primarily through relationships with parents, teachers, communities and culture.

- Risk-taking propensity

Cunningham and Lischeron cite Mill (1984) who identified risk bearing as the key factor distinguishing an entrepreneur from a manager. The risks involved relate not only to financial success but also to career opportunities, family relations, and psychic well-being. It has been proposed that entrepreneurs prefer to take moderate risks in situations where they have some degree of control or skill in realizing a profit. Cantillon described

the entrepreneur as a rational decision maker who assumed the risk and provided the management of the firm (Cunningham and Lischeron, 1991).

- The need for achievement

The individual who has learned the value of industriousness is most likely to have a need to work hard and achieve something meaningful (Cunningham and Lischeron, 1991). The need for achievement, however, if isolated from other variables, is a weak predictor of an individual's tendency to start a business.

1.4.3.3 The classical school of entrepreneurship

Innovation, creativity and discovery are key factors underlying the classical body of thought and research. The classical entrepreneur is associated with fervent individualism bordering on non-conformity. Entrepreneurship is viewed as the process of creating an opportunity. In this school, the critical aspect of entrepreneurship appears to be the process of doing, rather than owning a venture or business. Shumpeter (1950) supports this definition by arguing that the key factor of entrepreneurship lies in the innovativeness of the individual and may not involve ownership at all.

1.4.3.4 The management school of entrepreneurship

John Stuart Mill noted that in addition to risk-taking, entrepreneurs perform functions of supervision, control and providing direction to a firm. The management school deals with the technical aspects of entrepreneurship and seems to be based on the belief that entrepreneurship can be taught (Cunningham and Lischeron, 1991). Entrepreneurial functions in this school of thought often relate to start up: strategizing, developing a business plan, analyzing opportunities, acquiring resources and managing development and growth. Entrepreneurship is thus defined as a series of learned activities, which focus on the central functions of managing a firm.

1.4.3.5 The leadership school of entrepreneurship

An entrepreneur is often a leader who relies on people to accomplish purposes and objectives. The leadership school of entrepreneurship is a non-technical side of the management school that suggests that entrepreneurs need to be skilled in appealing to others to 'join the cause'. Central to this school of thought is the ability of the entrepreneur to define a vision, attract people to the vision and transform it into reality.

1.4.3.6 The intrapreneurship school of entrepreneurship

The intrapreneurship school evolved in response to a perceived lack of innovativeness and competitiveness in many organizations. Intrapreneurs, to the limited extent that they possess discretionary freedom of action, can act as entrepreneurs and implement their ideas without themselves becoming the owners of businesses. Large corporations often strive to create intrapreneurs or an entrepreneurial climate, but success in these scenarios may be rare (Cunningham and Lischeron, 1991).

1.4.4 The Chell entrepreneurial model

Chell (1986) suggests that a general entrepreneurial model is needed; one that considers appropriate personality variables and recognizes the variability in behaviour due to differences in persons and situations. Her model is a combination of Mischel's social learning person model and Harres' situational model. Chell describes Mischel's theory that each person has a set of cognitive social learning variables that are a result of the individual's history, that in turn regulate how new experiences affect him/her. These variables include competencies, strategies and personal constructs, expectations, subjective values and self-regulatory systems and plans. Harres' situational model highlights the significance of the meaning of a situation to the individual and suggests that an entrepreneur learns to handle managerial situations by 'learning the rules which govern them'. Chell combines the above views with the resulting paradigm overleaf:

"Both internal and external environments of the business create situations that the entrepreneur must deal with or ignore. Harre states that situations are rule-governed and prescribe the 'acting out' of certain roles. The entrepreneur, with his own set of personal variables in each situation, may or may not have the appropriate repertoire of behaviours to cope with and deal with the situations he or she encounters" (Chell, 1986).

The Chell model suggests that business growth is restricted when an entrepreneur's capabilities do not match the skills attached to the demands of business growth. Thus entrepreneurs need to develop the necessary skills as businesses grow.

1.4.5 Guzman's Booster function of entrepreneurship

Guzman (1994) identifies three functional spheres of an entrepreneur shown in Figure 1 overleaf. The Capitalist or Financial function is carried out by the entrepreneur contributing with capital and confers the entrepreneur with business ownership or part thereof. The Managerial function is carried out by entrepreneurs when they direct, organize, negotiate, plan or control the operations in their company. The third 'Booster' function was identified by Schumpeter (1965) and Knight (1942) when trying to explain the dynamics of economic activity. The 'Booster Sphere' refers to the entrepreneur performing fundamental initiatives so that the business can start operating, survive and expand (for example, deciding to undertake a new project or to enter a new market). This function has a strong dynamic character and is more difficult to formalize, since it depends on the psychological and sociological qualities of the entrepreneur. The financial and managerial functions are ultimately seen as subordinate to the Booster function because they have a more routine, technical character.

The essence of the entrepreneurial function thus lies in the Booster sphere (Guzman and Santos, 2001). Guzman (1994) further divides the Booster sphere into a 'Promoter' sub-function, and an 'Energizer' sub-function. The Promoter sub-function is materialized when an entrepreneur creates a new business; it describes the task that *potential*

entrepreneurs perform. The Energizer sub-function is materialized along the lifespan of the business; it reflects the fundamental initiatives that *relatively more established entrepreneurs* perform daily to increase the likelihood of business survival or growth. The Energizer sub-function, therefore, is the basis of *entrepreneurial quality*, which Guzman and Santos (2001:213) define as 'the initiatives and behaviours of entrepreneurs to energize their businesses, which depend on their own personal qualities and the factors that influence them'.

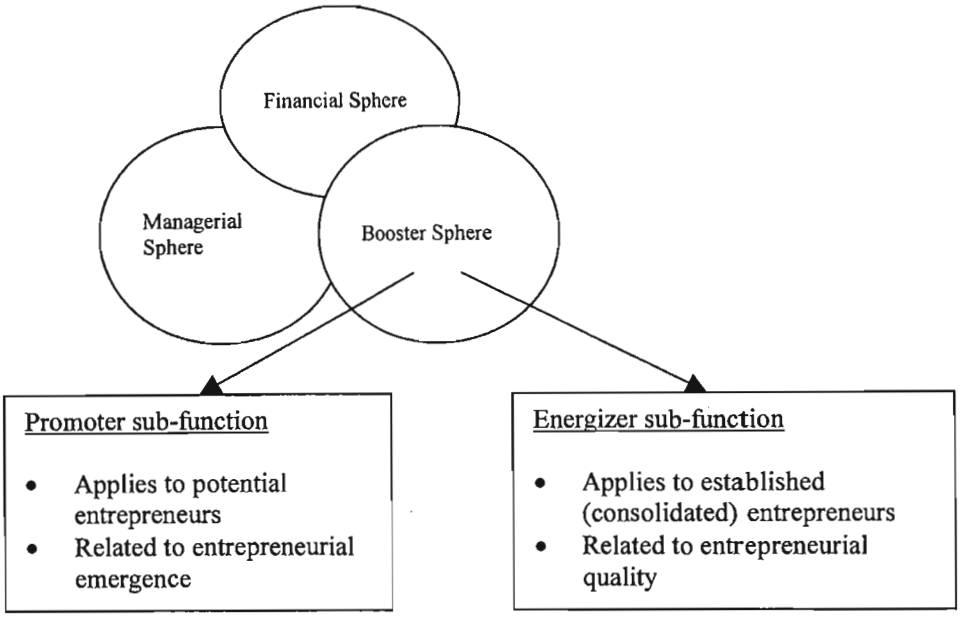

Figure 1: The functional spheres of an entrepreneur
Source: Guzman (1994)

Both sub-functions, however, contribute to forming the 'entrepreneurial culture' of a society, which reflects a population's values, beliefs and attitudes with regard to entrepreneurial activity (Gibb, 1993). The sub-functions can hence directly influence the path of economic development of any region. Entrepreneurial quality is thus considered an essential resource that is part of a region's economy and is capable of contributing to the region's economic development. The Guzman and Santos model of entrepreneurial

quality is discussed further in Chapter 2 when the conceptual model linking entrepreneurial quality and SMME business success is presented. Chapter 2 first identifies the research problems that were studied and the research objectives in more detail, and then describes the sample survey design and questionnaire.

CHAPTER TWO

RESEARCH PROBLEMS, OBJECTIVES AND METHODOLOGY

This chapter first identifies the research problems that were studied, and then states the research objectives. It then discusses the four components of the Guzman and Santos (2001) model of entrepreneurial quality and develops a model linking entrepreneurial quality and SMME success. Finally, the chapter explains the sample survey design, study data sources and the rationale for the questions included in the survey questionnaire.

2.1 The study research problems

2.1.1 The growth and survival of SMMEs

Figure 2 shows Burns' business life cycle model (cited by Escalante, 1996) that describes five stages in the development of a typical small business. During Stage I, the firm introduces its products and encounters consumer ignorance and resistance and so experiences low sales in terms of volume and growth, and profits are low or negative. During Stage II, the successful firm's products gain acceptance and the firm enjoys higher sales and profits, and rapid growth. At Stage III, rapid growth slows as new

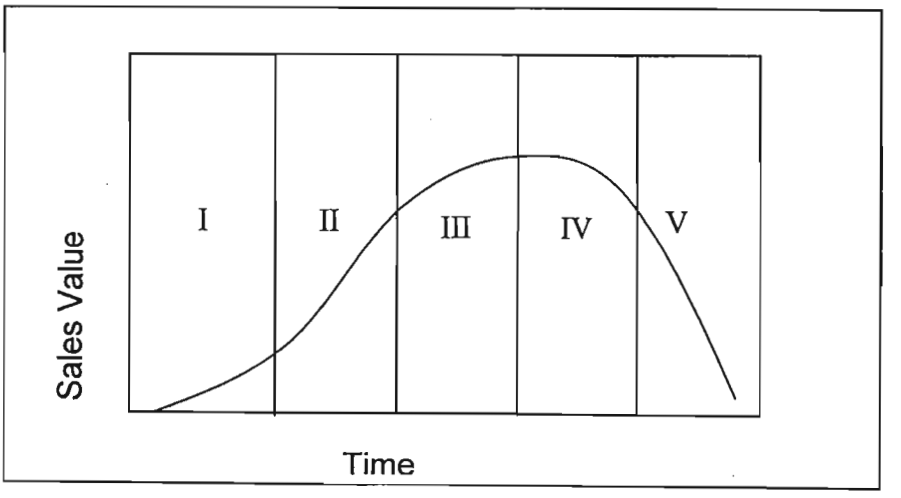

Figure 2: Burns' business life cycle curve

Source: Adapted from Escalante (1996).

entrants to the market compete with the firm. The firm reaches maturity at Stage IV when the market becomes saturated; profits and sales growth remain static. In the final stage, sales levels and profits decline, and the firm's management must decide how to sustain business viability. Very few small start-up firms are expected to survive the obstacles in Stage I and grow onwards to the later stages. It is difficult to quantify the factors that determine whether a business is able to overcome obstacles to survival and early growth, or how firms that move to the later stages of business development differ from the firms that are not able to. These factors include the quality of the entrepreneur and the particular socioeconomic, institutional and firm level constraints that SMMEs within a geo-political region face (Wagner and Sternberg, 2004).

2.1.2 The relationship between entrepreneurial quality and SMME success

Different factors determine the quality of an entrepreneur. The qualitative models reviewed in Chapter 1 identify both the entrepreneur's psychological processes and the environmental factors of the entrepreneur's personal and global context. Other models of entrepreneurial behaviour identify the entrepreneur's psychological processes, and personal and external factors that explain entrepreneurial *emergence* that derives from the *Promoter* sub-function of the Booster sphere (Chell, 1986; Cunningham and Lischeron, 1991; Yukl, 1991), but not the *quality* of the entrepreneur that derives from the *Energizer* sub-function. Entrepreneurial emergence is projected onto potential entrepreneurs and relates to the likelihood of a person initiating a business, while entrepreneurial quality is projected onto existing (consolidated) entrepreneurs and refers to the entrepreneur's potential to energize and improve their business (Guzman and Santos, 2001).

The discussion in sections 2.1.1 and 2.1.2 above indicates that firms face major constraints to survival and expansion during the early stages of business development and that the quality of the entrepreneur (derived from the Energizer sub-function of the Booster sphere) has a positive effect on the likelihood that a firm will overcome these early barriers to survival and growth. It is unclear, however, which constraints external to the entrepreneur *most affect* agribusiness SMMEs in KwaZulu-Natal. There is also a

lack of information on how to quantify the role of entrepreneurial quality in determining an SMME's ability to overcome these constraints to achieve long-term business success. The next section discusses the study research objectives in this context.

2.2 The study research objectives

Entrepreneurial quality is central to small business success as it determines the strategic responses to barriers to the survival and early growth of the business. It is evident that a robust model of the agribusiness SMME's survival path is lacking in the SA literature, as are quantitative methods of assessing entrepreneurial quality and how it impacts on the survival and growth of agribusiness SMMEs in KwaZulu-Natal. The first aim of the study, therefore, is to group potential socio-economic, institutional and firm-level constraints on the survival and growth of agribusiness SMMEs (some identified by past research and presented in Chapter 1) in KZN into fewer dimensions using Principal Component Analysis (PCA) (Manley, 1986).

The second aim is to estimate a logit model to quantify the relationship between the four components of entrepreneurial quality and the probability of entrepreneurial success or failure, using loan repayment status as a proxy for agribusiness SMME success, where 'success' implies that initial barriers to enterprise survival and growth have been overcome. The dichotomous dependent variable LOAN (no default on loan repayments during loan term = 1, defaulted on loan repayments during loan term = 0) will be partly explained by the four components of entrepreneurial quality in the Guzman and Santos (2001) model. These four components are shown in Figure 3 overleaf and discussed in the next section to show their link to business success

2.3 The four components of the Guzman and Santos model of entrepreneurial quality

The first component in Figure 3 - 'the preference for working as self-employed' - underlies the promoter sub-function, and is influenced by specific psychological features of entrepreneurs, such as the desire for independence, a resistance to authority, and an

aversion to the hierarchical structures of many organizations. This component is thus a *necessary but not sufficient* condition to be a quality entrepreneur; it is linked with the exponents of the Energizer sub-function. The second component - 'the exponents of entrepreneurial quality' - includes the nature of an entrepreneur's motivation, and the execution of certain 'energizer' behaviours. Models of entrepreneurial intentions (Herron and Robinson, 1993; Krueger and Casrud, 1993) identify the motivation to become an entrepreneur as a key element driving the Booster function. This motivation may be either intrinsic or extrinsic. Intrinsic motivation results from the pleasure associated with carrying out a certain activity, and reflects an individual's desire to fulfill his/her aims in life, such as wealth, career satisfaction or prestige. Entrepreneurs driven by intrinsic motivation have higher potential to carry out the Energizer sub-function (Guzman, 1994).

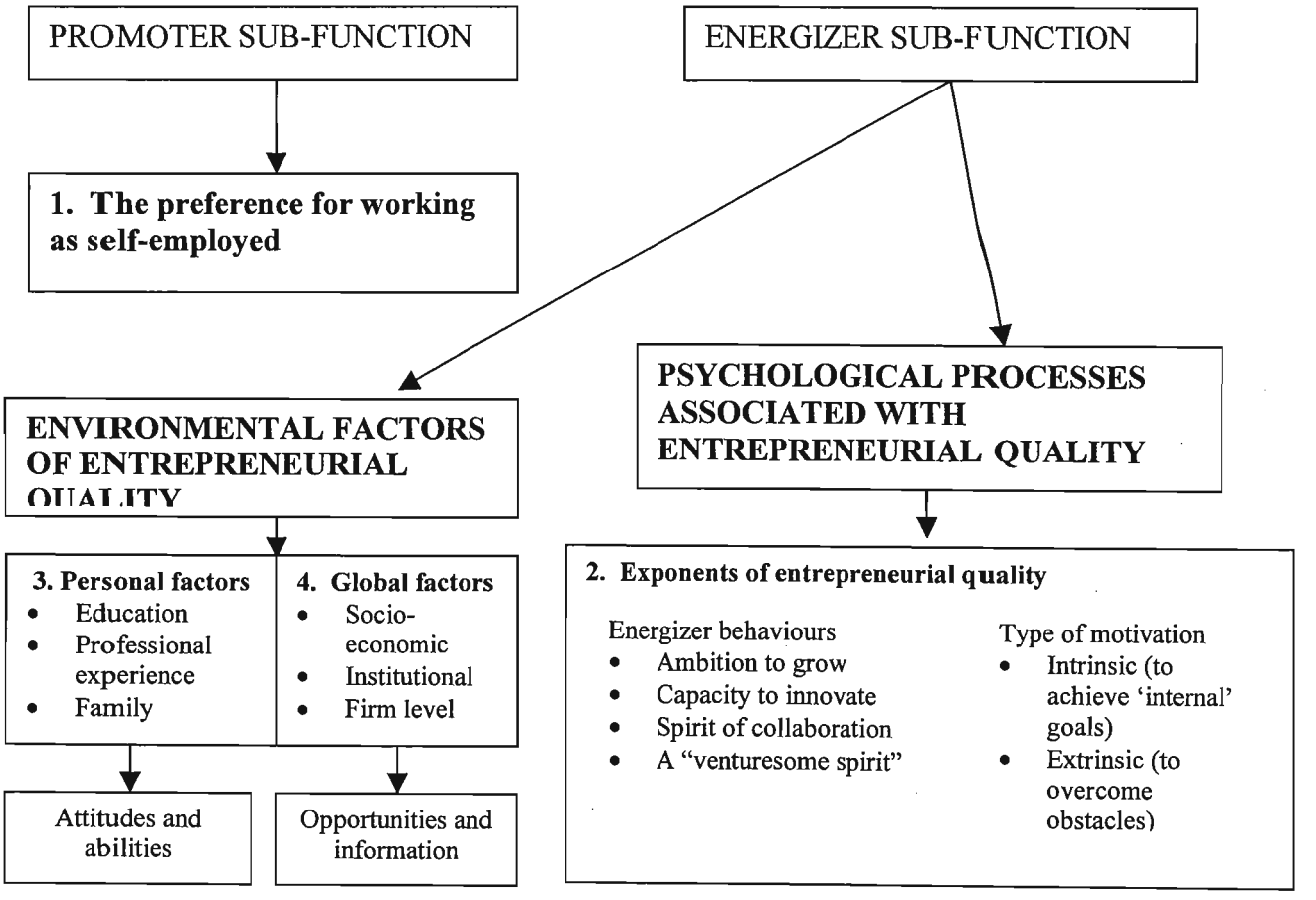

Figure 3: The four components of entrepreneurial quality

Source: Adapted from Guzman and Santos (2001)

Extrinsic motivation results from the desire to overcome an obstacle such as a perceived lack of wealth or prestige and has a stronger relationship with material factors such as avoiding unemployment, or satisfying material needs. Extrinsically motivated entrepreneurs usually look for tasks that are easier to carry out, reach a lower level of conceptual learning, require little creativity, maintain their behaviour for only a short time after reaching their goal and are usually more inclined to negative emotions (Cordoba and Caracuel, 1996, cited by Guzman and Santos, 2001). Motivation has an influence on the actions of the entrepreneur, how the Booster function is developed and consequently on the quality of the entrepreneur; intrinsic motivation is thought to result in greater entrepreneurial quality.

Chell's (1986) 'trait approach' suggests that entrepreneurs develop some behaviours in the exercise of the Energizer sub-function that are the materialization of psychological features considered to be essential in 'good' entrepreneurs. They include the ambition or capacity to grow (McClelland, 1961, cited by Guzman, 1994); the capacity to innovate (Schumpeter, 1965); collaborating with other businesses and individuals in order to achieve a higher level of enterprise growth; and other behaviours such as planning, budgeting, and training employees, that derive from a 'venturesome spirit' which should imbue any decision the entrepreneur makes to ensure business survival and growth. Although these other behaviours have important managerial content, they are better dealt with as energizer tasks, since they imply a dynamic, not routine, behaviour.

The third component – 'factors of the personal environment of the entrepreneur' – most directly affects the exponents of the Energizer sub-function. These personal factors interact with one another to influence entrepreneurial attitudes and abilities, which, in turn, affect and condition the development of motivations (Herron and Robinson, 1993; Krueger and Casrud, 1993). Abilities and attitudes associated with entrepreneurial quality include the capacity to identify new products and opportunities, to know how to evaluate business opportunities and to think critically, persuasive communication and/or negotiation skills, and problem solving. Personal factors include the extent of the entrepreneur's formal education; professional experience in the sector he/she operates in

and the influence of the entrepreneur's family. Education is thought to increase intrinsic motivation and energizer behaviours (Guzman and Santos, 2001), and the more enterprise education an individual receives, the greater the possibility of entrepreneurial success (Gibb, 1993). An entrepreneur's professional experience is an essential means of acquiring abilities and attitudes, reinforcing motivations and improving energizer capacity. An increased professional experience improves the quality of an entrepreneur. According to Role Model theory (Scherer *et al.*, 1991), parents influence their children when they opt for an entrepreneurial career. The role of the family may have a motivational and material influence on entrepreneurial quality. This positive influence may derive from having been educated in an environment where entrepreneurial culture is highly considered, or from the supply of economic resources, labour or personal contacts by an entrepreneur's family.

The fourth component – 'factors of the global environment of the entrepreneur' – is based on sociological-economic models, cultural models, and models of the infrastructure of the economic environment (Shane, 1994b, Wilken, 1979, and Van den Ven, 1989, as cited by Guzman and Santos, 2001). These external factors directly influence the preference for working as self-employed, the type and strength of entrepreneurial motivation, and the energizer behaviours, thus creating a favourable environment for entrepreneurial opportunities and information. Unlike personal factors, these factors impinge on all entrepreneurs in a region regardless of their education, experience or family support. Guzman and Santos (2001) group external factors into three categories: productive opportunities, socioeconomic factors and institutional factors. The link between the four components of entrepreneurial quality, agribusiness SMME success, and economic development in KZN is completed in Figure 4 overleaf.

Personal and external factors affect both the preference for working as self-employed and the exponents of entrepreneurial quality. Additional relationships of interdependence include the effect of enterprise success or failure, derived from the behaviour of an entrepreneur, on the economic development of KZN. The impact of entrepreneurial success or failure on the personal factors implies that success or failure would create a

new situation that could result in a higher education, more experience, or different family support. The impact of a specific level of economic development on the global factors would cause changes in the quality and quantity of productive opportunities, socio-cultural aspects of a population and changes in the mode of operation of the institutions involved in the support of entrepreneurial initiatives.

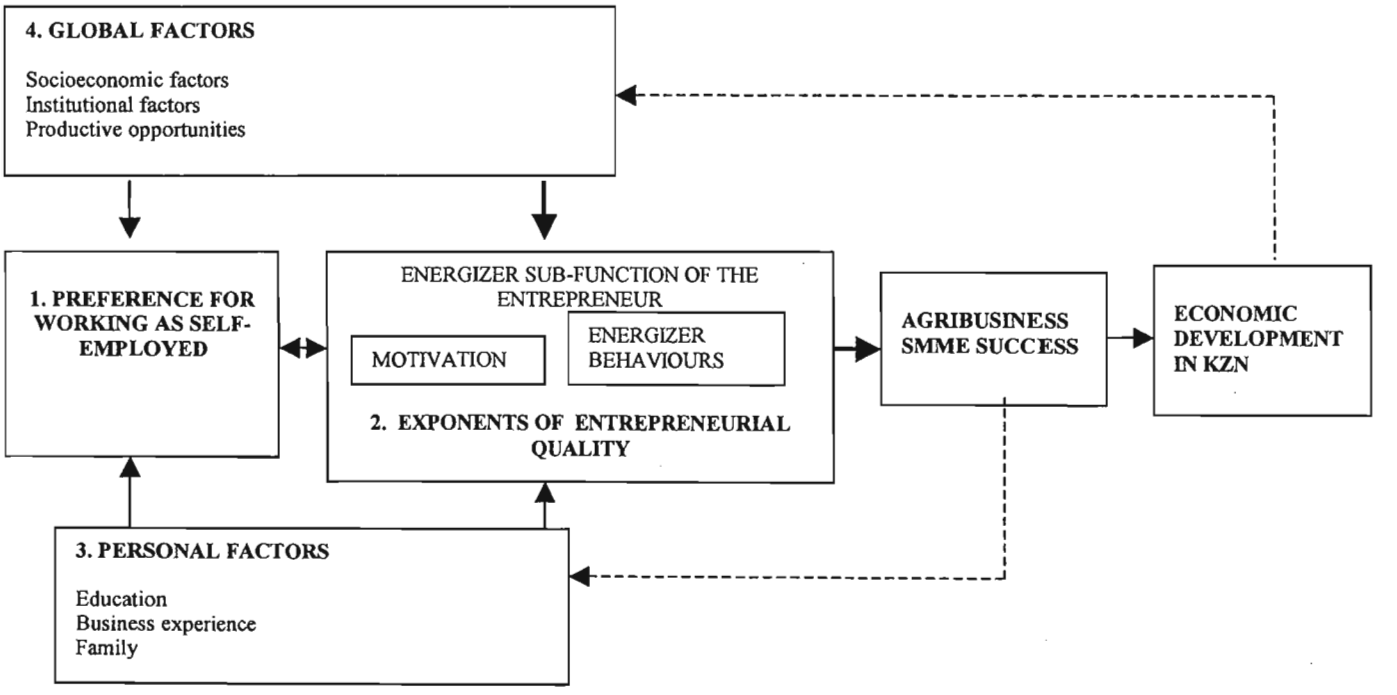

Figure 4: Conceptual model linking the four components of entrepreneurial quality to agribusiness SMME success in KwaZulu-Natal

Source: Adapted from Guzman and Santos (2001)

An empirical logit model of the relationship between the four components of entrepreneurial quality in Figure 4 and agribusiness SMME success in KZN (using loan repayment performance as a proxy for success) is specified and reported in Chapter 4. The next section describes the sample survey design and the sample questionnaire.

2.4 Sample survey design and questionnaire

Study data were collected via personal interviews with 44 Ithala agribusiness SMME clients during the period October 2003 to February 2004. Each respondent was first given a letter explaining the background and purpose of the study (see Appendix G on page 91). All of the respondents had secured loans with Ithala to fund either the creation or expansion of their own agribusiness that they managed in their individual capacity or as leaders of a management team. The 44 clients were selected by applying stratified random sampling to the population of 266 agribusiness SMMEs financed by Ithala in KZN at the time of the study. These 266 SMMEs were divided into mutually exclusive subgroups or strata that were as homogenous as possible given the available information (Barnett, 1991). Ithala classifies clients according to their 'main business category', and these categories were used as the four strata, namely: Harvester contractors (timber and sugarcane), Processors (mainly maize millers and butcheries), Retailers (furniture, farm machinery repair, spaza shop, beer distributor, etc.) and Speculators (cattle traders).

A fixed, constant proportion (sampling fraction) of 20 percent was selected from the N agribusinesses in each of the four strata to make up the stratified random sample. The researchers purposely chose this sampling fraction, which exceeded the 15 percent that would be sufficiently representative for multivariate analysis, in order to allow for the relatively high search costs of collecting data from spatially dispersed sampling units like the sample agribusiness owners (Barnett, 1991; Lyne, 2003; Ramroop, 2003). Given limited survey resources, and client work schedules, the researcher could not guarantee being able to interview all of the selected agribusinesses. The final stratified random sample shown in Table 2 overleaf had sampling fractions of over 15 percent for each stratum. Since these sampling fractions are similar across the strata, the selected stratum members could be aggregated into the final sample without further weighting.

Table 2: Sample strata and cases, Ithala agribusiness SMMEs, 2003-2004

Enterprise type (stratum)	Cases per stratum (N)	Cases in sample (n)	Sample cases as a % of stratum cases (n/N)
Harvester contractors	146	23	15.8
Processors	46	8	17.4
Retailers	45	8	17.8
Speculators	29	5	17.2
Total	**266**	**44**	**16.5**

The questionnaire presented to the 44 sample respondents shown in Appendix A on page 72 identifies 36 potential socioeconomic, institutional and firm level constraints on SMME survival and growth that were derived from the research review in section 1.3, and discussions with Darroch (2003) and Ithala personnel (Pringle, 2003; Nhleko, 2003). Respondents were asked to rank each of the 36 potential constraints on Likert-type scales ranging from one (perceived minor constraint) to five (perceived major constraint). The questions in Appendix B on page 74 were used to quantify SMME owners' perceptions of the business opportunities and information available to them. Respondents were asked to agree or disagree with statements about the existence of local, provincial, national and international business opportunities, and information on business opportunities. Response scores ranged from four (strongly agree) to one (strongly disagree).

The questions shown in Appendix C on page 75 were posed to sample respondents in order to test the relationships between the four components of entrepreneurial quality and enterprise success, and the relationships among the four components. The questions were derived from the conceptual model of entrepreneurial quality described in section 2.3. Question 1 assesses an entrepreneur's preference for working for him/herself, where Yes = 1 and No = 0. Question 2 tries to identify an owner's primary reason for starting the business, where the choice of statements a. or b. imply that the entrepreneur is 'intrinsically motivated', while the choice of statements c., d. or e. indicate 'extrinsically motivated' owners. Question 3 identifies five energizer behaviours that are the

materialization of psychological features thought to be essential in quality entrepreneurs as shown in Table 3 below.

Table 3: Five energizer behaviours and the psychological features that they derive from

Psychological feature:	Ambition	Innovation	Spirit of collaboration	Venturesome spirit	
Energizer behaviour:	Enterprise expansion	Creation of new products or services	Formal agreements with industry players	Compiling budgets for the business	Undertaking to train employees

Source: Adapted from Guzman and Santos (2001)

Each of these behaviours was assessed in terms of the entrepreneur's past behaviour and which activities he/she planned to undertake in the future. The maximum score of 3 for each of the behaviours occurs when an entrepreneur has exercised an energizer activity in the past and plans to do so again in the following year. The minimum score of 0 occurs when he/she has not exercised the particular energizer behaviour in the past, and will not do so in the following year. For example, Yes to past and planned enterprise expansion scores 3; Yes to past, and No to future, product or service development scores 2; and No to past or planned formal agreements, budgeting and employee training, scores 0. In this case, the respondent's overall energizer behaviors' score is 5 out a potential 15.

Question 4 evaluates the factors of the agribusiness SMME owner's personal environment; education ranged from 8 years (standard 6) to 15 years (degree); work experience scored 1 (less than a year), 2 (between two and five years), or 3 (more than five years experience in current business sector). The other components of Question 4 dealing with work experience, family entrepreneurship and family assistance, were coded Yes = 1 and No = 0. Question 5 identified an entrepreneur's perceptions of his/her 'attitudes and abilities', with each respondent's self-rating of personal skills ranging from 5 (excellent) to 1 (poor). Appendix D on page 78 shows the template that was used to capture the survey data in Appendices A to C. The questions in Appendix A on page 72 on respondents' perceptions about 36 potential socioeconomic, institutional and firm

level constraints to SMME survival and growth were used as proxies for the global or external factors that affect the success of the sample of 44 agribusiness SMME owners in the logit analysis of entrepreneurial quality and enterprise success in Chapter 4. The next chapter describes the main characteristics of the respondents, and analyses the respondents' perceptions of the factors that constrain their agribusiness SMME survival and growth using Likert mean scores and Principal Component Analysis.

CHAPTER 3

RESPONDENT CHARACTERISTICS, AND OWNERS' PERCEPTIONS OF CONSTRAINTS ON AGRIBUSINESS SMME SURVIVAL AND GROWTH IN KWAZULU-NATAL

This chapter first describes the main characteristics of the 44 survey respondents, and then reports their ratings of the potential constraints to SMME survival and growth that were presented to the owners as shown in Appendix A on page 72. It also identifies the main dimensions of these constraints using Principal Component Analysis.

3.1 Characteristics of the sample survey respondents and their enterprises

The characteristics of the 44 survey respondents and their SMMEs are summarized in Appendix E on page 86, and discussed in the following two sections.

3.1.1 Loan type and size, and number of employees

Almost half of the respondents had secured equipment loans with Ithala, while loans for land and fixed improvements, and working capital made up 34% and 18%, respectively, of the responses. The average approved loan amount (ALA) of the sample was R421,600 compared to the average loan collateral (LC) of R943,475 (see Table E.2). The Harvester contractors and Retailers had the highest average ALA's of R623,261 and R731,515 respectively. Speculators had the lowest average ALA of R134,518 but the highest LC to ALA ratio of 2.97. This ratio may overstate their loan security, as cattle are a relatively more fungible asset (more easily sold for cash) than land and fixed improvements. The average number of employees in the sample enterprises was 30, with a sample mode (most frequent response) of five employees. Harvester contractors had the highest average number of employees, while Speculators had the lowest staff complement.

3.1.2 Characteristics of the enterprise owners

Appendix E, Table E.3. shows that almost half (45%) of the respondents were between 41 and 50 years of age, while 32% were in the 50-60 year range, 21% between 30 and 40 years, and one speculator was under 30 years old. Female enterprise owners made up 16% of the sample, and were mainly Retailers. About 41% of respondents had qualified at tertiary level (certificate, diploma or bachelors degree) and 36% had passed Matric. Table E.4. shows that only nine percent of the sample had a Standard 6 level education, and 14% had completed some high schooling. Nearly 70% of enterprise owners had over five years experience in their current industry at enterprise start-up, with Harvester contractors (83%) and Retailers (88%) being the most experienced. Respondents with less than one year's experience and between one and five years experience accounted for 14% and 18% of the sample, respectively. Sixty percent of the respondents had parents who had been entrepreneurs and 66% percent of the sample considered that their immediate family had assisted them in becoming an entrepreneur by providing less expensive labour, finance, or business contacts in their industry. In Table E.5, book-keepers were hired either contractually or permanently by 73% of enterprises, and 32% of respondents had supplementary income from one or more other source. Finally, 70% of respondents felt that their business was generating sufficient income to support themselves and their dependants.

Table E.6. presents the energizer behaviours shown by the sample respondents. Eighty six percent of owners had expanded their business since start-up, and 80% planned expansion in the following year. Some 64% of owners had already devised new products or services (mainly Processors), while 55% planned to do so. Most respondents had formal business agreements (77%), and 59% (all Processors) planned to conclude formal agreements. Over 85% of owners either had or planned to draw up budgets, and 82% of respondents had sent their employees for formal training or provided in-house training. In Table E.7., just under 40% of the respondents had previously defaulted on their loan repayments to Ithala, with Harvester contractors (17%) having the lowest, and Speculators the highest (80%) rate of default, respectively. Reflecting the materialization

of the Promoter sub-function, most (86%) of the owners indicated that they would prefer to work for themselves at their current income levels, including 91% of Harvester contractors, 88% of Processors and Retailers, and 60% of Speculators. Some 43% of the sample respondents were intrinsically motivated, with Processors having the highest (63%), and Speculators the lowest (20%), incidence.

Speculators had the strongest perceptions in Table E.8. about business opportunities being available within municipal boundaries, while Processors seemed the most confident of business opportunities elsewhere in KZN and SA. Retailers had the highest ranking for perceived international business opportunities, and shared with Speculators the strongest perception that information on business opportunities was easily obtainable and available. In Table E.9., respondents' ratings of their attitudes and abilities was similar across the four strata. Overall, negotiating skills seem to need relatively more attention for the sample respondents. Section 3.2 next analyzes the respondents' perceptions of the factors that constrain their agribusiness SMME survival and growth, and presents the results of a Principle Component Analysis of their responses to the questions in Appendix A.

3.2 Agribusiness SMME owners' mean ratings of potential constraints

Table 4 shows the mean score for each potential constraint given in Appendix A on page 72 for the sample of 44 agribusiness owners, and for each stratum, in descending order. Insufficient government support for agribusiness SMMEs was ranked the highest constraint overall to business survival and growth (mean score of 3.86 out of a maximum score of five), and it was the main perceived constraint for Speculators and Harvester contractors. Respondents felt that government legislation and policy were biased towards larger businesses, government officials were not sufficiently trained to understand an entrepreneur's job, and government should either reduce the amount of legislation that SMMEs must comply with or provide more accessible information and skills enabling SMMEs to cope with these 'rules and regulations'.

Lack of access to start-up capital was ranked second overall as a constraint to business survival and growth (mean score of 3.45). Respondents, particularly Retailers, believed that this may be due to private financial institutions being reluctant to finance small business start-ups due to the perceived risk associated with SMMEs. This supports previous research in SA reported by Bannock (2002). Respondents also attributed this constraint to their lack of collateral, or difficulty in understanding and completing loan application procedures. Cash-flow stress was the third ranked constraint (mean score of 3.27), probably due less to the seasonal nature of incomes for agriculture–related enterprises, and more to capital requirements at start-up. The stratum most affected by the seasonality of agriculture-related incomes – Harvester contractors – had the lowest score of the four strata on this constraint (2.91). Many of these contractors had actively tried to manage this constraint by accessing a revolving loan or purchasing dual-purpose trailers to transport both sugarcane and timber, thus reducing their dependence on seasonal sugarcane harvesting contracts. Respondents also stated that having to comply with VAT legislation added considerably to their cash-flow stress.

Lack of access to capital for expansion, 'too many rules and regulations', and crime were ranked fourth, fifth, and sixth overall (mean scores of 3.14, 3.05 and 3.00, respectively). Lack of access to capital for expansion – particularly for Processors, Retailers and Speculators – was again attributed to private financial institutions being reluctant to finance small business start-ups due to the perceived risk. Speculators in this sample seemed to be relatively more affected by crime (average score of 4.20), which they attributed to incidents of livestock theft. Reports of crime also included theft of inputs such as diesel, fertilizer and chemicals, and of spare mechanical parts and batteries. Three Harvester contractors had been hijacked and their vehicles had not been recovered. Security guards, fences and alarm systems were perceived to reduce the threat of crime but impose another relatively large expense on SMMEs. Many respondents felt that legislation relating to their businesses was designed for larger corporate sector businesses, and that smaller businesses lacked the skills and management time to handle compliance.

Table 4: Owners' mean scores (out of a maximum of five) for potential constraints to SMME survival and growth, for the sample and each stratum (n=44)

Rank	Potential constraint	Sample mean score [b] (n = 44)	SPE[a] mean score (n = 5)	HAR mean score (n=23)	RET mean score (n=8)	PRO (mean score (n = 8)
1	Insufficient government support *	3.86	4.20	4.17	3.63	3.00
2	Lack of access to start-up capital	3.45	3.20	3.35	3.88	3.50
3	Cash flow stress	3.27	3.60	2.91	3.88	3.50
4	Lack of access to capital for expansion	3.14	3.40	2.61	3.50	4.13
5	Too many rules and regulations *	3.05	4.00	3.17	2.63	2.50
6	Crime *	3.00	4.20	3.04	2.75	2.38
7	Complex labour legislation*	2.80	3.20	3.00	2.88	1.88
8	Paying and complying with VAT*	2.68	2.60	3.00	2.50	2.00
9	Insufficient private sector support	2.64	2.00	2.96	2.63	2.13
10	Complying with minimum wage legislation*	2.61	2.60	3.09	2.00	1.88
11	Competition (rivalry)	2.50	3.00	2.22	2.50	3.00
12	Lack of access to skills training	2.34	3.00	2.30	2.25	2.13
13	Bargaining power of suppliers	2.27	3.60	2.22	2.00	1.88
14	Lack of access to good roads	2.25	2.40	2.30	2.88	1.38
15	Bargaining power of buyers	2.18	3.00	2.22	2.25	1.50
16	Lack of access to telecommunications	2.05	2.60	1.78	2.88	1.63
17	Lack of management skills	1.98	2.00	2.09	2.38	1.25
18	Low labour quality	1.95	2.80	1.70	2.88	1.25
19	Paying a skills levy	1.91	1.60	1.96	1.75	2.13
20	Threat of new entrants	1.91	1.80	1.74	1.88	2.50
21	Lack of access to water	1.89	3.00	1.52	2.75	1.38
22	Insufficient technology	1.86	3.00	1.57	2.13	1.75
23	Insufficient property rights	1.77	1.00	1.91	2.25	1.38
24	Substitutes	1.75	2.00	1.43	1.75	2.50
25	Lack of access to electricity	1.73	2.20	1.43	2.75	1.25
26	Lack of access to tender contracts	1.73	1.40	1.87	1.38	1.88
27	Managing employee UIF contributions	1.70	1.20	1.87	1.63	1.63
28	Scarce information about tender contracts	1.70	1.80	1.74	1.75	1.50
29	Distance to suppliers	1.61	1.80	1.52	1.75	1.63
30	Too few customers	1.61	1.60	1.43	2.50	1.25
31	Too few contacts in my industry	1.57	1.80	1.48	1.88	1.38
32	Lack of own transport	1.55	2.00	1.26	2.38	1.25
33	Lack of access to postal services	1.45	2.00	1.30	1.50	1.50
34	Distance from potential buyers	1.43	1.60	1.30	1.50	1.63
35	Inadequate business premises	1.36	1.60	1.22	1.75	1.25
36	Forestry Act	1.32	1.40	1.52	1.00	1.00

Note: [a] SPE = Speculators; HAR = Harvester contractors; RET = Retailers; and PRO = Processors; [b] Maximum score = 5.

* Denotes constraints (that rank in the top ten) resulting from government legislation.

Complex labour legislation and having to comply with minimum wage legislation were ranked seventh and tenth respectively, with the highest ratings from Harvester contractors. Respondents believed that employees were not aware of the rights of employers, and three respondents claimed that some of their Human Immuno-Deficiency Virus (HIV) positive employees injured themselves deliberately at work in order to claim compensation under the Workman's Compensation Act. Some Harvester contractors viewed mechanization as the only strategy to deal with current labour legislation, while others believed that SMMEs would have to just 'get used to' dealing with the legislation. Paying a skills levy was ranked as the nineteenth most limiting constraint. This levy can be reimbursed on application, but over half of the 19 owners who paid the monthly levy considered the procedure was too complicated and that the levy was an extra tax. Harvester contractors' relatively higher scores for the minimum wage constraint probably reflect the impact of their increased demand for casual labour (higher staff complements) during sugarcane and timber harvesting (Nhleko, 2003).

Paying and registering for VAT was ranked the eighth most limiting constraint overall, with a mean score of 2.68. This procedure was generally perceived by respondents to increase their business cash-flow stress. Some businesses were paying a bookkeeper primarily to ensure VAT compliance. The VAT registration procedure was seen as too complex for smaller businesses, while owners also stated that SMMEs who were not registered as VAT vendors could undercut the prices of their competitors who had registered as VAT vendors. These results support conclusions reached by the World Bank Task Team (2000) in SA.

The constraints perceived by this sample of 44 agribusiness SMME owners as major barriers to firm survival or growth are similar to those identified in previous studies on SMMEs in SA. The results suggest the constraints faced by agribusiness SMMEs are not necessarily all that distinct from those faced by non-agriculture-related businesses (this supports Escalante's 1996 findings). The next section uses Principal Component Analysis to reduce the 36 potential constraints into fewer components or dimensions (Manly,

1986) in order to infer policy and strategy recommendations for addressing these constraints.

3.3 Principal Component Analysis of owners' perceived constraints on agribusiness SMME survival and growth in KwaZulu-Natal

Principal Component Analysis (PCA) aims to economize on the number of variables and to summarize the information contained in a number of correlated variables (in this case the 36 constraints) into a smaller set of uncorrelated 'dimensions' with minimal loss of information (Manly, 1986). The decision about which principal components to retain depends on the percentage of the variance accounted for by the variable, the absolute variance accounted for by each principal component (PC), and whether the component can be *meaningfully interpreted.* The PC's can be estimated as linear functions of the original 36 variables (constraints) per equation (1) below:

$$PC_i = a_{i1}X_1 + a_{i2}X_2 + ... + a_{i36}X_{36} \qquad (1)$$

where i = 1 ..... 36; a_{i1} ..... a_{i36} = the component loadings; and X_1 ..... X_{36} = the 36 potential constraints listed in Appendix A on page 72. The a_i are estimated such that the first PC displays the largest amount of variation in the data, the second PC displays the second largest amount of variation, and so on.

Twelve PCs with eigenvalues greater than one were derived from the 36 potential constraints, and these PCs together explained 79.4% of the variation in the data. The PCs were estimated using the correlation matrix so as to avoid one variable (constraint) having undue influence on the PCs. Varimax rotation was then used to transform the components into factors that were more clearly interpretable (Manly, 1986). The first nine factors explained 70% of the variation in the data, and factors one to 12 are presented in Table 5 shown on pages 40, 41 and 42. The communalities for all of the variables exceed 0.68, implying that at least 68% of each variable's variation is accounted for by the common factors (Jolliffe, 1986).

Factor 1 had relatively high loadings greater than 0.40 for lack of access to electricity, inadequate business premises, lack of own transport, lack of access to water, roads, postal services and telecommunications, and crime. Factor 1 was, therefore, labeled 'Lack of access to services' as these variables relate to infrastructure services not easily accessible in rural areas. A lack of own transport implies extra expenditure to travel to markets, and crime may be a consequence of poverty prevalent in rural areas (Berry *et al.*, 2002). Factor 2 was defined as 'Funding constraints at start-up' as distance to suppliers, insufficient technology, and labour quality had the highest loadings for this factor. Escalante (1996) found that a low quality of labour was a common obstacle encountered by newly established SMMEs, as they can seldom afford the wage rate necessary to attract more skilled labour. Financial constraints at start-up can also result in a lack of access to technology and an inability to procure ideally situated business premises.

Factor 3 represents 'lack of management capacity in the enterprise' as the variables competition (rivalry), threat of new entrants, and threat from substitute products in other industries, had the highest positive loadings, while complex labour legislation and 'too many rules and regulations' had high negative loadings. The variables with positive factor loadings describe key aspects of competition in an industry (Porter, 1980). The negative signs on complex labour legislation and 'too many rules and regulations', therefore, may imply that agribusiness SMME owners that perceive rivalry as a threat to profitability had the management ability to overcome the barriers to business growth and survival posed by understanding and implementing labour legislation and other 'rules and regulations', and had progressed to a stage where they perceived that competitive forces were a relatively greater threat to their business profitability.

Table 5: Rotated factor loadings for potential constraints to SMME survival and growth, and average factor scores for each stratum

Factor		1	2	3	4
Eigenvalue		6.957	3.690	3.264	2.415
Percentage of variance explained		19.32	10.25	9.07	6.708
Potential constraints on the survival and growth of the business	Commun -alities	'Lack of access to services'	'Funding constraints at start-up'	'Management capacity in the enterprise'	'Access to tender contracts'
Lack of access to electricity	0.837	**0.819**	0.013	0.020	-0.066
Inadequate business premises	.0.770	**0.734**	0.070	-0.039	-0.070
Lack of own transport	0.804	**0.703**	0.046	0.113	-0.159
Lack of access to water	0.733	**0.701**	0.131	0.063	-0.227
Lack of access to roads	0.733	**0.659**	0.153	0.077	0.259
Lack of access to telecommunications	0.790	**0.646**	0.243	0.027	0.355
Crime	0.779	**0.499**	0.136	-0.269	0.326
Lack of access to postal services	0.829	**0.487**	0.120	0.245	0.460
Lack of contact networks in my area	0.776	**0.443**	0.292	0.351	0.181
Lack of customers in my area	0.823	**0.493**	0.610	0.180	0.109
Poor labour quality	0.869	0.285	**0.791**	-0.040	-0.024
Distance to suppliers	0.887	0.044	**0.790**	0.226	0.225
Insufficient technology	0.799	0.156	**0.575**	0.078	0.397
Competition (rivalry)	0.747	0.241	0.278	**0.695**	-0.137
Too many rules and regulations	0.773	0.151	-0.037	**-0.646**	-0.066
Complex labour legislation	0.881	-0.144	0.397	**-0.640**	0.119
Threat of new entrants	0.704	0.013	0.286	**0.626**	0.062
Substitutes in other industries	0.768	0.019	-0.002	**0.625**	0.132
Lack of access to tender contracts	0.736	-0.050	-0.001	-0.090	**0.848**
Scarce information about tender contracts	0.797	0.000	0.242	0.087	**0.831**
Paying a skills levy	0.728	-0.086	0.143	-0.144	-0.168
Managing employee UIF contributions	0.684	-0.052	0.021	-0.005	0.234
Paying and complying with VAT	0.889	0.257	-0.119	0.220	0.196
Lack of access to expansion capital	0.737	0.235	-0.019	0.085	0.109
Cash flow stress	0.757	0.281	0.234	0.188	0.011
Lack of access to start-up capital	0.768	0.153	0.246	0.047	0.108
Insufficient property rights	0.889	0.270	-0.280	0.245	0.022
Insufficient private sector support	0.807	0.131	-0.099	-0.030	-0.110
Insufficient government support	0.841	-0.069	0.014	-0.413	0.005
Distance to buyers	0.858	0.169	0.045	-0.018	-0.104
Strong bargaining power of buyers	0.829	0.413	0.214	0.051	-0.292
Strong bargaining power of suppliers	0.884	0.057	0.093	-0.008	0.063
Minimum wage legislation	0.730	0.072	0.235	-0.025	0.169
Forestry Act	0.706	-0.039	-0.015	-0.048	0.293
Lack of access to training facilities	0.863	0.025	0.016	0.020	0.061
Average factor scores for each stratum					
Harvester contractors		-0.17	-0.13	-0.15	0.09
Retailers		**0.76**	**0.33**	-0.02	**-0.29**
Processors		-0.52	-0.27	**0.72**	0.08
Speculators		0.38	**0.51**	-0.42	-0.10

Table 5: Continued

Factor		5	6	7	8
Eigenvalue		2.300	1.844	1.770	1.538
Percentage of variance explained		6.388	5.121	4.917	4.271
Potential constraints on the survival and growth of the business	Commun -alities	'Compliance costs'	'Liquidity stress'	'Lack of collateral'	'Lack of institutional support'
Lack of access to electricity	0.837	0.070	0.244	0.187	0.014
Inadequate business premises	.0.770	-0.260	-0.152	-0.027	-0.060
Lack of own transport	0.804	-0.203	0.059	0.057	0.026
Lack of access to water	0.733	-0.013	0.352	0.083	-0.068
Lack of access to roads	0.733	0.147	0.159	-0.202	0.196
Lack of access to telecommunications	0.790	-0.095	0.182	0.286	-0.037
Crime	0.779	0.129	0.078	-0.334	0.220
Lack of access to postal services	0.829	-0.104	-0.147	-0.024	-0.092
Lack of contact networks in my area	0.776	0.164	-0.259	0.014	0.186
Lack of customers in my area	0.823	0.099	-0.222	0.145	-0.140
Poor labour quality	0.869	-0.005	-0.004	-0.077	-0.295
Distance to suppliers	0.887	0.198	0.110	0.140	0.209
Insufficient technology	0.799	-0.102	0.312	0.121	0.027
Competition (rivalry)	0.747	-0.037	-0.045	-0.093	-0.089
Too many rules and regulations	0.773	0.366	-0.139	-0.096	-0.048
Complex labour legislation	0.881	0.407	0.012	-0.231	-0.054
Threat of new entrants	0.704	0.199	0.122	0.181	-0.117
Substitutes in other industries	0.768	-0.072	0.245	-0.151	-0.257
Lack of access to tender contracts	0.736	0.036	-0.039	0.016	-0.037
Scarce information about tender contracts	0.797	0.032	0.038	0.007	-0.054
Paying a skills levy	0.728	**0.796**	-0.012	0.066	0.019
Managing employee UIF contributions	0.684	**0.736**	-0.084	-0.039	-0.022
Paying and complying with VAT	0.889	**0.438**	-0.010	-0.548	0.259
Lack of access to expansion capital	0.737	-0.011	**0.770**	0.142	0.056
Cash flow stress	0.757	-0.385	**0.610**	-0.134	-0.125
Lack of access to start-up capital	0.768	0.196	0.163	**0.749**	0.136
Insufficient property rights	0.889	-0.261	-0.063	**0.634**	0.135
Insufficient private sector support	0.807	-0.086	-0.129	0.053	**0.845**
Insufficient government support	0.841	-0.054	**0.118**	0.069	**0.715**
Distance to buyers	0.858	-0.043	-0.062	-0.055	**-0.016**
Strong bargaining power of buyers	0.829	-0.138	-0.074	-0.143	0.184
Strong bargaining power of suppliers	0.884	0.174	0.023	0.030	-0.034
Minimum wage legislation	0.730	0.048	-0.097	-0.041	-0.045
Forestry Act	0.706	-0.021	-0.538	-0.019	0.290
Lack of access to training facilities	0.863	-0.095	-0.061	-0.019	0.147
Average factor scores for each stratum					
Harvester contractors		0.04	-0.32	-0.10	0.335
Retailers		-0.11	0.15	0.38	-0.292
Processors		0.13	**0.52**	0.23	**-0.502**
Speculators		-0.22	**0.42**	**-0.51**	-0.273

Table 5: Continued

Factor		9	10	11	12
Eigenvalue		1.469	1.194	1.145	1.013
Percentage of variance explained		4.080	3.317	3.182	2.183
Potential Constraints the survival and growth of the business	Commun-alities	'Distance to buyers'	'Lack of bargaining power'	Not interpretable	'Lack of access to training'
Lack of access to electricity	0.837	0.113	0.019	0.219	0.015
Inadequate business premises	.0.770	0.272	0.112	-0.176	-.0.083
Lack of own transport	0.804	0.433	0.109	-0.065	0.132
Lack of access to water	0.733	-0.068	0.152	-0.033	0.080
Lack of access to roads	0.733	-0.212	-0.102	0.065	-0.130
Lack of access to telecommunications	0.790	-0.049	-0.044	0.240	-0.154
Crime	0.779	0.212	0.155	-0.198	0.204
Lack of access to postal services	0.829	-0.073	0.453	-0.223	0.065
Lack of contact networks in my area	0.776	0.348	-0.079	0.040	0.285
Lack of customers in my area	0.823	0.108	0.048	0.218	0.046
Poor labour quality	0.869	0.139	0.121	0.123	0.139
Distance to suppliers	0.887	-0.017	0.052	0.029	-0.205
Insufficient technology	0.799	-0.182	0.317	0.096	0.119
Competition (rivalry)	0.747	0.046	-0.177	-0.074	0.226
Too many rules and regulations	0.773	0.323	-0.164	-0.124	0.127
Complex labour legislation	0.881	-0.041	-0.017	0.113	0.209
Threat of new entrants	0.704	0.092	0.299	0.158	0.054
Substitutes in other industries	0.768	0.441	-0.073	-0.072	0.022
Lack of access to tender contracts	0.736	0.025	0.016	0.040	-0.020
Scarce information about tender contracts	0.797	-0.124	-0.013	0.111	0.085
Paying a skills levy	0.728	0.058	0.052	-0.076	-0.044
Managing employee UIF contributions	0.684	-0.160	0.071	0.145	-0.153
Paying and complying with VAT	0.889	-0.035	0.083	0.392	0.014
Lack of access to expansion capital	0.737	0.079	0.083	-0.177	-0.024
Cash flow stress	0.757	-0.025	-0.145	0.097	-0.048
Lack of access to start-up capital	0.768	-0.067	-0.014	-0.096	-0.109
Insufficient property rights	0.889	-0.094	0.042	0.315	0.274
Insufficient private sector support	0.807	-0.124	-0.066	-0.081	0.022
Insufficient government support	0.841	0.202	0.110	0.033	0.280
Distance to buyers	0.858	**0.897**	0.038	0.037	0.039
Strong bargaining power of buyers	0.829	0.205	**0.581**	0.160	-0.204
Strong bargaining power of suppliers	0.884	-0.041	**0.905**	0.038	0.117
Minimum wage legislation	0.730	0.007	0.103	**0.769**	-0.150
Forestry Act	0.706	-0.055	0.187	**-0.448**	0.048
Lack of access to training facilities	0.863	0.068	0.084	-0.142	**0.889**
Average factor scores for each stratum					
Harvester contractors		-0.106	-0.003	0.312	-0.044
Retailers		-0.179	-0.360	0.019	0.095
Processors		**0.376**	-0.170	-0.663	-0.310
Speculators		0.174	**0.863**	-0.405	**0.545**

Factor 4 was defined as 'Access to contracts' (access to tender contracts, and scarce information on tenders, scored highly), and may relate to the SMME owners' perceptions that government and the private sector in KZN are biased towards larger businesses in awarding tender contracts. Factor 5 was labeled 'Compliance costs' as all variables with relatively higher loadings have financial or administrative costs associated with complying with legislation: paying a skills levy, managing and making employee Unemployment Insurance Fund (UIF) contributions, and paying/complying with VAT. Lack of access to expansion capital, and cash flow stress, had the highest loadings on Factor 6, which reflects 'Liquidity stress'. Factor 7 was labeled 'Lack of collateral', as access to start-up capital and lack of a transferable title deed scored highly, implying that uncertain property rights reduce access to loans when a lack of alternative collateral requires property as security for a loan (Bannock, 2002). Factor 8 isolates a lack of public and private institutional support for agribusiness SMMEs and suggests a role for promoting business linkages between SMMEs and larger organizations and parastatals to facilitate market access, skills transfer and input procurement. Factor 9 was labeled 'Distance to buyers' as this was the only potential constraint that scored highly on this component, and Factor 10 was labeled 'lack of bargaining power', and may reflect the relatively smaller size of agribusiness SMMEs relative to their input suppliers and product and service buyers. Factor 11 was not interpretable, while Factor 12 was labeled 'Training' as lack of access to training facilities was the only potential constraint that scored highly on this component.

Table 5 also shows the average score for each stratum for each of the 12 rotated factors. Retailers score highest on Factor 1 - 'Lack of access to services' - supporting the view that communities in spatially isolated areas with a relatively sparse resource base and limited cash circulation have limited information about product opportunities outside survivalist trading or provision of inexpensive services (Berry *et al.*, 2002). Retailers and Speculators seem to be relatively more affected by 'Financial constraints at start-up', with average scores for Factor 2 of 0.33 and 0.51, respectively. Speculators seem to perceive 'Management capacity in the enterprise' as more of a constraint than do the other agribusiness types. Processors and Speculators also rank 'Liquidity stress'

relatively more highly, while perceived 'Lack of (government and private sector) institutional support' is the main dimension for Harvester contractors.

The types of business opportunities, and information about these opportunities, apparent to an entrepreneur, are partly determined by the entrepreneur's perceptions about factors in the external environment (Shane, 1994b). The sample agribusiness SMME owners' scores for the 36 constraints to business survival and growth are proxies for their perceptions of the relative impact of these external factors. Respondents' assessments of the statements in Appendix B on page 74 were used to quantify their perceptions of local, provincial, national and international business opportunities, and information regarding business opportunities available to them. Section 3.4 presents empirical models that analyse whether the hypothesized link between these sets of perceptions was supported in the sample of 44 agribusiness SMME owners in KZN.

3.4 Empirical models linking owners' perceptions of constraints to owners' perceptions of business opportunities and available information

The correlation coefficients presented in Appendix F on page 90 suggested the following empirical models to quantify how the perceived constraints discussed in section 3.3 affected the study entrepreneurs' perceptions of the local (within municipal boundaries) (LOCOPP), provincial (PROVOPP), national (NATOPP) and international (INTERNOPP) business opportunities and information (INFO) about these opportunities, that were available to them (signs in parentheses indicate the expected direction of the impact of each constraint):

LOCOPP = f(BARGSUPP (-); NEWENT (-); INFO (+)) (2)

PROVOPP = f(LOCOPP (+); INTERNOPP (+); (PROXBUY (-); MANSKILLS (-); BARGSUPP (-)) (3)

INTERNOPP = f(PROVOPP (+); NATOPP (+); INFO (+); MANSKILLS (-); COMP (-)) (4)

INFO = f(EXLEGN (-); GOVSUPP (-); MANSKILLS (-); BUSPREM (-)). (5)

The definitions of the variables expected to influence an entrepreneur's perceptions of LOCOPP, PROVOPP, INTERNOPP, and INFO are presented in Table 6 (perceptions of

national business opportunities were omitted as these were not statistically significantly correlated with any of the 36 constraint variables).

Table 6: Definition of variables expected to influence agribusiness SMME owners' perceptions of business opportunities and information about such opportunities, KwaZulu-Natal, 2003-2004

Variable	Definition	Expected sign
LOCOPP	Perception of business opportunities within municipal boundaries	+
PROVOPP	Perception of business opportunities within KZN	+
INTERNOPP	Perception of international business opportunities	+
INFO	Perception of availability of information on all potential business opportunities	+
BARGSUPP	Perceived supplier bargaining power	-
NEWENT	Perceived threat of new entrants to product market	-
PROXBUY	Perceived distance from buyers	-
MANSKILLS	Perceived lack of management skills	-
COMP	Perceived competition from other businesses (rivalry)	-
EXLEGN	Perceived 'excessive' legislation	-
GOVSUPP	Perceived lack of government support for SMMEs	-
BUSPREM	Perceived inadequate business premises	-

LOCOPP, PROVOPP and INFO are all expected to have a positive effect on perceptions of business opportunities, as more positive perceptions of these variables may encourage an entrepreneur and increase his/her confidence and conviction that business opportunities within his/her municipal boundary, or throughout KZN or SA are available. The variables BARGSUPP, NEWENT, PROXBUY, and COMP should negatively affect perceptions of business opportunities, as these were identified as constraints to SMME survival and growth in section 3.2. The variables EXLEGN, MANSKILLS, GOVSUPP and BUSPREM are also likely to negatively affect perceptions of business opportunities, as these variables are constraints that will make it more difficult for an entrepreneur to find and interpret information on business opportunities (Kahneman *et al.*, 1989; Scottish Enterprise, 2002).

3.5 Linear regression models of factors affecting perceived business opportunities

Equations (2) to (5) on page 44 were estimated by Ordinary Least Squares (OLS) regression. Table 7 shows the results for equation (2). The estimated coefficients for BARGSUPP and NEWENT are statistically significant at the 10% level of probability, and have the expected negative signs. Both the perceived bargaining power of suppliers and the threat of new entrants thus negatively affect a respondent's perception of the availability of business opportunities within municipal boundaries.

Table 7: Factors affecting perceived local business opportunities (LOCOPP) for agribusiness SMMEs, KwaZulu-Natal, 2003-2004

Variable	Coefficient estimate	Standard error	t - statistic
BARGSUPP	-0.098	0.052	-1.876*
NEWENT	-0.096	0.055	-1.733*
INFO	0.101	0.076	1.325NS
Constant	3.733	0.226	17.109***
Adjusted R^2 = 0.182 F = 2.962*			

Note: ***, * and NS imply statistical significance at the 1% and 10% levels, and non-significance, respectively.

Table 8 overleaf, for equation (3), shows that owners' perceptions that business opportunities are available throughout KZN were positively related to strong perceptions that international opportunities (INTERNOPP) are available. The negative estimated coefficients for BARGSUPP and MANSKILL imply that strong bargaining power of suppliers and a lack of management skills reduce perceptions that business opportunities are available throughout KZN. The statistically significant positive coefficient estimate for PROXBUY implies that as perceived problems with distance to markets increase, more opportunities are perceived within KZN.

Table 8: Factors affecting perceived provincial business opportunities (PROVOPP) for agribusiness SMMEs, KwaZulu-Natal, 2003-2004

Variable	Coefficient estimate	Standard error	t - statistic
LOCOPP	0.214	0.160	1.339^{NS}
INTERNOPP	0.305	0.088	3.465^{***}
BARGSUPP	-0.189	0.055	-3.435^{***}
MANSKILL	-0.124	0.069	-1.805^{*}
PROXBUY	0.206	0.092	2.239^{**}
Constant	2.163	0.681	3.178^{***}
Adjusted R^2 = 0.582 F = 10.582^{***}			

Note: ***, **, * and ^{NS} imply statistical significance at the 1%, 5% and 10% levels, and non-significance, respectively.

In Table 9 for equation (4), positive perceptions of business opportunities throughout SA (NATOPP) and available information on business opportunities (INFO) increase the available international business opportunities (INTERNOPP) perceived by the survey respondents. The negative estimated COMP coefficient indicates that perceived strong competition (rivalry) negatively affects the study entrepreneurs' perceptions that business opportunities are available internationally.

Table 9: Factors affecting perceived international business opportunities (INTERNOPP) for agribusiness SMMEs, KwaZulu-Natal, 2003-2004

Variable	Coefficient estimate	Standard error	t - statistic
PROVOPP	0.102	0.152	0.670^{NS}
NATOPP	0.642	0.126	5.089^{***}
INFO	0.321	0.089	3.608^{***}
MANSKILL	-0.019	0.078	-0.239^{NS}
COMP	-0.246	0.056	-4.356^{***}
Constant	0.046	0.599	0.082^{NS}
Adjusted R^2 = 0.582 F = 10.582^{***}			

Note: ***, and ^{NS} imply statistical significance at the 1% level and non-significance, respectively.

Finally, Table 10 for equation (5) implies that the respondents' perceptions of whether information on business opportunities was available was negatively affected by their perceptions of insufficient government support and a lack of management skills.

Table 10: Owners' perceptions of information available on business opportunities (INFO), KwaZulu-Natal, 2003-2004

Variable	Coefficient estimate	Standard error	t - statistic
EXLEGN	-0.137	0.098	-1.404^{NS}
GOVSUPP	-0.223	0.109	-2.053^{***}
MANSKILLS	-0.254	0.121	-2.097^{***}
BUSPREM	-0.179	0.157	-1.142^{NS}
Constant	4.730	0.521	9.069^{***}
Adjusted R^2 = 0.315 F = 4.481^{***}			

Note: ***, and ^{NS} imply statistical significance at the 1% level, and non-significance, respectively.

The results in tables 7 to 10 indicate some support for the Guzman and Santos (2001) hypothesis that an entrepreneur's perceptions about external and firm level factors do affect his/her perceptions about whether business opportunities, and information about such opportunities, are available. These results must, however, be interpreted with caution as the coefficient estimates in equations (2) to (5) suffer from simultaneous-equation bias (are inconsistent), as they contain endogenous explanatory variables. This implies that equations (2) to (5) should probably be estimated using a simultaneous-equation model (Gujarati, 2003: 724-727). This is an area for future research. The next chapter specifies the empirical model relating entrepreneurial quality to enterprise success, and presents the results of a logit analysis quantifying this relationship.

CHAPTER 4
EMPIRICAL MODEL OF THE EFFECT OF ENTREPRENEURIAL QUALITY ON AGRIBUSINESS SMME SUCCESS

This chapter specifies and reports an empirical logit model of the relationship between the four components of entrepreneurial quality described in Chapter 2 and agribusiness SMME success in KZN. The 44 agribusiness SMME owners' repayment performance and loan status at Ithala at the time of the survey, was used as a proxy for enterprise success. A respondent was classified as a loan defaulter if he/she failed at least once to make a loan repayment when due during the loan term. Just below 40% of respondents has previously defaulted, with Harvester contractors having the lowest (17%) and speculators the highest (80%) rates of default, respectively. Four Processors (50%) and five Retailers (63%) had previously defaulted on their loan repayments.

4.1 Logit model specification

The conceptual model developed in Chapter 2 suggests that enterprise success depends upon four components of entrepreneurial quality, namely: the entrepreneur's preference for working as self-employed, the exponents of entrepreneurial quality (the entrepreneur's intrinsic motivation and his/her execution of various energizer behaviours), personal factors, and global or external factors. Discriminant analysis and logistic regression are commonly used to estimate the determinants of dependent variables that have binary outcomes, such as loan repayment status that shows no default or previous incidence of default. Discriminant analysis was not used in this study because some of the potential determinants of loan repayment performance were dichotomous (see below). Discriminant analysis requires that, within groups, variables follow a multivariate normal distribution, with equal covariance matrices (Press and Wilson, 1978; Manly, 1986). Although the violation of this assumption will not necessarily lead to poor results, Press and Wilson (1978) recommend the logistic regression model because of its robustness in respect of the underlying distribution of the independent variables, which need not be multivariate normal. Given that P_i is the probability that the ith agribusiness SMME will not default on loan repayment, the logit model of loan success for the 44

sample agribusiness owners can be expressed in equation (6) as follows (see Gujarati (2003) for a summary of the model's properties):

$$\ln [P_i / (1 - P_i)] = B_1 + B_2X_{2i} + ... + B_kX_{ki} \quad (6)$$

where 1- P_i is the probability that the ith agribusiness SMME owner would have defaulted, and ln $[P_i / (1 - P_i)]$ is the logit or log odds in favour of the ith agribusiness owner not having defaulted on loan repayments to Ithala. A respondent was classified as a defaulter if he/she had defaulted on a loan repayment when due during the course of the repayment period. The X_k are hypothesized determinants of loan success, while the B_k are the parameters to be estimated. Using the conceptual model linking the components of entrepreneurial quality to business success in Chapter 2, discussions with Darroch (2003) and the review of literature in Chapter 1, and equation (6), the loan status of the i^{th} agribusiness SMME owner was estimated as a function of the following variables:

PREF = the i^{th} agribusiness SMME owner's preference for working as self-employed (Yes = 1, No = 0);
MOTN = 1 if the i^{th} owner is intrinsically motivated, and 0 if extrinsically motivated;
ENGSCORE = the i^{th} owner's score for the energizer behaviours (ranges from 0 to15);
EXP = the i^{th} owner's experience in the industry that he/she currently operates in (1 = less than a year, 2 = 2-5 years and 3 = more than 5 years);
FAMILY = the score for the i^{th} owner's perception of whether family members had assisted him/her to become an entrepreneur (Yes = 1, No = 0);
BUSKILLS = the i^{th} owner's scores for self-rating of their business skills (range from 1 to 5);
EXTERNAL AND FIRM LEVEL FACTORS = the i^{th} owner's scores indicating his/her perceptions about whether the potential constraints cited in Chapter 3 constrain his/her business survival and growth (range from 1 to 5); and
EDUCATION = the i^{th} owner's score for his/her highest education level attained, ranging from 7 (less than Standard 6) to 14 (Bachelors degree).

The variables PREF, MOTN, ENGSCORE, the personal factors EXP and FAMILY, and BUSKILLS were all expected to positively affect loan success (no default history). The model developed in Figure 4 on page 27 suggests that entrepreneur's who prefer to work as self-employed, are intrinsically motivated, execute certain energizer behaviours, have relatively higher levels of education, greater business experience, are assisted by their family, and have better business skills, are more likely to be higher quality entrepreneurs, and hence to meet loan repayments as they fall due. EXTERNAL AND FIRM LEVEL FACTORS were more difficult to specify in the empirical model, particularly as the number of constraints (36) was almost equal to the sample size (44). The researcher, therefore, tried to use the PCs estimated from these constraints in Table 5 in section 3.3, which identify dimensions like perceived 'Lack of access to services' and 'Lack of institutional support', as determinants of loan repayment to try and economize on the number of external and firm level factors. Except for 'Management capacity in the enterprise', these factors, *a priori*, were expected to negatively affect loan repayment performance by the sample agribusiness SMMEs as higher scores indicated greater perceived constraints on SMME growth and survival.

4.2 Logit model results

None of the coefficients estimated for the PCs defining dimensions of the potential constraints affecting loan repayment were statistically significant at acceptable levels. The researcher decided, therefore, after reviewing correlation coefficients between the individual constraints and loan repayment, to proxy the EXTERNAL AND FIRM LEVEL factors using two individual constraints: TRAINING (the extent to which an owner perceives that lack of access to skills training facilities constrains business survival and growth), and ELEC (the extent to which an owner perceives that lack of access to electricity is a constraint). Both of these variables should be negatively related to loan repayment, as higher scores indicate relatively greater perceived constraints that reduce the likelihood of business survival and growth and, hence, loan repayment. The resulting logit model of entrepreneurial quality and agribusiness SMME success (loan repayment) estimated by the method of maximum likelihood using the SPSS statistical package

(Norusis, 1994) and stepwise regression is shown in Table 11. Note that 41 cases were used, as loan repayment data were incomplete for three of the owners.

The estimated coefficient for PREF, the first component of entrepreneurial quality, has the expected sign but is not statistically significant. The positive signs for the coefficients estimated for MOTN and ENGSCORE, the elements of the second component of entrepreneurial quality, agree with *a priori* reasoning, but the MOTN estimate is not statistically significant. The parameter estimates for the personal factors EXP and FAMILY, reflecting the third component of entrepreneurial quality, are positive as expected, and statistically significant. The EDUCATION variable was excluded by the stepwise regression procedure. The variable EVALCOST, a proxy for BUSKILLS, also belongs in the third component as it reflects the owner's self-rating of his/her ability to evaluate the potential costs and benefits of business opportunities. The negative sign for the EVALCOST parameter estimate was not expected, and it may indicate that the sample respondents overstate their ability in this regard (higher self-ratings are correlated with poorer loan repayment performance).

Table 11: Logit model of factors affecting agribusiness SMME success (loan repayment performance), KwaZulu-Natal, 2003-2004 (n=41)

Variable	Coefficient estimate
Constant	7.249^{NS}
PREF	0.259^{NS}
MOTN	2.162^{NS}
ENGSCORE	0.803**
EXP	3.328***
FAMILY	3.262**
EVALCOST	-3.365***
ELEC	-1.550**
TRAINING	1.124**

Note: ^{NS}, ** and *** indicate not statistically significant, and statistically significant at the 5% and 1% levels, respectively.

The estimated coefficient for ELEC - a global or external factor reflecting the fourth component of entrepreneurial quality - is statistically significant and has the expected sign. A lack of access to electricity in part reflects the difficulty that entrepreneurs in

rural areas experience in accessing infrastructure services. The parameter estimate for TRAINING, another external factor, is statistically significant, but has an unexpected positive sign. This may indicate that agribusiness SMME owners in the sample that more strongly perceived lack of access to training as a constraint had taken actions to remedy this problem, thereby increasing the likelihood of loan repayment. The estimated logit model had an overall correct classification rate of 90%, with 92% of non-defaulters and 88% of loan defaulters being correctly classified. These classification results are biased upwards, as the same 41 cases were used to both estimate the logit model and to assess the model's classification accuracy. These correct classification results compare well with rates of 62-85% reported in loan repayment research reviewed by Mashatola and Darroch (2003). The –2LL (log of the likelihood) statistic of 22.504 with a χ^2 distribution and 33 degrees of freedom has an observed probability level of close to 0.75, indicating a good model fit to the data.

Attempts to improve the logit model by estimating the determinants of loan repayment within a simultaneous-equation model that specifies the interrelationships between the four components of entrepreneurial quality in Figure 4 did not generate meaningful results. This result, and the lack of statistically significant coefficients for the PREF component, MOTN element, and PCs in the logit model may be due to a lack of variability in some of the sample data, or the relatively small sample size, as multicollinearity was not identified as a problem in the data (Gujarati, 2003). For example, owners' scores for their perceptions about the individual external constraints were quite similar across all strata. Further research is needed to study the impact of business type on loan success, as Harvester contractors in this sample had relatively lower loan default rates. The next section examines the relationships between the four components of Guzman's model of entrepreneurial quality and presents the results of chi-square tests for independence between the four components.

4.3 Chi-square tests for independence between the components of entrepreneurial quality

A chi-square test for independence between two variables is based on a contingency table that summarizes the measurements on these variables for each case in a sample survey (Mirer, 1983). Based on the frequency proportions observed in the data, expected frequencies can be predicted on the assumption that the two variables are independent of each other. A chi-square test statistic, χ^2, value can then be calculated by equation (7) as:

$$\chi^2 = \Sigma (n_k - p_k)^2 / p_k \qquad (7)$$

where n_k = the absolute frequency of observations in category k, and p_k = the number of cases predicted to be in the k^{th} category. For a contingency table of $(r - 1)(c - 1)$ degrees of freedom, where r = the number of rows and c = the number of columns in the main body of the contingency table, the null hypothesis of independence is tested by comparing the estimated χ^2 value to the critical χ^2 value at the 1%, 5% and 10% levels of significance. If the estimated value exceeds the critical value, the null hypothesis of independence is rejected (Mirer, 1983). Relationships between the preference for working as self-employed, the type of entrepreneurial motivation, and the capacity for energizer behaviours were tested using the 44 SMME agribusiness owners' responses to Question 1, Question 2 and Question 3 in Appendix C on page 75.

4.4 Results of chi-square tests for independence

Table 12 reports the test for independence between motivation type and preference for working as self-employed. The hypothesis of independence between these two components of entrepreneurial quality is rejected at the 2.2% level of statistical significance. Intrinsically motivated entrepreneurs in the sample would prefer to work as self-employed, while it seems that only the extrinsically motivated owners in the sample would work as an employee rather than for him/herself at their current income level.

Table 12: Relationships between motivation type and the preference for working as self-employed by agribusiness SMME owners, KwaZulu-Natal, 2003-2004 (n=44)

	n = 38	n = 6			
	Prefer to work as self-employed (%)	Prefer to work as employee (%)	χ^2 value	df	Significance level for χ^2
Type of motivation					
Intrinsic	50	0	5.280	1	0.022**
Extrinsic	50	100			

Note: ** indicates statistical significance at the 5% level; df denotes degrees of freedom.

Table 13 presents tests for independence between the five energizer behaviours, and the preference for working as self-employed. The hypothesis of independence is rejected at the 10% level of significance for the preference for working as self-employed and an agribusiness SMME owner having devised a new product or service since start-up, having compiled budgets for the business since start-up, the desire to compile budgets for the business in the future, and the desire to train employees in the future. This implies that there is a degree of dependence between the preference for working as self-employed and the capacity for innovation, planning and a 'venturesome' spirit.

Tests for independence between the same energizer behaviours and the nature of an agribusiness SMME owner's motivation are given in Table 14. There is a high degree of dependence between being an intrinsically motivated agribusiness SMME owner and the ability to plan by compiling budgets. The relationship between innovation and intrinsic motivation is statistically significant only at the 11% level, and there are no other statistically significant relationships between intrinsic motivation and the other energizer behaviours. Overall, the above Chi-square tests show some support for Guzman's hypothesis that entrepreneurs with a preference for working as self-employed tend to be intrinsically motivated and have a capacity for innovation, a desire to plan, and a venturesome spirit.

Table 13: Relationship between energizer behaviors and the preference for working as self-employed by agribusiness SMME owners, KwaZulu-Natal, 2003-2004 (n=44)

		n = 38	n = 6			
		Prefer to work as self-employed (%)	Prefer to work as employee (%)	χ^2 value	df	Significance level for χ^2
Behaviours derived from ambition						
Have you expanded you business since start up?	Yes	82	100			
	No	18	0	1.314	1	0.252
Do you plan to expand your business in the next year?	Yes	84	67			
	No	16	33	1.072	1	0.300
Behaviours derived from innovation						
Have you devised a new product or service since start-up?	Yes	61	100			
	No	39	0	3.593	1	0.058*
Do you plan to market a new product or service in the next year?	Yes	53	83			
	No	47	17	0.275	1	0.600
Behaviours derived from a spirit of collaboration						
Have you entered a formal agreement with an industry player since start-up?	Yes	74	67			
	No	26	33	0.129	1	0.720
Do you plan to enter a formal agreement with and industry play in the next year?	Yes	58	50			
	No	42	50	1.562	1	0.211
Behaviours derived from a desire to plan						
Have you compiled budgets for your business since start-up?	Yes	92	67			
	No	8	33	3.329	1	0.068*
Do you plan to draw up a budget for your business in the next year?	Yes	95	67			
	No	5	33	4.940	1	0.026**
Behaviours derived from a 'venturesome' spirit						
Have trained any employees since start-up?	Yes	84	67			
	No	16	33	1.072	1	0.300
Do you plan to train any employees in the next year?	Yes	68	33			
	No	32	67	2.757	1	0.097*

Note: ** and * indicate statistical significance at the 5% and 10% levels, respectively; df denotes degrees of freedom.

Table 14: Relationship between energizer behaviors and motivation type for agribusiness SMME owners, KwaZulu-Natal, 2003-2004 (n=44).

		n = 19	n = 25			
		Intrinsic motivation (%)	Extrinsic motivation (%)	χ^2 value	df	Significance level for χ^2
Behaviours derived from ambition						
Have you expanded you business since start up?	Yes	15	22			
	No	4	3	0.661	1	0.416
Do you plan to expand your business in the next year?	Yes	15	21			
	No	4	4	0.185	1	0.667
Behaviours derived from innovation						
Have you devised a new product or service since start-up?	Yes	10	19			
	No	9	6	2.624	1	0.105
Do you plan to market a new product or service in the next year?	Yes	10	15			
	No	9	10	0.239	1	0.625
Behaviours derived from a spirit of collaboration						
Have you entered a formal agreement with an industry player since start-up?	Yes	12	20			
	No	7	5	1.544	1	0.214
Do you plan to enter a formal agreement with and industry play in the next year?	Yes	11	14			
	No	8	11	0.016	1	0.900
Behaviours derived from a desire to plan						
Have you compiled budgets for your business since start-up?	Yes	19	20			
	No	0	5	4.287	1	0.038**
Do you plan to draw up a budget for your business in the next year?	Yes	16	21			
	No	3	4	3.344	1	0.067*
Behaviours derived from being 'venturesome'						
Have trained any employees since start-up?	Yes	16	20			
	No	3	5	0.129	1	0.720
Do you plan to train any employees in the next year?	Yes	13	15			
	No	6	10	0.331	1	0.565

Note: ** and * indicate statistical significance at the 5% and 10% levels, respectively; df denotes degrees of freedom.

CONCLUSIONS

Agribusiness SMME's in KwaZulu-Natal (KZN) can potentially stimulate employment growth, and thereby help to reduce the levels of income inequality and poverty in the province. The literature review in Chapter 1 describes the significance of promoting the growth of existing SMMEs, as opposed to an increase in SMME start-ups that are usually micro, survivalist enterprises. The latter enterprises typically have low productivity and, while they may alleviate poverty, are less effective in generating investment capital to boost economic development. Increased employment levels resulting from SMME start-ups usually reflect supply-push factors, while increased employment levels resulting from SMME expansion usually reflect demand-pull forces. Supply-push forces include population growth or a decrease in agricultural returns, while demand-pull forces include increasing productivity of enterprises and buoyant demand. The challenge for policy makers at local and provincial government level, and financiers, therefore, is to encourage the net expansion of existing SMMEs rather than the emergence of survivalist enterprises.

The results of this study show that barriers to agribusiness SMME survival and growth in KZN result from socio-economic, institutional and firm-level constraints. A stratified random sample of 44 agribusiness SMME owners in KZN during October 2003 and February 2004 perceived that a lack of government support for agribusiness SMMEs was the major overall constraint to business survival and growth. This results partly from the perception that SMMEs have to comply with complex legislation, including VAT administration and registration, and labour and minimum wage laws. Many of these owners also consider that they lack the capacity or resources to comply with this legislation. Lack of access to finance is also perceived as a major constraint, despite 70% of the study respondents having over five years experience in their current business, and 40% having a tertiary qualification. Further analysis identified eight dimensions of the owners' perceived constraints on agribusiness SMME survival and growth in KZN, namely: a lack of access to services; funding constraints at start-up; management capacity in the enterprise; access to tender contracts; compliance costs associated with VAT and labour legislation; liquidity stress; lack of collateral; and lack of institutional (government

and private sector) support. A lack of collateral and access to services seemed to affect the Retailer stratum relatively more, while Speculators considered lack of capital at start-up to be their major constraint. Harvester contractors and Processors seemed to be most affected by compliance costs, while Processors were especially prone to liquidity stress. These results support findings by Wynne and Lyne (2003), which imply that small enterprise growth is constrained by poor access to credit, relatively high transactions costs, and unreliable local markets.

Many constraints perceived by the 44 agribusiness SMME owners in KZN arise because their businesses are situated in remote rural areas. This reduces access to infrastructure services such as good roads, telecommunications and electricity, exacerbates the problem of a lack of own transport, and increases exposure to crime. These results support findings by Fenwick and Lyne (1999), Matangul *et al.* (2001), and Klitgaard and Fitschen (1997). The policy implication is that SMME survival rates and growth rates could be increased by providing, or improving the quality of, appropriate infrastructure services in rural areas. This may stimulate markets outside of urban areas by decreasing transaction costs. Lack of finance at business start-up is associated with a SMME's inability to attract skilled labour, purchase sufficient technology, and afford business premises close to their suppliers. Difficulty in accessing finance results from formal lending institutions being averse to financing smaller loans due to relatively high administration and information costs in the absence of collateral. To help overcome this constraint, potential financiers that want to increase access by SMMEs to capital markets could research further how to develop mechanisms to encourage savings mobilization, or to develop innovative loan products to suit the cash flows of agribusiness SMMEs and improve the risk-profiles of collateral poor entrepreneurs.

The SMME owners' ability to manage the competitive forces in their product markets could be improved by the provision of accessible and appropriate skills training services, or appropriate training at school and tertiary level. Such training could emphasize the need to understand the threats and opportunities posed by potential new entrants into product markets, competitors in the same market, and substitutes in other industries.

Public and private sector institutions could also facilitate access to tender contracts, by, for example, involving neutral representatives from the private sector in the tender process to promote transparency (and good governance) in respect of resource allocation. The costs associated with complying with legislation such as the payment of skills levies, VAT registration and payment, and labour issues could be reduced by reviewing processes for agribusiness SMMEs to access skills grants, and making small business representation on labour bargaining councils more effective. This would enable small businesses to provide the negotiations in these councils with more insight into the effects of work agreements and service conditions on SMMEs. The implications of allowing SMMEs to elect to pay income tax and VAT on a cash basis needs further research, as this may reduce cash-flow stress resulting from paying VAT at the point of invoice and from interest lost before the receipt of VAT refunds. Liquidity stress due to a lack of access to expansion capital, and compliance with VAT and the payment of skills levies, could be mitigated by developing more flexible loan products, such as graduated payment loans; these could also improve the risk profile of cash and collateral-strapped entrepreneurs. Lack of secure title deeds compounds the problem of insufficient start-up capital by reducing business collateral available for loans.

A perceived lack of both government and private sector support indicates a need to identify how to develop more constructive business linkages between agribusiness SMMEs and public or private institutions in KZN to increase market access and skills transfer. Study results also show that business opportunities perceived by agribusiness entrepreneurs depend on the availability of information and the entrepreneur's perception of his/her management skills, proximity to markets and the bargaining power of suppliers. Further research for policy purposes is needed to determine if the constraints on business survival and growth identified in this dissertation also apply to agribusiness SMMEs in other provinces in SA.

Given the relative importance of SMME expansion as opposed to SMME start-up or emergence, Guzman and Santos' (2001) distinction between entrepreneurial emergence and entrepreneurial quality is very relevant to this study. An estimated logit model of the

effects of entrepreneurial quality on business success for the 44 agribusiness SMMEs (using loan repayment as a proxy for success) shows that strong energizer behaviours (such as current and planned business expansion and staff training), more years of business experience, and family assistance to become an entrepreneur, promote loan repayment, while a perceived lack of access to electricity (a proxy for access to services) negatively affects loan repayment. Access to training and electricity services are external factors affecting entrepreneurial quality and business success. The overall model correct classification rate of 90% - 92% of non-defaulters and 88% of loan defaulters - compares well with rates reported in other studies of loan repayment.

Chi-square tests for independence show that among this sample of 44 agribusiness SMME owners in KZN, relatively more intrinsically motivated owners would prefer to work as self-employed. This preference also increases with an entrepreneur's capability of executing energizer behaviours derived from innovation and a desire to plan, which may translate into the devising of new products or services, drawing up budgets for the business, and providing formal or informal training to employees. Intrinsically motivated entrepreneurs also seem more inclined to plan into the future for their businesses. These results provide some support for Guzman's (1994) hypothesis of the links between these components of entrepreneurial quality.

Public and private financial institutions could supplement their current loan evaluation policies by giving more attention to the applicant's capacity for energizer behaviours and extent of family assistance in becoming an entrepreneur. This may reduce adverse selection, and improve access to finance by agribusiness SMMEs and help to ease a major perceived constraint on their survival and growth. Nieuwenhuizen and Kroon (2003) also suggested the need for SA financial institutions to assess the costs and benefits of incorporating more information about *personal characteristics* into their loan evaluation procedures, but did not identify as wide a range of energizer behaviours, or the potential role of family assistance in promoting SMME success. The policy implication of the effects of training and lack of access to electricity is that SMME survival and growth could be promoted by providing accessible and appropriate skills training services

- perhaps at school and tertiary level - and by providing, or improving the quality of, appropriate infrastructure. This raises the obvious question of how these measures would be financed. Further research for policy purposes is needed to determine if the effects of entrepreneurial quality on business success identified in this paper apply to agribusinesses in other provinces in SA. Further research could also be directed at validating these results on a larger sample of agribusiness SMMEs in KZN, and at identifying which explanatory variables influencing loan repayment performance are relatively more important from a lending institution's perspective by enterprise type.

SUMMARY

Agribusiness SMMEs can help to overcome the problems of unemployment, poverty and income inequality in KwaZulu-Natal (KZN) if the constraints to SMME survival and growth can be identified and addressed. One major constraint is a lack of access to finance - commercial banks are hesitant to finance SMMEs as they lack information about the nature of the credit risks to which they might be exposed, and are often reluctant to accept the relatively high administrative costs associated with relatively smaller loans. The spatial distance of rural SMMEs' from urban centers within municipal boundaries results in a lack of access to services, and to more lucrative markets. Owners of agribusiness SMMEs also perceive that government legislation relating to small businesses constrains their business survival and growth. These problems could in part be addressed by identifying the dimensions of socioeconomic, institutional and firm level constraints faced by agribusiness SMMEs in KZN, and the role of entrepreneurial quality in determining the success of agribusiness SMMEs. This would provide policy makers and the private sector with information to craft and implement appropriate strategies to increase SMME survival and growth rates.

The first aim of this study, therefore, was to identify the major dimensions of the constraints that agribusiness SMME owners in KZN perceive hinder their business survival and growth, using Principal Component Analysis (PCA) of 36 potential socioeconomic, institutional and firm level constraints identified from past local and international research. The second aim was to quantify the relationship (if any) between entrepreneurial quality and agribusiness SMME success, using an empirical logit model. This analysis was adapted from a model linking entrepreneurial quality to business success developed by Guzman and Santos (2001). Loan repayment performance by the study agribusiness SMMEs was used as a proxy for business success. Four components of entrepreneurial quality are derived from the Energizer sub-function in this model: the preference for working as self-employed - a necessary but not sufficient condition to be a quality entrepreneur; the type of motivation (intrinsic or extrinsic) that induces an individual to become an entrepreneur, and the existence of certain energizer behaviours; factors in the entrepreneur's personal environment (such as education, business

experience and family influence) that determine the entrepreneur's abilities and attitudes; and factors in the entrepreneur's global (external) environment (these provide the entrepreneur with information and business opportunities).

This study used a stratified random sample survey of 44 agribusiness SMME owners financed by the Ithala Development Finance Corporation in KZN during October 2003 and February 2004 to obtain data. The sample was stratified into Harvester contractors, Processors, Retailers and Speculators using a sampling fraction of 20% for each stratum drawn from Ithala's 266 agribusiness SMME clients at the time. Questions on potential constraints to business survival and growth and the four components of entrepreneurial quality were then presented to the sample respondents during personal interviews. Respondents had to rank each of 36 potential constraints from one (minor constraint) to five (major constraint), and to rank themselves on the various aspects of entrepreneurial quality such as factors of the personal environment; motivation type and energizer behaviours; preference for working as self-employed; attitudes and abilities; and perceptions regarding potential business opportunities and the availability of information regarding such opportunities. Their rankings of the 36 potential constraints to business survival and growth were used to proxy the impact of factors of the global environment.

The 44 agribusiness SMME owners perceived that a lack of government support and lack of access to start-up and expansion capital were the major barriers to business survival and growth. Cash flow and liquidity stress resulted from having to comply with VAT administration and registration, and complex labour legislation. The PCA identified 12 dimensions of the 36 potential constraints, namely: lack of access to services; lack of capital at start-up; management capacity in the enterprise; lack of collateral; lack of access to tender contracts; and lack of government and private sector support. A lack of collateral and lack of access to services seemed to affect the Retailer stratum relatively more, while Speculators considered lack of capital at start-up as their main constraint. Harvester contractors and Processors seemed to be most affected by compliance costs, while Processors were especially prone to liquidity stress.

Ordinary Least Squares regression analysis showed that perceptions of local business opportunities are influenced by owner perceptions of the threat of new entrants to their product market and the strong bargaining power of their suppliers, while perceived provincial business opportunities were affected by owner perceptions of the strong bargaining power of their suppliers, proximity to their markets, and perceived international business opportunities. Information on business opportunities was related to owner perceptions of government support for the SMME sector, and ratings of his/her own management skills.

An empirical logit model estimated that stronger energizer behaviours (such as current and planned business expansion and staff training), more years of business experience, and family assistance to become an entrepreneur, promote loan repayment, while a perceived lack of access to electricity (a proxy for lack of access to services) negatively affects loan repayment. Chi-square tests also showed that SMME agribusiness owners in KZN with a preference for working as self-employed had intrinsic motivation and were more likely to adopt the energizer behaviours.

The study results suggest that the development of appropriate infrastructure and training services, innovative loan products to address cash flow and collateral issues, more transparent tendering processes, policies to reduce the cost of compliance with VAT and labour legislation affecting agribusiness SMMEs, and more focus on the personal characteristics of credit applicants, are some of the solutions that could help to promote the future success of agribusiness SMMEs in KZN. Further research is needed to validate these results on a larger sample of agribusiness SMMEs, and to estimate if the effects of entrepreneurial quality on business success identified in this study apply to agribusiness SMMEs in other provinces in South Africa. The implications of allowing SMMEs to elect to pay VAT on a cash basis should also be examined.

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Appendix A: Questionnaire used to survey owners' perceptions of factors that constrain agribusiness SMME survival and growth in KwaZulu-Natal, 2003-2004

Rate the following aspects on a scale of 1 (minor constraint) to 5 (major constraint)	Minor constraint				Major constraint
	1	2	3	4	5
Access to electricity	□	□	□	□	□
Access to water	□	□	□	□	□
Access to good roads	□	□	□	□	□
Access to telecommunications	□	□	□	□	□
Access to postal services	□	□	□	□	□
Crime	□	□	□	□	□
Insufficient start-up capital	□	□	□	□	□
Distance from potential buyers	□	□	□	□	□
Distance to suppliers	□	□	□	□	□
Lack of contacts in your industry and area	□	□	□	□	□
Lack of own transport	□	□	□	□	□
Access to expansion capital	□	□	□	□	□
Complex labour legislation	□	□	□	□	□
Paying a skills levy	□	□	□	□	□
Managing employee UIF contributions	□	□	□	□	□
Complying with minimum wage legislation	□	□	□	□	□
The Forestry Act	□	□	□	□	□

Too many rules and regulations	□	□	□	□	□
Insufficient property rights	□	□	□	□	□
VAT or taxation issues	□	□	□	□	□
Insufficient government support for agribusiness SMMEs	□	□	□	□	□
Insufficient private sector support for agribusiness SMMEs	□	□	□	□	□
Access to skills training	□	□	□	□	□
Too few customers for your product	□	□	□	□	□
Access to tender contracts	□	□	□	□	□
Scarce information about the availability of tenders	□	□	□	□	□
Lack of management skills	□	□	□	□	□
Bargaining power of buyers	□	□	□	□	□
Bargaining power of suppliers	□	□	□	□	□
Threat of new entrants to your product(s) market(s)	□	□	□	□	□
Threat from substitute products in other industries	□	□	□	□	□
Rivalry from competing sellers	□	□	□	□	□
Insufficient technology in your business	□	□	□	□	□
Low quality of labour	□	□	□	□	□
Inadequate business premises	□	□	□	□	□

Appendix B: Questionnaire used to survey owners' perceptions of business opportunities, and information available on business opportunities, for agribusiness SMMEs in KwaZulu-Natal, 2003-2004

To what extent do you agree with the following statements:	Strongly agree (4)	Agree (3)	Disagree (2)	Strongly disagree (1)
Local business opportunities exist for me (within your municipal boundary) (LOCOPP)	☐	☐	☐	☐
Provincial business opportunities exist for me (outside your municipal boundary) (PROVOPP)	☐	☐	☐	☐
National business opportunities exist for me (in other provinces) (NATOPP)	☐	☐	☐	☐
International business opportunities exist for me (INTERNOPP)	☐	☐	☐	☐
Information on any potential business opportunities available to me is available and easily obtainable (INFO)	☐	☐	☐	☐

Appendix C: Questions used to identify the four components of entrepreneurial quality for agribusiness SMME owners in KwaZulu-Natal, 2003-2004

Question 1: Preference for working as self-employed				
	Would you be willing to change your work as an entrepreneur for a position as an employee with a similar income level?	☐ Yes	☐ No	
Question 2: Motivation type				
	Which statement best describes the reason why you became an entrepreneur?		Comments:	
a.	I have always felt a special need or desire to develop this activity, regardless of its economic implications	☐		
b.	I felt that it was impossible for me to obtain career satisfaction as an employee	☐		
c.	I think that working for myself will enable me to become wealthy	☐		
d.	I became an entrepreneur to overcome a distressing economic situation, e.g. unemployment, loss of family household income due to death or disease	☐		
e.	I was required to continue the family business to avoid its closure or acquisition by an outside party	☐		
Question 3: Energizer behaviours				
a.	Have you carried out any enterprise expansion since starting your business?	☐ Yes	☐ No	Details:
	Have you planned to carry out any enterprise expansion in the following year?	☐ Yes	☐ No	
b.	Have you devised/marketed a new product or service for your customers since starting your business?	☐ Yes	☐ No	
	Have you considered devising/marketing a new product or service for your customers during the following year?	☐ Yes	☐ No	

c.	Have you entered an agreement with another participant in your industry since starting your business? (Formal/informal)	☐ Yes	☐ No	
	Do you plan to enter an agreement (formal or informal) with another participant in your industry during the following year?	☐ Yes	☐ No	
d.	Have you drawn up a budget since starting your business?	☐ Yes	☐ No	
	Have you drawn up a budget for the following year?	☐ Yes	☐ No	
e.	Have you implemented any formal training system for you employees since starting your business? E.g. sending them to training, or training them by yourself.	☐ Yes	☐ No	
	Do you plan to implement a formal training system for your employees during the following year?	☐ Yes	☐ No	

Question 4: Factors of the entrepreneur's personal environment

	What level of formal education did you attain?	Less than Std 6 ☐	Std 6 ☐	Std 8 ☐	Matric ☐	Cert ☐	Dipl. ☐	Degree ☐
	How much paid work experience have you had in the sector or business you now operate in?	Less than a year ☐			One to five years ☐		More than five years ☐	
	Has it benefited you in your current business? If yes, how?	☐ Yes	☐ No	Details:				
	Have you had any other paid work experience?	☐ Yes	☐ No	Details:				
	Has it benefited you in your current business?	☐ Yes	☐ No	Details:				
	Were/are your parents entrepreneurs?	☐ Yes	☐ No	Details:				
	Is entrepreneurship considered a worthwhile occupation in your family?	☐ Yes	☐ No	Details:				
	Have your family assisted you in becoming an entrepreneur?	☐ Yes	☐ No	Details:				
	Have they provided with you with financial support? e.g. start up capital, loans to cover unforeseen costs	☐ Yes	☐ No	Details:				

	Have they provided you with sound business advice?	☐ Yes	☐ No	Details:
	Have they motivated you to become an entrepreneur?	☐ Yes	☐ No	Details:
	Have they assisted you in making helpful contacts in your industry?	☐ Yes	☐ No	Details:
	Have they provided labour that would otherwise have been unobtainable or more expensive?	☐ Yes	☐ No	Details:

Question 5: Attitudes and abilities

	Rank your skills in the following activities relative to your competitors from 5 (excellent) to 1 (poor):	Rank	Comments:
	Identifying new potential products and services to market to my customers	☐	
	Evaluating the potential costs and benefits of business opportunities	☐	
	Communicating with your employees	☐	
	Communicating with your suppliers and customers	☐	
	Communicating with corporate/financial intermediaries	☐	
	Negotiating deals with suppliers or financial intermediaries	☐	

APPENDIX D: Survey data capture template

1. Preference for working as self employed

- Derives from **Promoter sub-function** of the Booster sphere of entrepreneurial function which influences **entrepreneurial emergence.**
- A **necessary but not sufficient** condition to be an entrepreneur (first component of entrepreneurial quality).

- **Question 1** to assess preference for working as **self-employed** (Yes = 1, No = 0)
- Keywords: independence, authority, hierarchy

1.	Would you be willing to change your work as an entrepreneur for a position as an employee with a similar income level?	☐ Yes	☐ No	Score:

2. Exponents of entrepreneurial quality

- Two **exponents** deriving from the **Energizer** sub-function of the **Booster** sphere of entrepreneur which influences entrepreneurial **quality.**

2.1 Motivation

- Affects the **development** of **psychological processes** associated with quality entrepreneurs.

- **Question 2.1** to assess the type of primary **motivation.**
  - Intrinsic (a and b) = 1
  - Extrinsic (c, d, e) = 0
  - (Model of Entrepreneurial Intentions: Herron and Robinson, 1993; Kruger and Casrud, 1993)
- Keywords: aims in life, goals, unemployment, survival, personal satisfaction.

2.1	Statement:	Ranking:	Extra Comments:	Score:
	a. I have always felt a special need or desire to develop this activity, regardless of its economic implications	☐	•	
	b. I felt that it was impossible for me to achieve success in my career as an employee	☐	•	

	c. I think that working for myself will enable me to become exceptionally wealthy	□	•	
	d. I became an entrepreneur to overcome a distressing economic situation, e.g. unemployment, loss of family household income due to death or disease	□	•	
	e. I was required to continue the family business to avoid its closure or acquisition by an outside party	□	•	

2.2 Energizer Behaviours

- Affects the **materialization** of **psychological processes** associated with quality entrepreneurs.

- **Question 2.2**. to assess the execution of the **Energizer behaviours:**
  - Ambition (a). Key words: market position, achievement/motivation, career
  - Capacity to innovate (b). Key words: product development, market research.
  - Spirit of collaboration (c). Key words, deals, partnerships, synergies)
  - Other energizer behaviours (d). Key words: Plan, expect, prepare.
    - d.i. planning
    - d.ii. training employees (Chell, 1986; Schumpeter, 1950)

2.2.	a. Have you carried out any enterprise expansion since starting your business?	□ Yes	□ No	Comments:
	Have you planned to carry out any enterprise expansion in the following year?	□ Yes	□ No	
	b. Have you devised/marketed a new product or service for your customers since starting your business?	□ Yes	□ No	
	Have you considered devising/marketing a new product or service for your customers during the following year?	□ Yes	□ No	
	c. Have you entered an agreement with another participant in your industry since starting your business? (Formal/informal)	□ Yes	□ No	
	Do you plan to enter an agreement with another participant in your industry during the following year? (Formal/informal)	□ Yes	□ No	

	d.i. Have you drawn up a budget since starting your business?	☐ Yes	☐ No	
	Have you drawn up a budget for the following year?	☐ Yes	☐ No	
	d.ii. Have you implemented any formal training system for you employees since starting your business? e.g. sending them to training or training them yourself.	☐ Yes	☐ No	
	Do you plan to implement a formal training system for your employees during the following year?	☐ Yes	☐ No	

	The answer is Yes for the following year	The answer is No for the following year
The answer is Yes since the business started	Score 3	Score 2
The answer is No since the business started	Score 1	Score 0

3. Factors of the entrepreneurial environment

- Two **factors** of the **Energizer** sub-function of the **Booster** sphere of entrepreneur which influences entrepreneurial **quality**.
- Directly affect the two exponents of the Energizer sub-function.
- Arise from entrepreneur's interaction with his/her immediate environment.

3.1 Factors of the personal environment of the entrepreneur

- Factors of the personal environment may influence **attitudes and abilities** that affect motivation.

  - **Question 3.1.1.** to assess entrepreneur's **attitudes and abilities:** Score 5 for rank 5, score 1 for rank 1
    - **Identifying** new products and opportunities (a).
    - Skills at **critical thinking** and **evaluating opportunities** (b).
    - **Negotiating** or persuasive **communication skills** (c).

3.1.1	Rank your skills in the following relative to your competitors from 5 (excellent) to 1 (poor)	Rank	Details:	Score: (Rank 5 scores 5, rank 1 scores 1)
	a. Identifying new potential products and services to market to my customers	□		
	b. Evaluating the potential costs and benefits of business opportunities	□		
	c. Communicating with your employees	□		
	Communicating with your suppliers and customers	□		
	Communicating with corporate/financial intermediaries	□		
	Negotiating deals with suppliers or financial intermediaries	□		

- **Question 3.1.2** To assess:
  - the factors of the **personal environment.**
  - their **impact** on the development of **attitudes and abilities.**

- Factors of the personal environment:
  - Education (a): Score 7 (less than Std 6) to 14 (degree).
  - Professional experience (b): score 1 for less than one year, 2 for 2-5 years, and 3 for more than five years in current industry. Key words: experience, worked for, learnt about, developed skills.
  - Influence of the entrepreneurs family (c): score 1 = Yes, 0 = No. Key words: support, influence, loan, family business, finance, employment.

3.1.2. Score:	a.What level of formal education did you attain?	Less than Std 6 □	Std 6 □	Std 8 □	Matric □	Cert. □	Dipl □	Degree □
	b.How much paid work experience have you had in the sector /business you now operate in?	Less than a year □		More than a year □		Less than 5 years □		More than five years □
	Has it benefited you in your current business? If yes, how?	□ Yes	□ No	Details:				
	Have you had any other paid work experience?	□ Yes	□ No	Details:				
	Has it benefited you in your current business?	□ Yes	□ No	Details:				
	c. Were/are your parents entrepreneurs?	□ Yes	□ No	Details:				
	Is entrepreneurship considered a worthwhile occupation in your family?	□ Yes	□ No	Details:				

	Have you family assisted you in becoming an entrepreneur?	☐ Yes	☐ No	Details:
	Have they provided with you with financial support? e.g. start up capital, loans to cover unforeseen costs	☐ Yes	☐ No	Details:
	Have they provided you with sound business advice?	☐ Yes	☐ No	Details:
	Have they motivated you to become an entrepreneur?	☐ Yes	☐ No	Details:
	Have they assisted you in making helpful contacts in your industry?	☐ Yes	☐ No	Details:
	Have they provided labour that would otherwise have been unobtainable or more expensive?	☐ Yes	☐ No	Details:

3.2 Factors of the global environment of the entrepreneur.

- Factors of the **global environment** may influence **opportunities and information** which affect the preference for working as self employed, type of entrepreneurial motivation, the energizer behaviours.
- Question 3.2.1. to assess: **existence of opportunities and information:** Score 4 for rank Strongly agree, and score 1 for Strongly disagree.

3.2.1.	To what extent do you agree with the following statements:	Strongly agree (score 4)	Agree (score 3)	Disagree (score 2)	Strongly disagree (score 1)	Score:
	Local business opportunities exist for me	☐	☐	☐	☐	
	Provincial business opportunities exist for me	☐	☐	☐	☐	
	National business opportunities exist for me	☐	☐	☐	☐	
	International business opportunities exist for me	☐	☐	☐	☐	

	Information on business opportunities is available and easily obtainable: Local opportunities Provincial opportunities National opportunities International opportunities	 □ □ □ □	 □ □ □ □	 □ □ □ □	 □ □ □ □	

Question 3.2.2. to assess:

- the **factors** of the global environment
  - socio-cultural factors (a)
  - political institutional factors (b)
  - Escalante's mangement (c.i), marketing (porters 5-forces: c.ii), operational (c.iii.) and financial (c.iv.) barriers to business survival.
- their impact on **opportunities and information**.

3.2.2.	In your opinion, what are the major constraints hindering your business survival or growth? Rate the following aspects on a scale of 1 (minor constraint) to 5 (major constraint)	Minor constraint			Major constraint		Score
		1 Score 5	2	3	4	5 Score 1	
	a. Availability of electricity	□	□	□	□	□	
	Availability of water	□	□	□	□	□	
	Roads	□	□	□	□	□	
	Availability of telecommunications	□	□	□	□	□	
	Postal services	□	□	□	□	□	
	Crime	□	□	□	□	□	
	Proximity to buyers	□	□	□	□	□	

	Proximity to suppliers	□	□	□	□	□	
	Lack of 'contact networks' in your area	□	□	□	□	□	
	Lack of own transport	□	□	□	□	□	
	b. Access to start up capital	□	□	□	□	□	
	Complex labour legislation	□	□	□	□	□	
	Paying a skills levy	□	□	□	□	□	
	UIF contributions on your employees' behalf	□	□	□	□	□	
	Effective minimum wages on the profitability of the business	□	□	□	□	□	
	The Forestry Act	□	□	□	□	□	
	Too many laws	□	□	□	□	□	
	Inadequate property rights	□	□	□	□	□	
	VAT or taxation issues	□	□	□	□	□	
	Lack of institutional support for SMMEs	□	□	□	□	□	
	Lack of public skills training facilities	□	□	□	□	□	
	Too few customers for your product	□	□	□	□	□	
	Difficulty in obtaining tenders	□	□	□	□	□	
	Lack of information about tenders	□	□	□	□	□	
	c.i. Skill deficiencies: Managerial Skills Business Skills	□	□	□	□	□	

	c.ii. Bargaining power of buyers	□	□	□	□	□	
	Bargaining power of suppliers	□	□	□	□	□	
	Threat of new entrants to your product market	□	□	□	□	□	
	Threat from substitute products	□	□	□	□	□	
	Rivalry from competing sellers	□	□	□	□	□	
	c.iii. Low quality of labour	□	□	□	□	□	
	Business premises	□	□	□	□	□	
	Limited technology	□	□	□	□	□	
	Lack of access to Start up capital	□	□	□	□	□	
	Cash-flow stress	□	□	□	□	□	

Appendix E: Characteristics of agribusiness SMME survey respondents, KwaZulu-Natal, 2003-2004

E.1 Loan type by stratum (n=44)

Loan type	Number of respondents				
	Harvester contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	Percentage
Land and fixed improvements	7	3	4	1	34
Equipment	15	3	1	2	48
Working capital or production loan	1	2	3	2	18
Total	**23**	**8**	**8**	**5**	**100**

E.2. Loan size, and number of employees by stratum (n=44)

Item	Harvester Contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	Sample mean
Average ALA	R623,261	R259,243	R731,515	R134,518	R421,600
Average LC	R728,988	R329,316	R768,405	R399,475	R943,475
Average ALA/ Average LC	1.17	1.27	1.05	2.97	1.61
Average Total Employees	47	13	16	7	30

E. 3. Age and gender of respondents by stratum (n=44)

Age	Harvester contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	Percentage
21 – 30 years	0	0	0	1	2
31 – 40 years	3	2	1	3	21
41 – 50 years	13	3	4	0	45
51 – 60 years	7	3	3	1	32
Total	**23**	**8**	**8**	**5**	**100**
Gender					
Female	2	2	3	0	16
Male	21	6	5	5	84
Total	**23**	**8**	**8**	**5**	**100**

E.4. Factors of the agribusiness SMME owners' environments, KwaZulu-Natal, 2003-2004 (n = 44)

Factor	Number of respondents				Percentage
	Harvester contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	
Highest education level of respondents					
Standard 6	3	1	0	0	9
Some high school	4	1	1	0	14
Matric	8	2	3	3	36
Tertiary	8	4	4	2	41
Total	**23**	**8**	**8**	**5**	**100**
Years of experience in current industry					
Less than one	2	2	0	2	14
One to five years	2	3	1	2	18
More than five	19	3	7	1	68
Total	**23**	**8**	**8**	**5**	**100**
Respondents whose parents were entrepreneurs					
	11	6	4	4	59
Respondents whose families had assisted them in becoming an entrepreneur financial, making contacts or labour					
	16	5	5	3	66

E. 5. Commercial features by stratum (n = 44)

Feature	Number of respondents				Percentage
	Harvester Contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	
With book keepers	18	7	4	3	73
Supplementary income	9	3	2	0	32
Making enough income to support self and dependents	14	6	7	4	71

E.6. Owners' energizer behaviours by stratum, KwaZulu-Natal, 2003-2004 (n = 44)

Number of respondents (percentage in parentheses)					
Energizer behaviours	**Harvester Contractors**	**Processors**	**Retailers**	**Speculators**	**Total**
Have expanded their business	18(78)	8(100)	7(88)	5(100)	38(86)
Plan to expand their business	19(83)	7(88)	4(50)	5(100)	35(80)
Devised new products or services to market	15(65)	6(75)	5(63)	2(40)	28(64)
Plan to devise new products or services to market	13(57)	5(63)	3(38)	3(60)	24(55)
Have entered formal agreements with industry players	17(74)	7(88)	6(75)	4(80)	34(77)
Plan to enter formal agreement with industry players	12(52)	8(100)	4(50)	2(40)	26(59)
Have drawn up budgets for their business	19(83)	8(100)	8(100)	4(80)	39(89)
Plan to draw up budgets for their business	22(96)	6(75)	6(75)	4(80)	38(86)
Have trained employees, formally or informally	19(83)	6(75)	8(100)	3(60)	36(82)
Plan to train employees, formally or informally	16(70)	4(50)	3(38)	3(60)	26(59)

E.7. Respondents' loan repayment status, preference for working as self-employed and motivation type, KwaZulu-Natal, 2003-2004 (n = 44)

Number of respondents			
Business type	**Defaulted on loan repayments**	**Who would prefer to work for themselves at their current income level**	**Who are intrinsically motivated**
Harvester contractors (n = 23)	4 (17%)	21 (91%)	9 (39%)
Processors (n = 8)	4 (50%)	7 (88%)	5 (63%)
Retailers (n = 8)	5 (63%)	7 (88%)	4 (50%)
Speculators (n =5)	4 (80%)	3 (60%)	1 (20%)
Total	**17 (39%)**	**38 (86%)**	**19 (43%)**

E.8. Average scores for owners' perceptions of business opportunities, and availability of information, by stratum, KwaZulu-Natal, 2003-2004 (n = 44)

Opportunities and information					
Business type	**Business opportunities exist for me within my TLC boundaries**	**Business opportunities exist for me elsewhere in KZN**	**Business opportunities exist for me throughout SA**	**International business opportunities exist for me**	**Information on business opportunities is available and easily obtainable**
Harvester contractors	3.65	3.30	2.87	2.43	2.52
Processors	3.63	3.63	3.38	2.63	2.75
Retailers	3.88	3.38	3.25	2.88	3.00
Speculators	4.00	3.00	2.20	2.00	3.00
Sample	**3.73**	**3.34**	**2.95**	**2.50**	**2.70**

E.9. Average scores for owners' perceptions of their own business skills, by stratum, KwaZulu-Natal, 2003-2004 (n = 44)

Attitudes and abilities						
usiness Type	**Identifying business opportunities**	**Evaluating potential business costs**	**Communicating with my employees**	**Communicating with my suppliers**	**Communicating with corporate and financial intermediaries**	**Negotiating skills**
rvester ıtractors	3.70	3.78	4.13	4.13	3.74	3.61
ɔcessors	4.38	4.00	3.88	4.25	4.00	4.13
tailers	4.00	4.13	4.25	4.25	3.75	3.75
eculators	3.80	4.20	3.80	4.20	4.00	3.75
mple	**3.89**	**3.93**	**4.07**	**4.18**	**3.82**	**3.75**

Appendix F: Correlation coefficients for perceived business opportunities and respondents' perceptions of factors of their external environments

Variable	Statistic	LOCOPP	PROVOPP	NATOPP	INTEROPP	INFO
LOCOPP	Pearson Correlation	1.000	0.327*	0.101	0.118	0.086
	Sig.[a] (2-tailed)	.	0.030	0.515	0.446	0.581
PROVOPP	Pearson Correlation	0.327*	1.000	0.613**	0.556**	0.100
	Sig. (2-tailed)	0.030	.	0.073	0.000	0.519
NATOPP	Pearson Correlation	0.101	0.613**	1.000	0.676**	0.192
	Sig. (2-tailed)	0.515	0.000	.	0.000	0.212
INTERNOPP	Pearson Correlation	0.118	0.556**	0.676**	1.000	0.438**
	Sig. (2-tailed)	0.446	0.000	0.000	.	0.003
INFO	Pearson Correlation	0.086	0.100	0.192	0.438**	1.000
	Sig. (2-tailed)	0.581	0.519	0.212	0.003	.
Complex labour legislation	Pearson Correlation	0.274	-0.024	-0.075	0.121	0.006
	Sig. (2-tailed)	0.072	0.879	0.630	0.433	0.967
Insufficient Property rights	Pearson Correlation	-0.273	-0.045	0.013	-0.208	-0.228
	Sig. (2-tailed)	0.073	0.772	0.931	0.174	0.137
Bargaining power of suppliers	Pearson Correlation	-0.307*	-0.391**	-0.179	0.041	0.235
	Sig. (2-tailed)	0.043	0.009	0.246	0.792	0.124
Threat of new entrants	Pearson Correlation	-0.301*	-0.137	0.021	-0.022	0.170
	Sig. (2-tailed)	0.047	0.374	0.892	0.888	0.269
Lack of management skills	Pearson Correlation	0.034	-0.320*	-0.202	-0.402**	-0.323**
	Sig. (2-tailed)	0.824	0.034	0.189	0.007	0.032
Competition (rivalry)	Pearson Correlation	-0.073	-0.266	-0.044	-0.448**	0.009
	Sig. (2-tailed)	0.640	0.081	0.777	0.002	0.952
Too many rules and regulation	Pearson Correlation	0.184	0.122	-0.193	0.021	-0.299*
	Sig. (2-tailed)	0.232	0.430	0.208	0.893	0.048
Insufficient government support	Pearson Correlation	-0.208	0.126	-0.034	0.115	-0.316
	Sig. (2-tailed)	0.176	0.413	0.824	0.457	0.036
Inadequate business premises	Pearson Correlation	-0.039	0.153	-0.047	-0.127	-0.356*
	Sig. (2-tailed)	0.801	0.323	0.760	0.412	0.018
Distance from potential customers	Pearson Correlation	0.080	0.357*	0.200	0.227	0.091
	Sig. (2-tailed)	0.604	0.017	0.194	0.138	0.556

Note: [a] Sig represents statistical level of significance.

* Correlation is statistically significant at the 0.05 level (2-tailed)

** Correlation is statistically significant at the 0.01 level (2-tailed)

APPENDIX G: Agribusiness and entrepreneur questionnaire information sheet

Title of study: Factors determining and constraining the survival and early growth of small agribusinesses in KwaZulu-Natal

Investigators: TA Clover
MAG Darroch
Department of Agricultural Economics
School of Agricultural Sciences and Agribusiness
University of Natal

Funding: National Research Foundation

Background and purpose of the study:

The Agribusiness SMME sector has been identified as having considerable potential to generate sustainable livelihoods and to stimulate local economic development.

This study is being conducted to assess the primary constraints on small agribusiness development in KwaZulu-Natal, and to try and quantify some determinants of small business success.

The study has two objectives; firstly, to present small-business enabling policy recommendations to the local, provincial and national governments. Secondly, to boost the availability of finance to small business by increasing financial intermediaries' interest in this sector.

Your participation:

This study defines an entrepreneur as a person who:

- Works for him/herself and not for a company or any other organization i.e. are not paid wages or a salary by any individual other than themselves.
- Derives an income from a business he/she initiated.
- Owns and/or manages a business he/she initiated.
- Contributed or accessed finance in order to initiate the business.

Your status as an entrepreneur qualifies you as a potential case to include in the sample of agribusinesses in this study. Participation is voluntary and involves answering a series of questions relating to your business and yourself. All information you give will be kept strictly confidential; your name or your business will not be identified at any point during the study. You will not be paid for your participation but your responses will help to strengthen the validity of the study's results. The study's results will contribute to improving KwaZulu-Natal's small business environment and increasing the resources available to entrepreneurs. Your time and honest responses will be greatly appreciated. The study is being conducted with the aid of and in conjunction with Ithala Development Finance Corporation, Agribusiness division.

Agreement to participate:

Your decision to answer the following questions will be interpreted as an indication of your agreement to participate in the study. In no way does this waive your legal rights nor release the investigators, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time.

Thank you for your participation in the study. It is greatly appreciated. If you have further questions concerning matters relating to this research, please contact:

Teresa Clover (082 324 7304)
Mr M.A.G. Darroch (033 260 5493)

ENTREPRENEUR AND AGRIBUSINESS DETAILS

Name:	
Age:	
Gender:	
When did you start your business?	
Please give a brief description of your product(s).	
Please identify three core activities your business needs to be competent at in order to generate its product(s) (e.g. A beer brewer must be good at making beer and distributing/selling it).	
Please give a brief description of your customers: with regard to their income group, region etc.	
How many people does your business employ?	
Is the revenue from this business your sole/primary source of income? If yes, is it sufficient? If no, what proportion of your total income do your derive from this business?	

FACTORS AFFECTING THE SURVIVAL, GROWTH AND SUCCESS OF SMALL, MEDIUM AND MICRO AGRIBUSINESSES IN KWAZULU-NATAL

Theresa Ann Clover

Submitted in partial fulfilment of the requirements for the degree of

MASTER OF SCIENCE IN AGRICULTURE
(AGRIBUSINESS)

DISCIPLINE OF AGRICULTURAL ECONOMICS
SCHOOL OF AGRICULTURAL SCIENCES AND AGRIBUSINESS
FACULTY OF SCIENCE AND AGRICULTURE
UNIVERSITY OF KWAZULU-NATAL
DECEMBER 2004

DECLARATION

I hereby certify that, unless specifically indicated to the contrary in the text, this dissertation is the result of my own original work, which has not already been accepted in substance for any degree and is not being submitted in candidature for any other degree.

Signed .....

Theresa A Clover

I hereby certify that the above statement is correct.

Signed .....

Mr MAG Darroch

Supervisor

ABSTRACT

The sustained growth of small, medium and micro enterprises (SMMEs) could help to reduce poverty, income inequality and unemployment problems in KwaZulu-Natal (KZN). Public and private sector institutions can identify policies and strategies to increase the survival and growth rates of SMMEs if they have more information about the factors that constrain business performance, and the link between entrepreneurial quality and enterprise success. The owners of 44 agribusiness SMMEs in a stratified random sample of Ithala Development Finance Corporation (Ithala) clients in KZN were, therefore, surveyed during October 2003-February 2004 to identify what they perceive are constraints on business survival and growth, and how entrepreneurial quality affects business success (using loan repayment performance at Ithala as a proxy for success).

Principal Component Analysis of 36 potential constraints ranked by the survey respondents identified eight dimensions of perceived constraints: A lack of access to services; funding constraints at enterprise start-up; a lack of management capacity in the enterprise; access to tender contracts; compliance costs associated with VAT and labour legislation; liquidity stress; a lack of collateral, and a lack of institutional (government and private sector) support. A lack of collateral and access to services seemed to affect the Retailer stratum relatively more, while Speculators considered lack of capital at start-up to be their major constraint. Harvester contractors and Processors seemed to be most affected by compliance costs, while Processors were especially prone to liquidity stress. Possible solutions to ease these constraints include the provision of appropriate infrastructure and training, development of innovative loan products to address cash flow and collateral issues, more transparent tendering processes, and policies to reduce the costs of compliance with legislation.

An empirical logit model showed that strong energizer behaviours (current and planned business expansion and staff training) that reflect entrepreneurial quality, more business experience, and family assistance to become an entrepreneur, promote loan repayment (success), while a lack of access to electricity and training facilities increase the

probability of loan default. This suggests that more focus on the personal characteristics of credit applicants and (again) the development of appropriate infrastructure and training services could help to promote the future success of agribusiness SMMEs in KZN.

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INTRODUCTION

Poverty, inequality and unemployment have been identified as the three most serious constraints to economic development in South Africa (SA) (Parliament of the Republic of South Africa, 1994). The degree of spatial inequality in SA implies that the development challenges faced by the nine provincial governments differ considerably between provinces, and statistics indicate that the KwaZulu-Natal province (KZN) faces disproportionately large development challenges; for example, in 2000, it was the province with the third highest rate of unemployment (39%) in SA of (KZN Department of Economic Development and Tourism, 2000), and 54% of its population survived on an income below the international poverty threshold of US$1 per person, per day, as identified by the World Bank (2000). Rogerson (1999) and a World Bank Task Team (2000) assert that the promotion of small, medium and micro enterprises (SMMEs) is a key area of employment generation, and that a substantial share of new job creation in SA could be provided by agricultural processing and non-agricultural employment in SMMEs. Recent statistics, however, show that most SMMEs in SA are concentrated at the low end of the enterprise size scale, and exist primarily as black survivalist firms with little capacity for sustained survival or growth (Business Referral and Information Network, 2003).

In this context, research that can identify ways to increase the survival and growth rates of agribusiness SMMEs in KZN can contribute to alleviating poverty, income inequality and unemployment by identifying factors that constrain businesses performance. A lack of access to finance has been identified as a major constraint to SMME survival and growth in SA (Rogerson, 1998; Naude, 1998; GEMINI Survey, 2001; Nieuwenhuizen and Kroon, 2003). Guzman (1994) asserts that the entrepreneurial quality of an SMME owner is also a critical factor affecting an SMME's ability to overcome barriers to survival and achieve sustainable growth. This study, therefore, aims firstly to identify what factors agribusiness SMME owners in KZN perceive constrain business survival and growth; and secondly, to analyze whether entrepreneurial quality affects the success of agribusiness SMMEs in KZN. The study is based on a stratified random sample of 44

agribusiness SMME clients who had active loans with the Ithala Development Finance Corporation (Ithala) in KZN between October 2003 and February 2004. Following Guzman and Santos (2001), entrepreneurial quality is a product of personal factors, psychological processes like the capacity to innovate, and motivation, and factors in the entrepreneur's global (external) environment. To the best of the author's knowledge, this is the first local attempt to study the constraints faced by agribusiness SMME owners in KZN, and the link between entrepreneurial quality and agribusiness SMME success.

Identifying the main constraints to agribusiness SMME survival and growth may provide information that financial intermediaries, local and provincial government institutions, and the private sector, can use to develop appropriate policies and strategies that promote the sustained growth of agribusiness SMMEs in KZN. Results from a quantitative model of the relationship between entrepreneurial quality and the likelihood of agribusiness SMME success in KZN may help formal financial institutions to more accurately assess the credit risk posed by such businesses, and to reduce adverse selection problems (borrowers turn out to be a greater risk than believed when granting a loan) and agency costs incurred in structuring, administering and enforcing loan contracts (Barry *et al.*, 1995) when financing SMMEs. This in turn could result in improved access to finance by agribusiness SMMEs in KZN.

Following Harling (1995:22), an agribusiness enterprise is defined in the study as a business 'operating in the food and fibre sector of the economy' or 'having a high degree of interdependence with agricultural production'. In addition, small, medium and micro enterprises are defined in terms of the National Small Business Act (Act 102 of 1996) (1996) in SA as having 50 or less, 100 or less, and five or less full-time equivalent paid employees, respectively. Although such physical measures of size have limited usefulness in comparing different types of businesses (Barry *et al.*, 1995), full information on more appropriate financial measures, such as gross sales, was not readily available for all of the survey respondents. Data for the study were gathered using a survey questionnaire completed by the representative, stratified random sample of Ithala agribusiness SMME clients.

The dissertation is organized as follows: Chapter 1 reviews literature on the economics of SMMEs and entrepreneurship theory. It identifies the potential roles of SMMEs in a market economy, discusses potential constraints to SMME survival and growth, and presents characteristics and constraints associated with agribusiness SMMEs in SA. Theories on the definition of an entrepreneur, the determinants of entrepreneurial quality, and the functions of entrepreneurs are also discussed in Chapter 1. Chapter 2 presents the study research problems and objectives in more detail, and describes the research methodology, focusing on a conceptual model linking entrepreneurial quality and agribusiness SMME success, and the sample survey design, data collection process, and the survey questionnaire. Chapter 3 describes the characteristics of the sample survey respondents and their enterprises, and then discusses the owners' perceptions of constraints to agribusiness SMME survival and growth in KZN using the results of a Principal Component Analysis of these constraints. This chapter also reports results that relate the agribusiness SMME owners' perceptions of constraints on their business survival and growth to their perceptions of potential business opportunities and information available about business opportunities. Chapter 4 reports the results of an empirical logit model of the effect of entrepreneurial quality on agribusiness SMME success in KZN, and chi-square tests of the relationships between components of entrepreneurial quality. A concluding section discusses some policy and management implications of the study results.

CHAPTER 1

LITERATURE REVIEW OF THE ECONOMICS OF SMMEs, AND THEORIES OF ENTREPRENEURSHIP

This chapter examines the potential role of SMMEs in the economy of KZN, and then outlines the dynamic characteristics of SMME growth. The third section discusses some past research on socioeconomic, institutional and firm level constraints to SMME survival and growth. The final section reviews theories of entrepreneurship, focusing on the definition and measures of entrepreneurship in relation to the stage of SMME development.

1.1 The potential role of SMMEs in the economy of KZN

Bannock (2002) identifies three potential roles that SMMEs can play in a market economy; they may develop markets, accumulate capital through trading and develop commercial culture and skills within a region. They may also diversify an economy dominated by agriculture, create jobs and complement larger firms in raising productivity (Liedholm *et al.*, 1994). Successful SMMEs have the potential to stimulate demand for investment or capital goods (Brunetti *et al.*, 1997), and to upgrade human capital when large enterprises in the secondary and tertiary sectors release unskilled labour that SMMEs may employ. An SA study in 2000 shows that people employed in SMMEs are more likely to start their own businesses (World Bank Task Team, 2000). Micro-enterprises may increase the productivity of labour in the economy by engaging previously unemployed, low-skilled labour at little or no opportunity cost, but their productivity has a relatively low ceiling and they typically operate in the informal sector; they may achieve poverty alleviation at most but not necessarily expansion of the middle class (Liedholm *et al.*, 1994). It is, therefore, important to distinguish between an increase in micro-enterprise 'start-ups' and the growth of existing SMMEs or the graduation of micro-enterprises into small and medium size enterprises.

1.2 Characteristics of SMME sector growth

Two components of SMME sector growth should be examined to identify its changes: Net firm *creation* reflects the offsetting elements or firm start-ups and closures, while net firm *expansion* incorporates the expansion and contraction of existing firms (Liedholm *et al.*, 1994). The distinction between net firm creation and expansion provides clues to the nature of jobs being created by these firms and the forces driving the process. When growth in aggregate demand results in more productive rural enterprises, employment growth signals increased employment in 'expansion jobs', yet when growth in agricultural returns is low, or the population growth rate is relatively high, employment growth can signal that rural enterprises are taking up excess workers who cannot readily find formal employment. Jobs from net firm expansion are more likely to reflect demand-pull forces, while start-up jobs reflect supply-push forces. Driver *et al.* (2001) estimate that only a quarter of new rural jobs in Africa result from the net expansion of firms. Jobs resulting from demand-pull forces generally result from a perceived business opportunity, while necessity driven (survivalist) entrepreneurship results from supply-push forces. Net firm expansion, therefore, is positively associated with an increase in a country's rate of economic growth.

A lack of investment and working capital has been identified by SMMEs in SA as a major constraint on firm survival and growth (Rogerson, 1998). Escalante (1996) reports that business failures are more prevalent among firms in the early stage of business development, and often result from difficulties that SMMEs have in accessing finance. These may result from entrepreneurs' difficulty in understanding and completing the loan application procedure, or from financial institutions being reluctant to finance SMMEs due to the relatively high costs of administering relatively small loans and relatively higher risk perceived to be associated with financing these types of operations (Bannock, 2002; Rogerson, 1998; Naude, 1998). The GEMINI Survey (2001) found that access to formal lenders in SA is difficult until a firm has more than five employees and has been in operation for three to five years. Inadequate property rights and a lack of alternative collateral may compound this problem in developing economies (Bannock, 2002).

1.3 Past research on constraints on SMME survival and early growth

Guzman and Santos (2001) developed a conceptual model showing that socioeconomic and institutional factors, such as macroeconomic policies, in an entrepreneur's external environment, and personal characteristics of the entrepreneur, directly affect enterprise success and economic development. Extending work by Shane (1994a), they propose that these socioeconomic and institutional factors also influence the types of, and information about, such opportunities that are available to the entrepreneur. According to Mintzberg (1989), barriers to SMME survival and growth are likely to occur in all four functional areas of business operation - management, marketing, operations and finance – and may be directly related to the size and start-up conditions of an SMME. The next three sections review potential socioeconomic, institutional and firm-level constraints to SMME survival and growth that have been identified in past local and international research.

1.3.1 Socioeconomic constraints

Constraints such as a lack of public infrastructure services and of access to profitable markets, may result from an SMME's spatial distance from urban areas. Rogerson (1998) found that the availability of infrastructure services is often directly linked to the location of business. The SMMEs located closer to urban centers often have better access to services compared to those in poorer rural areas (Naude, 1998; Berry *et al.*, 2002; Klitgaard and Fitschen, 1997; Matungul *et al.*, 2001). Necessary services for business survival and growth include access to water, electricity, serviceable roads, telecommunications, postal services and protection from crime (Rogerson, 1998; Rogerson, 1999).

Lack of access to markets in a SA and KZN context is inseparable from, and inexplicable without reference to, the history of displaced communities that have been separated from mainstream markets (Berry *et al.*, 2002). These rural communities have been spatially isolated in areas that typically have a sparse resource base, limited cash circulation, and

negligible information about product opportunities outside of survivalist trading, services or production activities. Consequently, rural entrepreneurs often compete within a small, location specific market for relatively low-income clients, where fewer prospective customers can afford their product. Larger, more developed markets may be situated at prohibitive distances from the entrepreneur's home. Lack of own transport markedly increases the transaction costs for enterprises based in remote rural areas or at large distances from main roads (Rogerson, 1998). Moser (1997) found that rural SMMEs in SA, as a result of their greater distance from developed markets, place a high value on social capital or contact networks. A lack, or absence, of such networks thus potentially places a major constraint on agribusiness SMME survival and growth in rural areas (Fenwick and Lyne, 1999).

1.3.2 Institutional constraints

Institutional constraints may arise directly or indirectly from a perceived lack of either government or private sector support for SMMEs.

1.3.2.1 Lack of government support for SMMEs

Entrepreneurs may interpret the administrative and financial burdens placed on their enterprise by having to comply with a range of government legislated procedures and laws as a lack of government support for agribusiness SMMEs. Lack of investment, or start-up, capital and difficulty in accessing investment capital have been identified by SMME owners in SA as a major constraint to their business survival and growth. Inadequate property rights and an absence of title deeds in many developing countries results in a lack of collateral necessary to access investment capital, and creates a lack of incentive to make fixed improvements to land, which compounds the problem of low collateral (Bannock, 2002).

Smaller business owners often perceive that SA labour legislation is overly complex and favourably biased toward businesses with less labour relative to capital employed.

Bannock (2002) cites the success of labour brokers in SA as evidence of an overly complex labour regulatory system. Specific aspects of SA labour legislation identified as imposing either financial or administrative constraints on SMME operations include paying a skills levy, and managing employees' Unemployment Insurance Fund (UIF) payments (Rogerson, 1998). Many owners of SMMEs also perceive that government-legislated Value Added Tax (VAT) imposes a disproportionate burden on smaller businesses in SA. This burden is attributed to the complexity of VAT registration and administration, and to cash flow stress - interest is lost prior to receipt of VAT refunds, and VAT is paid to the Receiver at the point of invoice rather than at the point of receipt (Bannock, 2002).

Some harvester contractors in KZN have cited the Forestry Act as a constraint on their business performance. Sugarcane harvest contractors, for example, report that legislation stipulating 'no controlled burning during weekends' hampers their productivity, as they cannot burn sugar cane tops - which is necessary prior to harvesting - during two days of the week (Pringle, 2003). There is also dissatisfaction with the SA government's procurement and tender policies, access to government tenders and the transparency with which government tenders are awarded. Some SMME owners suggest that government could provide support for the SMME sector by awarding more tenders to smaller businesses and disseminating more information to this sector about upcoming tenders (Naude, 1998). At firm level, however, a lack of skills or training may reduce an entrepreneur's understanding of, and ability to complete, the application process for such tenders (Rogerson, 1999). Fuller (2003) believes that access to government-supplied skills training is a key factor affecting the success or failure of SMMEs in SA. Increased skills training may also improve an entrepreneur's ability to overcome many of the constraints discussed previously in this section.

1.3.2.2 Lack of private sector support for SMMEs

Once a business has started up, access to expansion or working capital may be restricted by an entrepreneur's difficulties in understanding private sector loan financing schemes, weak organizational arrangements, overly complex application procedures, and the reluctance of private lending institutions' to finance SMMEs (Naude, 1998). Access to markets may also be a constraint if appropriate intermediary and private institutions do not interface with SMMEs to link entrepreneurs with potential buyers and suppliers of inputs. Subcontracting linkages between large enterprises and emerging SMMEs are an important element in facilitating SMME sector growth (Naude, 1998). Private intermediaries and parastatal organizations, like development financiers, can provide SMME support through training activities, business counseling, advice on contract tenders, and help in securing loans (Mead, 1998).

1.3.3 Firm level barriers

An SMME owner's lack of knowledge or management skills, or inability to multi-task, rather than competing products, may cause business failure (El Namaki, 1990; Hoad and Rosko, 1964). Young, small firms may also face severe under-capitilisation and liquidity problems. Knight (1981) states that most enterprises are started with a small equity base that only grows when the firm generates retained earnings from operations. Owners and managers frequently lack the ability to present a convincing business plan to lending institutions, and lending institutions are often biased against financing small businesses. The issue of loan collateral is important for small businesses, as they seldom own sufficient fixed assets to qualify for bank loans. Cash flow problems can be exaggerated when entrepreneurs invest heavily in start-up equipment (Bhide, 2000).

Escalante (1996) cites low quality, and high turnover, of labour as common obstacles encountered by newly established firms. Smaller firms may not be able to afford the wage rates necessary to attract highly qualified or skilled labour, and employees rarely remain in small firms as they accept more lucrative employment opportunities from

larger, more established firms. The physical facilities and business premises used by many small businesses are also often inadequate to provide any long-run competitive threat to larger established enterprises, and many small businesses can seldom afford sufficient technology at start-up (Karlson, 1994).

The biggest threat to new SMMEs in the early part of their business operations is often the well-entrenched, secure position of strong competitors who have already captured a portion of the existing market (Porter, 1979). Combined with the firm level barriers described above, this makes them particularly vulnerable to rivalry from competing sellers, the bargaining power of buyers and input suppliers, the threat of new entrants to their product markets, and the threat from substitute products in other industries (Porter, 1980). A comprehensive review of 98 articles on factors responsible for the success of SMMEs around the world by Nieuwenhuizen and Kroon (2003) identifies business knowledge, market orientation, financial knowledge and management, and creativity and innovation, as key firm-level factors affecting successful business performance.

The above review shows that the potential constraints to survival and growth faced by SMMEs may result from one, or a combination of, factors such as lack of access to public infrastructure, a perceived lack of public sector support, restrictive government policies, the organizational nature of an emerging SMME, an entrepreneur's lack of management and/or innovation skills, or a perceived lack of private sector intermediary support. There may also be inter-industry differences between agribusiness and non-agribusiness SMMEs. A higher incidence of one-person agribusiness SMME start-ups may result from agribusiness entrepreneurs having more business and management skill deficiencies, as non-agribusiness firm owners have often acquired training and skills from their previous employment (Barry and Boehlje, 1986). Escalante (1996) found that competitors in the agribusiness sector are usually other relatively small businesses, while the non-agribusiness group competed mostly against the larger players in various industries. This is consistent with the view that the agricultural sector has traditionally been characterized by largely non-corporate forms of business organization (Barry and Boehlje, 1986).

Niche marketing is also more dominant in agribusiness industries as these firms are able to develop market niches that are less profitable for their larger competitors. Customized products may be too costly in terms of resources and time for larger corporations. Product diversification is most frequently adopted by agribusiness firms in order to compete with the diversified operations of their equally flexible small business competitors. Diversification also helps to mitigate the effects of the cyclical nature of agribusiness activities on the firm's cash-flow position. The additional cost of product differentiation or niche market creation inevitably raises the cost of products or services. Successful product differentiation for a niche market requires that the premium earned for meeting the niche customers' needs exceeds the cost of differentiation (Thompson and Strickland, 1998).

Quantitative research in SA on the constraints to SMME survival and growth is limited, and while the quality of the entrepreneur seems to affect SMME success, neither entrepreneurial quality nor its link to success has been researched in an SA agribusiness SMME context. The next section presents literature on the theory of entrepreneurship as background to developing an empirical model of how entrepreneurial quality affects the success of agribusiness SMMEs in KZN.

1.4 Theories of entrepreneurship

The literature on entrepreneurship is fragmented and at times controversial. Many people who perceive themselves as entrepreneurs may not easily fit with past or current definitions of the concept. The topic of entrepreneurship has been discussed by economists, sociologists, psychologists, and political scientists. This section shows how researchers have attempted to define the concept of entrepreneurship and to identify characteristics associated with successful entrepreneurs.

1.4.1 Definitions of entrepreneurship

The term *"entrepreneur"* that most people recognize is one meaning someone who organizes and assumes the risk of a business in return for profits. According to economist Richard Cantillon's original formulation, the entrepreneur is a specialist in taking on risk. The term came into much wider use after John Stuart Mill popularized it in his 1848 Principles of Political Economy (Casson, 1982). One of the reasons for the past lack of economic theory of the entrepreneur lies in the extreme assumptions about access to information implicit in the neoclassical school of economic thought. Simple neoclassical models assume that everyone has free access to all the information that they require for taking decisions. This assumption reduces decision-making to the mechanical application of mathematical rules for optimization. It trivializes decision-making, and makes it impossible to analyze the role of entrepreneurs in taking decisions of a particular kind. Thus, the basic objection to the neoclassical view of the entrepreneur is that it depersonalizes the market process; transactors are faceless economic agents and the only personal characteristics significant in this paradigm are their tastes for consumer goods and their utility maximizing behaviour. New economic theories on the entrepreneur, acknowledge that individuals differ not only in their tastes, but also in their access to information. Individuals with similar tastes, acting under similar circumstances but with different information, may well make different decisions (Casson, 1982).

1.4.2 Alternative theories of the entrepreneur

More recent economic theories on the entrepreneur include the X-efficiency theory of Liebenstein, the market process theory of Hayek, the risk bearing theory of Knight and Schumpeter's innovation theory. Liebenstein's X-efficiency theory has been applied to analyze the role of the entrepreneur. X-efficiency is the degree of inefficiency in the use of a firm's resources. It arises either because a firm's resources are used in the wrong way or because they are not used at all. This theory assumes that there are 'psychological costs' to being fully rational and that these limit the extent to which individuals plan to exploit all the opportunities available, and to satisfy all the constraints to which they are

subject. The psychological costs are the anticipation of disequilibrium due to the discrepancy between *ex ante* and *ex post* plans resulting from approximate planning to constraints. Liebenstein regards entrepreneurship as a creative response to X-efficiency (Hebert and Link, 1982).

Hayek's main contribution to the theory of the entrepreneur is to point out that the absence of entrepreneurs in neoclassical economics is associated with the assumption of market equilibrium. Hayek states that the equilibrium postulate is equivalent to a postulate of full information in the sense that no further information is required in order to modify one's decisions. Knight (1942) identified the entrepreneur as a recipient of pure profit, where profit is the residual income available after all contractual payments have been deducted from the revenue of the enterprise - it is the reward to the entrepreneur for bearing the costs of uncertainty. Knight identifies uncertainty with a situation where the probabilities of alternative outcomes cannot be determined either by *a priori* reasoning or statistical inference.

Schumpeter (1965) is very explicit about the economic function of the entrepreneur. The entrepreneur is the prime mover in economic development and his or her function is to innovate, or to 'carry out new combinations'. Anyone who performs this function is an entrepreneur, and Schumpeter is adamant that the entrepreneur is not necessarily a risk-bearer. Risk bearing is the function of the capitalist who lends his funds to the entrepreneur (Herbert and Link, 1982).

The Austrian school presents the entrepreneur as a player in the dynamic process of economic change. The entrepreneur is alert to opportunities that go unnoticed by other players in the rest of the economy. By venturing into these business potentials, he/she improves the allocation of scarce resources in the economy (Brock and Evans, 1986). Emphasis is placed on the market as a *process* in which prices provide signals to producers and consumers. Entrepreneurial success then hinges on how well the entrepreneur can assess present and future market conditions (Pasour, 1990)

1.4.3 The entrepreneurial process

Cunningham and Lischeron (1991) describe six schools of thought that are useful for defining and understanding the entrepreneurial process. The schools are categorized according to their interest in studying personal characteristics, opportunities, management or the need for adapting an existing venture. Cunningham and Lischeron assert that different entrepreneurial situations of start-up, growth and maturity of a venture may require different skills or entrepreneurial behaviours. Table 1 presents the definitions and criteria of these six entrepreneurial schools. It gives measurable variables (in the form of personal characteristics) associated with each school, and indicates which stages of business development each school is particularly suited to.

Table 1: Summary of definitions and criteria of six entrepreneurial schools of thought

ntrepreneurial Model	Definition	Measures	Stage of business development
;reat Person' school	Extraordinary achiever	Personal principles Personal histories Experiences	Start-up
sychological Characteristics :hool	Founder Control over the means of production	Locus of control Tolerance of ambiguity Need for achievement	Start-up
lassical School	People who innovate, bearing risk and uncertainty	Decision making Alert to opportunities Creativity	Start-up and early growth
lanagement School	Create value, manage risks, communicative skills	Expertise Technical knowledge Technical plans	Early growth and maturity
eadership School	Promotion and protection of values	Attitudes, style, management of people	Early growth and maturity
ıtrapreneurship School	Those who team up to promote innovation	Decision making	Maturity and change

Source: Adapted from Cunningham and Lischeron (1991).

1.4.3.1 The 'Great Person' school of entrepreneurship

This school proposes that individuals come into the world carrying the genes or inborn capacity to perform entrepreneurial activities. These individuals can present ideas,

concepts and beliefs that others find interesting, intriguing or stimulating. They are endowed with traits that differentiate them from others and an inborn faculty for intuition is characteristic. Iaccoca (1984), cited by Cunningham and Lischeron (1991), described this as 'a feel for the problem and a decisive ability to make decisions when others are still looking for facts'. These entrepreneurs exhibit high levels of vigour, persistence and self-esteem, and have a strong drive for independence and success. Traits associated with them are typically vision and single-mindedness, perseverance, social skills, intelligence, judgment and decisiveness. Yukl (1991) argues that the successful entrepreneur cannot fully be described by specific traits and that situation elements often influence who will be a successful leader.

1.4.3.2 The psychological characteristics school of entrepreneurship

This school proposes that the primary determinants of behaviour are a person's needs, drives, attitudes, beliefs and values. People behave in accordance with their values more often than not (despite variations in situations). This school focuses on personality factors and three personality characteristics have received considerable attention:

- Personal value system

This school believes that entrepreneurs cannot be developed in classroom situations and that entrepreneurial ability relates to a person's style of behaviour that develops over time, primarily through relationships with parents, teachers, communities and culture.

- Risk-taking propensity

Cunningham and Lischeron cite Mill (1984) who identified risk bearing as the key factor distinguishing an entrepreneur from a manager. The risks involved relate not only to financial success but also to career opportunities, family relations, and psychic well-being. It has been proposed that entrepreneurs prefer to take moderate risks in situations where they have some degree of control or skill in realizing a profit. Cantillon described

the entrepreneur as a rational decision maker who assumed the risk and provided the management of the firm (Cunningham and Lischeron, 1991).

- The need for achievement

The individual who has learned the value of industriousness is most likely to have a need to work hard and achieve something meaningful (Cunningham and Lischeron, 1991). The need for achievement, however, if isolated from other variables, is a weak predictor of an individual's tendency to start a business.

1.4.3.3 The classical school of entrepreneurship

Innovation, creativity and discovery are key factors underlying the classical body of thought and research. The classical entrepreneur is associated with fervent individualism bordering on non-conformity. Entrepreneurship is viewed as the process of creating an opportunity. In this school, the critical aspect of entrepreneurship appears to be the process of doing, rather than owning a venture or business. Shumpeter (1950) supports this definition by arguing that the key factor of entrepreneurship lies in the innovativeness of the individual and may not involve ownership at all.

1.4.3.4 The management school of entrepreneurship

John Stuart Mill noted that in addition to risk-taking, entrepreneurs perform functions of supervision, control and providing direction to a firm. The management school deals with the technical aspects of entrepreneurship and seems to be based on the belief that entrepreneurship can be taught (Cunningham and Lischeron, 1991). Entrepreneurial functions in this school of thought often relate to start up: strategizing, developing a business plan, analyzing opportunities, acquiring resources and managing development and growth. Entrepreneurship is thus defined as a series of learned activities, which focus on the central functions of managing a firm.

1.4.3.5 The leadership school of entrepreneurship

An entrepreneur is often a leader who relies on people to accomplish purposes and objectives. The leadership school of entrepreneurship is a non-technical side of the management school that suggests that entrepreneurs need to be skilled in appealing to others to 'join the cause'. Central to this school of thought is the ability of the entrepreneur to define a vision, attract people to the vision and transform it into reality.

1.4.3.6 The intrapreneurship school of entrepreneurship

The intrapreneurship school evolved in response to a perceived lack of innovativeness and competitiveness in many organizations. Intrapreneurs, to the limited extent that they possess discretionary freedom of action, can act as entrepreneurs and implement their ideas without themselves becoming the owners of businesses. Large corporations often strive to create intrapreneurs or an entrepreneurial climate, but success in these scenarios may be rare (Cunningham and Lischeron, 1991).

1.4.4 The Chell entrepreneurial model

Chell (1986) suggests that a general entrepreneurial model is needed; one that considers appropriate personality variables and recognizes the variability in behaviour due to differences in persons and situations. Her model is a combination of Mischel's social learning person model and Harres' situational model. Chell describes Mischel's theory that each person has a set of cognitive social learning variables that are a result of the individual's history, that in turn regulate how new experiences affect him/her. These variables include competencies, strategies and personal constructs, expectations, subjective values and self-regulatory systems and plans. Harres' situational model highlights the significance of the meaning of a situation to the individual and suggests that an entrepreneur learns to handle managerial situations by 'learning the rules which govern them'. Chell combines the above views with the resulting paradigm overleaf:

"Both internal and external environments of the business create situations that the entrepreneur must deal with or ignore. Harre states that situations are rule-governed and prescribe the 'acting out' of certain roles. The entrepreneur, with his own set of personal variables in each situation, may or may not have the appropriate repertoire of behaviours to cope with and deal with the situations he or she encounters" (Chell, 1986).

The Chell model suggests that business growth is restricted when an entrepreneur's capabilities do not match the skills attached to the demands of business growth. Thus entrepreneurs need to develop the necessary skills as businesses grow.

1.4.5 Guzman's Booster function of entrepreneurship

Guzman (1994) identifies three functional spheres of an entrepreneur shown in Figure 1 overleaf. The Capitalist or Financial function is carried out by the entrepreneur contributing with capital and confers the entrepreneur with business ownership or part thereof. The Managerial function is carried out by entrepreneurs when they direct, organize, negotiate, plan or control the operations in their company. The third 'Booster' function was identified by Schumpeter (1965) and Knight (1942) when trying to explain the dynamics of economic activity. The 'Booster Sphere' refers to the entrepreneur performing fundamental initiatives so that the business can start operating, survive and expand (for example, deciding to undertake a new project or to enter a new market). This function has a strong dynamic character and is more difficult to formalize, since it depends on the psychological and sociological qualities of the entrepreneur. The financial and managerial functions are ultimately seen as subordinate to the Booster function because they have a more routine, technical character.

The essence of the entrepreneurial function thus lies in the Booster sphere (Guzman and Santos, 2001). Guzman (1994) further divides the Booster sphere into a 'Promoter' sub-function, and an 'Energizer' sub-function. The Promoter sub-function is materialized when an entrepreneur creates a new business; it describes the task that *potential*

entrepreneurs perform. The Energizer sub-function is materialized along the lifespan of the business; it reflects the fundamental initiatives that *relatively more established entrepreneurs* perform daily to increase the likelihood of business survival or growth. The Energizer sub-function, therefore, is the basis of *entrepreneurial quality*, which Guzman and Santos (2001:213) define as 'the initiatives and behaviours of entrepreneurs to energize their businesses, which depend on their own personal qualities and the factors that influence them'.

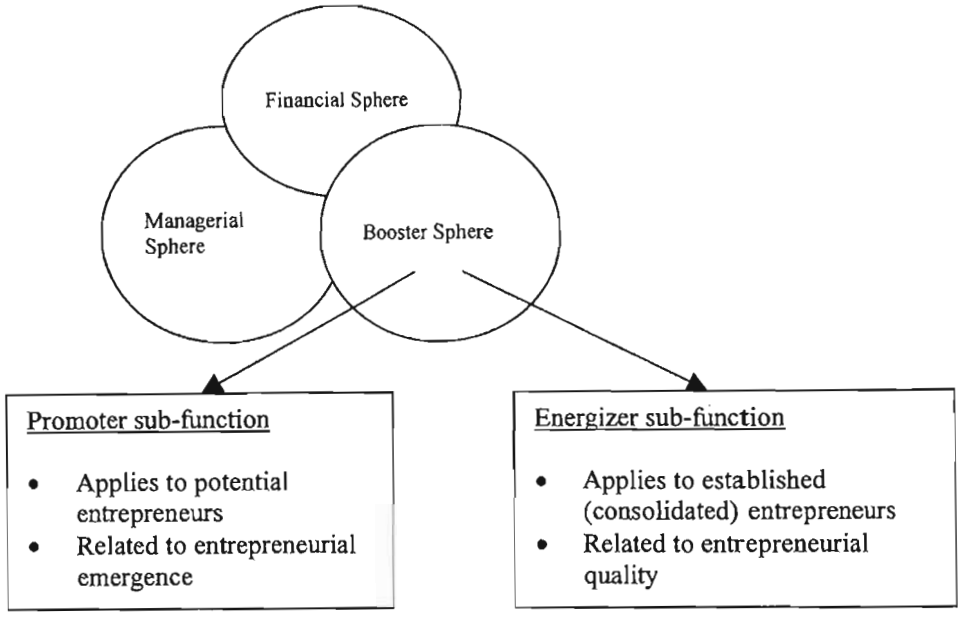

Figure 1: The functional spheres of an entrepreneur
Source: Guzman (1994)

Both sub-functions, however, contribute to forming the 'entrepreneurial culture' of a society, which reflects a population's values, beliefs and attitudes with regard to entrepreneurial activity (Gibb, 1993). The sub-functions can hence directly influence the path of economic development of any region. Entrepreneurial quality is thus considered an essential resource that is part of a region's economy and is capable of contributing to the region's economic development. The Guzman and Santos model of entrepreneurial

quality is discussed further in Chapter 2 when the conceptual model linking entrepreneurial quality and SMME business success is presented. Chapter 2 first identifies the research problems that were studied and the research objectives in more detail, and then describes the sample survey design and questionnaire.

CHAPTER TWO

RESEARCH PROBLEMS, OBJECTIVES AND METHODOLOGY

This chapter first identifies the research problems that were studied, and then states the research objectives. It then discusses the four components of the Guzman and Santos (2001) model of entrepreneurial quality and develops a model linking entrepreneurial quality and SMME success. Finally, the chapter explains the sample survey design, study data sources and the rationale for the questions included in the survey questionnaire.

2.1 The study research problems

2.1.1 The growth and survival of SMMEs

Figure 2 shows Burns' business life cycle model (cited by Escalante, 1996) that describes five stages in the development of a typical small business. During Stage I, the firm introduces its products and encounters consumer ignorance and resistance and so experiences low sales in terms of volume and growth, and profits are low or negative. During Stage II, the successful firm's products gain acceptance and the firm enjoys higher sales and profits, and rapid growth. At Stage III, rapid growth slows as new

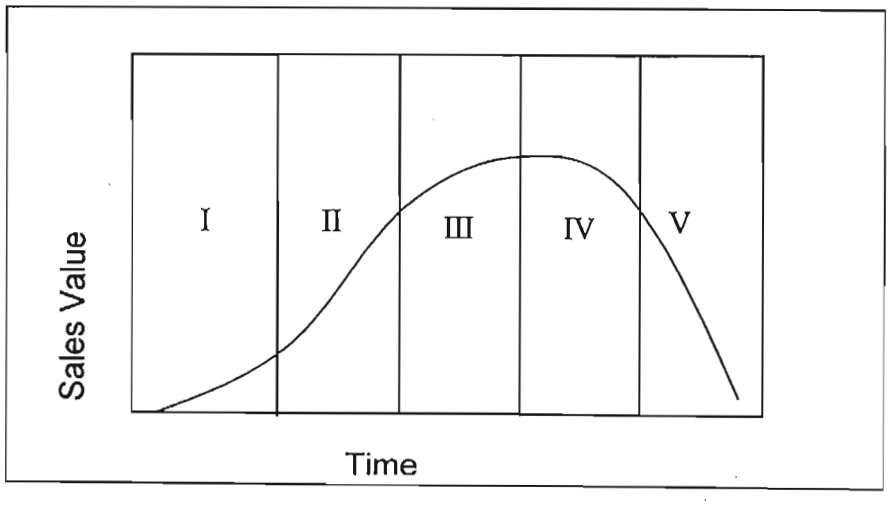

Figure 2: Burns' business life cycle curve

Source: Adapted from Escalante (1996).

entrants to the market compete with the firm. The firm reaches maturity at Stage IV when the market becomes saturated; profits and sales growth remain static. In the final stage, sales levels and profits decline, and the firm's management must decide how to sustain business viability. Very few small start-up firms are expected to survive the obstacles in Stage I and grow onwards to the later stages. It is difficult to quantify the factors that determine whether a business is able to overcome obstacles to survival and early growth, or how firms that move to the later stages of business development differ from the firms that are not able to. These factors include the quality of the entrepreneur and the particular socioeconomic, institutional and firm level constraints that SMMEs within a geo-political region face (Wagner and Sternberg, 2004).

2.1.2 The relationship between entrepreneurial quality and SMME success

Different factors determine the quality of an entrepreneur. The qualitative models reviewed in Chapter 1 identify both the entrepreneur's psychological processes and the environmental factors of the entrepreneur's personal and global context. Other models of entrepreneurial behaviour identify the entrepreneur's psychological processes, and personal and external factors that explain entrepreneurial *emergence* that derives from the P*romoter* sub-function of the Booster sphere (Chell, 1986; Cunningham and Lischeron, 1991; Yukl, 1991), but not the *quality* of the entrepreneur that derives from the E*nergizer* sub-function. Entrepreneurial emergence is projected onto potential entrepreneurs and relates to the likelihood of a person initiating a business, while entrepreneurial quality is projected onto existing (consolidated) entrepreneurs and refers to the entrepreneur's potential to energize and improve their business (Guzman and Santos, 2001).

The discussion in sections 2.1.1 and 2.1.2 above indicates that firms face major constraints to survival and expansion during the early stages of business development and that the quality of the entrepreneur (derived from the Energizer sub-function of the Booster sphere) has a positive effect on the likelihood that a firm will overcome these early barriers to survival and growth. It is unclear, however, which constraints external to the entrepreneur *most affect* agribusiness SMMEs in KwaZulu-Natal. There is also a

lack of information on how to quantify the role of entrepreneurial quality in determining an SMME's ability to overcome these constraints to achieve long-term business success. The next section discusses the study research objectives in this context.

2.2 The study research objectives

Entrepreneurial quality is central to small business success as it determines the strategic responses to barriers to the survival and early growth of the business. It is evident that a robust model of the agribusiness SMME's survival path is lacking in the SA literature, as are quantitative methods of assessing entrepreneurial quality and how it impacts on the survival and growth of agribusiness SMMEs in KwaZulu-Natal. The first aim of the study, therefore, is to group potential socio-economic, institutional and firm-level constraints on the survival and growth of agribusiness SMMEs (some identified by past research and presented in Chapter 1) in KZN into fewer dimensions using Principal Component Analysis (PCA) (Manley, 1986).

The second aim is to estimate a logit model to quantify the relationship between the four components of entrepreneurial quality and the probability of entrepreneurial success or failure, using loan repayment status as a proxy for agribusiness SMME success, where 'success' implies that initial barriers to enterprise survival and growth have been overcome. The dichotomous dependent variable LOAN (no default on loan repayments during loan term = 1, defaulted on loan repayments during loan term = 0) will be partly explained by the four components of entrepreneurial quality in the Guzman and Santos (2001) model. These four components are shown in Figure 3 overleaf and discussed in the next section to show their link to business success

2.3 The four components of the Guzman and Santos model of entrepreneurial quality

The first component in Figure 3 - 'the preference for working as self-employed' - underlies the promoter sub-function, and is influenced by specific psychological features of entrepreneurs, such as the desire for independence, a resistance to authority, and an

aversion to the hierarchical structures of many organizations. This component is thus a *necessary but not sufficient* condition to be a quality entrepreneur; it is linked with the exponents of the Energizer sub-function. The second component - 'the exponents of entrepreneurial quality' - includes the nature of an entrepreneur's motivation, and the execution of certain 'energizer' behaviours. Models of entrepreneurial intentions (Herron and Robinson, 1993; Krueger and Casrud, 1993) identify the motivation to become an entrepreneur as a key element driving the Booster function. This motivation may be either intrinsic or extrinsic. Intrinsic motivation results from the pleasure associated with carrying out a certain activity, and reflects an individual's desire to fulfill his/her aims in life, such as wealth, career satisfaction or prestige. Entrepreneurs driven by intrinsic motivation have higher potential to carry out the Energizer sub-function (Guzman, 1994).

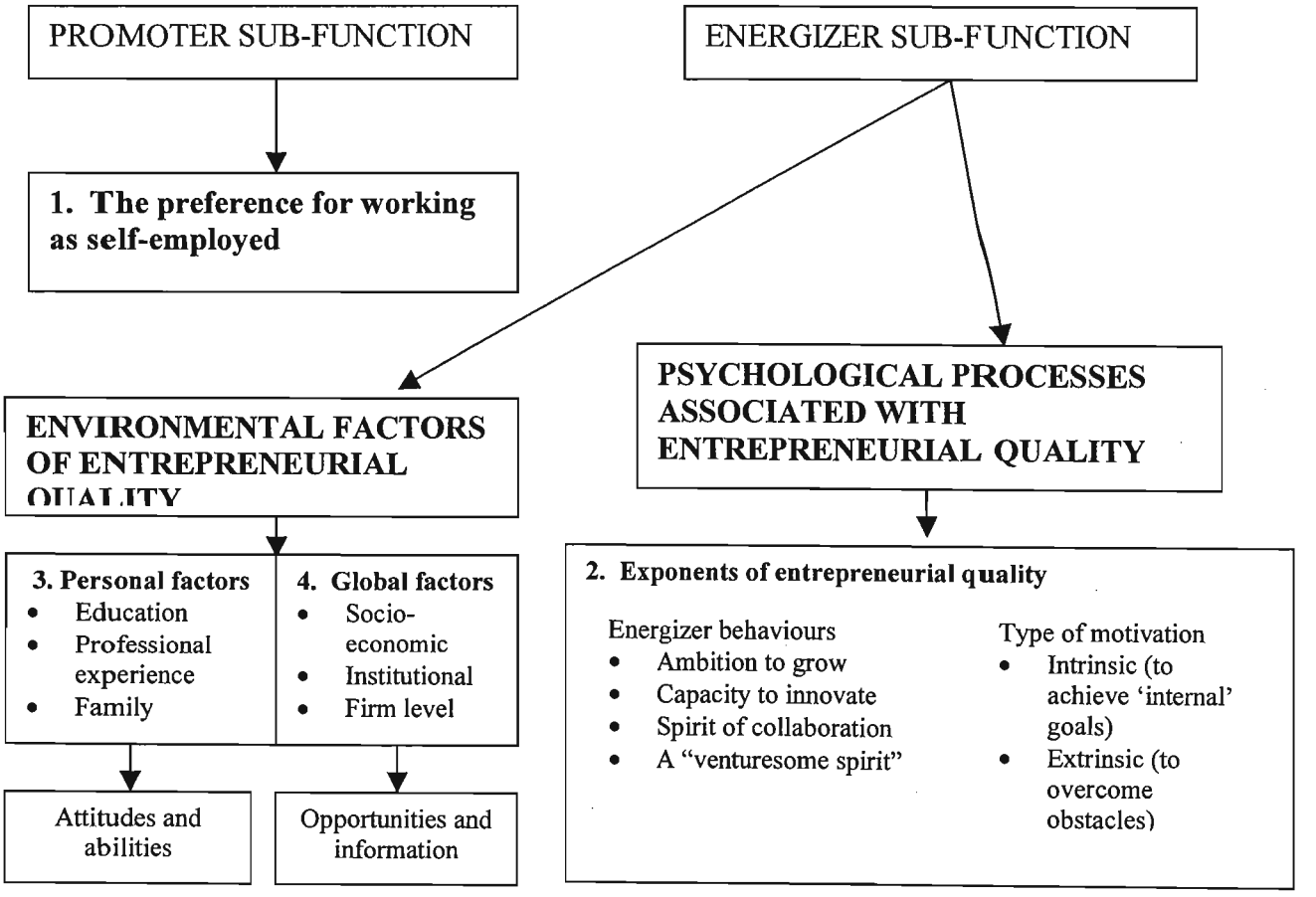

Figure 3: The four components of entrepreneurial quality

Source: Adapted from Guzman and Santos (2001)

Extrinsic motivation results from the desire to overcome an obstacle such as a perceived lack of wealth or prestige and has a stronger relationship with material factors such as avoiding unemployment, or satisfying material needs. Extrinsically motivated entrepreneurs usually look for tasks that are easier to carry out, reach a lower level of conceptual learning, require little creativity, maintain their behaviour for only a short time after reaching their goal and are usually more inclined to negative emotions (Cordoba and Caracuel, 1996, cited by Guzman and Santos, 2001). Motivation has an influence on the actions of the entrepreneur, how the Booster function is developed and consequently on the quality of the entrepreneur; intrinsic motivation is thought to result in greater entrepreneurial quality.

Chell's (1986) 'trait approach' suggests that entrepreneurs develop some behaviours in the exercise of the Energizer sub-function that are the materialization of psychological features considered to be essential in 'good' entrepreneurs. They include the ambition or capacity to grow (McClelland, 1961, cited by Guzman, 1994); the capacity to innovate (Schumpeter, 1965); collaborating with other businesses and individuals in order to achieve a higher level of enterprise growth; and other behaviours such as planning, budgeting, and training employees, that derive from a 'venturesome spirit' which should imbue any decision the entrepreneur makes to ensure business survival and growth. Although these other behaviours have important managerial content, they are better dealt with as energizer tasks, since they imply a dynamic, not routine, behaviour.

The third component – 'factors of the personal environment of the entrepreneur' – most directly affects the exponents of the Energizer sub-function. These personal factors interact with one another to influence entrepreneurial attitudes and abilities, which, in turn, affect and condition the development of motivations (Herron and Robinson, 1993; Krueger and Casrud, 1993). Abilities and attitudes associated with entrepreneurial quality include the capacity to identify new products and opportunities, to know how to evaluate business opportunities and to think critically, persuasive communication and/or negotiation skills, and problem solving. Personal factors include the extent of the entrepreneur's formal education; professional experience in the sector he/she operates in

and the influence of the entrepreneur's family. Education is thought to increase intrinsic motivation and energizer behaviours (Guzman and Santos, 2001), and the more enterprise education an individual receives, the greater the possibility of entrepreneurial success (Gibb, 1993). An entrepreneur's professional experience is an essential means of acquiring abilities and attitudes, reinforcing motivations and improving energizer capacity. An increased professional experience improves the quality of an entrepreneur. According to Role Model theory (Scherer *et al.*, 1991), parents influence their children when they opt for an entrepreneurial career. The role of the family may have a motivational and material influence on entrepreneurial quality. This positive influence may derive from having been educated in an environment where entrepreneurial culture is highly considered, or from the supply of economic resources, labour or personal contacts by an entrepreneur's family.

The fourth component – 'factors of the global environment of the entrepreneur' – is based on sociological-economic models, cultural models, and models of the infrastructure of the economic environment (Shane, 1994b, Wilken, 1979, and Van den Ven, 1989, as cited by Guzman and Santos, 2001). These external factors directly influence the preference for working as self-employed, the type and strength of entrepreneurial motivation, and the energizer behaviours, thus creating a favourable environment for entrepreneurial opportunities and information. Unlike personal factors, these factors impinge on all entrepreneurs in a region regardless of their education, experience or family support. Guzman and Santos (2001) group external factors into three categories: productive opportunities, socioeconomic factors and institutional factors. The link between the four components of entrepreneurial quality, agribusiness SMME success, and economic development in KZN is completed in Figure 4 overleaf.

Personal and external factors affect both the preference for working as self-employed and the exponents of entrepreneurial quality. Additional relationships of interdependence include the effect of enterprise success or failure, derived from the behaviour of an entrepreneur, on the economic development of KZN. The impact of entrepreneurial success or failure on the personal factors implies that success or failure would create a

new situation that could result in a higher education, more experience, or different family support. The impact of a specific level of economic development on the global factors would cause changes in the quality and quantity of productive opportunities, socio-cultural aspects of a population and changes in the mode of operation of the institutions involved in the support of entrepreneurial initiatives.

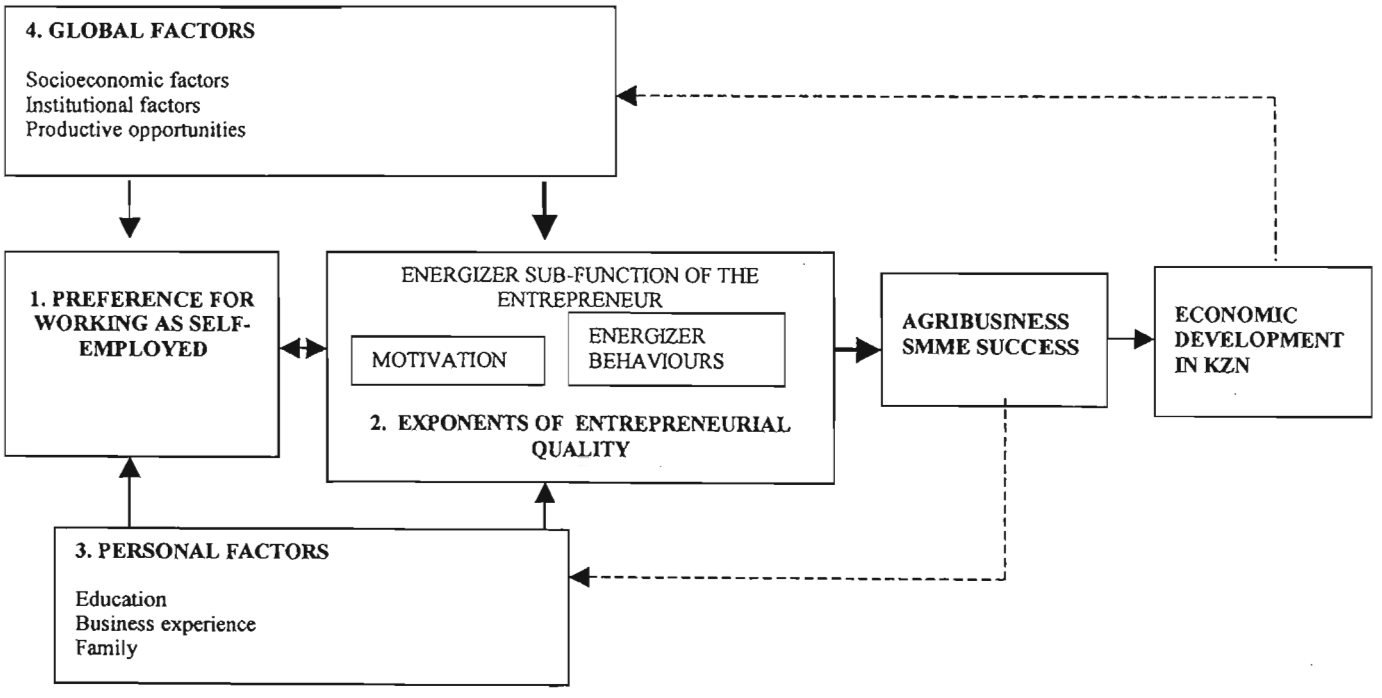

Figure 4: Conceptual model linking the four components of entrepreneurial quality to agribusiness SMME success in KwaZulu-Natal

Source: Adapted from Guzman and Santos (2001)

An empirical logit model of the relationship between the four components of entrepreneurial quality in Figure 4 and agribusiness SMME success in KZN (using loan repayment performance as a proxy for success) is specified and reported in Chapter 4. The next section describes the sample survey design and the sample questionnaire.

2.4 Sample survey design and questionnaire

Study data were collected via personal interviews with 44 Ithala agribusiness SMME clients during the period October 2003 to February 2004. Each respondent was first given a letter explaining the background and purpose of the study (see Appendix G on page 91). All of the respondents had secured loans with Ithala to fund either the creation or expansion of their own agribusiness that they managed in their individual capacity or as leaders of a management team. The 44 clients were selected by applying stratified random sampling to the population of 266 agribusiness SMMEs financed by Ithala in KZN at the time of the study. These 266 SMMEs were divided into mutually exclusive subgroups or strata that were as homogenous as possible given the available information (Barnett, 1991). Ithala classifies clients according to their 'main business category', and these categories were used as the four strata, namely: Harvester contractors (timber and sugarcane), Processors (mainly maize millers and butcheries), Retailers (furniture, farm machinery repair, spaza shop, beer distributor, etc.) and Speculators (cattle traders).

A fixed, constant proportion (sampling fraction) of 20 percent was selected from the N agribusinesses in each of the four strata to make up the stratified random sample. The researchers purposely chose this sampling fraction, which exceeded the 15 percent that would be sufficiently representative for multivariate analysis, in order to allow for the relatively high search costs of collecting data from spatially dispersed sampling units like the sample agribusiness owners (Barnett, 1991; Lyne, 2003; Ramroop, 2003). Given limited survey resources, and client work schedules, the researcher could not guarantee being able to interview all of the selected agribusinesses. The final stratified random sample shown in Table 2 overleaf had sampling fractions of over 15 percent for each stratum. Since these sampling fractions are similar across the strata, the selected stratum members could be aggregated into the final sample without further weighting.

Table 2: Sample strata and cases, Ithala agribusiness SMMEs, 2003-2004

Enterprise type (stratum)	Cases per stratum (N)	Cases in sample (n)	Sample cases as a % of stratum cases (n/N)
Harvester contractors	146	23	15.8
Processors	46	8	17.4
Retailers	45	8	17.8
Speculators	29	5	17.2
Total	**266**	**44**	**16.5**

The questionnaire presented to the 44 sample respondents shown in Appendix A on page 72 identifies 36 potential socioeconomic, institutional and firm level constraints on SMME survival and growth that were derived from the research review in section 1.3, and discussions with Darroch (2003) and Ithala personnel (Pringle, 2003; Nhleko, 2003). Respondents were asked to rank each of the 36 potential constraints on Likert-type scales ranging from one (perceived minor constraint) to five (perceived major constraint). The questions in Appendix B on page 74 were used to quantify SMME owners' perceptions of the business opportunities and information available to them. Respondents were asked to agree or disagree with statements about the existence of local, provincial, national and international business opportunities, and information on business opportunities. Response scores ranged from four (strongly agree) to one (strongly disagree).

The questions shown in Appendix C on page 75 were posed to sample respondents in order to test the relationships between the four components of entrepreneurial quality and enterprise success, and the relationships among the four components. The questions were derived from the conceptual model of entrepreneurial quality described in section 2.3. Question 1 assesses an entrepreneur's preference for working for him/herself, where Yes = 1 and No = 0. Question 2 tries to identify an owner's primary reason for starting the business, where the choice of statements a. or b. imply that the entrepreneur is 'intrinsically motivated', while the choice of statements c., d. or e. indicate 'extrinsically motivated' owners. Question 3 identifies five energizer behaviours that are the

materialization of psychological features thought to be essential in quality entrepreneurs as shown in Table 3 below.

Table 3: Five energizer behaviours and the psychological features that they derive from

Psychological feature:	Ambition	Innovation	Spirit of collaboration	Venturesome spirit	
Energizer behaviour:	Enterprise expansion	Creation of new products or services	Formal agreements with industry players	Compiling budgets for the business	Undertaking to train employees

Source: Adapted from Guzman and Santos (2001)

Each of these behaviours was assessed in terms of the entrepreneur's past behaviour and which activities he/she planned to undertake in the future. The maximum score of 3 for each of the behaviours occurs when an entrepreneur has exercised an energizer activity in the past and plans to do so again in the following year. The minimum score of 0 occurs when he/she has not exercised the particular energizer behaviour in the past, and will not do so in the following year. For example, Yes to past and planned enterprise expansion scores 3; Yes to past, and No to future, product or service development scores 2; and No to past or planned formal agreements, budgeting and employee training, scores 0. In this case, the respondent's overall energizer behaviors' score is 5 out a potential 15.

Question 4 evaluates the factors of the agribusiness SMME owner's personal environment; education ranged from 8 years (standard 6) to 15 years (degree); work experience scored 1 (less than a year), 2 (between two and five years), or 3 (more than five years experience in current business sector). The other components of Question 4 dealing with work experience, family entrepreneurship and family assistance, were coded Yes = 1 and No = 0. Question 5 identified an entrepreneur's perceptions of his/her 'attitudes and abilities', with each respondent's self-rating of personal skills ranging from 5 (excellent) to 1 (poor). Appendix D on page 78 shows the template that was used to capture the survey data in Appendices A to C. The questions in Appendix A on page 72 on respondents' perceptions about 36 potential socioeconomic, institutional and firm

level constraints to SMME survival and growth were used as proxies for the global or external factors that affect the success of the sample of 44 agribusiness SMME owners in the logit analysis of entrepreneurial quality and enterprise success in Chapter 4. The next chapter describes the main characteristics of the respondents, and analyses the respondents' perceptions of the factors that constrain their agribusiness SMME survival and growth using Likert mean scores and Principal Component Analysis.

CHAPTER 3

RESPONDENT CHARACTERISTICS, AND OWNERS' PERCEPTIONS OF CONSTRAINTS ON AGRIBUSINESS SMME SURVIVAL AND GROWTH IN KWAZULU-NATAL

This chapter first describes the main characteristics of the 44 survey respondents, and then reports their ratings of the potential constraints to SMME survival and growth that were presented to the owners as shown in Appendix A on page 72. It also identifies the main dimensions of these constraints using Principal Component Analysis.

3.1 Characteristics of the sample survey respondents and their enterprises

The characteristics of the 44 survey respondents and their SMMEs are summarized in Appendix E on page 86, and discussed in the following two sections.

3.1.1 Loan type and size, and number of employees

Almost half of the respondents had secured equipment loans with Ithala, while loans for land and fixed improvements, and working capital made up 34% and 18%, respectively, of the responses. The average approved loan amount (ALA) of the sample was R421,600 compared to the average loan collateral (LC) of R943,475 (see Table E.2). The Harvester contractors and Retailers had the highest average ALA's of R623,261 and R731,515 respectively. Speculators had the lowest average ALA of R134,518 but the highest LC to ALA ratio of 2.97. This ratio may overstate their loan security, as cattle are a relatively more fungible asset (more easily sold for cash) than land and fixed improvements. The average number of employees in the sample enterprises was 30, with a sample mode (most frequent response) of five employees. Harvester contractors had the highest average number of employees, while Speculators had the lowest staff complement.

3.1.2 Characteristics of the enterprise owners

Appendix E, Table E.3. shows that almost half (45%) of the respondents were between 41 and 50 years of age, while 32% were in the 50-60 year range, 21% between 30 and 40 years, and one speculator was under 30 years old. Female enterprise owners made up 16% of the sample, and were mainly Retailers. About 41% of respondents had qualified at tertiary level (certificate, diploma or bachelors degree) and 36% had passed Matric. Table E.4. shows that only nine percent of the sample had a Standard 6 level education, and 14% had completed some high schooling. Nearly 70% of enterprise owners had over five years experience in their current industry at enterprise start-up, with Harvester contractors (83%) and Retailers (88%) being the most experienced. Respondents with less than one year's experience and between one and five years experience accounted for 14% and 18% of the sample, respectively. Sixty percent of the respondents had parents who had been entrepreneurs and 66% percent of the sample considered that their immediate family had assisted them in becoming an entrepreneur by providing less expensive labour, finance, or business contacts in their industry. In Table E.5, book-keepers were hired either contractually or permanently by 73% of enterprises, and 32% of respondents had supplementary income from one or more other source. Finally, 70% of respondents felt that their business was generating sufficient income to support themselves and their dependants.

Table E.6. presents the energizer behaviours shown by the sample respondents. Eighty six percent of owners had expanded their business since start-up, and 80% planned expansion in the following year. Some 64% of owners had already devised new products or services (mainly Processors), while 55% planned to do so. Most respondents had formal business agreements (77%), and 59% (all Processors) planned to conclude formal agreements. Over 85% of owners either had or planned to draw up budgets, and 82% of respondents had sent their employees for formal training or provided in-house training. In Table E.7., just under 40% of the respondents had previously defaulted on their loan repayments to Ithala, with Harvester contractors (17%) having the lowest, and Speculators the highest (80%) rate of default, respectively. Reflecting the materialization

of the Promoter sub-function, most (86%) of the owners indicated that they would prefer to work for themselves at their current income levels, including 91% of Harvester contractors, 88% of Processors and Retailers, and 60% of Speculators. Some 43% of the sample respondents were intrinsically motivated, with Processors having the highest (63%), and Speculators the lowest (20%), incidence.

Speculators had the strongest perceptions in Table E.8. about business opportunities being available within municipal boundaries, while Processors seemed the most confident of business opportunities elsewhere in KZN and SA. Retailers had the highest ranking for perceived international business opportunities, and shared with Speculators the strongest perception that information on business opportunities was easily obtainable and available. In Table E.9., respondents' ratings of their attitudes and abilities was similar across the four strata. Overall, negotiating skills seem to need relatively more attention for the sample respondents. Section 3.2 next analyzes the respondents' perceptions of the factors that constrain their agribusiness SMME survival and growth, and presents the results of a Principle Component Analysis of their responses to the questions in Appendix A.

3.2 Agribusiness SMME owners' mean ratings of potential constraints

Table 4 shows the mean score for each potential constraint given in Appendix A on page 72 for the sample of 44 agribusiness owners, and for each stratum, in descending order. Insufficient government support for agribusiness SMMEs was ranked the highest constraint overall to business survival and growth (mean score of 3.86 out of a maximum score of five), and it was the main perceived constraint for Speculators and Harvester contractors. Respondents felt that government legislation and policy were biased towards larger businesses, government officials were not sufficiently trained to understand an entrepreneur's job, and government should either reduce the amount of legislation that SMMEs must comply with or provide more accessible information and skills enabling SMMEs to cope with these 'rules and regulations'.

Lack of access to start-up capital was ranked second overall as a constraint to business survival and growth (mean score of 3.45). Respondents, particularly Retailers, believed that this may be due to private financial institutions being reluctant to finance small business start-ups due to the perceived risk associated with SMMEs. This supports previous research in SA reported by Bannock (2002). Respondents also attributed this constraint to their lack of collateral, or difficulty in understanding and completing loan application procedures. Cash-flow stress was the third ranked constraint (mean score of 3.27), probably due less to the seasonal nature of incomes for agriculture–related enterprises, and more to capital requirements at start-up. The stratum most affected by the seasonality of agriculture-related incomes – Harvester contractors – had the lowest score of the four strata on this constraint (2.91). Many of these contractors had actively tried to manage this constraint by accessing a revolving loan or purchasing dual-purpose trailers to transport both sugarcane and timber, thus reducing their dependence on seasonal sugarcane harvesting contracts. Respondents also stated that having to comply with VAT legislation added considerably to their cash-flow stress.

Lack of access to capital for expansion, 'too many rules and regulations', and crime were ranked fourth, fifth, and sixth overall (mean scores of 3.14, 3.05 and 3.00, respectively). Lack of access to capital for expansion – particularly for Processors, Retailers and Speculators – was again attributed to private financial institutions being reluctant to finance small business start-ups due to the perceived risk. Speculators in this sample seemed to be relatively more affected by crime (average score of 4.20), which they attributed to incidents of livestock theft. Reports of crime also included theft of inputs such as diesel, fertilizer and chemicals, and of spare mechanical parts and batteries. Three Harvester contractors had been hijacked and their vehicles had not been recovered. Security guards, fences and alarm systems were perceived to reduce the threat of crime but impose another relatively large expense on SMMEs. Many respondents felt that legislation relating to their businesses was designed for larger corporate sector businesses, and that smaller businesses lacked the skills and management time to handle compliance.

Table 4: Owners' mean scores (out of a maximum of five) for potential constraints to SMME survival and growth, for the sample and each stratum (n=44)

Rank	Potential constraint	Sample mean score [b] (n = 44)	SPE[a] mean score (n = 5)	HAR mean score (n=23)	RET mean score (n=8)	PRO (mean score (n = 8)
1	Insufficient government support *	3.86	4.20	4.17	3.63	3.00
2	Lack of access to start-up capital	3.45	3.20	3.35	3.88	3.50
3	Cash flow stress	3.27	3.60	2.91	3.88	3.50
4	Lack of access to capital for expansion	3.14	3.40	2.61	3.50	4.13
5	Too many rules and regulations *	3.05	4.00	3.17	2.63	2.50
6	Crime *	3.00	4.20	3.04	2.75	2.38
7	Complex labour legislation*	2.80	3.20	3.00	2.88	1.88
8	Paying and complying with VAT*	2.68	2.60	3.00	2.50	2.00
9	Insufficient private sector support	2.64	2.00	2.96	2.63	2.13
10	Complying with minimum wage legislation*	2.61	2.60	3.09	2.00	1.88
11	Competition (rivalry)	2.50	3.00	2.22	2.50	3.00
12	Lack of access to skills training	2.34	3.00	2.30	2.25	2.13
13	Bargaining power of suppliers	2.27	3.60	2.22	2.00	1.88
14	Lack of access to good roads	2.25	2.40	2.30	2.88	1.38
15	Bargaining power of buyers	2.18	3.00	2.22	2.25	1.50
16	Lack of access to telecommunications	2.05	2.60	1.78	2.88	1.63
17	Lack of management skills	1.98	2.00	2.09	2.38	1.25
18	Low labour quality	1.95	2.80	1.70	2.88	1.25
19	Paying a skills levy	1.91	1.60	1.96	1.75	2.13
20	Threat of new entrants	1.91	1.80	1.74	1.88	2.50
21	Lack of access to water	1.89	3.00	1.52	2.75	1.38
22	Insufficient technology	1.86	3.00	1.57	2.13	1.75
23	Insufficient property rights	1.77	1.00	1.91	2.25	1.38
24	Substitutes	1.75	2.00	1.43	1.75	2.50
25	Lack of access to electricity	1.73	2.20	1.43	2.75	1.25
26	Lack of access to tender contracts	1.73	1.40	1.87	1.38	1.88
27	Managing employee UIF contributions	1.70	1.20	1.87	1.63	1.63
28	Scarce information about tender contracts	1.70	1.80	1.74	1.75	1.50
29	Distance to suppliers	1.61	1.80	1.52	1.75	1.63
30	Too few customers	1.61	1.60	1.43	2.50	1.25
31	Too few contacts in my industry	1.57	1.80	1.48	1.88	1.38
32	Lack of own transport	1.55	2.00	1.26	2.38	1.25
33	Lack of access to postal services	1.45	2.00	1.30	1.50	1.50
34	Distance from potential buyers	1.43	1.60	1.30	1.50	1.63
35	Inadequate business premises	1.36	1.60	1.22	1.75	1.25
36	Forestry Act	1.32	1.40	1.52	1.00	1.00

Note: [a] SPE = Speculators; HAR = Harvester contractors; RET = Retailers; and PRO = Processors; [b] Maximum score = 5.

* Denotes constraints (that rank in the top ten) resulting from government legislation.

Complex labour legislation and having to comply with minimum wage legislation were ranked seventh and tenth respectively, with the highest ratings from Harvester contractors. Respondents believed that employees were not aware of the rights of employers, and three respondents claimed that some of their Human Immuno-Deficiency Virus (HIV) positive employees injured themselves deliberately at work in order to claim compensation under the Workman's Compensation Act. Some Harvester contractors viewed mechanization as the only strategy to deal with current labour legislation, while others believed that SMMEs would have to just 'get used to' dealing with the legislation. Paying a skills levy was ranked as the nineteenth most limiting constraint. This levy can be reimbursed on application, but over half of the 19 owners who paid the monthly levy considered the procedure was too complicated and that the levy was an extra tax. Harvester contractors' relatively higher scores for the minimum wage constraint probably reflect the impact of their increased demand for casual labour (higher staff complements) during sugarcane and timber harvesting (Nhleko, 2003).

Paying and registering for VAT was ranked the eighth most limiting constraint overall, with a mean score of 2.68. This procedure was generally perceived by respondents to increase their business cash-flow stress. Some businesses were paying a bookkeeper primarily to ensure VAT compliance. The VAT registration procedure was seen as too complex for smaller businesses, while owners also stated that SMMEs who were not registered as VAT vendors could undercut the prices of their competitors who had registered as VAT vendors. These results support conclusions reached by the World Bank Task Team (2000) in SA.

The constraints perceived by this sample of 44 agribusiness SMME owners as major barriers to firm survival or growth are similar to those identified in previous studies on SMMEs in SA. The results suggest the constraints faced by agribusiness SMMEs are not necessarily all that distinct from those faced by non-agriculture-related businesses (this supports Escalante's 1996 findings). The next section uses Principal Component Analysis to reduce the 36 potential constraints into fewer components or dimensions (Manly,

1986) in order to infer policy and strategy recommendations for addressing these constraints.

3.3 Principal Component Analysis of owners' perceived constraints on agribusiness SMME survival and growth in KwaZulu-Natal

Principal Component Analysis (PCA) aims to economize on the number of variables and to summarize the information contained in a number of correlated variables (in this case the 36 constraints) into a smaller set of uncorrelated 'dimensions' with minimal loss of information (Manly, 1986). The decision about which principal components to retain depends on the percentage of the variance accounted for by the variable, the absolute variance accounted for by each principal component (PC), and whether the component can be *meaningfully interpreted.* The PC's can be estimated as linear functions of the original 36 variables (constraints) per equation (1) below:

$$PC_i = a_{i1}X_1 + a_{i2}X_2 + ... + a_{i36}X_{36} \qquad (1)$$

where i = 1 ..... 36; a_{i1} ..... a_{i36} = the component loadings; and X_1 ..... X_{36} = the 36 potential constraints listed in Appendix A on page 72. The a_i are estimated such that the first PC displays the largest amount of variation in the data, the second PC displays the second largest amount of variation, and so on.

Twelve PCs with eigenvalues greater than one were derived from the 36 potential constraints, and these PCs together explained 79.4% of the variation in the data. The PCs were estimated using the correlation matrix so as to avoid one variable (constraint) having undue influence on the PCs. Varimax rotation was then used to transform the components into factors that were more clearly interpretable (Manly, 1986). The first nine factors explained 70% of the variation in the data, and factors one to 12 are presented in Table 5 shown on pages 40, 41 and 42. The communalities for all of the variables exceed 0.68, implying that at least 68% of each variable's variation is accounted for by the common factors (Jolliffe, 1986).

Factor 1 had relatively high loadings greater than 0.40 for lack of access to electricity, inadequate business premises, lack of own transport, lack of access to water, roads, postal services and telecommunications, and crime. Factor 1 was, therefore, labeled 'Lack of access to services' as these variables relate to infrastructure services not easily accessible in rural areas. A lack of own transport implies extra expenditure to travel to markets, and crime may be a consequence of poverty prevalent in rural areas (Berry *et al.*, 2002). Factor 2 was defined as 'Funding constraints at start-up' as distance to suppliers, insufficient technology, and labour quality had the highest loadings for this factor. Escalante (1996) found that a low quality of labour was a common obstacle encountered by newly established SMMEs, as they can seldom afford the wage rate necessary to attract more skilled labour. Financial constraints at start-up can also result in a lack of access to technology and an inability to procure ideally situated business premises.

Factor 3 represents 'lack of management capacity in the enterprise' as the variables competition (rivalry), threat of new entrants, and threat from substitute products in other industries, had the highest positive loadings, while complex labour legislation and 'too many rules and regulations' had high negative loadings. The variables with positive factor loadings describe key aspects of competition in an industry (Porter, 1980). The negative signs on complex labour legislation and 'too many rules and regulations', therefore, may imply that agribusiness SMME owners that perceive rivalry as a threat to profitability had the management ability to overcome the barriers to business growth and survival posed by understanding and implementing labour legislation and other 'rules and regulations', and had progressed to a stage where they perceived that competitive forces were a relatively greater threat to their business profitability.

Table 5: Rotated factor loadings for potential constraints to SMME survival and growth, and average factor scores for each stratum

Factor		1	2	3	4
Eigenvalue		6.957	3.690	3.264	2.415
Percentage of variance explained		19.32	10.25	9.07	6.708
Potential constraints on the survival and growth of the business	Commun -alities	'Lack of access to services'	'Funding constraints at start-up'	'Management capacity in the enterprise'	'Access to tender contracts'
Lack of access to electricity	0.837	**0.819**	0.013	0.020	-0.066
Inadequate business premises	.0.770	**0.734**	0.070	-0.039	-0.070
Lack of own transport	0.804	**0.703**	0.046	0.113	-0.159
Lack of access to water	0.733	**0.701**	0.131	0.063	-0.227
Lack of access to roads	0.733	**0.659**	0.153	0.077	0.259
Lack of access to telecommunications	0.790	**0.646**	0.243	0.027	0.355
Crime	0.779	**0.499**	0.136	-0.269	0.326
Lack of access to postal services	0.829	**0.487**	0.120	0.245	0.460
Lack of contact networks in my area	0.776	**0.443**	0.292	0.351	0.181
Lack of customers in my area	0.823	**0.493**	0.610	0.180	0.109
Poor labour quality	**0.869**	0.285	**0.791**	-0.040	-0.024
Distance to suppliers	0.887	0.044	**0.790**	0.226	0.225
Insufficient technology	0.799	0.156	**0.575**	0.078	0.397
Competition (rivalry)	0.747	0.241	0.278	**0.695**	-0.137
Too many rules and regulations	0.773	0.151	-0.037	**-0.646**	-0.066
Complex labour legislation	0.881	-0.144	0.397	**-0.640**	0.119
Threat of new entrants	0.704	0.013	0.286	**0.626**	0.062
Substitutes in other industries	0.768	0.019	-0.002	**0.625**	0.132
Lack of access to tender contracts	0.736	-0.050	-0.001	-0.090	**0.848**
Scarce information about tender contracts	0.797	0.000	0.242	0.087	**0.831**
Paying a skills levy	0.728	-0.086	0.143	-0.144	-0.168
Managing employee UIF contributions	0.684	-0.052	0.021	-0.005	0.234
Paying and complying with VAT	0.889	0.257	-0.119	0.220	0.196
Lack of access to expansion capital	0.737	0.235	-0.019	0.085	0.109
Cash flow stress	0.757	0.281	0.234	0.188	0.011
Lack of access to start-up capital	0.768	0.153	0.246	0.047	0.108
Insufficient property rights	0.889	0.270	-0.280	0.245	0.022
Insufficient private sector support	0.807	0.131	-0.099	-0.030	-0.110
Insufficient government support	0.841	-0.069	0.014	-0.413	0.005
Distance to buyers	0.858	0.169	0.045	-0.018	-0.104
Strong bargaining power of buyers	0.829	0.413	0.214	0.051	-0.292
Strong bargaining power of suppliers	0.884	0.057	0.093	-0.008	0.063
Minimum wage legislation	0.730	0.072	0.235	-0.025	0.169
Forestry Act	0.706	-0.039	-0.015	-0.048	0.293
Lack of access to training facilities	0.863	0.025	0.016	0.020	0.061
Average factor scores for each stratum					
Harvester contractors		-0.17	-0.13	-0.15	0.09
Retailers		**0.76**	**0.33**	-0.02	**-0.29**
Processors		-0.52	-0.27	**0.72**	0.08
Speculators		0.38	**0.51**	-0.42	-0.10

Table 5: Continued

Factor		5	6	7	8
Eigenvalue		2.300	1.844	1.770	1.538
Percentage of variance explained		6.388	5.121	4.917	4.271
Potential constraints on the survival and growth of the business	Commun -alities	'Compliance costs'	'Liquidity stress'	'Lack of collateral'	'Lack of institutional support'
Lack of access to electricity	0.837	0.070	0.244	0.187	0.014
Inadequate business premises	.0.770	-0.260	-0.152	-0.027	-0.060
Lack of own transport	0.804	-0.203	0.059	0.057	0.026
Lack of access to water	0.733	-0.013	0.352	0.083	-0.068
Lack of access to roads	0.733	0.147	0.159	-0.202	0.196
Lack of access to telecommunications	0.790	-0.095	0.182	0.286	-0.037
Crime	0.779	0.129	0.078	-0.334	0.220
Lack of access to postal services	0.829	-0.104	-0.147	-0.024	-0.092
Lack of contact networks in my area	0.776	0.164	-0.259	0.014	0.186
Lack of customers in my area	0.823	0.099	-0.222	0.145	-0.140
Poor labour quality	0.869	-0.005	-0.004	-0.077	-0.295
Distance to suppliers	0.887	0.198	0.110	0.140	0.209
Insufficient technology	0.799	-0.102	0.312	0.121	0.027
Competition (rivalry)	0.747	-0.037	-0.045	-0.093	-0.089
Too many rules and regulations	0.773	0.366	-0.139	-0.096	-0.048
Complex labour legislation	0.881	0.407	0.012	-0.231	-0.054
Threat of new entrants	0.704	0.199	0.122	0.181	-0.117
Substitutes in other industries	0.768	-0.072	0.245	-0.151	-0.257
Lack of access to tender contracts	0.736	0.036	-0.039	0.016	-0.037
Scarce information about tender contracts	0.797	0.032	0.038	0.007	-0.054
Paying a skills levy	0.728	**0.796**	-0.012	0.066	0.019
Managing employee UIF contributions	0.684	**0.736**	-0.084	-0.039	-0.022
Paying and complying with VAT	0.889	**0.438**	-0.010	-0.548	0.259
Lack of access to expansion capital	0.737	-0.011	**0.770**	0.142	0.056
Cash flow stress	0.757	-0.385	**0.610**	-0.134	-0.125
Lack of access to start-up capital	0.768	0.196	0.163	**0.749**	0.136
Insufficient property rights	0.889	-0.261	-0.063	**0.634**	0.135
Insufficient private sector support	0.807	-0.086	-0.129	0.053	**0.845**
Insufficient government support	0.841	-0.054	0.118	0.069	**0.715**
Distance to buyers	0.858	-0.043	-0.062	-0.055	-0.016
Strong bargaining power of buyers	0.829	-0.138	-0.074	-0.143	0.184
Strong bargaining power of suppliers	0.884	0.174	0.023	0.030	-0.034
Minimum wage legislation	0.730	0.048	-0.097	-0.041	-0.045
Forestry Act	0.706	-0.021	-0.538	-0.019	0.290
Lack of access to training facilities	0.863	-0.095	-0.061	-0.019	0.147
Average factor scores for each stratum					
Harvester contractors		0.04	-0.32	-0.10	0.335
Retailers		-0.11	0.15	0.38	-0.292
Processors		0.13	**0.52**	0.23	**-0.502**
Speculators		-0.22	**0.42**	**-0.51**	-0.273

Table 5: Continued

Factor		9	10	11	12
Eigenvalue		1.469	1.194	1.145	1.013
Percentage of variance explained		4.080	3.317	3.182	2.183
Potential Constraints the survival and growth of the business	Commun-alities	'Distance to buyers'	'Lack of bargaining power'	Not interpretable	'Lack of access to training'
Lack of access to electricity	0.837	0.113	0.019	0.219	0.015
Inadequate business premises	.0.770	0.272	0.112	-0.176	-.0.083
Lack of own transport	0.804	0.433	0.109	-0.065	0.132
Lack of access to water	0.733	-0.068	0.152	-0.033	0.080
Lack of access to roads	0.733	-0.212	-0.102	0.065	-0.130
Lack of access to telecommunications	0.790	-0.049	-0.044	0.240	-0.154
Crime	0.779	0.212	0.155	-0.198	0.204
Lack of access to postal services	0.829	-0.073	0.453	-0.223	0.065
Lack of contact networks in my area	0.776	0.348	-0.079	0.040	0.285
Lack of customers in my area	0.823	0.108	0.048	0.218	0.046
Poor labour quality	0.869	0.139	0.121	0.123	0.139
Distance to suppliers	0.887	-0.017	0.052	0.029	-0.205
Insufficient technology	0.799	-0.182	0.317	0.096	0.119
Competition (rivalry)	0.747	0.046	-0.177	-0.074	0.226
Too many rules and regulations	0.773	0.323	-0.164	-0.124	0.127
Complex labour legislation	0.881	-0.041	-0.017	0.113	0.209
Threat of new entrants	0.704	0.092	0.299	0.158	0.054
Substitutes in other industries	0.768	0.441	-0.073	-0.072	0.022
Lack of access to tender contracts	0.736	0.025	0.016	0.040	-0.020
Scarce information about tender contracts	0.797	-0.124	-0.013	0.111	0.085
Paying a skills levy	0.728	0.058	0.052	-0.076	-0.044
Managing employee UIF contributions	0.684	-0.160	0.071	0.145	-0.153
Paying and complying with VAT	0.889	-0.035	0.083	0.392	0.014
Lack of access to expansion capital	0.737	0.079	0.083	-0.177	-0.024
Cash flow stress	0.757	-0.025	-0.145	0.097	-0.048
Lack of access to start-up capital	0.768	-0.067	-0.014	-0.096	-0.109
Insufficient property rights	0.889	-0.094	0.042	0.315	0.274
Insufficient private sector support	0.807	-0.124	-0.066	-0.081	0.022
Insufficient government support	0.841	0.202	0.110	0.033	0.280
Distance to buyers	0.858	**0.897**	0.038	0.037	0.039
Strong bargaining power of buyers	0.829	0.205	**0.581**	0.160	-0.204
Strong bargaining power of suppliers	0.884	-0.041	**0.905**	0.038	0.117
Minimum wage legislation	0.730	0.007	0.103	**0.769**	-0.150
Forestry Act	0.706	-0.055	0.187	**-0.448**	0.048
Lack of access to training facilities	0.863	0.068	0.084	-0.142	**0.889**
Average factor scores for each stratum					
Harvester contractors		-0.106	-0.003	0.312	-0.044
Retailers		-0.179	-0.360	0.019	0.095
Processors		**0.376**	-0.170	-0.663	-0.310
Speculators		0.174	**0.863**	-0.405	**0.545**

Factor 4 was defined as 'Access to contracts' (access to tender contracts, and scarce information on tenders, scored highly), and may relate to the SMME owners' perceptions that government and the private sector in KZN are biased towards larger businesses in awarding tender contracts. Factor 5 was labeled 'Compliance costs' as all variables with relatively higher loadings have financial or administrative costs associated with complying with legislation: paying a skills levy, managing and making employee Unemployment Insurance Fund (UIF) contributions, and paying/complying with VAT. Lack of access to expansion capital, and cash flow stress, had the highest loadings on Factor 6, which reflects 'Liquidity stress'. Factor 7 was labeled 'Lack of collateral', as access to start-up capital and lack of a transferable title deed scored highly, implying that uncertain property rights reduce access to loans when a lack of alternative collateral requires property as security for a loan (Bannock, 2002). Factor 8 isolates a lack of public and private institutional support for agribusiness SMMEs and suggests a role for promoting business linkages between SMMEs and larger organizations and parastatals to facilitate market access, skills transfer and input procurement. Factor 9 was labeled 'Distance to buyers' as this was the only potential constraint that scored highly on this component, and Factor 10 was labeled 'lack of bargaining power', and may reflect the relatively smaller size of agribusiness SMMEs relative to their input suppliers and product and service buyers. Factor 11 was not interpretable, while Factor 12 was labeled 'Training' as lack of access to training facilities was the only potential constraint that scored highly on this component.

Table 5 also shows the average score for each stratum for each of the 12 rotated factors. Retailers score highest on Factor 1 - 'Lack of access to services' - supporting the view that communities in spatially isolated areas with a relatively sparse resource base and limited cash circulation have limited information about product opportunities outside survivalist trading or provision of inexpensive services (Berry *et al.*, 2002). Retailers and Speculators seem to be relatively more affected by 'Financial constraints at start-up', with average scores for Factor 2 of 0.33 and 0.51, respectively. Speculators seem to perceive 'Management capacity in the enterprise' as more of a constraint than do the other agribusiness types. Processors and Speculators also rank 'Liquidity stress'

relatively more highly, while perceived 'Lack of (government and private sector) institutional support' is the main dimension for Harvester contractors.

The types of business opportunities, and information about these opportunities, apparent to an entrepreneur, are partly determined by the entrepreneur's perceptions about factors in the external environment (Shane, 1994b). The sample agribusiness SMME owners' scores for the 36 constraints to business survival and growth are proxies for their perceptions of the relative impact of these external factors. Respondents' assessments of the statements in Appendix B on page 74 were used to quantify their perceptions of local, provincial, national and international business opportunities, and information regarding business opportunities available to them. Section 3.4 presents empirical models that analyse whether the hypothesized link between these sets of perceptions was supported in the sample of 44 agribusiness SMME owners in KZN.

3.4 Empirical models linking owners' perceptions of constraints to owners' perceptions of business opportunities and available information

The correlation coefficients presented in Appendix F on page 90 suggested the following empirical models to quantify how the perceived constraints discussed in section 3.3 affected the study entrepreneurs' perceptions of the local (within municipal boundaries) (LOCOPP), provincial (PROVOPP), national (NATOPP) and international (INTERNOPP) business opportunities and information (INFO) about these opportunities, that were available to them (signs in parentheses indicate the expected direction of the impact of each constraint):

LOCOPP = f(BARGSUPP (-); NEWENT (-); INFO (+)) (2)

PROVOPP = f(LOCOPP (+); INTERNOPP (+); (PROXBUY (-); MANSKILLS (-); BARGSUPP (-)) (3)

INTERNOPP = f(PROVOPP (+); NATOPP (+); INFO (+); MANSKILLS (-); COMP (-)) (4)

INFO = f(EXLEGN (-); GOVSUPP (-); MANSKILLS (-); BUSPREM (-)). (5)

The definitions of the variables expected to influence an entrepreneur's perceptions of LOCOPP, PROVOPP, INTERNOPP, and INFO are presented in Table 6 (perceptions of

national business opportunities were omitted as these were not statistically significantly correlated with any of the 36 constraint variables).

Table 6: Definition of variables expected to influence agribusiness SMME owners' perceptions of business opportunities and information about such opportunities, KwaZulu-Natal, 2003-2004

Variable	Definition	Expected sign
LOCOPP	Perception of business opportunities within municipal boundaries	+
PROVOPP	Perception of business opportunities within KZN	+
INTERNOPP	Perception of international business opportunities	+
INFO	Perception of availability of information on all potential business opportunities	+
BARGSUPP	Perceived supplier bargaining power	-
NEWENT	Perceived threat of new entrants to product market	-
PROXBUY	Perceived distance from buyers	-
MANSKILLS	Perceived lack of management skills	-
COMP	Perceived competition from other businesses (rivalry)	-
EXLEGN	Perceived 'excessive' legislation	-
GOVSUPP	Perceived lack of government support for SMMEs	-
BUSPREM	Perceived inadequate business premises	-

LOCOPP, PROVOPP and INFO are all expected to have a positive effect on perceptions of business opportunities, as more positive perceptions of these variables may encourage an entrepreneur and increase his/her confidence and conviction that business opportunities within his/her municipal boundary, or throughout KZN or SA are available. The variables BARGSUPP, NEWENT, PROXBUY, and COMP should negatively affect perceptions of business opportunities, as these were identified as constraints to SMME survival and growth in section 3.2. The variables EXLEGN, MANSKILLS, GOVSUPP and BUSPREM are also likely to negatively affect perceptions of business opportunities, as these variables are constraints that will make it more difficult for an entrepreneur to find and interpret information on business opportunities (Kahneman *et al.*, 1989; Scottish Enterprise, 2002).

3.5 Linear regression models of factors affecting perceived business opportunities

Equations (2) to (5) on page 44 were estimated by Ordinary Least Squares (OLS) regression. Table 7 shows the results for equation (2). The estimated coefficients for BARGSUPP and NEWENT are statistically significant at the 10% level of probability, and have the expected negative signs. Both the perceived bargaining power of suppliers and the threat of new entrants thus negatively affect a respondent's perception of the availability of business opportunities within municipal boundaries.

Table 7: Factors affecting perceived local business opportunities (LOCOPP) for agribusiness SMMEs, KwaZulu-Natal, 2003-2004

Variable	Coefficient estimate	Standard error	t - statistic
BARGSUPP	-0.098	0.052	-1.876*
NEWENT	-0.096	0.055	-1.733*
INFO	0.101	0.076	1.325^{NS}
Constant	3.733	0.226	17.109***
Adjusted R^2 = 0.182 F = 2.962*			

Note: ***, * and $^{N.S}$ imply statistical significance at the 1% and 10% levels, and non-significance, respectively.

Table 8 overleaf, for equation (3), shows that owners' perceptions that business opportunities are available throughout KZN were positively related to strong perceptions that international opportunities (INTERNOPP) are available. The negative estimated coefficients for BARGSUPP and MANSKILL imply that strong bargaining power of suppliers and a lack of management skills reduce perceptions that business opportunities are available throughout KZN. The statistically significant positive coefficient estimate for PROXBUY implies that as perceived problems with distance to markets increase, more opportunities are perceived within KZN.

Table 8: Factors affecting perceived provincial business opportunities (PROVOPP) for agribusiness SMMEs, KwaZulu-Natal, 2003-2004

Variable	Coefficient estimate	Standard error	t - statistic
LOCOPP	0.214	0.160	1.339^{NS}
INTERNOPP	0.305	0.088	3.465***
BARGSUPP	-0.189	0.055	-3.435***
MANSKILL	-0.124	0.069	-1.805*
PROXBUY	0.206	0.092	2.239**
Constant	2.163	0.681	3.178***
Adjusted R^2 = 0.582 F = 10.582***			

Note: ***, **, * and ^{NS} imply statistical significance at the 1%, 5% and 10% levels, and non-significance, respectively.

In Table 9 for equation (4), positive perceptions of business opportunities throughout SA (NATOPP) and available information on business opportunities (INFO) increase the available international business opportunities (INTERNOPP) perceived by the survey respondents. The negative estimated COMP coefficient indicates that perceived strong competition (rivalry) negatively affects the study entrepreneurs' perceptions that business opportunities are available internationally.

Table 9: Factors affecting perceived international business opportunities (INTERNOPP) for agribusiness SMMEs, KwaZulu-Natal, 2003-2004

Variable	Coefficient estimate	Standard error	t - statistic
PROVOPP	0.102	0.152	0.670^{NS}
NATOPP	0.642	0.126	5.089***
INFO	0.321	0.089	3.608***
MANSKILL	-0.019	0.078	-0.239^{NS}
COMP	-0.246	0.056	-4.356***
Constant	0.046	0.599	0.082^{NS}
Adjusted R^2 = 0.582 F = 10.582***			

Note: ***, and ^{NS} imply statistical significance at the 1% level and non-significance, respectively.

Finally, Table 10 for equation (5) implies that the respondents' perceptions of whether information on business opportunities was available was negatively affected by their perceptions of insufficient government support and a lack of management skills.

Table 10: Owners' perceptions of information available on business opportunities (INFO), KwaZulu-Natal, 2003-2004

Variable	Coefficient estimate	Standard error	t - statistic
EXLEGN	-0.137	0.098	-1.404^{NS}
GOVSUPP	-0.223	0.109	-2.053^{***}
MANSKILLS	-0.254	0.121	-2.097^{***}
BUSPREM	-0.179	0.157	-1.142^{NS}
Constant	4.730	0.521	9.069^{***}
Adjusted R^2 = 0.315 F = 4.481^{***}			

Note: ***, and ^{NS} imply statistical significance at the 1% level, and non-significance, respectively.

The results in tables 7 to 10 indicate some support for the Guzman and Santos (2001) hypothesis that an entrepreneur's perceptions about external and firm level factors do affect his/her perceptions about whether business opportunities, and information about such opportunities, are available. These results must, however, be interpreted with caution as the coefficient estimates in equations (2) to (5) suffer from simultaneous-equation bias (are inconsistent), as they contain endogenous explanatory variables. This implies that equations (2) to (5) should probably be estimated using a simultaneous-equation model (Gujarati, 2003: 724-727). This is an area for future research. The next chapter specifies the empirical model relating entrepreneurial quality to enterprise success, and presents the results of a logit analysis quantifying this relationship.

CHAPTER 4
EMPIRICAL MODEL OF THE EFFECT OF ENTREPRENEURIAL QUALITY ON AGRIBUSINESS SMME SUCCESS

This chapter specifies and reports an empirical logit model of the relationship between the four components of entrepreneurial quality described in Chapter 2 and agribusiness SMME success in KZN. The 44 agribusiness SMME owners' repayment performance and loan status at Ithala at the time of the survey, was used as a proxy for enterprise success. A respondent was classified as a loan defaulter if he/she failed at least once to make a loan repayment when due during the loan term. Just below 40% of respondents has previously defaulted, with Harvester contractors having the lowest (17%) and speculators the highest (80%) rates of default, respectively. Four Processors (50%) and five Retailers (63%) had previously defaulted on their loan repayments.

4.1 Logit model specification

The conceptual model developed in Chapter 2 suggests that enterprise success depends upon four components of entrepreneurial quality, namely: the entrepreneur's preference for working as self-employed, the exponents of entrepreneurial quality (the entrepreneur's intrinsic motivation and his/her execution of various energizer behaviours), personal factors, and global or external factors. Discriminant analysis and logistic regression are commonly used to estimate the determinants of dependent variables that have binary outcomes, such as loan repayment status that shows no default or previous incidence of default. Discriminant analysis was not used in this study because some of the potential determinants of loan repayment performance were dichotomous (see below). Discriminant analysis requires that, within groups, variables follow a multivariate normal distribution, with equal covariance matrices (Press and Wilson, 1978; Manly, 1986). Although the violation of this assumption will not necessarily lead to poor results, Press and Wilson (1978) recommend the logistic regression model because of its robustness in respect of the underlying distribution of the independent variables, which need not be multivariate normal. Given that P_i is the probability that the ith agribusiness SMME will not default on loan repayment, the logit model of loan success for the 44

sample agribusiness owners can be expressed in equation (6) as follows (see Gujarati (2003) for a summary of the model's properties):

$$\ln [P_i / (1 - P_i)] = B_1 + B_2X_{2i} + ... + B_kX_{ki} \quad (6)$$

where 1- P_i is the probability that the ith agribusiness SMME owner would have defaulted, and ln $[P_i / (1 - P_i)]$ is the logit or log odds in favour of the ith agribusiness owner not having defaulted on loan repayments to Ithala. A respondent was classified as a defaulter if he/she had defaulted on a loan repayment when due during the course of the repayment period. The X_k are hypothesized determinants of loan success, while the B_k are the parameters to be estimated. Using the conceptual model linking the components of entrepreneurial quality to business success in Chapter 2, discussions with Darroch (2003) and the review of literature in Chapter 1, and equation (6), the loan status of the i^{th} agribusiness SMME owner was estimated as a function of the following variables:

PREF = the i^{th} agribusiness SMME owner's preference for working as self-employed (Yes = 1, No = 0);
MOTN = 1 if the i^{th} owner is intrinsically motivated, and 0 if extrinsically motivated;
ENGSCORE = the i^{th} owner's score for the energizer behaviours (ranges from 0 to15);
EXP = the i^{th} owner's experience in the industry that he/she currently operates in (1 = less than a year, 2 = 2-5 years and 3 = more than 5 years);
FAMILY = the score for the i^{th} owner's perception of whether family members had assisted him/her to become an entrepreneur (Yes = 1, No = 0);
BUSKILLS = the i^{th} owner's scores for self-rating of their business skills (range from 1 to 5);
EXTERNAL AND FIRM LEVEL FACTORS = the i^{th} owner's scores indicating his/her perceptions about whether the potential constraints cited in Chapter 3 constrain his/her business survival and growth (range from 1 to 5); and
EDUCATION = the i^{th} owner's score for his/her highest education level attained, ranging from 7 (less than Standard 6) to 14 (Bachelors degree).

The variables PREF, MOTN, ENGSCORE, the personal factors EXP and FAMILY, and BUSKILLS were all expected to positively affect loan success (no default history). The model developed in Figure 4 on page 27 suggests that entrepreneur's who prefer to work as self-employed, are intrinsically motivated, execute certain energizer behaviours, have relatively higher levels of education, greater business experience, are assisted by their family, and have better business skills, are more likely to be higher quality entrepreneurs, and hence to meet loan repayments as they fall due. EXTERNAL AND FIRM LEVEL FACTORS were more difficult to specify in the empirical model, particularly as the number of constraints (36) was almost equal to the sample size (44). The researcher, therefore, tried to use the PCs estimated from these constraints in Table 5 in section 3.3, which identify dimensions like perceived 'Lack of access to services' and 'Lack of institutional support', as determinants of loan repayment to try and economize on the number of external and firm level factors. Except for 'Management capacity in the enterprise', these factors, *a priori*, were expected to negatively affect loan repayment performance by the sample agribusiness SMMEs as higher scores indicated greater perceived constraints on SMME growth and survival.

4.2 Logit model results

None of the coefficients estimated for the PCs defining dimensions of the potential constraints affecting loan repayment were statistically significant at acceptable levels. The researcher decided, therefore, after reviewing correlation coefficients between the individual constraints and loan repayment, to proxy the EXTERNAL AND FIRM LEVEL factors using two individual constraints: TRAINING (the extent to which an owner perceives that lack of access to skills training facilities constrains business survival and growth), and ELEC (the extent to which an owner perceives that lack of access to electricity is a constraint). Both of these variables should be negatively related to loan repayment, as higher scores indicate relatively greater perceived constraints that reduce the likelihood of business survival and growth and, hence, loan repayment. The resulting logit model of entrepreneurial quality and agribusiness SMME success (loan repayment) estimated by the method of maximum likelihood using the SPSS statistical package

(Norusis, 1994) and stepwise regression is shown in Table 11. Note that 41 cases were used, as loan repayment data were incomplete for three of the owners.

The estimated coefficient for PREF, the first component of entrepreneurial quality, has the expected sign but is not statistically significant. The positive signs for the coefficients estimated for MOTN and ENGSCORE, the elements of the second component of entrepreneurial quality, agree with *a priori* reasoning, but the MOTN estimate is not statistically significant. The parameter estimates for the personal factors EXP and FAMILY, reflecting the third component of entrepreneurial quality, are positive as expected, and statistically significant. The EDUCATION variable was excluded by the stepwise regression procedure. The variable EVALCOST, a proxy for BUSKILLS, also belongs in the third component as it reflects the owner's self-rating of his/her ability to evaluate the potential costs and benefits of business opportunities. The negative sign for the EVALCOST parameter estimate was not expected, and it may indicate that the sample respondents overstate their ability in this regard (higher self-ratings are correlated with poorer loan repayment performance).

Table 11: Logit model of factors affecting agribusiness SMME success (loan repayment performance), KwaZulu-Natal, 2003-2004 (n=41)

Variable	Coefficient estimate
Constant	7.249^{NS}
PREF	0.259^{NS}
MOTN	2.162^{NS}
ENGSCORE	0.803**
EXP	3.328***
FAMILY	3.262**
EVALCOST	-3.365***
ELEC	-1.550**
TRAINING	1.124**

Note: ^{NS}, ** and *** indicate not statistically significant, and statistically significant at the 5% and 1% levels, respectively.

The estimated coefficient for ELEC - a global or external factor reflecting the fourth component of entrepreneurial quality - is statistically significant and has the expected sign. A lack of access to electricity in part reflects the difficulty that entrepreneurs in

rural areas experience in accessing infrastructure services. The parameter estimate for TRAINING, another external factor, is statistically significant, but has an unexpected positive sign. This may indicate that agribusiness SMME owners in the sample that more strongly perceived lack of access to training as a constraint had taken actions to remedy this problem, thereby increasing the likelihood of loan repayment. The estimated logit model had an overall correct classification rate of 90%, with 92% of non-defaulters and 88% of loan defaulters being correctly classified. These classification results are biased upwards, as the same 41 cases were used to both estimate the logit model and to assess the model's classification accuracy. These correct classification results compare well with rates of 62-85% reported in loan repayment research reviewed by Mashatola and Darroch (2003). The –2LL (log of the likelihood) statistic of 22.504 with a χ^2 distribution and 33 degrees of freedom has an observed probability level of close to 0.75, indicating a good model fit to the data.

Attempts to improve the logit model by estimating the determinants of loan repayment within a simultaneous-equation model that specifies the interrelationships between the four components of entrepreneurial quality in Figure 4 did not generate meaningful results. This result, and the lack of statistically significant coefficients for the PREF component, MOTN element, and PCs in the logit model may be due to a lack of variability in some of the sample data, or the relatively small sample size, as multicollinearity was not identified as a problem in the data (Gujarati, 2003). For example, owners' scores for their perceptions about the individual external constraints were quite similar across all strata. Further research is needed to study the impact of business type on loan success, as Harvester contractors in this sample had relatively lower loan default rates. The next section examines the relationships between the four components of Guzman's model of entrepreneurial quality and presents the results of chi-square tests for independence between the four components.

4.3 Chi-square tests for independence between the components of entrepreneurial quality

A chi-square test for independence between two variables is based on a contingency table that summarizes the measurements on these variables for each case in a sample survey (Mirer, 1983). Based on the frequency proportions observed in the data, expected frequencies can be predicted on the assumption that the two variables are independent of each other. A chi-square test statistic, χ^2, value can then be calculated by equation (7) as:

$$\chi^2 = \Sigma (n_k - p_k)^2 / p_k \qquad (7)$$

where n_k = the absolute frequency of observations in category k, and p_k = the number of cases predicted to be in the k^{th} category. For a contingency table of $(r - 1)(c - 1)$ degrees of freedom, where r = the number of rows and c = the number of columns in the main body of the contingency table, the null hypothesis of independence is tested by comparing the estimated χ^2 value to the critical χ^2 value at the 1%, 5% and 10% levels of significance. If the estimated value exceeds the critical value, the null hypothesis of independence is rejected (Mirer, 1983). Relationships between the preference for working as self-employed, the type of entrepreneurial motivation, and the capacity for energizer behaviours were tested using the 44 SMME agribusiness owners' responses to Question 1, Question 2 and Question 3 in Appendix C on page 75.

4.4 Results of chi-square tests for independence

Table 12 reports the test for independence between motivation type and preference for working as self-employed. The hypothesis of independence between these two components of entrepreneurial quality is rejected at the 2.2% level of statistical significance. Intrinsically motivated entrepreneurs in the sample would prefer to work as self-employed, while it seems that only the extrinsically motivated owners in the sample would work as an employee rather than for him/herself at their current income level.

Table 12: Relationships between motivation type and the preference for working as self-employed by agribusiness SMME owners, KwaZulu-Natal, 2003-2004 (n=44)

	n = 38	n = 6			
	Prefer to work as self-employed (%)	Prefer to work as employee (%)	χ^2 value	df	Significance level for χ^2
Type of motivation					
Intrinsic	50	0	5.280	1	0.022**
Extrinsic	50	100			

Note: ** indicates statistical significance at the 5% level; df denotes degrees of freedom.

Table 13 presents tests for independence between the five energizer behaviours, and the preference for working as self-employed. The hypothesis of independence is rejected at the 10% level of significance for the preference for working as self-employed and an agribusiness SMME owner having devised a new product or service since start-up, having compiled budgets for the business since start-up, the desire to compile budgets for the business in the future, and the desire to train employees in the future. This implies that there is a degree of dependence between the preference for working as self-employed and the capacity for innovation, planning and a 'venturesome' spirit.

Tests for independence between the same energizer behaviours and the nature of an agribusiness SMME owner's motivation are given in Table 14. There is a high degree of dependence between being an intrinsically motivated agribusiness SMME owner and the ability to plan by compiling budgets. The relationship between innovation and intrinsic motivation is statistically significant only at the 11% level, and there are no other statistically significant relationships between intrinsic motivation and the other energizer behaviours. Overall, the above Chi-square tests show some support for Guzman's hypothesis that entrepreneurs with a preference for working as self-employed tend to be intrinsically motivated and have a capacity for innovation, a desire to plan, and a venturesome spirit.

Table 13: Relationship between energizer behaviors and the preference for working as self-employed by agribusiness SMME owners, KwaZulu-Natal, 2003-2004 (n=44)

		n = 38	n = 6			
		Prefer to work as self-employed (%)	Prefer to work as employee (%)	χ^2 value	df	Significance level for χ^2
Behaviours derived from ambition						
Have you expanded you business since start up?	Yes	82	100			
	No	18	0	1.314	1	0.252
Do you plan to expand your business in the next year?	Yes	84	67			
	No	16	33	1.072	1	0.300
Behaviours derived from innovation						
Have you devised a new product or service since start-up?	Yes	61	100			
	No	39	0	3.593	1	0.058*
Do you plan to market a new product or service in the next year?	Yes	53	83			
	No	47	17	0.275	1	0.600
Behaviours derived from a spirit of collaboration						
Have you entered a formal agreement with an industry player since start-up?	Yes	74	67			
	No	26	33	0.129	1	0.720
Do you plan to enter a formal agreement with and industry play in the next year?	Yes	58	50			
	No	42	50	1.562	1	0.211
Behaviours derived from a desire to plan						
Have you compiled budgets for your business since start-up?	Yes	92	67			
	No	8	33	3.329	1	0.068*
Do you plan to draw up a budget for your business in the next year?	Yes	95	67			
	No	5	33	4.940	1	0.026**
Behaviours derived from a 'venturesome' spirit						
Have trained any employees since start-up?	Yes	84	67			
	No	16	33	1.072	1	0.300
Do you plan to train any employees in the next year?	Yes	68	33			
	No	32	67	2.757	1	0.097*

Note: ** and * indicate statistical significance at the 5% and 10% levels, respectively; df denotes degrees of freedom.

Table 14: Relationship between energizer behaviors and motivation type for agribusiness SMME owners, KwaZulu-Natal, 2003-2004 (n=44).

		n = 19	n = 25			
		Intrinsic motivation (%)	Extrinsic motivation (%)	χ^2 value	df	Significance level for χ^2
Behaviours derived from ambition						
Have you expanded you business since start up?	Yes	15	22			
	No	4	3	0.661	1	0.416
Do you plan to expand your business in the next year?	Yes	15	21			
	No	4	4	0.185	1	0.667
Behaviours derived from innovation						
Have you devised a new product or service since start-up?	Yes	10	19			
	No	9	6	2.624	1	0.105
Do you plan to market a new product or service in the next year?	Yes	10	15			
	No	9	10	0.239	1	0.625
Behaviours derived from a spirit of collaboration						
Have you entered a formal agreement with an industry player since start-up?	Yes	12	20			
	No	7	5	1.544	1	0.214
Do you plan to enter a formal agreement with and industry play in the next year?	Yes	11	14			
	No	8	11	0.016	1	0.900
Behaviours derived from a desire to plan						
Have you compiled budgets for your business since start-up?	Yes	19	20			
	No	0	5	4.287	1	0.038**
Do you plan to draw up a budget for your business in the next year?	Yes	16	21			
	No	3	4	3.344	1	0.067*
Behaviours derived from being 'venturesome'						
Have trained any employees since start-up?	Yes	16	20			
	No	3	5	0.129	1	0.720
Do you plan to train any employees in the next year?	Yes	13	15			
	No	6	10	0.331	1	0.565

Note: ** and * indicate statistical significance at the 5% and 10% levels, respectively; df denotes degrees of freedom.

CONCLUSIONS

Agribusiness SMME's in KwaZulu-Natal (KZN) can potentially stimulate employment growth, and thereby help to reduce the levels of income inequality and poverty in the province. The literature review in Chapter 1 describes the significance of promoting the growth of existing SMMEs, as opposed to an increase in SMME start-ups that are usually micro, survivalist enterprises. The latter enterprises typically have low productivity and, while they may alleviate poverty, are less effective in generating investment capital to boost economic development. Increased employment levels resulting from SMME start-ups usually reflect supply-push factors, while increased employment levels resulting from SMME expansion usually reflect demand-pull forces. Supply-push forces include population growth or a decrease in agricultural returns, while demand-pull forces include increasing productivity of enterprises and buoyant demand. The challenge for policy makers at local and provincial government level, and financiers, therefore, is to encourage the net expansion of existing SMMEs rather than the emergence of survivalist enterprises.

The results of this study show that barriers to agribusiness SMME survival and growth in KZN result from socio-economic, institutional and firm-level constraints. A stratified random sample of 44 agribusiness SMME owners in KZN during October 2003 and February 2004 perceived that a lack of government support for agribusiness SMMEs was the major overall constraint to business survival and growth. This results partly from the perception that SMMEs have to comply with complex legislation, including VAT administration and registration, and labour and minimum wage laws. Many of these owners also consider that they lack the capacity or resources to comply with this legislation. Lack of access to finance is also perceived as a major constraint, despite 70% of the study respondents having over five years experience in their current business, and 40% having a tertiary qualification. Further analysis identified eight dimensions of the owners' perceived constraints on agribusiness SMME survival and growth in KZN, namely: a lack of access to services; funding constraints at start-up; management capacity in the enterprise; access to tender contracts; compliance costs associated with VAT and labour legislation; liquidity stress; lack of collateral; and lack of institutional (government

and private sector) support. A lack of collateral and access to services seemed to affect the Retailer stratum relatively more, while Speculators considered lack of capital at start-up to be their major constraint. Harvester contractors and Processors seemed to be most affected by compliance costs, while Processors were especially prone to liquidity stress. These results support findings by Wynne and Lyne (2003), which imply that small enterprise growth is constrained by poor access to credit, relatively high transactions costs, and unreliable local markets.

Many constraints perceived by the 44 agribusiness SMME owners in KZN arise because their businesses are situated in remote rural areas. This reduces access to infrastructure services such as good roads, telecommunications and electricity, exacerbates the problem of a lack of own transport, and increases exposure to crime. These results support findings by Fenwick and Lyne (1999), Matangul *et al.* (2001), and Klitgaard and Fitschen (1997). The policy implication is that SMME survival rates and growth rates could be increased by providing, or improving the quality of, appropriate infrastructure services in rural areas. This may stimulate markets outside of urban areas by decreasing transaction costs. Lack of finance at business start-up is associated with a SMME's inability to attract skilled labour, purchase sufficient technology, and afford business premises close to their suppliers. Difficulty in accessing finance results from formal lending institutions being averse to financing smaller loans due to relatively high administration and information costs in the absence of collateral. To help overcome this constraint, potential financiers that want to increase access by SMMEs to capital markets could research further how to develop mechanisms to encourage savings mobilization, or to develop innovative loan products to suit the cash flows of agribusiness SMMEs and improve the risk-profiles of collateral poor entrepreneurs.

The SMME owners' ability to manage the competitive forces in their product markets could be improved by the provision of accessible and appropriate skills training services, or appropriate training at school and tertiary level. Such training could emphasize the need to understand the threats and opportunities posed by potential new entrants into product markets, competitors in the same market, and substitutes in other industries.

Public and private sector institutions could also facilitate access to tender contracts, by, for example, involving neutral representatives from the private sector in the tender process to promote transparency (and good governance) in respect of resource allocation. The costs associated with complying with legislation such as the payment of skills levies, VAT registration and payment, and labour issues could be reduced by reviewing processes for agribusiness SMMEs to access skills grants, and making small business representation on labour bargaining councils more effective. This would enable small businesses to provide the negotiations in these councils with more insight into the effects of work agreements and service conditions on SMMEs. The implications of allowing SMMEs to elect to pay income tax and VAT on a cash basis needs further research, as this may reduce cash-flow stress resulting from paying VAT at the point of invoice and from interest lost before the receipt of VAT refunds. Liquidity stress due to a lack of access to expansion capital, and compliance with VAT and the payment of skills levies, could be mitigated by developing more flexible loan products, such as graduated payment loans; these could also improve the risk profile of cash and collateral-strapped entrepreneurs. Lack of secure title deeds compounds the problem of insufficient start-up capital by reducing business collateral available for loans.

A perceived lack of both government and private sector support indicates a need to identify how to develop more constructive business linkages between agribusiness SMMEs and public or private institutions in KZN to increase market access and skills transfer. Study results also show that business opportunities perceived by agribusiness entrepreneurs depend on the availability of information and the entrepreneur's perception of his/her management skills, proximity to markets and the bargaining power of suppliers. Further research for policy purposes is needed to determine if the constraints on business survival and growth identified in this dissertation also apply to agribusiness SMMEs in other provinces in SA.

Given the relative importance of SMME expansion as opposed to SMME start-up or emergence, Guzman and Santos' (2001) distinction between entrepreneurial emergence and entrepreneurial quality is very relevant to this study. An estimated logit model of the

effects of entrepreneurial quality on business success for the 44 agribusiness SMMEs (using loan repayment as a proxy for success) shows that strong energizer behaviours (such as current and planned business expansion and staff training), more years of business experience, and family assistance to become an entrepreneur, promote loan repayment, while a perceived lack of access to electricity (a proxy for access to services) negatively affects loan repayment. Access to training and electricity services are external factors affecting entrepreneurial quality and business success. The overall model correct classification rate of 90% - 92% of non-defaulters and 88% of loan defaulters - compares well with rates reported in other studies of loan repayment.

Chi-square tests for independence show that among this sample of 44 agribusiness SMME owners in KZN, relatively more intrinsically motivated owners would prefer to work as self-employed. This preference also increases with an entrepreneur's capability of executing energizer behaviours derived from innovation and a desire to plan, which may translate into the devising of new products or services, drawing up budgets for the business, and providing formal or informal training to employees. Intrinsically motivated entrepreneurs also seem more inclined to plan into the future for their businesses. These results provide some support for Guzman's (1994) hypothesis of the links between these components of entrepreneurial quality.

Public and private financial institutions could supplement their current loan evaluation policies by giving more attention to the applicant's capacity for energizer behaviours and extent of family assistance in becoming an entrepreneur. This may reduce adverse selection, and improve access to finance by agribusiness SMMEs and help to ease a major perceived constraint on their survival and growth. Nieuwenhuizen and Kroon (2003) also suggested the need for SA financial institutions to assess the costs and benefits of incorporating more information about *personal characteristics* into their loan evaluation procedures, but did not identify as wide a range of energizer behaviours, or the potential role of family assistance in promoting SMME success. The policy implication of the effects of training and lack of access to electricity is that SMME survival and growth could be promoted by providing accessible and appropriate skills training services

- perhaps at school and tertiary level - and by providing, or improving the quality of, appropriate infrastructure. This raises the obvious question of how these measures would be financed. Further research for policy purposes is needed to determine if the effects of entrepreneurial quality on business success identified in this paper apply to agribusinesses in other provinces in SA. Further research could also be directed at validating these results on a larger sample of agribusiness SMMEs in KZN, and at identifying which explanatory variables influencing loan repayment performance are relatively more important from a lending institution's perspective by enterprise type.

SUMMARY

Agribusiness SMMEs can help to overcome the problems of unemployment, poverty and income inequality in KwaZulu-Natal (KZN) if the constraints to SMME survival and growth can be identified and addressed. One major constraint is a lack of access to finance - commercial banks are hesitant to finance SMMEs as they lack information about the nature of the credit risks to which they might be exposed, and are often reluctant to accept the relatively high administrative costs associated with relatively smaller loans. The spatial distance of rural SMMEs' from urban centers within municipal boundaries results in a lack of access to services, and to more lucrative markets. Owners of agribusiness SMMEs also perceive that government legislation relating to small businesses constrains their business survival and growth. These problems could in part be addressed by identifying the dimensions of socioeconomic, institutional and firm level constraints faced by agribusiness SMMEs in KZN, and the role of entrepreneurial quality in determining the success of agribusiness SMMEs. This would provide policy makers and the private sector with information to craft and implement appropriate strategies to increase SMME survival and growth rates.

The first aim of this study, therefore, was to identify the major dimensions of the constraints that agribusiness SMME owners in KZN perceive hinder their business survival and growth, using Principal Component Analysis (PCA) of 36 potential socioeconomic, institutional and firm level constraints identified from past local and international research. The second aim was to quantify the relationship (if any) between entrepreneurial quality and agribusiness SMME success, using an empirical logit model. This analysis was adapted from a model linking entrepreneurial quality to business success developed by Guzman and Santos (2001). Loan repayment performance by the study agribusiness SMMEs was used as a proxy for business success. Four components of entrepreneurial quality are derived from the Energizer sub-function in this model: the preference for working as self-employed - a necessary but not sufficient condition to be a quality entrepreneur; the type of motivation (intrinsic or extrinsic) that induces an individual to become an entrepreneur, and the existence of certain energizer behaviours; factors in the entrepreneur's personal environment (such as education, business

experience and family influence) that determine the entrepreneur's abilities and attitudes; and factors in the entrepreneur's global (external) environment (these provide the entrepreneur with information and business opportunities).

This study used a stratified random sample survey of 44 agribusiness SMME owners financed by the Ithala Development Finance Corporation in KZN during October 2003 and February 2004 to obtain data. The sample was stratified into Harvester contractors, Processors, Retailers and Speculators using a sampling fraction of 20% for each stratum drawn from Ithala's 266 agribusiness SMME clients at the time. Questions on potential constraints to business survival and growth and the four components of entrepreneurial quality were then presented to the sample respondents during personal interviews. Respondents had to rank each of 36 potential constraints from one (minor constraint) to five (major constraint), and to rank themselves on the various aspects of entrepreneurial quality such as factors of the personal environment; motivation type and energizer behaviours; preference for working as self-employed; attitudes and abilities; and perceptions regarding potential business opportunities and the availability of information regarding such opportunities. Their rankings of the 36 potential constraints to business survival and growth were used to proxy the impact of factors of the global environment.

The 44 agribusiness SMME owners perceived that a lack of government support and lack of access to start-up and expansion capital were the major barriers to business survival and growth. Cash flow and liquidity stress resulted from having to comply with VAT administration and registration, and complex labour legislation. The PCA identified 12 dimensions of the 36 potential constraints, namely: lack of access to services; lack of capital at start-up; management capacity in the enterprise; lack of collateral; lack of access to tender contracts; and lack of government and private sector support. A lack of collateral and lack of access to services seemed to affect the Retailer stratum relatively more, while Speculators considered lack of capital at start-up as their main constraint. Harvester contractors and Processors seemed to be most affected by compliance costs, while Processors were especially prone to liquidity stress.

Ordinary Least Squares regression analysis showed that perceptions of local business opportunities are influenced by owner perceptions of the threat of new entrants to their product market and the strong bargaining power of their suppliers, while perceived provincial business opportunities were affected by owner perceptions of the strong bargaining power of their suppliers, proximity to their markets, and perceived international business opportunities. Information on business opportunities was related to owner perceptions of government support for the SMME sector, and ratings of his/her own management skills.

An empirical logit model estimated that stronger energizer behaviours (such as current and planned business expansion and staff training), more years of business experience, and family assistance to become an entrepreneur, promote loan repayment, while a perceived lack of access to electricity (a proxy for lack of access to services) negatively affects loan repayment. Chi-square tests also showed that SMME agribusiness owners in KZN with a preference for working as self-employed had intrinsic motivation and were more likely to adopt the energizer behaviours.

The study results suggest that the development of appropriate infrastructure and training services, innovative loan products to address cash flow and collateral issues, more transparent tendering processes, policies to reduce the cost of compliance with VAT and labour legislation affecting agribusiness SMMEs, and more focus on the personal characteristics of credit applicants, are some of the solutions that could help to promote the future success of agribusiness SMMEs in KZN. Further research is needed to validate these results on a larger sample of agribusiness SMMEs, and to estimate if the effects of entrepreneurial quality on business success identified in this study apply to agribusiness SMMEs in other provinces in South Africa. The implications of allowing SMMEs to elect to pay VAT on a cash basis should also be examined.

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Appendix A: Questionnaire used to survey owners' perceptions of factors that constrain agribusiness SMME survival and growth in KwaZulu-Natal, 2003-2004

Rate the following aspects on a scale of 1 (minor constraint) to 5 (major constraint)	Minor constraint				Major constraint
	1	2	3	4	5
Access to electricity	□	□	□	□	□
Access to water	□	□	□	□	□
Access to good roads	□	□	□	□	□
Access to telecommunications	□	□	□	□	□
Access to postal services	□	□	□	□	□
Crime	□	□	□	□	□
Insufficient start-up capital	□	□	□	□	□
Distance from potential buyers	□	□	□	□	□
Distance to suppliers	□	□	□	□	□
Lack of contacts in your industry and area	□	□	□	□	□
Lack of own transport	□	□	□	□	□
Access to expansion capital	□	□	□	□	□
Complex labour legislation	□	□	□	□	□
Paying a skills levy	□	□	□	□	□
Managing employee UIF contributions	□	□	□	□	□
Complying with minimum wage legislation	□	□	□	□	□
The Forestry Act	□	□	□	□	□

Too many rules and regulations	□	□	□	□	□
Insufficient property rights	□	□	□	□	□
VAT or taxation issues	□	□	□	□	□
Insufficient government support for agribusiness SMMEs	□	□	□	□	□
Insufficient private sector support for agribusiness SMMEs	□	□	□	□	□
Access to skills training	□	□	□	□	□
Too few customers for your product	□	□	□	□	□
Access to tender contracts	□	□	□	□	□
Scarce information about the availability of tenders	□	□	□	□	□
Lack of management skills	□	□	□	□	□
Bargaining power of buyers	□	□	□	□	□
Bargaining power of suppliers	□	□	□	□	□
Threat of new entrants to your product(s) market(s)	□	□	□	□	□
Threat from substitute products in other industries	□	□	□	□	□
Rivalry from competing sellers	□	□	□	□	□
Insufficient technology in your business	□	□	□	□	□
Low quality of labour	□	□	□	□	□
Inadequate business premises	□	□	□	□	□

Appendix B: Questionnaire used to survey owners' perceptions of business opportunities, and information available on business opportunities, for agribusiness SMMEs in KwaZulu-Natal, 2003-2004

To what extent do you agree with the following statements:	Strongly agree (4)	Agree (3)	Disagree (2)	Strongly disagree (1)
Local business opportunities exist for me (within your municipal boundary) (LOCOPP)	☐	☐	☐	☐
Provincial business opportunities exist for me (outside your municipal boundary) (PROVOPP)	☐	☐	☐	☐
National business opportunities exist for me (in other provinces) (NATOPP)	☐	☐	☐	☐
International business opportunities exist for me (INTERNOPP)	☐	☐	☐	☐
Information on any potential business opportunities available to me is available and easily obtainable (INFO)	☐	☐	☐	☐

Appendix C: Questions used to identify the four components of entrepreneurial quality for agribusiness SMME owners in KwaZulu-Natal, 2003-2004

Question 1: Preference for working as self-employed			
	Would you be willing to change your work as an entrepreneur for a position as an employee with a similar income level?	☐ Yes	☐ No
Question 2: Motivation type			
	Which statement best describes the reason why you became an entrepreneur?		Comments:
a.	I have always felt a special need or desire to develop this activity, regardless of its economic implications	☐	
b.	I felt that it was impossible for me to obtain career satisfaction as an employee	☐	
c.	I think that working for myself will enable me to become wealthy	☐	
d.	I became an entrepreneur to overcome a distressing economic situation, e.g. unemployment, loss of family household income due to death or disease	☐	
e.	I was required to continue the family business to avoid its closure or acquisition by an outside party	☐	
Question 3: Energizer behaviours			
a.	Have you carried out any enterprise expansion since starting your business?	☐ Yes	☐ No	Details:
	Have you planned to carry out any enterprise expansion in the following year?	☐ Yes	☐ No	
b.	Have you devised/marketed a new product or service for your customers since starting your business?	☐ Yes	☐ No	
	Have you considered devising/marketing a new product or service for your customers during the following year?	☐ Yes	☐ No	

c.	Have you entered an agreement with another participant in your industry since starting your business? (Formal/informal)	☐ Yes	☐ No	
	Do you plan to enter an agreement (formal or informal) with another participant in your industry during the following year?	☐ Yes	☐ No	
d.	Have you drawn up a budget since starting your business?	☐ Yes	☐ No	
	Have you drawn up a budget for the following year?	☐ Yes	☐ No	
e.	Have you implemented any formal training system for you employees since starting your business? E.g. sending them to training, or training them by yourself.	☐ Yes	☐ No	
	Do you plan to implement a formal training system for your employees during the following year?	☐ Yes	☐ No	

Question 4: Factors of the entrepreneur's personal environment

	What level of formal education did you attain?	Less than Std 6 ☐	Std 6 ☐	Std 8 ☐	Matric ☐	Cert ☐	Dipl. ☐	Degree ☐
	How much paid work experience have you had in the sector or business you now operate in?	Less than a year ☐			One to five years ☐		More than five years ☐	
	Has it benefited you in your current business? If yes, how?	☐ Yes	☐ No	Details:				
	Have you had any other paid work experience?	☐ Yes	☐ No	Details:				
	Has it benefited you in your current business?	☐ Yes	☐ No	Details:				
	Were/are your parents entrepreneurs?	☐ Yes	☐ No	Details:				
	Is entrepreneurship considered a worthwhile occupation in your family?	☐ Yes	☐ No	Details:				
	Have your family assisted you in becoming an entrepreneur?	☐ Yes	☐ No	Details:				
	Have they provided with you with financial support? e.g. start up capital, loans to cover unforeseen costs	☐ Yes	☐ No	Details:				

	Have they provided you with sound business advice?	☐ Yes	☐ No	Details:
	Have they motivated you to become an entrepreneur?	☐ Yes	☐ No	Details:
	Have they assisted you in making helpful contacts in your industry?	☐ Yes	☐ No	Details:
	Have they provided labour that would otherwise have been unobtainable or more expensive?	☐ Yes	☐ No	Details:

Question 5: Attitudes and abilities

	Rank your skills in the following activities relative to your competitors from 5 (excellent) to 1 (poor):	Rank	Comments:
	Identifying new potential products and services to market to my customers	☐	
	Evaluating the potential costs and benefits of business opportunities	☐	
	Communicating with your employees	☐	
	Communicating with your suppliers and customers	☐	
	Communicating with corporate/financial intermediaries	☐	
	Negotiating deals with suppliers or financial intermediaries	☐	

APPENDIX D: Survey data capture template

1. Preference for working as self employed

- Derives from **Promoter sub-function** of the Booster sphere of entrepreneurial function which influences **entrepreneurial emergence.**
- A **necessary but not sufficient** condition to be an entrepreneur (first component of entrepreneurial quality).

- **Question** 1 to assess preference for working as **self-employed** (Yes = 1, No = 0)
- Keywords: independence, authority, hierarchy

1.	Would you be willing to change your work as an entrepreneur for a position as an employee with a similar income level?	☐ Yes	☐ No	Score:

2. Exponents of entrepreneurial quality

- Two **exponents** deriving from the **Energizer** sub-function of the **Booster** sphere of entrepreneur which influences entrepreneurial **quality.**

2.1 Motivation

- Affects the **development** of **psychological processes** associated with quality entrepreneurs.

- **Question 2.1** to assess the type of primary **motivation.**
  - Intrinsic (a and b) = 1
  - Extrinsic (c, d, e) = 0
  - (Model of Entrepreneurial Intentions: Herron and Robinson, 1993; Kruger and Casrud, 1993)
- Keywords: aims in life, goals, unemployment, survival, personal satisfaction.

2.1	Statement:	Ranking:	Extra Comments:	Score:
	a. I have always felt a special need or desire to develop this activity, regardless of its economic implications	☐	•	
	b. I felt that it was impossible for me to achieve success in my career as an employee	☐	•	

	c. I think that working for myself will enable me to become exceptionally wealthy	□	•	
	d. I became an entrepreneur to overcome a distressing economic situation, e.g. unemployment, loss of family household income due to death or disease	□	•	
	e. I was required to continue the family business to avoid its closure or acquisition by an outside party	□	•	

2.2 Energizer Behaviours

- Affects the **materialization** of **psychological processes** associated with quality entrepreneurs.

- **Question 2.2**. to assess the execution of the **Energizer behaviours:**
  - Ambition (a). Key words: market position, achievement/motivation, career
  - Capacity to innovate (b). Key words: product development, market research.
  - Spirit of collaboration (c). Key words, deals, partnerships, synergies)
  - Other energizer behaviours (d). Key words: Plan, expect, prepare.
    - d.i. planning
    - d.ii. training employees (Chell, 1986; Schumpeter, 1950)

2.2.	a. Have you carried out any enterprise expansion since starting your business?	□ Yes	□ No	Comments:
	Have you planned to carry out any enterprise expansion in the following year?	□ Yes	□ No	
	b. Have you devised/marketed a new product or service for your customers since starting your business?	□ Yes	□ No	
	Have you considered devising/marketing a new product or service for your customers during the following year?	□ Yes	□ No	
	c. Have you entered an agreement with another participant in your industry since starting your business? (Formal/informal)	□ Yes	□ No	
	Do you plan to enter an agreement with another participant in your industry during the following year? (Formal/informal)	□ Yes	□ No	

	d.i. Have you drawn up a budget since starting your business?	□ Yes	□ No	
	Have you drawn up a budget for the following year?	□ Yes	□ No	
	d.ii. Have you implemented any formal training system for you employees since starting your business? e.g. sending them to training or training them yourself.	□ Yes	□ No	
	Do you plan to implement a formal training system for your employees during the following year?	□ Yes	□ No	

	The answer is Yes for the following year	The answer is No for the following year
The answer is Yes since the business started	Score 3	Score 2
The answer is No since the business started	Score 1	Score 0

3. Factors of the entrepreneurial environment

- Two **factors** of the **Energizer** sub-function of the **Booster** sphere of entrepreneur which influences entrepreneurial **quality**.
- Directly affect the two exponents of the Energizer sub-function.
- Arise from entrepreneur's interaction with his/her immediate environment.

3.1 Factors of the personal environment of the entrepreneur

- Factors of the personal environment may influence **attitudes and abilities** that affect motivation.

  - **Question 3.1.1.** to assess entrepreneur's **attitudes and abilities:** Score 5 for rank 5, score 1 for rank 1
    - **Identifying** new products and opportunities (a).
    - Skills at **critical thinking** and **evaluating opportunities** (b).
    - **Negotiating** or persuasive **communication skills** (c).

3.1.1	Rank your skills in the following relative to your competitors from 5 (excellent) to 1 (poor)	Rank	Details:	Score: (Rank 5 scores 5, rank 1 scores 1)
	a. Identifying new potential products and services to market to my customers	□		
	b. Evaluating the potential costs and benefits of business opportunities	□		
	c. Communicating with your employees	□		
	Communicating with your suppliers and customers	□		
	Communicating with corporate/financial intermediaries	□		
	Negotiating deals with suppliers or financial intermediaries	□		

- **Question 3.1.2** To assess:
  - the factors of the **personal environment.**
  - their **impact** on the development of **attitudes and abilities.**

- Factors of the personal environment:
  - Education (a): Score 7 (less than Std 6) to 14 (degree).
  - Professional experience (b): score 1 for less than one year, 2 for 2-5 years, and 3 for more than five years in current industry. Key words: experience, worked for, learnt about, developed skills.
  - Influence of the entrepreneurs family (c): score 1 = Yes, 0 = No. Key words: support, influence, loan, family business, finance, employment.

3.1.2. Score:	a.What level of formal education did you attain?	Less than Std 6 □	Std 6 □	Std 8 □	Matric □	Cert. □	Dipl □	Degree □
	b.How much paid work experience have you had in the sector /business you now operate in?	Less than a year □		More than a year □		Less than 5 years □		More than five years □
	Has it benefited you in your current business? If yes, how?	□ Yes	□ No	Details:				
	Have you had any other paid work experience?	□ Yes	□ No	Details:				
	Has it benefited you in your current business?	□ Yes	□ No	Details:				
	c. Were/are your parents entrepreneurs?	□ Yes	□ No	Details:				
	Is entrepreneurship considered a worthwhile occupation in your family?	□ Yes	□ No	Details:				

	Have you family assisted you in becoming an entrepreneur?	☐ Yes	☐ No	Details:
	Have they provided with you with financial support? e.g. start up capital, loans to cover unforeseen costs	☐ Yes	☐ No	Details:
	Have they provided you with sound business advice?	☐ Yes	☐ No	Details:
	Have they motivated you to become an entrepreneur?	☐ Yes	☐ No	Details:
	Have they assisted you in making helpful contacts in your industry?	☐ Yes	☐ No	Details:
	Have they provided labour that would otherwise have been unobtainable or more expensive?	☐ Yes	☐ No	Details:

3.2 Factors of the global environment of the entrepreneur.

- Factors of the **global environment** may influence **opportunities and information** which affect the preference for working as self employed, type of entrepreneurial motivation, the energizer behaviours.
- Question 3.2.1. to assess: **existence of opportunities and information:** Score 4 for rank Strongly agree, and score 1 for Strongly disagree.

3.2.1.	To what extent do you agree with the following statements:	Strongly agree (score 4)	Agree (score 3)	Disagree (score 2)	Strongly disagree (score 1)	Score:
	Local business opportunities exist for me	☐	☐	☐	☐	
	Provincial business opportunities exist for me	☐	☐	☐	☐	
	National business opportunities exist for me	☐	☐	☐	☐	
	International business opportunities exist for me	☐	☐	☐	☐	

	Information on business opportunities is available and easily obtainable:					
	Local opportunities	□	□	□	□	
	Provincial opportunities	□	□	□	□	
	National opportunities	□	□	□	□	
	International opportunities	□	□	□	□	

Question 3.2.2. to assess:

- the **factors** of the global environment
  - socio-cultural factors (a)
  - political institutional factors (b)
  - Escalante's mangement (c.i), marketing (porters 5-forces: c.ii), operational (c.iii.) and financial (c.iv.) barriers to business survival.
- their impact on **opportunities and information**.

3.2.2.	In your opinion, what are the major constraints hindering your business survival or growth? Rate the following aspects on a scale of 1 (minor constraint) to 5 (major constraint)	Minor constraint			Major constraint		Score
		1 Score 5	2	3	4	5 Score 1	
	a. Availability of electricity	□	□	□	□	□	
	Availability of water	□	□	□	□	□	
	Roads	□	□	□	□	□	
	Availability of telecommunications	□	□	□	□	□	
	Postal services	□	□	□	□	□	
	Crime	□	□	□	□	□	
	Proximity to buyers	□	□	□	□	□	

	Proximity to suppliers	□	□	□	□	□	
	Lack of 'contact networks' in your area	□	□	□	□	□	
	Lack of own transport	□	□	□	□	□	
	b. Access to start up capital	□	□	□	□	□	
	Complex labour legislation	□	□	□	□	□	
	Paying a skills levy	□	□	□	□	□	
	UIF contributions on your employees' behalf	□	□	□	□	□	
	Effective minimum wages on the profitability of the business	□	□	□	□	□	
	The Forestry Act	□	□	□	□	□	
	Too many laws	□	□	□	□	□	
	Inadequate property rights	□	□	□	□	□	
	VAT or taxation issues	□	□	□	□	□	
	Lack of institutional support for SMMEs	□	□	□	□	□	
	Lack of public skills training facilities	□	□	□	□	□	
	Too few customers for your product	□	□	□	□	□	
	Difficulty in obtaining tenders	□	□	□	□	□	
	Lack of information about tenders	□	□	□	□	□	
	c.i. Skill deficiencies: Managerial Skills Business Skills	□	□	□	□	□	

	c.ii. Bargaining power of buyers	□	□	□	□	□	
	Bargaining power of suppliers	□	□	□	□	□	
	Threat of new entrants to your product market	□	□	□	□	□	
	Threat from substitute products	□	□	□	□	□	
	Rivalry from competing sellers	□	□	□	□	□	
	c.iii. Low quality of labour	□	□	□	□	□	
	Business premises	□	□	□	□	□	
	Limited technology	□	□	□	□	□	
	Lack of access to Start up capital	□	□	□	□	□	
	Cash-flow stress	□	□	□	□	□	

Appendix E: Characteristics of agribusiness SMME survey respondents, KwaZulu-Natal, 2003-2004

E.1 Loan type by stratum (n=44)

Loan type	Number of respondents				
	Harvester contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	Percentage
Land and fixed improvements	7	3	4	1	34
Equipment	15	3	1	2	48
Working capital or production loan	1	2	3	2	18
Total	**23**	**8**	**8**	**5**	**100**

E.2. Loan size, and number of employees by stratum (n=44)

Item	Harvester Contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	Sample mean
Average ALA	R623,261	R259,243	R731,515	R134,518	R421,600
Average LC	R728,988	R329,316	R768,405	R399,475	R943,475
Average ALA/ Average LC	1.17	1.27	1.05	2.97	1.61
Average Total Employees	47	13	16	7	30

E. 3. Age and gender of respondents by stratum (n=44)

Age	Harvester contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	Percentage
21 – 30 years	0	0	0	1	2
31 – 40 years	3	2	1	3	21
41 – 50 years	13	3	4	0	45
51 – 60 years	7	3	3	1	32
Total	**23**	**8**	**8**	**5**	**100**
Gender					
Female	2	2	3	0	16
Male	21	6	5	5	84
Total	**23**	**8**	**8**	**5**	**100**

E.4. Factors of the agribusiness SMME owners' environments, KwaZulu-Natal, 2003-2004 (n = 44)

Factor	Number of respondents: Harvester contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	Percentage
Highest education level of respondents					
Standard 6	3	1	0	0	9
Some high school	4	1	1	0	14
Matric	8	2	3	3	36
Tertiary	8	4	4	2	41
Total	**23**	**8**	**8**	**5**	**100**
Years of experience in current industry					
Less than one	2	2	0	2	14
One to five years	2	3	1	2	18
More than five	19	3	7	1	68
Total	**23**	**8**	**8**	**5**	**100**
Respondents whose parents were entrepreneurs					
	11	6	4	4	59
Respondents whose families had assisted them in becoming an entrepreneur financial, making contacts or labour					
	16	5	5	3	66

E. 5. Commercial features by stratum (n = 44)

Feature	Number of respondents: Harvester Contractors (n = 23)	Processors (n = 8)	Retailers (n = 8)	Speculators (n = 5)	Percentage
With book keepers	18	7	4	3	73
Supplementary income	9	3	2	0	32
Making enough income to support self and dependents	14	6	7	4	71

E.6. Owners' energizer behaviours by stratum, KwaZulu-Natal, 2003-2004 (n = 44)

Number of respondents (percentage in parentheses)					
Energizer behaviours	**Harvester Contractors**	**Processors**	**Retailers**	**Speculators**	**Total**
Have expanded their business	18(78)	8(100)	7(88)	5(100)	38(86)
Plan to expand their business	19(83)	7(88)	4(50)	5(100)	35(80)
Devised new products or services to market	15(65)	6(75)	5(63)	2(40)	28(64)
Plan to devise new products or services to market	13(57)	5(63)	3(38)	3(60)	24(55)
Have entered formal agreements with industry players	17(74)	7(88)	6(75)	4(80)	34(77)
Plan to enter formal agreement with industry players	12(52)	8(100)	4(50)	2(40)	26(59)
Have drawn up budgets for their business	19(83)	8(100)	8(100)	4(80)	39(89)
Plan to draw up budgets for their business	22(96)	6(75)	6(75)	4(80)	38(86)
Have trained employees, formally or informally	19(83)	6(75)	8(100)	3(60)	36(82)
Plan to train employees, formally or informally	16(70)	4(50)	3(38)	3(60)	26(59)

E.7. Respondents' loan repayment status, preference for working as self-employed and motivation type, KwaZulu-Natal, 2003-2004 (n = 44)

Number of respondents			
Business type	**Defaulted on loan repayments**	**Who would prefer to work for themselves at their current income level**	**Who are intrinsically motivated**
Harvester contractors (n = 23)	4 (17%)	21 (91%)	9 (39%)
Processors (n = 8)	4 (50%)	7 (88%)	5 (63%)
Retailers (n = 8)	5 (63%)	7 (88%)	4 (50%)
Speculators (n =5)	4 (80%)	3 (60%)	1 (20%)
Total	**17 (39%)**	**38 (86%)**	**19 (43%)**

E.8. Average scores for owners' perceptions of business opportunities, and availability of information, by stratum, KwaZulu-Natal, 2003-2004 (n = 44)

Opportunities and information					
Business type	**Business opportunities exist for me within my TLC boundaries**	**Business opportunities exist for me elsewhere in KZN**	**Business opportunities exist for me throughout SA**	**International business opportunities exist for me**	**Information on business opportunities is available and easily obtainable**
Harvester contractors	3.65	3.30	2.87	2.43	2.52
Processors	3.63	3.63	3.38	2.63	2.75
Retailers	3.88	3.38	3.25	2.88	3.00
Speculators	4.00	3.00	2.20	2.00	3.00
Sample	**3.73**	**3.34**	**2.95**	**2.50**	**2.70**

E.9. Average scores for owners' perceptions of their own business skills, by stratum, KwaZulu-Natal, 2003-2004 (n = 44)

Attitudes and abilities						
usiness Type	**Identifying business opportunities**	**Evaluating potential business costs**	**Communicating with my employees**	**Communicating with my suppliers**	**Communicating with corporate and financial intermediaries**	**Negotiating skills**
rvester ıtractors	3.70	3.78	4.13	4.13	3.74	3.61
ɔcessors	4.38	4.00	3.88	4.25	4.00	4.13
tailers	4.00	4.13	4.25	4.25	3.75	3.75
eculators	3.80	4.20	3.80	4.20	4.00	3.75
mple	**3.89**	**3.93**	**4.07**	**4.18**	**3.82**	**3.75**

Appendix F: Correlation coefficients for perceived business opportunities and respondents' perceptions of factors of their external environments

Variable	Statistic	LOCOPP	PROVOPP	NATOPP	INTEROPP	INFO
LOCOPP	Pearson Correlation	1.000	0.327*	0.101	0.118	0.086
	Sig.[a] (2-tailed)	.	0.030	0.515	0.446	0.581
PROVOPP	Pearson Correlation	0.327*	1.000	0.613**	0.556**	0.100
	Sig. (2-tailed)	0.030	.	0.073	0.000	0.519
NATOPP	Pearson Correlation	0.101	0.613**	1.000	0.676**	0.192
	Sig. (2-tailed)	0.515	0.000	.	0.000	0.212
INTERNOPP	Pearson Correlation	0.118	0.556**	0.676**	1.000	0.438**
	Sig. (2-tailed)	0.446	0.000	0.000	.	0.003
INFO	Pearson Correlation	0.086	0.100	0.192	0.438**	1.000
	Sig. (2-tailed)	0.581	0.519	0.212	0.003	.
Complex labour legislation	Pearson Correlation	0.274	-0.024	-0.075	0.121	0.006
	Sig. (2-tailed)	0.072	0.879	0.630	0.433	0.967
Insufficient Property rights	Pearson Correlation	-0.273	-0.045	0.013	-0.208	-0.228
	Sig. (2-tailed)	0.073	0.772	0.931	0.174	0.137
Bargaining power of suppliers	Pearson Correlation	-0.307*	-0.391**	-0.179	0.041	0.235
	Sig. (2-tailed)	0.043	0.009	0.246	0.792	0.124
Threat of new entrants	Pearson Correlation	-0.301*	-0.137	0.021	-0.022	0.170
	Sig. (2-tailed)	0.047	0.374	0.892	0.888	0.269
Lack of management skills	Pearson Correlation	0.034	-0.320*	-0.202	-0.402**	-0.323**
	Sig. (2-tailed)	0.824	0.034	0.189	0.007	0.032
Competition (rivalry)	Pearson Correlation	-0.073	-0.266	-0.044	-0.448**	0.009
	Sig. (2-tailed)	0.640	0.081	0.777	0.002	0.952
Too many rules and regulation	Pearson Correlation	0.184	0.122	-0.193	0.021	-0.299*
	Sig. (2-tailed)	0.232	0.430	0.208	0.893	0.048
Insufficient government support	Pearson Correlation	-0.208	0.126	-0.034	0.115	-0.316
	Sig. (2-tailed)	0.176	0.413	0.824	0.457	0.036
Inadequate business premises	Pearson Correlation	-0.039	0.153	-0.047	-0.127	-0.356*
	Sig. (2-tailed)	0.801	0.323	0.760	0.412	0.018
Distance from potential customers	Pearson Correlation	0.080	0.357*	0.200	0.227	0.091
	Sig. (2-tailed)	0.604	0.017	0.194	0.138	0.556

Note: [a] Sig represents statistical level of significance.

* Correlation is statistically significant at the 0.05 level (2-tailed)

** Correlation is statistically significant at the 0.01 level (2-tailed)

APPENDIX G: Agribusiness and entrepreneur questionnaire information sheet

Title of study: Factors determining and constraining the survival and early growth of small agribusinesses in KwaZulu-Natal

Investigators: TA Clover
MAG Darroch
Department of Agricultural Economics
School of Agricultural Sciences and Agribusiness
University of Natal

Funding: National Research Foundation

Background and purpose of the study:

The Agribusiness SMME sector has been identified as having considerable potential to generate sustainable livelihoods and to stimulate local economic development.

This study is being conducted to assess the primary constraints on small agribusiness development in KwaZulu-Natal, and to try and quantify some determinants of small business success.

The study has two objectives; firstly, to present small-business enabling policy recommendations to the local, provincial and national governments. Secondly, to boost the availability of finance to small business by increasing financial intermediaries' interest in this sector.

Your participation:

This study defines an entrepreneur as a person who:

- Works for him/herself and not for a company or any other organization i.e. are not paid wages or a salary by any individual other than themselves.
- Derives an income from a business he/she initiated.
- Owns and/or manages a business he/she initiated.
- Contributed or accessed finance in order to initiate the business.

Your status as an entrepreneur qualifies you as a potential case to include in the sample of agribusinesses in this study. Participation is voluntary and involves answering a series of questions relating to your business and yourself. All information you give will be kept strictly confidential; your name or your business will not be identified at any point during the study. You will not be paid for your participation but your responses will help to strengthen the validity of the study's results. The study's results will contribute to improving KwaZulu-Natal's small business environment and increasing the resources available to entrepreneurs. Your time and honest responses will be greatly appreciated. The study is being conducted with the aid of and in conjunction with Ithala Development Finance Corporation, Agribusiness division.

Agreement to participate:

Your decision to answer the following questions will be interpreted as an indication of your agreement to participate in the study. In no way does this waive your legal rights nor release the investigators, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time.

Thank you for your participation in the study. It is greatly appreciated. If you have further questions concerning matters relating to this research, please contact:

Teresa Clover (082 324 7304)
Mr M.A.G. Darroch (033 260 5493)

ENTREPRENEUR AND AGRIBUSINESS DETAILS

Name:	
Age:	
Gender:	
When did you start your business?	
Please give a brief description of your product(s).	
Please identify three core activities your business needs to be competent at in order to generate its product(s) (e.g. A beer brewer must be good at making beer and distributing/selling it).	
Please give a brief description of your customers: with regard to their income group, region etc.	
How many people does your business employ?	
Is the revenue from this business your sole/primary source of income? If yes, is it sufficient? If no, what proportion of your total income do your derive from this business?	