

**THE ROLE OF ORGANISED INFORMATION AND TACIT  
KNOWLEDGE IN THE SURVIVAL AND SUCCESS OF SMALL  
ENTERPRISES IN DEVELOPING COMMUNITIES**

**BY**

**NOMCEBO FAITH MAGAGULA**



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**Supervisor: Dr. M.S. van der Walt**

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## **DECLARATION**

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

## ABSTRACT

In the business sector of the Information Society, information plays a crucial role in giving an enterprise a competitive advantage. Information as a resource in a small enterprise includes internally produced information, information obtained from the external environment as well as the knowledge residing in people's heads. However, this information and knowledge needs to be processed and recorded in physical formats for the purposes of decision-making and problem solving as it is part of the information resources of the small enterprise. This study explored the extent of information and knowledge management in developing communities' small enterprises in pursuit of survival and success. A deeper understanding of the business information needs, sources of information, frustrations and problems were investigated in order to establish and meet the specific needs of small enterprises in developing communities. More specifically, the objective of the study was to promote effective information organisation in small enterprises, with special reference to developing communities, as a means to support economic and social development of South Africa.

For data gathering, a questionnaire was developed and distributed to owner/managers of 17 small enterprises in Kayamandi, a developing community in the Stellenbosch area. The purpose was to determine owner/managers's needs with regard to information organisation and to identify existing systems, tools and procedures that might be appropriate for this sector. The results indicated the absence or insufficient business education of owner/managers in Kayamandi, which has a damaging effect on their ability to acquire the information they need for their daily business work and operational activities. Moreover, the owner/managers do most of their information gathering using a variety of informal sources, and that information is not organised in information packages. This, in turn, affects their business development.

Information should interact with tacit knowledge to improve the quality of work. In addition, the oral tradition should be promoted because it plays an important role in the daily running of the small enterprises in developing communities. In that sense, owner/managers should create an environment that can assist in knowledge sharing from various information sources. Maintaining such knowledge as information in retrieval based

information systems could assist owner/managers in the overall functioning of their businesses because they are faced with the challenge of responding effectively to changing customer expectations. An affordable information system model is recommended and structured to fit owner/manager's work habits. The arrangement of information resources in the system can be used for categorisation of information either in a manual or electronic system.

## **ABSTRAK**

In die sakektor van die Inligtingsamelewing speel inligting 'n kritieke rol om aan 'n onderneming 'n mededingende voorsprong te bied. Inligting as hulpbron in 'n klein onderneming sluit in intern-geproduseerde inligting, inligting wat uit die eksterne omgewing verkry word, asook die kennis wat in mense se koppe is. Dié inligting moet egter verwerk en vasgelê word in fisiese formate met die oog op besluitneming en probleemoplossing, aangesien dit deel is van die inligtingshulpbronne van die klein onderneming. Hierdie studie verken die omvang van inligtings- en kennisbestuur in ontwikkelende gemeenskappe se klein sake-ondernemings met die oog op oorlewing en sukses. 'n Dieper begrip is gesoek van die sake-inligtingsbehoefte, bronne van inligting, frustrasies en probleme ten einde die spesifieke behoeftes van 'n klein onderneming te bepaal en daaraan te voldoen. Meer bepaald was die doel van die studie om effektiewe inligtingsorganiserings in klein ondernemings te bevorder, met spesifieke verwysing na ontwikkelende gemeenskappe, as 'n manier om ekonomiese en sosiale ontwikkeling in Suid-Afrika te bevorder.

Met die oog op dataversameling is 'n vraelys ontwikkel en versprei onder eienaars/bestuurders van 17 klein ondernemings in Kayamandi, 'n ontwikkelende gemeenskap in die Stellenbosch-gebied. Die doel was om eienaars/bestuurders se behoeftes met betrekking tot inligtingsorganiserings te bepaal en stelsels, werktuie en prosedures te identifiseer wat vir hierdie sektor toepaslik sou wees. Die uitslae dui op die afwesigheid of ontoereikendheid van sake-opleiding onder die eienaars/bestuurders in Kayamandi, wat 'n skadelike uitwerking het op hul vermoë om die nodige inligting te bekom vir hul daaglikse sake-bedrywighede en operasionele aktiwiteite. Verder hanteer die eienaars/bestuurders grotendeels hul eie inligtingsversameling deur gebruik te maak van 'n verskeidenheid informele bronne, en hierdie inligting word nie in inligtingspakkette georganiseer nie. Dit beïnvloed op sy beurt hul sake-ontwikkeling.

Inligting behoort in wisselwerking te wees met versweë kennis ten einde die kwaliteit van werk te verbeter. Daarby behoort die mondelinge tradisie bevorder te word, want dit speel 'n belangrike rol in die daaglikse bestuur van die klein sake-ondernemings in ontwikkelende gemeenskappe. In daardie opsig behoort eienaars/bestuurders 'n omgewing

te skep wat kan help met kennisdeling vanuit verskeie inligtingsbronne. Die instandhouding van sulke kennis as inligting in herwinningsgebaseerde inligtingstelsels, sou eienaars/bestuurders kon help in die algehele funksionering van hul ondernemings, want hulle staar die uitdaging in die gesig om effektief te reageer op veranderende klante-verwagtinge. 'n Bekostigbare inligtingstelselmodel word aanbeveel en gestruktureer om by eienaars/bestuurders se werksgewoontes te pas. Die rangskikking van inligtingsbronne in die stelsel kan gebruik word vir die kategorisering van inligting óf in 'n hand- óf in 'n elektroniese stelsel.

**For Mbali**

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## CHAPTER ONE: INTRODUCTION TO THE STUDY

### 1.1 Background on small enterprises

Rogerson (1997) draws a distinction between the established formal enterprises and the emerging informal enterprises. The established formal enterprises are largely in White or Asian ownership, and situated at all levels in the South African urban system. In contrast, the emerging enterprises are mostly informal enterprises under Black or Coloured ownership, and based geographically in urban townships, informal settlements and rural areas.

The small business sector has two components: the formal and the informal sector (Nattrass & Nattrass, 1988: 1). The formal sector operates within the legal framework. Moreover, the formal sector is more able to operate in a fully competitive and extensive environment than its informal counterpart. The informal sector is defined as all those economic activities that are pursued without the sanction of the authorities, that is, those enterprises not recorded in the national accounts (Hartzenberg & Leiman, 1992: 187). The informal sector, also referred to as micro-enterprises, operate outside the law, due to failure to comply with licensing regulations or the public health requirements.

Members of the informal sector manifest themselves in different ways in different countries and in different cities within the same country and even in different parts of the same cities (International Labour Office, 1992). A White paper of the South African Department of Trade and Industry (South Africa, 1995) explains that small enterprises constitute the bulk of established businesses in South Africa. The small enterprise sector has developed into a major employment generator and contributes to the economic well-being of a substantial portion of the South African population (Martins & Tustin, 1999: 20).

The small enterprise sector is a dynamic and challenging environment that requires a versatile and adaptable workforce that recognizes that full-time jobs are outdated. In addition, retrenchments have forced many formerly employed people to seek casual work in the micro-enterprise economy. The informalisation of the formal economy has forced large organisations to contract out numerous activities to informal producers to avoid labour

regulations and to decrease labour costs (Rogerson, 1996). Some individuals are opening their own businesses because they cannot rely on large organisations to provide them with jobs for life anymore. Other organisations fail to give some people personal satisfaction, and then self-employment becomes an option because these individuals are motivated to seek fulfilment in their own enterprises.

According to De Beer et al. (1996: 135), for a small business to survive and be successful, the owner/manager should have organised information that can assist him in decision-making and in operational activities for competitive advantage. In order to gather the organised information, owner/managers should continually rely on internal and external sources for information. The interaction and the good working relations with sources assist in gathering the required information that improves goods and services. The information needed is gathered through business intelligence (discussed in section 3.3.2). Information gathered from sources is processed, organised and stored in the information system. The system supplies the needed information when required.

However, the designed information system should suit the owner/manager's mindset and needs. Such a system supports the business processes in achieving the organisational objectives without which no organisation, large or small, can survive. It is essential to have a system that manages the information for effective performance (Goldenberg & Kline, 1999; Honig, 1998 and Parker, Riopelle & Steel, 1995).

Kent (1986: 122) defines an information system as a system that manages corporate information resources. Information has to be managed just as any other component function in the small enterprise; this includes information on human and material resources. The creation of an information system in good time is essential because all the information available is supplied when the need arises to make meaningful decisions. According to Choo (1998: 23), the information system includes interrelated processes: such as identifying information needs, acquiring information, organising and storing information, and utilisation of information by the small enterprises for productive performance.

The small enterprises are faced with opportunities and challenges in a competitive information economy. The organised information is assumed essential and forms an integral part in the survival and success of enterprises in developing communities.

## 1.2 Statement of research problem

Information gathered from sources is organised by means of filing and indexing so that it can be retrieved for future use. An information retrieval system defines the specification of search criteria that describe the information needed (Feather & Sturges, 1997: 211). A search query is easily matched with an information need, thereby retrieving the needed information.

In developing communities, small enterprises are presumed to be operating without an effective information system, which is an essential resource when making decisions. Insufficient information is often the cause of wrong decision-making that leads to loss of money, time, labour and even the failure of the enterprise (De Beer et al., 1996: 136).

This research *explored the extent of information and knowledge management in small enterprises in developing communities and furthermore it considered strategies for survival and success*. To provide answers to the topic stated, the following questions were addressed in this research:

- What is the structure of the small enterprise?
- What are the information needs of the small enterprise?
- What kind of information needs to be organised?
- What sources are used in acquiring information?
- Are the owner/managers aware of the availability of information that could improve the functioning of the small enterprise?
- Do the owner/managers in developing communities encourage knowledge sharing among themselves, and between employees regarding business operational activities?
- What types of records are kept in small enterprises and what is the scheme of arrangement?

- Which factors assist in the survival and success of small enterprises in developing communities?

Many questions were addressed in this research because the information needed by small enterprises for productive performance comes from internal and external sources. The processed internal and external information helps the small enterprise to stay focused on its objectives. Milner (2000) acknowledges that managing information and knowledge is a problematic area to address but can be overcome with time.

### **1.3 Objectives**

The study determined whether information and knowledge organisation contributes to the success of small enterprises. Moreover, the study looked at aspects of the structure and culture of small enterprises and investigated whether these aspects contribute to the failure of small enterprises to expand. A deeper understanding of the business information needs, sources of information, frustrations and problems of small enterprises in developing communities were investigated and strategies for survival and success were identified.

### **1.4 Underlying research assumption**

It is assumed that the integration of information and knowledge management in the running of an enterprise improves performance in business settings. The focus however, remains on how small enterprises in developing communities are handling their tangible and intangible resources for survival and success.

In developing communities, owner/managers are assumed to see themselves as decision-makers, working from their subjective experience. Owner/managers often consider it part of their role to make quick responses to situations confronting them (Norton & Peel, 1989: 27). Furthermore, they do not always see the value of information and knowledge management in arriving at decisions.

## 1.5 Methodology

Qualitative and quantitative approaches were used to gather data. Methods adopted included questionnaires, interviews and analyses of documents. The methods used established the procedure currently practised by the small enterprises regarding information and knowledge management, although with confidential documents, access was difficult.

Pilot interviews accompanied by pre-testing of a questionnaire were conducted with some owner/managers of a few small enterprises in a developing community to sense the culture and structure. The pilot interviews paved the way for the final questionnaire. The questionnaire was used for conducting structured interviews with the owner/managers of 17 small enterprises in Kayamandi, a developing community in the Stellenbosch area. Thereafter, issues identified by the questionnaire were explored in more depth during subsequent semi-structured interviews with 9 owner/managers. The questionnaire and interview methodology is discussed in Chapter six.

## 1.6 Definition of terms

There are key terms in the title of the study: *organised information*, *tacit knowledge*, *survival and success*, *small enterprise* and *developing communities*. Each of these terms is defined here briefly and discussed fully in the subsequent chapters.

### 1.6.1 Organised information

Information comprises all knowledge, ideas, facts and imaginative works of the mind, which are communicated informally and/or formally in any format (Chen & Herson, 1982: 5). According to Feather & Sturges (1997: 184), information is an assemblage of data in a comprehensible form capable of communication. Information is a set of data matched to a particular information need. Information is represented by various information packages to assist individuals to achieve their objectives. In that regard, the competitive use of information is often critically important for an organisation to be successful.

Organisations and individuals know that accurate, relevant and timely information is crucial for them to remain viable and competitive. Information influences an organisation's interaction with its environment and determines how effectively the organisation is able to respond to and influence its sources. However, despite everything offered by the very latest information services, there remains the problem of obtaining the relevant information at the right time for different groups of users. It should be realised that the content of information is important in meeting the users' needs.

According to Beijerse, (2000: 164), organising is the means of achieving certain, mostly predetermined, goals using certain means. An enterprise should acquire the needed internal and external information and knowledge to achieve its profit objectives. In that regard, information gathered is processed and organised systematically with retrieval tools for accessing it. Information retrieval is dependent upon already organised information.

Information can be organised in any format. Taylor (1999: 2) emphasises that, instead of using words such as a "book" or "item" to refer to organised information, terms such as "information-bearing entity" and "information package" should be used. These information packages are designed to fit the user's needs and mindset and could be computerised or manual based depending on the infrastructures. Further discussion on organised information is in section 3.3.3.

#### 1.6.2 Tacit knowledge

Tacit knowledge is subjective, and individuals acquire it during their lives and use it to produce goods and services in market or non-market related circumstances. Tacit knowledge is the knowledge that is in the mind of the individual. This knowledge is twofold. It may be implicitly shared, probably through actions and shared ways of doing things within an organisation (Rowley & Farrow, 2000: 6). Furthermore, it could be documented, contrary to the other part, which is difficult to be expressed verbally. Tacit knowledge is discussed in section 4.3.

### 1.6.3 Survival and success

There is no agreed definition of small business success because measures of success do not exist (Goldenberg & Kline, 1999: 371). Mostly, the terms "survival and success" are linked and are defined in monetary terms. In a study done in Pietersburg (Northern Transvaal) by Morake, Ramonnye and Mathiba (1994: 179), owner/managers stated that they were able to judge their success by the material things which were not business related, that they were able to invest in. That study reveals the outcomes of survival and success of enterprises and not the factors behind success. Survival is not always success because some owner/managers can still be in business even if they are making little profit in their businesses. In addition, unpredictable external factors such as inflation, interest rates in the markets, depreciation of currencies and regulatory trends can bring changes in the functioning of these enterprises.

However, survival in the competitive business environment requires the adoption of new management techniques and strategies. The business environment comprises all the factors that can affect the establishment, growth and survival of an enterprise positively and/or negatively (Nieuwenhuizen, Le Roux & Jacobs, 1996: 37). The business environment can therefore promote or impede the enterprise's objectives. Survival and success is discussed in section 2.9.

### 1.6.4 Small enterprises

It is extremely difficult to identify a small firm in most countries because they are not represented in recognised directories (Kennington, 1989: 7). Owner/managers want to remain anonymous in the business environment in order to avoid regulations and the payment of taxes.

"Small enterprise" is an inclusive term comprising formal and informal business. The formal enterprise is tax-registered and operated by an entrepreneur who ensures that the enterprise is well managed to guarantee survival and profitability. On the other hand, it is largely unemployed people who, as a matter of basic economic survival, create informal enterprises. The common feature of small enterprises in developing communities is that owner/managers are directly in control. Small enterprises are discussed in section 2.3.

### 1.6.5 Developing communities

In a developing country, there are two types of communities: the well developed, and the less developed (the haves and have-nots). The latter lack resources due to the past uneven distribution of resources by the government.

The installation of a democratic government in South Africa has prompted the disadvantaged communities to seek the services they were deprived of and which as a result prevented them from being on a par with the advantaged communities. In that regard, the government, through its departments, renders different services to different people and these services differ according to the needs of a specific community (refer to section 3.5.6). Consultation and participative management ascertain the rendering of services according to the needs of the community. Developing communities are discussed in section 2.2.

## 1.7 Scope and limitations of the study

Parker, Riopelle & Steel (1995) and Natrass & Natrass (1988) indicate that the small business sector comprises formal and informal sectors. For the purpose of this study, the researcher investigated the small business sector. The investigation concentrated on the organisation of information and knowledge and it disregarded the small enterprise's assets, turnover and number of employees.

The small business sectors that were investigated consisted of the Black established formal sector and the emerging informal sector. The term "owner/manager" was used for the business's owner. In addition, the term "small enterprise" was used for the formal, small business and the informal, micro-enterprise.

The target population was the owner/managers of the established and emerging small enterprises that are geographically situated in Kayamandi. The focal point of this study was the organisation of tangible and intangible assets within the small enterprise. The small enterprises investigated were those that had been in business longer than one year. Johnson & Kuehn (1987: 55) point out that this period should be chosen to avoid the high closure rates reported for small firms.



The investigation concentrated on small enterprises in manufacturing, retail and services. In conducting the investigation, current approaches and strategies employed by the small enterprises in the developing communities of Kayamandi were regarded as essential data.

However, experience has shown that small enterprises' owner/managers are usually difficult to interview (Nattrass & Nattrass, 1988). Some do not want to reveal their businesses' procedures and are vague when responding to some of the questions. Other owner/managers failed to keep appointments. Moreover, it was difficult to distinguish between managers and entrepreneurs of small enterprises in the developing community.

## **1.8 Outline of the study**

This chapter presents the problem and places it in context. In Chapter two, small enterprises are discussed, with special reference to developing communities. Chapter three looks at small enterprises and information management. In Chapter four, small enterprises and knowledge management are discussed. Information organisation in small enterprises is discussed in Chapter five. Chapter six focuses on the survey of information and knowledge organisation in small enterprises in Kayamandi, Stellenbosch. The results of this survey, that is the analysis and interpretation of data, are given in Chapter seven. A summary of the study findings and recommendations are presented in Chapter eight.

## **CHAPTER TWO: SMALL ENTERPRISES, WITH SPECIAL REFERENCE TO DEVELOPING COMMUNITIES**

### **2.1 Introduction**

This chapter deals with small enterprises, particularly in developing communities. The terms "small enterprises" and "developing communities" in the heading of this chapter are discussed in detail because they form an integral part of the focus of the study, moreover, they put into perspective where the study was conducted. Furthermore, case studies of small enterprises conducted in several developing countries were related to the South African situation.

### **2.2 Small enterprises**

Small enterprises encompass formal (entrepreneurship) and informal (micro) enterprises. Martins & Tustin (1999) and Hadjimanolis (1999) define a small enterprise as having fewer than 50 paid employees. On the other hand, Botha & Claassen (1985) indicate that micro-enterprises are very small businesses having fewer than five paid employees.

It is a mistake to consider the small and micro-enterprises as separate entities (Nattrass & Nattrass, 1988). These authors approached both enterprises simultaneously, in order to understand the continuum and the dynamics determining business progress. In addition, the study done by Parker, Riopelle & Steel (1995) in Ghana, Malawi, Mali, Senegal and Tanzania confirms that there is no operational clear-cut distinction between formal and informal enterprises in these countries.

Maas, De Coning & Smit (1999: 41) focus on the South African environment and identify the following characteristics of an entrepreneur:

- Calculated risk taker;
- Internal locus of control;
- Holistic approach;

- Knowledge and experience regarding technical and management skills;
- Value system and motivation that focuses on growth and development through the creative exploitation of opportunities.

On the other hand, the National Manpower Commission (South Africa, 1984) lists the characteristics of the informal sector as follows:

- Family ownership;
- Small-scale operations;
- Ease of entry;
- Labour intensive;
- Skills acquired outside the formal school system;
- Unregulated and competitive markets.

In order for unemployed people to survive, they create micro-enterprises. According to Manning & Mashigo (1993), the informal sector employs mostly housewives and students as well as persons with a permanent occupation who work after hours. Furthermore, micro-enterprises indicate a low level of education and the absence of any formal business training.

In a developing country such as South Africa, the informal sector includes all those people who cannot find work in the formal economic sector or who do something extra to earn an additional income. However, some micro-enterprises may mature to a level at which they could be formally registered and comply with the laws and regulations of the government.

### **2.3 Developing communities**

A "developing community" in South Africa is a community that was disadvantaged and deprived of necessary resources by the previous government for racial reasons. Such a community is distinguished by a low standard of living that manifests itself in inadequate housing, poor general health and inadequate education. However, the democratic system installed in South Africa in 1994 recognised that all races in the country should be treated

equally. Subsequently, reconstruction and development programmes (RDP) were offered to the disadvantaged communities to uplift them.

The RDP is an integrated, socio-economic policy framework for achieving this objective. It seeks to mobilise all the people and the country's resources toward the final eradication of apartheid and the building of a democratic, non-racial and non-sexist future (South Africa, The Reconstruction and Development Programme: a policy framework). However, these programmes designed to bridge the gap between communities are slow in effect because the majority of the population was severely affected by racial discrimination.

Seen against this background, the information economy provides the means for successful adjustment and new possibilities for alleviating problems such as poverty and inequality, with the potential to achieve gains in economic and human development. Information is a current basic need and people have to cope with fast changing needs in all aspects of their lives. Education, more than anything, determines the prospects of a community for human development and competitiveness.

The advanced economies have become information-intensive, undergoing major structural changes and are devoting vast resources to the generating, processing, distribution and use of information. Information has become the essential element of economic growth and social development.

#### **2.4 Structure and culture of small enterprises**

The survival and success of an enterprise depend on its culture and structure (Norton & Peel, 1989). These are influenced by good working conditions that exist in enterprises and that lead to the sharing of tacit knowledge. The knowledge shared should be stored in information systems for future use.

Henry (1991) and D'Amboise & Muldoney (1984) state that to form a better understanding of enterprises, there are important interactive factors to be considered:

- Organisational behaviour;
- Task environment.

#### 2.4.1 Organisational behaviour

Small enterprises are mostly non-hierarchical with short communication lines between the employees and management. Ideally, the small enterprise structure should be characterised by an open culture, empowered employees and an environment in which mistakes are allowed in order to encourage the learning process. Beijerse (2000) and Bakewell (1989) stress that subordinates should be kept informed and consulted, with the provision of opportunity for self-responsibility and development.

The culture should be informal to allow for easy communication, and the results of performance should be centrally determined. Moreover, employees should be encouraged to communicate and apply their knowledge to effective performance whether it is a large or small enterprise. In a working environment, during every encounter with another person, a degree of trust can be established. The culture and structure enhance or break down the reciprocal trust and knowledge sharing. Knowledge sharing contributes considerably to bridging gaps for someone whose knowledge is insufficient. The employees assimilate the knowledge shared that also belongs to the small enterprise. The knowledge belonging to the enterprise may be organised and stored for future reference.

According to Sveiby (1998), although communication should always be encouraged, it is trust that forms the bandwidth of communication. It requires the owner/manager's judgement to determine for each employee or employee category the "need to know" boundaries for access to the enterprise's information. On the other hand, an employee's morale and loyalty could be badly affected if the boundaries are perceived to be very restrictive and apparently discriminatory. These restrictions on access to information could be interpreted by employees as implying that they cannot be trusted or are considered inferior to other employees with more access to enterprise information.

#### 2.4.2 Task environment

The small enterprises cannot function in isolation; since dynamic interaction, which plays a significant role within and outside their environment, is needed (Coetzee, Havenga & Visagie, 1993). Organisational growth and survival depend on an organisation's ability to adapt to its internal and external environment.

The internal environment of a small enterprise consists of employees and/or, according to Kershoff (1996), family members. Family members are discussed as external and internal sources of information for the enterprise in subsequent chapters. On the other hand, the external environment of a small enterprise consists of those external systems that it contacts. Information needed by the small enterprises may seem compelling enough to warrant seeking external assistance for efficient and effective performance. Dollinger (1985), Hills (1985) and Jones (1982) refer to "the business literature", which strongly suggests that small business success should be linked to monitoring the external environment. For this, market research and business intelligence (discussed in section 3.3.2) are needed.

It is crucial to define the potential market and develop a plan for targeting it. Market research assists in determining which sources of information are most valid and whose interests can best be satisfied. On the other hand, the use of business intelligence improves quality, cost reduction in products brought about by reverse engineering of the competitor's products, the smoothing of production cycles, better product positioning, the avoidance of mistakes made by competitors as well as the duplication of their more successful programmes (Gilad & Gilad, 1988: 201).

The interaction between a small enterprise and its sources predicts and controls the behaviour of the organisation towards its objective. In addition, this interaction is essential for creativity. An environment that is characterised by trust, openness and the debating of issues plays a crucial role in enhancing creativity (Von Krogh, Ichijo & Nonaka, 2000). Creativity is defined as the creation of something new, resulting from the interaction between the individual and the environment. The discussion of issues between owner/manager and the enterprise's sources helps in producing the desired products and services.

Von Krogh, Ichijo & Nonaka (2000: 47) state that the emphasis on co-operation and personal relationships between internal and external sources is the hallmark of an enabling context, which can make a company more profitable. Maas, De Coning & Smit (1999); Choo (1998: 93) and Crowe & Avison (1980) refer to the immediate environment of an enterprise as consisting of employees, competitors, suppliers, customers, government and other sources (referred to in section 3.5). The type of information required depends on the nature of the business as this information provides a useful yardstick and direction to the business.

Owner/managers need information to react dynamically to environmental changes. According to Bennett & Cheesley, (1982: 78), it is found that management of information is essential to the success of any enterprise regardless of its size.

## **2.5 Characteristics of different types of small enterprise owner/managers**

A distinction between entrepreneurial and small business organisations is that the entrepreneurial organisation is more creative than the small business (Morris, 1993: 2). Nieuwenhuizen, Le Roux, & Jacobs (1996) and Merz, Weber, & Laetz (1994) suggest that growth may be a useful way to distinguish between small business owners and entrepreneurs.

Entrepreneurs exploit opportunities and build new competencies, changing the nature of their business to add new value for existing and potential clients. They look for ways to satisfy customers by improving existing products and services or producing new inventions. Knowledge (discussed in Chapter 4) is seen as the only factor by which entrepreneurs can distinguish themselves from small business owner/managers (Beijerse, 2000). It is recognised that knowledge sharing helps the small enterprise to grow.

The small enterprise's success lies in its ability to stimulate an entire workforce to create a new future. The enabling environment releases the unexplored capabilities of the people to sustain major growth (Matthew in Von Krogh, Ichijo & Nonaka, 2000: 19). According to Goldenberg & Kline (1999: 366), individuals with positive motivations are predicted to be

more likely to succeed than individuals being pushed to do so by circumstances beyond their control.

Scarborough & Zimmer (1993) and Pleitner (1984) argue that the majority of small business owner/managers are seldom engaged in innovative practices and in strategic planning. According to Maas, De Coning & Smit (1999), the small business owner/manager is an individual who establishes and manages a business for the principal purpose of furthering personal goals. These enterprises are bound with family needs and desires. In that regard, the owner/manager sees the small enterprise as the primary source of income as it consumes most of his time and resources. Furthermore, owner/managers are often seen as subjective, working for themselves with the chance to exercise all their capabilities, skills, knowledge and energy.

A study done by Morake, Ramonnye & Mathiba (1994: 176) shows that life circumstances rather than choice force many owner/managers to start a business. As a result, owner/managers pay no attention to issues such as training and the marketability of their businesses, which are basic needs for the survival of enterprises. One should remember that not all owner/managers of small enterprises are entrepreneurs.

Owner/managers are found not to have fixed operational times or do not maintain operational times. That could be attributed to the labour-intensive nature of the micro-enterprises. The long trading hours and making available of small items are the most important requirements met by the informal sectors (Terblanche, 1995: 46).

## **2.6 Advantages and disadvantages of small enterprises**

According to Clay & Creigh-Tyte (1994: 2), small enterprises create jobs that larger firms have discarded. The growing trend worldwide for large companies to outsource non-core functions is providing excellent opportunities for small enterprises. Small enterprises capitalise on what differentiates them from large businesses because they are seen as a possible solution to rising unemployment and a formula for economic growth. Rogerson (1996) confirms that small enterprises are creating new jobs since the formal economy is



incapable of absorbing new entrants to the labour market and the formal sector is contracting out formal jobs.

A White paper of the South African Department of Trade and Industry (South Africa, 1995) indicates that small enterprises are an important force in generating employment and stimulating economic development. The small enterprises serve narrow markets, can keep abreast of fast changing market demands, and are able to react quickly and efficiently to market and technological changes. Owner/managers have the ability to adapt their products and services in a changing environment to suit the markets. The direct contact with customers allows emerging needs to be served quickly. Claessens (in Maas, De Coning & Smit, 1999: 39) points out that, since the structure of the small enterprises is flexible, they have a better chance to survive in a fast changing environment. Owner/managers are independent and self-motivated because they are working for their own profit and they can take quick decisions regarding issues. These factors make them work harder and strive for success.

Moreover, little capital is required to start a small enterprise and that gives more people an opportunity to participate in this sector. In developing countries, capital is scarce and small enterprises are established because they do not require intensive capital.

Kershoff (1996: 14) revealed that customers perceive the following as strengths of informal retailing:

- Lower prices;
- Better and more personalised customer services;
- Customers are served in their home language and given equal treatment
- Businesses are more conveniently situated;
- More convenient trading hours;
- Informal traders are more likely to provide goods according to personal specification (Terblanche, 1995: 45).

However, Dickson, Coles & Smith (1997: 13-21) and Lynas & Dorrian (1987: 1) argue that there are also disadvantages. These are shortages of capital to purchase modern machinery and equipment, lack of managerial training and often inefficient techniques. Enterprises work long hours because the average income earned is low.

As far as the financial aspect is concerned, many small enterprises seem not to be properly managed. Some small enterprises do not have financial records of expenditure and income to assess their progress. Owner/managers do not regard keeping records as important (Morake, Ramonnye & Mathiba, 1994: 180). There is insufficient cash for putting aside each month to pay for rentals and materials. In addition, it is impossible to appoint qualified personnel because of a lack of funds.

Owing to lack of finance, small enterprises tend to engage in similar types of activities as large organisations, rather than finding niche markets. Some owner/managers neither have time to plan to take advantage of opportunities available to them, nor are prepared to take action to avoid risks that threaten them. They are inflexible in responding to market demands such as social, political, economic and regulatory trends that produce changes which in the long run may prove fatal to their enterprises. This results from the owner/managers' attachment to traditional methods of production or to a lack of proper guidance. Owner/managers' subjective judgements and inflexibility thus result in poor products and services delivery.

Some of the small enterprises' working conditions are often not satisfactory. Labour law can protect employees in such a situation only partially or not at all unless the small enterprise is operating formally.

The lack of business education seems to be the main problem facing owner/managers in small enterprises. Moreover, education is needed if owner/managers are to conduct market research and make use of business intelligence.

## **2.7 Factors of survival and success in small enterprises**

There are various ways of measuring survival and success and those ways are based on subjective ratings of the owner/managers. Different authors define the term "survival and success" differently. Scarborough & Zimmer (1993) point out that strategic planning is an essential determinant of the survival of small business. Strategic planning, encompassing past and present experiences, anticipates and prepares logically for the future. These authors also admit that luck plays a role in many business ventures.

In contrast, Goldenberg & Kline (1999: 371) state that examining financial records (which reflect outcomes) is the only way to assess business success. However, that is impossible in developing communities because of financial constraints in employing professionals. In addition, owner/managers are reluctant to provide that kind of information to an outside person.

The concept "care" is relevant and ensures success for companies today (Von Krogh, Ichijo & Nonaka, 2000: 47). The owner/manager has to maintain a good relationship with internal and external information sources. In that regard, owner/managers will know their customers needs and wants, as these are key factors to success in any type of business.

A White paper of the South African Department of Trade and Industry (South Africa, 1995: 31) regards the acquisition of relevant vocational, technical and business skills as critical factors for success in small enterprises. In addition, literacy and entrepreneurial awareness are seen as particularly important to enable people to advance from survivalist activities into larger and better earning enterprises.

The key success factors in enterprises according to Nieuwenhuizen, Le Roux & Jacobs (1996: 9) are:

- Skills - which refer to manual work that can be learnt;
- Expertise - based on knowledge that one acquires. Expertise and knowledge are obtained by studying and/or experience;

- Aptitudes and talents - each person is born with these qualities. Skills, expertise and knowledge are products of one's natural aptitudes, talents and attitudes;
- Personal qualities - such as persistence, commitment, involvement, willingness, sound human relations, creativity and innovative ability and positive attitude/approach;
- Management skills - the importance of performing functions such as general management, production, finances, purchasing, personnel relations, marketing and administrative external relations;
- External factors - such as economic conditions, technological changes, social and cultural forces, political and legislative variables, and international forces.

In addition, Maas, De Coning and Smit (1999: 43) list the indicators that can play a meaningful role in the survival of enterprises:

- Financial management;
- Internal locus of control;
- Creative system;
- Value system;
- Motivation and business structures.

Formal training does not necessarily guarantee success in a small business enterprise but through studies, one can obtain certain knowledge that can lead to certain small business ideas (Nieuwenhuizen, Le Roux & Jacobs, 1996: 51). In *Global Entrepreneurship Monitor (GEM) South Africa* (Driver et al., 2001: 52), tertiary education is regarded as having the effect of increasing the perception of business opportunities. Higher levels of education are associated with significantly higher levels of entrepreneurial activity because, through studies, knowledge obtained could lead to certain business ideas.

All the factors listed are closely linked to the level of education of owner/managers. The educated owner/manager forecasts the market trends and plans accordingly. Market research and business intelligence are essential to planning a business, and in turn planning is

essential to ensuring that the business becomes a success. Planning involves searching for information that guides and gives direction in overcoming obstacles and in reaching the small enterprise's objectives. However, planning is based on good relationships with sources. Information gathered from sources is processed to assist small enterprises in rendering the best products and services.

With the rapid expansion in the number of small enterprises all over the country, South Africa faces a daunting challenge in the sphere of small business-oriented education and training. The intervention aimed at improving the small enterprises has to be linked to the improvement of the living conditions and the restructuring of the education system in order to achieve a balance within communities.

## **2.8 Survival and success of small enterprises in developing countries**

The survival and success of small enterprises are described by employing a global perception. This perception has been described within developing countries and has been applied to the South African situation. Some case studies identified factors that determine survival and success in a small enterprise.

In a study covering Ghana, Malawi, Mali, Senegal and Tanzania, the authors Parker, Riopelle & Steel (1995) trace micro and small manufacturing enterprises. The study investigated the potential of African micro and small-scale enterprises (MSEs) in contributing to economic development. The sample was restricted to private MSE manufacturers with fewer than 50 employees and which had a majority of indigenous ownership. The two size groups selected were each consisting of "micro enterprises" having 5 employees and a "small enterprise" with 49 employees.

The results of that study reveal:

- The owner/managers of small-scale enterprises, except in Ghana, were relatively well educated. The greater dynamism in small-scale enterprises was associated with higher levels of education;

- Apprenticeship was not a factor.

The study by Vaughan & Tague-Sutcliffe (1997) in Shanghai, China focused on the small business-manufacturing sector. The sector was chosen because of its long history and because it was a booming part of the economy. According to these authors, the pace of economic development and the intense competition cause small businesses to appear and disappear very quickly.

A business directory compiled by the Shanghai information centre was used to select a random sample. The Institute of Scientific and Technical Information considered 300 or fewer employees an appropriate criterion to use in the study. The business heads filled in the questionnaire. The Linear Structural Relations (Lisrel) model was used to determine the impact of information on the development of the small manufacturing sector.

Vaughan & Tague-Sutcliffe's (1997) findings reveal the following:

- Business environment (finance, location, technology and market) is important in business success;
- The informal sources of information are a valid indicator of business survival.

Furthermore, in Jamaica, Honig (1998) studied the manufacturing and repairing goods micro-enterprises. The number of employees in both sectors was fewer than 10, and informality was defined as a failure of the firm to comply with Jamaican law. Honig (1998) indicates that, by definition, it is impossible to select randomly an informal sector firm from a master list as they are by nature unrecorded. In order for the sample to be representative, it included members from each of the three population groups of the area.

Honig (1998) lists the following findings:

- Education demonstrated a favourable return to the profitability of the business;
- Vocational training demonstrated strong and positive effects;
- Lengthy experience in business was strongly associated with increasing profit;

- Social networks played an important role in the success of micro enterprises.

The level of education of the owner/managers in the above studies was not mentioned. Moreover, it was not specified whether acquired training was from extra education or undertaken at work (in-service). The success of owner/managers in enterprises lies in education, which thus plays a significant role. The educated owner/manager is aware that market research and business intelligence assist in delivering quality products and services that suit the needs and wants of customers. The ability of owner/managers to ensure that customers are satisfied is their only security because without customers the business is a failure. In addition, information in the conducted studies was gathered informally, through interacting with different internal as well as external sources.

These studies conducted in developing countries highlight factors such as education and business environment that form the foundation of survival and success in enterprises. Accessibility to information is related to the level of education of the owner/manager because literacy and numeracy play an important role in terms of written information. Morake, Ramonnye & Mathiba (1994: 175) found that reading, writing, counting and decision-making were basic skills gained through schooling by the small enterprises' owner/managers. Owner/managers possessed different levels of primary and high school education; but tertiary education had not been available to any of them.

## **2.9 Small enterprises in South Africa's developing communities**

The policies of Bantu education and job reservation (in effect until 1979) restricted Blacks from being given apprenticeships and jobs in certain skilled trades (Riley, 1993). The lifting of restrictions in Bantu education and of job reservation in 1979 led to the emergence of small enterprises. Informal sectors started to emerge about 1980 when the formal economy stopped creating new formal jobs (Rudman 1988). Kirsten (1988) indicates that Black South Africans were involved in the informal economy since 1985.

Riley (1993) indicates that the legacy of apartheid ensured that almost all black enterprises were small regardless of assets, turnover and the number of employees. The preparation of

small enterprises for playing a dynamic role in the generation of employment and wealth was minimised. In addition, the historical legacy of the "Bantu education" system prevented most Blacks from obtaining business management knowledge (Kershoff, 1996: 22). The supply of Black entrepreneurs with the technical and managerial skills necessary for operating their own businesses was severely constrained. The lack of education and skills is one of the most common constraints limiting the development of black owner/managers.

According to Riley (1993), the emerging enterprises experience the following problems:

- Labour issues - it is difficult to find skilled labour. The skilled workers do not want to work for small enterprises because jobs are small and insecure, while expanding firms have difficulty in finding reliable labour;
- Principal external constraints include highly competitive markets, lack of market infrastructure and unstable politics;
- Owner/managers are poorly educated, lacking skills or technical expertise;
- Limited institutional outreach, lack of understanding their (owner/managers) needs and problems;
- Difficulty in growing or improving services. Owner/managers do not have access to broader markets or to network opportunities in the formal markets.

The *GEM* South Africa's report by Driver et al. (2001:4) confirms Riley's (1993) findings. According to the report, the most important problems for entrepreneurship in South Africa are the following:

- Education – general basic education is poor for a large proportion of the population;
- Cultural and social norms – entrepreneurship is not broadly understood and supported as a career. There is lack of initiative, creativity and confidence;
- Financial support – poverty and lack of assets mean that many people do not have the security needed to access formal loan finance;
- Government policy – government has stated its commitment to promoting small business, however, labour legislation is seen as oppressive for small firms.



The generally accepted causes of poor performance amongst small enterprises are the lack of managerial expertise and entrepreneurial skills. Blacks lack basic skills as well as high-level technical skills. South Africa's history has left few Blacks in developing communities with the ideal entrepreneurial profile in terms of education. The lack of education experienced by owner/managers leads to inflexibility concerning the market's demands. Moreover, subjective decision-making results in poor operational activities. As seen by Rogerson (1996), micro-enterprises reflect low education, poor working conditions, extended working hours and the struggle to meet daily targets. The legacy of apartheid education and other policies is apparent in the damage that has been done to self-esteem, motivation and creativity of most Black owner/managers. Moreover, a prevailing culture that government provides jobs often softens the will to set up a business.

## **2.10 Challenges for enterprises in developing communities**

According to Wright (1987: 136), skills in the field of management constitute the greatest area of need for Black communities. Black business has the potential to be a dynamic and productive player in the South African economy (Riley, 1993). However, the findings compiled by Driver et al. (2001: 52) in *GEM South Africa* found that the current education system is not equipping pupils with an entrepreneurial mindset and skills in terms of developing their potential. Development includes better education and training that leads to greater levels of literacy and skill which in turn improves productivity.

The owner/managers lack an essential requirement: business management training. The lack of skills generates poor products and services in a small enterprise. Maas, De Coning & Smit (1999: 39) highlight that one way to ensure that small enterprises in South Africa contribute to the country's economic growth is to stimulate creativity in the sector. However, the owner/managers should create an enabling environment for employees to be creative.

The provision of an information infrastructure, and education and training can promote and upgrade small enterprises. There is a need to integrate general skills training and business training into the school curriculum (Morake, Ramonnye & Mathiba, 1994: 177). In South Africa, the provision of skills has to be tackled in the context of the overall restructuring of South African education. Nonetheless, it is important to note that most deficiencies, such as a

dominant, subjective role and too little education, exist among the characteristics of owner/managers in developing communities. Owner/managers should transform and involve key information sources of the business environment in their enterprises.

## **CHAPTER THREE: THE SMALL ENTERPRISE AND INFORMATION MANAGEMENT**

### **3.1 Introduction**

Owner/managers in developing communities should adopt an entirely new approach to business needs in the 21st century as customers become more connected to the information economy. The information economy has resulted in businesses using information to become more flexible and responsive to customers' needs. Business strategies need to reflect the changing environment with respect to increased competitive dynamics that the markets create.

The new strategies developed should be relevant to the business environment and should be based on the core competencies of the enterprises. Enterprises need to be more alert to what is happening around them and the information systems should enable them to interpret information with great efficiency. The trend in the business environment is towards increasing the value content of information services. Nonetheless, keeping up with information is not easy and most of all it is hard work, especially in developing communities.

As was observed in Chapter one, many small enterprises in developing communities are assumed not to be managing their information, which may lead to their operational failure. The owner/managers do not realise the value of information that could assist in the survival and success of their enterprises. According to Norton & Peel (1989), businesses failing to use information swiftly inevitably forfeit their opportunities in a competitive economy.

### **3.2 The information revolution**

The information revolution is the result of the new information infrastructure. Information is changing the way businesses operate. The important concept of competition highlights the role of information in implementing effective strategies.

Porter & Millar (1985: 150) list three vital ways in which the information revolution is affecting competition:

- It changes industry structure and alters the rules of competition;
- It creates competitive advantage by giving companies new ways to outperform their rivals;
- It spawns completely new business, often within a company's existing operations.

Information approaches in a changing world require vision, creativity and skills that are new in kind yet essential in maintaining a competitive advantage. A competitive advantage is a characteristic unique to a product or service, such as the lowest price, that is clearly identified by clients and makes the product or service stand out above those of competitors (O'Neill, Terblanché & Keyter, 1997: 73). To be successful in today's competitive world, one needs to adopt a completely new mental attitude towards information products and services that are relevant to users' needs and wants.

The competition requires business to focus on tangible and intangible assets (Sveiby, 1998). Tangible assets cover, among others, explicit recorded knowledge while intangible assets include tacit knowledge in human minds (discussed in Chapter 4). Both these assets are important commodities at business management and operational levels. Yet, some traditional small enterprises focus on the tacit knowledge of their owner/managers and leave the important tangible assets unmanaged. Haldin-Herrgard (2000: 359) points out the importance of unstructured, intangible, tacit knowledge, which in collaboration with explicit recorded knowledge achieves excellence.

Information as a resource should be managed like any other resource. Information resource management (IRM) is a concept advocating that information is a valuable resource and should be managed accordingly (Long, 1989: 12). Each owner/manager who embraces the concept of IRM is accepting the responsibility of managing and controlling information. Information supports every aspect of life, including the most adventurous and innovative projects.

Maas, De Coning & Smit (1999: 44) point out that creativity in South African enterprises is not that common because of the existing profile of owner/managers. Creativity is the ability to consider a topic in various ways and to come up with something new (Nieuwenhuizen, Le Roux & Jacobs, 1996: 49). However, lack of creativity may be due to lack of skills, expertise and knowledge on the part of owner/managers.

Most South African small enterprises in developing communities fall far short of the above-mentioned ideal in creativity. It is a sad fact that too many small enterprises in South Africa are not able to take advantage of opportunities that exist because of lack of information and know-how (Lynas & Dorrian, 1987). Owner/managers in South Africa need exposure to more and better information and training in managing their small enterprises. According to Rowley & Farrow (2000: 16), for information to be useful it needs to be structured and organised. Information may be structured and organised through information management.

### **3.3 Information management**

In information management, owner/managers are responsible for gathering raw data and processing them into usable information. Nonetheless, the general focus of information management is to enhance the accessibility of relevant information so that the organisation will have a view of itself and its environment. Information management determines what can most usefully and profitably be gained from interpreting information that then takes on some meaning either in isolation or in combination with other knowledge.

Information plays different roles and has different values for owner/managers at different levels. In management activity, information provides improvements in work quality, and decision-making. Obtaining the right information in the right format at the right time is important for owner/managers. McLeod (1990: 5) lists two main reasons for information management:

- Increased complexity of the management task – firms of all sizes are subject to economic influences, technology of business is becoming more complex, time frame for making decisions is shrinking and there are social and competitive pressures;

- Availability of problem solving tools – owner/managers need support to implement decisions and that support may come from computer based systems.

Information management is needed in all business organisations and careful handling and storage of information result in tremendously positive outcomes (Von Krogh, Ichijo & Nonaka, 2000: 19). Information management is affecting entire business processes in creating information products and services. To succeed in the new era of competition, small enterprises need relevant, timely and accurate information for decision-making.

Rowley & Farrow (2000: 8) list the characteristics of information that support management:

- Objectivity – there are difficulties associated with creating a shared reality that could be regarded as valid and transferable objective knowledge. However, if experiments are often repeated on problems and environments under similar conditions and give consistent results, then those results can be identified as objective knowledge. Terms associated with objectivity are "reliability" and "accuracy";
- Accessibility - most explicit knowledge should be stored in printed forms and other styles of communication that are also important;
- Relevance – information should refer to the exact state of the events it describes;
- Currency – information should be current because managers often must act within a limited time;
- Structure and organisation – information and knowledge should be organised in accordance with a particular structure. The features of that structure will be the way in which items are grouped into categories and the relationships that exist between the categories;
- Systems – information and knowledge should be stored in the information systems. These systems are designed to achieve effective and efficient retrieval;
- Usefulness – information should be in a form that makes it easy to apply to the situation (Licker, 1997:37).

The information systems should not only coordinate and control the flow of information in a small enterprise but should also suit the enterprise's structure. Retrieval-based information systems support owner/managers by making them more informed and flexible in arriving at decisions. Organised information in systems facilitates the productive use of information resources. Information management brings together the organisation's capabilities to create and use information.

Information management is a cycle of processes that support the organisation's learning activities (Choo, 1998: 23). These processes are: identifying the information needs, acquiring information, information organisation and storage, developing information products and services, distributing information, and using information. These processes suggest new strategies for maximising the value of information in organisations and changing the ways of doing things. Furthermore, these processes interact with those of other organisations and systems to alter the environment, in turn, generating new information. The information management processes are discussed next.

### 3.3.1 Identification of information needs

Information needs of small enterprises are closely related to daily problems in which decision-making at short notice requires facts (Kennington, 1989). According to Choo (1998: 26), information needs arise from problems, uncertainties and ambiguities encountered in specific organisational situations. Information needs can either be subject matter requirements by important members of the organisation, or situational. The information needed should make sense of the situation and provide necessary information for decision-making and problem solving. An accurate description of information requirements is a prerequisite for effective information management (Choo, 1998: 28).

To keep a business headed in the right direction an objective is needed. Owner/managers should recognise the sudden changing of the environment and seek information. In small enterprises owners are simultaneously managers and employees, constantly aware of what is happening around them. Based on personal experience, owner/managers can adapt the relevant product or service to the new demands.

Information needs arise from functional areas within business processes that require their own type of information. De Beer et al. (1996: 141) list some functional areas that will require information in a business:

- The owner/manager needs information on the general financial position, profitability of the business, technological developments and performance of other functional areas;
- The marketing function would like information on clients and potential clients, their spending capacity, geographical location, markets, market segments and needs. Information is also needed on competition, prices, alternative forms of marketing communication, sales volumes, sales values and marketing costs;
- The purchasing function would like information on existing and potential suppliers, quality and prices of raw materials and equipment, acquisition costs, stock levels and consumption rates;
- The production function is interested in information on the budgeted and actual production volumes, production costs, the availability of stock and the utilisation of equipment and staff;
- The personnel function desires information on the business's human resources and personnel aspects such as leave, salary scales, conditions of employment and training statistics;
- The financial function needs information on capital movement, investment proposals, creditors, debtors, stock levels and turnover.
- External factors such as technological innovations, government policies, economic trends, demographic patterns, lifestyle changes, political transitions and international trade are considered important (Choo, 1998: 30).

The above information is important for owner/managers and it is used to meet the needs of the enterprise. Information is gathered by scanning the business environment. Lowe (1999) affirms Barrow's (1986) viewpoint by pointing out that business information consists of factors that are outside and largely beyond the control of the business.



### 3.3.2 Information acquisition

Information acquisition is driven by information needs identified within the organisation. Information acquisition is the result of strategic planning which involves a process of identifying and analysing needs, and relating the needs to the products and services. As owner/managers are strategists, they should ensure that business processes are aligned with the enterprise's objectives. Scarborough & Zimmer (1993) point out that strategic planning teaches the owner/manager a degree of discipline that is important for business survival.

Strategic planning cannot guarantee success but, according to Scarborough & Zimmer (1993), strategic planning does dramatically increase the enterprise's chances of survival in a hostile business environment. In strategic planning, factors that have a direct significance in the small enterprise's functioning are considered. It then becomes important to acquire information from internal and external sources, as well as formal and informal. Information acquisition is conducted according to the organisation's established policies and procedures about how, where and what information to collect about which activities.

Information acquisition involves locating sources of information, and then obtaining and processing the information. The owner/managers rely on those sources to position themselves for business opportunities and threats. In a business environment, in order to prepare against threats or to identify opportunities there should be a systematic and competent monitoring of the environment, which is done through business intelligence.

Business intelligence is the activity of monitoring the environment external to the firm for information that is relevant for the decision-making process in the company (Gilad & Gilad, 1988: viii). Business intelligence can be carried out formally and informally. According to Gilad & Gilad, formal business intelligence is an organised, systematic and ongoing process that produces high quality intelligence; this approach to business intelligence takes place mainly in big organisations.

The ability of an enterprise to respond quickly to changes in the market is dependent on such surveillance. On the other hand, informal business intelligence involves uncoordinated

business intelligence activities carried on by individuals on an ad hoc basis. Owner/managers in developing communities seem to utilise informal business intelligence because they are less inclined to acknowledge the importance of formal collection and analysis of environmental information. However, owner/managers suffer a blow when disregarding the external factors that produce changes in the long term.

Nonetheless, business intelligence could be expensive for owner/managers in developing communities. It requires resources beyond owner/managers' reach, including staff to be maintained and some information infrastructures. However, through communication and contacts with other people, information as knowledge (discussed in section 3.4) is acquired. This type of information saves time, is cheap and can immediately be utilised to improve business performance. For their organisation's growth and survival, owner/managers should always maintain a good relationship with customers, suppliers and employees (Von Krogh, Ichijo & Nonaka, 2000:46).

Interaction with information sources and external factors is required to meet known and anticipated needs. Enterprises depend on the environment for resources and for their continued existence. This dependence requires the enterprises to learn enough about current and possible future conditions of their environment. The valuable knowledge gained is applied to business processes in developing the enterprise's competencies. Moreover, information as knowledge is only useful if it is accurate, relevant, accessible, and can be utilised when required.

The selection of sources and sampling of events become necessary because of the existence of many methods, sources and channels of collecting information about the environment (Choo, 1998: 30). Owner/managers should exploit the potential of tangible and intangible resources outside the enterprises.

### 3.3.3 Information organisation and storage

Information organisation and storage systems help to create consistency, good practice and efficiencies in handling information. Information acquired from sources is processed,

organised and stored in retrieval-based systems in order to facilitate information sharing and retrieval (Choo, 1998; 33). Information from such a system is retrieved through an index and used to make decisions, interpret situations and solve problems. Systems create and maintain relationships between all organisational resources by indicating which resources are to be used for specific activities. It becomes crucial to have a system that details the resources of the organisation that are important for its performance. Systems can be either manual or computerised, be specific to a functional area or be integrated.

Organised information makes it possible for the organisation to achieve its goals. Livesay (in Etzel & Thomas, 1996:31) suggests that better organisation of information increases efficiency (the time taken to process information or perform a task) and effectiveness (the ability to achieve goals). Organised information supported by strategy, structure, culture and systems ensures the efficient and effective delivery of best products and services (Beijerse, 2000: 164).

Wilson (1993) points out that every organisation must have an information system to survive in the business environment. The information system collects and communicates internal and external information quickly and effectively for making decisions in a changing competitive environment. An information system is responsive to opportunities, and assists in avoiding threats if the organisational culture and structure are adaptable to external needs.

An information system is a stable structure of the organisation that maintains the history, experience and expertise of an organisation (Malhotra, 2000). The purpose of an information system is to support the owner/manager in decision-making, problem solving and operational activities. Owner/managers should utilise information systems effectively for productive performance. Refer to Chapter 5.

#### 3.3.4 Information products and services

Information is made available in the form of information products such as a budget, financial statements and computer printouts (De Beer, 1996: 140). Furthermore, this information is

conveyed either in writing or orally. The information products are stored systematically in information services that can be specific to a functional area or have a broad coverage.

These information services should fit the users' needs and mindset. Taylor (1986 in Choo, 1998: 39) points out that information products and services are developed to assist owner/managers in taking better decisions in better sense-making of situations and in taking more effective action. The author indicates that information products and services are designed to deliver the potential usefulness to the user through greater ease of use, noise reduction, improved data quality and greater adaptability.

### 3.3.5 Information distribution

Information is distributed through channels such as publications, e-mail, intranet, newspapers and electronic journals. These channels ensure personal contacts within the organisation. However, in developing communities' enterprises, information is best conveyed through personal contacts because few employees are information conscious.

The goal of information distribution is to increase the sharing of information. In addition, the sharing of information coordinates unrelated items to create new knowledge. According to Choo (1998: 49), the sharing of information changes organisational learning because the retrieval of information in systems becomes possible to users of the organisation. Through information distribution, a learning organisation continues developing its competencies by learning from its success and failures.

### 3.3.6 Information use

In an organisation, information is distributed through information products and services. Information becomes available to the owner/managers in making meaningful decisions, solving problems and interpreting situations. Owner/managers should utilise the relevant information in order to realise their profit objective.

### **3.4 The relationship between information and explicit knowledge**

In order for the enterprises to survive in this competitive environment, owner/managers need to acquire information and explicit knowledge from various sources. Information and knowledge may be linked and used interchangeably depending on the context although the meanings of the two words are different.

Information refers to the data that have been processed so as to be usable in specific situations (De Beer et al., 1996: 136). Furthermore, information is recorded knowledge represented in various formats and can be used for calculations, comparisons, evaluations and summaries. Information is interpreted in terms of existing knowledge and in the process the knowledge base changes. In that regard, Vaughan & Tague-Sutcliffe (1997: 922) define information as those facts and data acquired from formal and informal sources.

Knowledge is intangible but some of it can be represented in various information packages. Skyrme (1999: 59) emphasizes that unless something is made explicit, it frequently does not get properly managed. The term "explicit" is defined as something clearly stated and fully expressed. The physical representation of ideas, beliefs and opinions of individuals can be viewed as a translation from something intangible to something tangible, from knowledge to recorded knowledge. According to Buckland (1991:42), information in this sense is called "information as knowledge" because knowledge is imparted in the process of informing. Information as knowledge comes to a user from either a person or a document. Moreover, that information is an increment in knowledge because it shares the characteristics of intangible knowledge.

Explicit knowledge is viewed as equivalent to objective knowledge, and a proportion of this explicit knowledge will be recorded in documents of various types (Rowley & Farrow, 2000: 6). It is possible that the explicit knowledge needed by enterprises is available in published forms. According to Alter (1996: 30), that kind of information is hard data generated by formal systems. Hard data are in databases, libraries, newspapers and government documents and are more precise and systematic. Hard data identify their authors as sources. The advantage of this form of data is that it is immediately available and thereby saves time. Hard data may provide only part of the information people and organisations need. However,

that information may be outdated and be no longer accurate. If the required information is not available in published form, owner/managers have to consult other knowledge sources (De Coning, Hill & Naudé 1989: 47).

Other knowledge sources also referred to as soft data are through oral communication. According to Alter (1996: 30), soft data may be just as important as hard data. Soft data form part of the knowledge embodied in the human mind, which is called tacit knowledge (discussed in Chapter 4), and is used by the small enterprise for productive performance. Moreover, the soft data consist of subjective knowledge obtained by informal means such as talking to people. The soft data are often full of personal viewpoints and need to be carefully assessed and interpreted because they may be insufficient, inaccurate and unreliable. On the other hand, these sources are generally free and tend to provide information that is clear and easy to understand.

Nonetheless, the transfer of soft data is most likely to be successful between a source and a recipient who are alike or similar. These interacting individuals may share beliefs, values, educational background and social status. According to Vickery & Vickery (1987: 24) this mode of transmission is called relaying because it covers all human intermediaries who pass on information from source to recipient. In addition, much relaying activity is incidental because only information of interest is assimilated and from time to time it is passed on to others.

The integration of hard and soft data should be promoted because it brings the desired results to the enterprises. Norton & Peel (1989) recognise that an integrated mix of internal and external data is essential to gain and keep competitive advantage in today's business environment. The merging of data acquired from sources anticipates future trends and removes obstacles to achievement.

### **3.5 Sources of information and explicit knowledge**

Owner/managers acquire information from different sources. According to O'Reilly, Chatman & Anderson (1987) and Culman (1984), information selected is based on accessibility rather than on quality. In addition, Fann & Smeltzer (1989: 318) indicate that decision-makers tend to use sources that are highly characterised by physical accessibility in order to retrieve potential relevant information. In contrast, according to Choo (1998: 93), source selection is influenced by the perceived quality of the source rather than accessibility. These sources are customers, suppliers, competitors, family (which is also discussed as a source of tacit knowledge) and friends, information services and government.

#### **3.5.1 Customers**

Small enterprises in the competitive world of today need to guarantee total customer satisfaction. A study of the needs and reactions of the customer is vital (Burrows & Bakewell, 1989). Owner/managers should constantly keep in touch with customers so that they know what type of products and services customers require. It is fairly well established that a person's needs are unlimited because as his/her circumstances improve, he/she not only desires more possessions, but continually desires newer and better products and services.

Von Krogh, Ichijo & Nonaka (2000) and Chaston, Badger & Saddler-Smith (1999) recommend the building of stronger relationships with customers as this is often a way of ensuring the survival of firms in unstable and highly competitive markets.

The information required is gathered through customer research, an activity that unfortunately intimidates many small enterprises because of the cost factor. However, through personal communication and contacts with other people, information as knowledge could be acquired by owner/managers in developing communities. Rudman (1988) found that many owner/managers tune in to ethnic radio and television stations to find out about products and services delivery. Consequently, new products are often stocked due to customers' needs created by media advertisements. Customers exposed to such advertising campaigns develop a need for a product they might not even have heard of before. The needs may be strongly influenced by a number of factors that are subject to change. Customer

research is necessary both before and after introducing a product and service. Follow-up research is necessary in order to confirm the satisfaction of customers.

Needs are unlimited but available means are limited, which leaves customers facing the problem of having to make choices. It is important to consider customers' needs because customers have the power to choose from among the best value products and services available in the market. There is no obligation for customers to inform the owner/manager if they are dissatisfied because, if there is an alternative, it is easier to go elsewhere (Beijerse, 2000). Owner/managers face dramatic competition, and thus continual improvement of products and services is important.

As Wilson (1993: 17) puts it, "today's consumer is king" because organisations are forced to be more responsive to the needs of customers, who are being offered a wide range of activities and products by competing organisations. Customers are increasingly steering the markets. A company has to comply with diverse customer preferences and demands if it wants to survive (Beijerse, 2000). The owner/manager researches the customer's needs and delivers the required products and services (Lynas & Dorrian, 1987: 53-54).

Johnson & Kuehn (1987) highlight the fact that information involving customers in small enterprises is mostly verbal. This information is judged to be of high quality and, if responded to, pays off in improved performance. Burrows & Bakewell (1989: 40) and Barrow (1986) recognise that, without customers, business cannot get off the ground, let alone survive. They point out that the most successful companies are those that succeed in getting closer to their customers.

The owner/manager who understands the needs and wants of customers, adapts the enterprise's products and services to suit them. In doing so, the owner/manager generates customer satisfaction in the hope of retaining a long-term customer relationship. Small enterprises of all descriptions can only survive by attracting and retaining customers (Lynas & Dorrian, 1987: 59). The customer's needs and wants are unlimited and may change, and



the owner/manager has to anticipate what changes are likely to occur and be able to adapt his/her products and services to suit the changes.

### 3.5.2 Suppliers

Business is a chain of relationships. Just as it is important to develop good relations with the customers, owner/managers also need to develop good relations with their suppliers. Strong relationships are based on mutual interests in which both parties understand that the relationship is good for them.

A supplier promotes products and services mainly through advertising and selling (Burrows & Bakewell, 1989). The choice of a supplier is very important to the owner/manager because no small enterprise can survive without the consistent flow of raw materials and final products. In turn, the supply of a product and service in time is important to the owner/manager for maintaining the relationship with long-term customers. An ineffective supplier causes loss of business opportunities and competitive advantage.

The ideal supplier is one who delivers a required stock in time and at a good price, and someone who adapts quickly to changes in the market (Bekker, 1988: 216-217). Hill (1987 in Stevens, 1997: 35-36) confirms that critical factors such as reliable delivery, quality, flexibility and price may serve as guidelines when choosing or rating suppliers.

A strong link with suppliers is important. The owner/manager obtains much information from a supplier who is travelling and meeting people (Burrows & Bakewell, 1989). That information is vital as it is used to improve products, services as well as producing new inventions.

### 3.5.3 Competitors

Competition is a major driving force in the economy because it forces owner/managers to be more creative. Customers prefer a variety of products and services to choose from among different enterprises but if there is no competition, the variety is limited. Customers' needs

lead to the creation of products and services by enterprises, which in turn benefit the customers.

According to Scarborough & Zimmer (1993) owner/managers point out competition as the single biggest challenge facing the small enterprises. The established White and Indian small enterprises are moving into the developing communities (Kershoff, 1996) and either eliminate the competition or take it over. The owner/managers of developing small enterprises are aware that they have to contend with this strong competition because these established competitors are trying to attract their customers. The resulting improvement in products and services is desirable.

Lynas & Dorrian (1987) advise owner/managers to gauge the strengths and weaknesses of the competing enterprises and use that knowledge to further their own business. Von Krogh, Ichijo & Nonaka (2000) et al. (2000: 46) point out that the competitive information helps the enterprise to position itself for future trends by influencing the enterprise's system, strategies, structures and the organisational culture accordingly. The owner/manager should know who his competitors are, know as much as possible about their operations, and how the competitors are affecting his own business (Barrow, 1986). However, this undertaking takes time to accomplish, as it is an ongoing process.

Singularly, Morake, Ramonnye & Mathiba (1994: 187) found that a high level of trust exists among the owner/managers of competing small enterprises in the Pietersburg area (Northern Transvaal). They trust one another to such an extent that they sell one another's products and provide services while one is away. This attitude is attributed to their membership of the Zion Christian Church (ZCC).

According to De Beer et al. (1996) and Scarborough & Zimmer (1993), competitive information is gained in the following ways:

- Meetings involving employees and owner/manager;
- Visiting exhibitions;

- Information from customers;
- Local media;
- Buying competitors' products or services;
- Tendering meetings.

In big organisations, there are competitive business intelligence units that are directly involved in collecting the above data. These units track developments in the business environment and from the competitors, and gather intelligence, which in turn flows through the organisation. Intelligence gathered serves to support decisions regarding pricing strategy, trade discounts, sales targeting, new product introductions, new packaging, promotions and changes in selling techniques (Galad & Galad, 1988: 201). Consulting practices can be used by small enterprises that can afford them.

Competition is strongly linked to pricing, quality and promotion of products and services. To gain competitive advantage (Porter & Millar, 1985), products and services should sell at a lower cost or be unique. The small enterprise that is manufacturing and selling directly to customers can often control prices, unlike a retailer where the customer has much greater control over the price. The customer has the choice to buy from other small enterprises if the product and service is of high cost and of poor quality.

#### 3.5.4 Family and friends

Owner/managers have a subjective tendency to seek out information from sources that would most likely support their preconceived ideas, rather than to seek out objective information that might not carry similar support. According to Morake, Ramonnye & Mathiba (1994), the trust among owner/managers is highly influenced by language, culture and religion.

Vaughan & Tague-Sutcliffe (1997), Johannessen & Kolvereid (1994) and Fann & Smeltzer (1989) found that family and friends are important sources of information in small enterprises. In addition, owner/managers turn to specific knowledgeable individuals who

possess crucial skills deemed useful to the enterprise (Raffo et al., 2000: 361). This indicates the informal information as mostly utilised in small enterprises.

### 3.5.5 Libraries and information services

A library is a place that should be guaranteed to be packed with relevant information. Libraries should seek to know what sort of information their clients use and how they use it, in order to ensure that the collection best meet their needs. The resources in libraries should meet the different information needs of the community. Most people belonging to organisations look for information in libraries or information centres to ensure effective performance.

However, there are a number of reasons why people do not use their libraries and information services. Many people may lack information-searching skills and are unaware of the wealth of information that can be obtained. Some may think they know the answers to all their information needs and carry on without checking to see if more up-to-date information exists. Others may not know that such facilities exist and in turn use alternative sources.

A study done by Kinnell, Feather & Matthews (1994: 19-21) in China points out the non-use of information services that might meet some or all business information needs. However, Norton & Peel (1989) argue that libraries and information services are unable to keep pace with business information needs. Vaughan & Tague-Sutcliffe (1997: 927) report owner/managers complaining about difficulties in finding information that was relevant to their business needs. Moreover, they highlight that important business information is often kept secret for reasons of competition and thus is unavailable through formal sources.

Libraries are expected to support small-business information needs but such support seldom exists (Glynn & Koenig, 1995: 255-256). Academic libraries that support business schools provide resources for large and small businesses but often as a fee-based service. This allows the academic library to generate income. A study done in Illinois by Harper (in Glynn & Koenig, 1995: 256) shows that small businesses still ranked academic libraries well above

public libraries as a source of information. Academic libraries have a variety of resources as they serve a wide range of departments.

Vaughan & Tague-Sutcliffe (1997: 927) list some suggestions that libraries and information centres could follow to serve small businesses since the latter use mainly informal information:

- Promote informal sources, by organising activities which create opportunities for personal contacts and networking;
- Libraries should move away from the traditional stereotyped warehouse image, stop being passive guardians of information, and be active providers of information.

Libraries might like to provide all the information needed for social and economic development of people. However, libraries are constrained by low and insufficient budgets in collecting the needed information, and moreover, in publicising their services.

Community libraries are expected to support the educational and informational needs of people and to assist in the process of general upliftment and development of the disadvantaged. More recently, public libraries have changed to being community libraries. Community libraries have gained in popularity because of their commitment to the empowerment of the entire community through their address of informational needs. The need for small business information and the willingness of libraries to play new roles gave rise to the restart of the Library Business Corner (LBC) project in August 2000 after an initial attempt had failed (Thomas, 2001). The LBC project started in the Western Cape and is expected to extend to other parts of the country. The LBC is a unit in the public library. It stocks and displays popular and easily understandable material in different languages that covers key small business issues.

### 3.5.6 Government

Apart from the information the owner/managers need from other sources in order to prosper in the competitive environment, the government has to provide particular information to the

owner/managers. The government has realised that the small enterprise sector is a generator of employment. Morake, Ramonnye, & Mathiba (1994: 190) found that there is a need for advisory services for micro-enterprise owners. Advice and training by professionals could assist owner/managers to prioritise their business needs.

For this reason, the Department of Trade and Industry has established 36 incentive schemes to assist the small enterprises (South Africa, Department of Trade and Industry: 2001). These schemes are designed to lead to specific important outcomes such as reducing inequality and poverty, promoting the development of SMMEs and increasing opportunities for Black economic empowerment. Most of these schemes disseminate information that focuses on financial support. However, it is usually owner/managers of established enterprises who can afford these resources provided by the schemes.

Even less so can owner/managers in developing communities afford either these or the expensive consultancy services. These schemes are located in areas that are geographically beyond the reach of small enterprises and the owner/managers do not know who to talk to about these schemes. In addition, these schemes are too complicated, do not help people in the developing communities and, most importantly, do not meet the strategic objective of empowerment.

In fact, out of the 36 schemes established, only a few are in line with the needs of the developing communities. These few schemes are:

- Emerging entrepreneur scheme - increases access to finance for SMMEs through banks;
- Danida business-to-business programme - develops and strengthens business opportunities and creates jobs for eligible entrepreneurs from previously disadvantaged communities;
- Khula Start – targets historically disadvantaged communities, particularly women, in rural areas and informal sectors.

The development of infrastructures that are in line with the needs of small enterprises in the developing communities of South Africa is essential. In that regard, the South African Department of Labour has regulated the Skills Development Act, (South Africa, No. 97 of 1998). The Act is based on the analysis of business requirements and the skills needs of current staff. It defines the skills priorities that each workplace pursues, and the training programmes that are required to meet and deliver the workplace objectives. The Department of Labour has appointed the Sector: Education and Training Authorities (SETA) to administer the necessary funds.

SETAs receive funds from training boards, schemes and levies. A major function of a SETA is the implementation of its sector skills plan. In order to do this, the SETA makes a grant to an employer, a training provider or an individual. A grant might be finance to research or to develop the training infrastructure in a sector. The grants are determined by each sector which publishes details on how to apply them.

In *GEM* South Africa (Driver et al.: 2001), it is found that education and training are important aspects in business. In response to this findings, the Department of Education is offering a small, medium and micro enterprises (SMMEs) course. A SMME course is offered at public adult learning centres and takes one year to complete (Kabane, 2001: 11). This learning area equips learners with the skills, knowledge and attitudes necessary for them to become entrepreneurs.

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Enterprises in developing communities should adopt the information management approach for survival and success. However, lack of funds keeps on surfacing as a barrier to acquiring the relevant information. The information management approach demands education from owner/managers. According to Haywood (in Morris, Meed & Svenseu, 1996: 5), if information is indeed becoming the new means of production, a new divide opens between the information rich and the information poor. This in turn will put those without information at a disadvantage. Information management tries to create an equitable information order between individuals, social groups, communities and societies in the small enterprise sector.

In addition to information management, aspects of knowledge management are considered essential for enterprises in developing communities. The combination of tacit and explicit knowledge is considered to be the fundamental basis of competition in an organisation that wants to realise its objective. This is elaborated in the next chapter.



## **CHAPTER FOUR: THE SMALL ENTERPRISE AND KNOWLEDGE MANAGEMENT**

### **4.1 Introduction**

Knowledge comes from various sources such as tangible recorded information, observation, logical thought and oral information transfer. Knowledge is rarely priced as it cannot be directly observed because it is difficult to measure. However, despite this, knowledge is seen as the hidden factor of production that accounts for the rapid rate of growth of successful enterprises.

Knowledge management is associated with the identification and the creation of new knowledge through knowledge sharing. Knowledge management involves knowing what knowledge resides in people in an organisation and knowing the individuals who possess the knowledge. However, this subjective tacit knowledge, based in an individual's mind, is under-utilised. Owner/managers are faced with major challenges of creating an enabling environment for their employees that will enable the conversion of tacit knowledge into explicit knowledge. The converted tacit knowledge is represented in various information packages for future use as it assists in achieving the enterprise's objectives.

### **4.2 Knowledge management**

According to Pantry & Griffiths (1998: 18), knowledge management is a relatively new technique that is attracting increasing attention, particularly in the mainstream of management and information technology. However, Civi (2000) points out that although the study of knowledge has been recognized in the last decade as a crucial element of the development of firms, it is as old as human history. Organisations view knowledge as their most valuable and strategic resource because it offers opportunities for competitive advantage.

Some organisations believe in managing their employees' capabilities in order to become and remain competitive. Knowledge management is concerned with the exploitation and

development of the knowledge assets of an organisation with a view to furthering the organisation's objectives (Rowley & Farrow, 2000: 15). According to these authors, the term "knowledge management" includes the following:

- Disclosure of or sharing knowledge so that all members of an organisation can use that knowledge in their roles within an organisation;
- Ensuring that information is available at the location at which it is most crucial for decision-making processes;
- Ensuring that knowledge is available when it is needed;
- Ensuring that it is possible for new knowledge to be created;
- Ensuring that everyone in the organisation knows who has expert knowledge and where it is.

For the above-mentioned conditions to prevail, an open culture and flexible structure should exist in the enterprise. Knowledge management embraces subjective tacit knowledge that resides in the minds of employees. The subjective tacit knowledge is converted into objective knowledge through sharing in the pursuit of organisational objectives.

In helping to realise organisational objectives, a culture of and systems for knowledge sharing are critical for the long-term success and survival of small and large organisations (Lim & Klobas, 2000 and Norton & Peel, 1989). The present business environment requires a flexible structure in which teamwork makes an intellectual contribution to a better future. Team workers coordinate their activities and assume joint responsibility for the outcomes.

According to Haberer & Wendel-Webb (1994: 68), in a team environment the high quality of ideas and the increase of work output is often attributed to a concept called 'synergy'. The authors define synergy as a combined or co-operative action that results in a total effect that is greater than the sum of its parts. One of the ways in which synergy works is through people sharing their expertise. An expert in some aspect of a team's work offers to spread that expertise to other members of the team through training.

Von Krogh, Ichijo & Nonaka (2000) point out that it is time for most corporations to revitalise their human side, which could generate new sources of knowledge. Tacit knowledge is neglected because it cannot be placed on a balance sheet (Wilson, 1996). Value is often associated with some form of measurement but measuring the contribution of tacit knowledge to business success is difficult.

Lim & Klobas (2000), Matlay (2000), Skyrme (1999) and Drucker (1993) point out that tacit knowledge as a resource distinguishes one organisation from another. Such tacit knowledge has a competitive advantage because of its uniqueness, and rivals cannot replicate it. Haldin-Herrgard (2000) and Wilson (1996) indicate that, in a few progressive companies, information is their most valuable work in process, while knowledge is their most useful tool in learning and creativity. In addition, Lawson & Lorenzi (1999) state that explicit knowledge is for everyone to find and use, but the use of tacit knowledge assists in arriving at the organisation's goals. However, tacit knowledge cannot function in isolation, but has to interact with explicit knowledge to improve the quality of work.

Lim & Klobas (2000) indicate that tacit knowledge remains the most important form of knowledge for organisational success. Wilson (1996) points out that people within a close-knit group depend heavily on shared values and experiences. Small enterprises in developing communities rely on such knowledge for survival. However, these enterprises are assumed to depend on the owner/managers' tacit knowledge in planning and operational activities. Small enterprises should begin to create worker-centred environments to encourage the open sharing and use of all forms of tacit knowledge.

### **4.3 Tacit knowledge**

Owner/managers in developing communities are assumed to be managing their small enterprises by relying heavily on their tacit knowledge, which is risky. This reliance is risky because it is based on one individual's subjective experience, and tacit knowledge needs to be shared in order to be used. Tacit knowledge is human capital, which involves skills, competencies, expertise and contextual knowledge in people's heads (Pollard, 2000). Gore & Gore (1999) describe tacit knowledge in technical and cognitive dimensions. Technical

knowledge encompasses information and expertise in relation to “know how” and cognitive knowledge consists of mental modes, beliefs and values.

Tacit knowledge, unlike explicit recorded knowledge, is subjective and may be difficult to document. Tacit knowledge is highly and closely dependent on individual skills, individual perceptions and experiences and may be difficult to be captured systematically. Some kinds of tacit knowledge may be explicit to a certain extent and could be documented, formulated in sentences or captured in drawings. However, people may have problems in articulating everything that they know.

As Brockman & Anthony (1998) indicate, tacit knowledge cannot be imparted through teaching, training or education in the same manner as recorded knowledge, which can be learnt. However, the organisational culture and structure are important determinants in the sharing of tacit knowledge. The business culture and structure that support knowledge sharing are successful in converting tacit knowledge into explicit knowledge.

A good working relationship between the owner/manager and employees improves performance and increases productivity. Such conditions ensure that conflicts are worked through and feedback is given to all employees on how they are performing. However, if employees who are “the engine of innovation” feel threatened, the whole production process suffers (Von Krogh, Ichijo & Nonaka, 2000: 45). Good working conditions motivate employees to contribute their knowledge willingly for new knowledge creation.

The owner/manager creates an enabling environment for knowledge sharing, and valuable opinions are received during the learning process (Von Krogh, Ichijo & Nonaka, 2000). Tacit knowledge requires the active contribution of the learner in the learning process. In such an environment, knowledge sharing and learning reciprocity contributes positively to the motivation and morale of the workforce. In that context, tacit knowledge is shared freely and, in turn, leads to knowledge creation. Knowledge creation involves moving from the old ways of doing things to the new in order to suit market needs. More is known and being learned every day than was ever known or learned before. The new knowledge created forms

the core for efficient and effective service delivery. In different organisations, the knowledge shared resides in various information packages. In such places where information packages exist, it is easy for the owner/managers to refer to them and start working towards improvement.

According to Lim & Klobas (2000), small businesses have a history of using apprentice systems as a method for transferring skills. The success of the organisation lay in its increased knowledge, which is still an important fact even in today's environment.

Zack (1999) argues that the field of the management of tacit knowledge is still unexplored and not fully understood. According to the author, intuition is not business related and in turn receives lower preference.

#### **4.4 Sources of tacit knowledge**

In small enterprises in developing communities, the workforce consists of an owner/manager, employees and/or family members. Families are linked to enterprises because some enterprises are sources that provide for the income to families' needs. Therefore, families have a dual responsibility as sources of knowledge (as was discussed in subsection 3.5.4) and as employees. These employees are internal sources of information within the small enterprises.

Every business depends on motivated employees. A flexible, free and open culture in a small enterprise motivates employees to contribute and share their knowledge. Such a culture allows organisational members to feel safe to explore the unknown territories of new markets, new customers, new products and new manufacturing technologies (Von Krogh, Ichijo & Nonaka, 2000: 45).

In knowledge sharing, trust should exist between owner/managers and employees. An enterprise that bases its knowledge management programme on trust among employees recognises and rewards the intangible contributions of its employees. By doing that, an

enterprise finds itself with workers who willingly give of their knowledge in the spirit of cooperation and volunteerism.

In converting tacit knowledge, it needs to be expressed, discussed, refined and be organised in various information packages for future use.

#### **4.5 Conversion of tacit knowledge**

Tacit knowledge is so internalised that it has become a natural part of a person's behaviour or way of thinking. People know more than they can express, so this type of knowledge resource results in difficulties in conversion. As Haldin-Herrgard (2000: 257) argues, people may have subconscious knowledge or may not know how tacit knowledge connects to explicit knowledge. In addressing day-to-day responsibilities, employees develop skills and expertise that, through repetition, eventually become nearly instinctive.

More experience and deeper knowledge lead to higher tacitness of knowledge, which leads to greater difficulties in expressing the knowledge. This experience increases the productivity of the individual worker, but it also creates a problem. An employee who is no longer conscious of the individual steps that he or she performs probably will not be able to explain the task to another person. If the expertise remains tacit in the individual's head, others in the enterprise will go through their own trial-and-error experiences in order to build their own best practices. Haldin-Herrgard (2000: 361) points out that language is inadequate for articulating non-verbal tacit knowledge. Moreover, most people find it hard to articulate something that seems natural and obvious for them, especially if they know more than they can express. This part of knowledge resources can be difficult to be converted.

However, according to Haldin-Herrgard (2000) and Lim & Klobas (2000), there are different methods for supporting the conversion of tacit knowledge. These methods are: apprenticeship, networking, action learning that includes face-to-face social interaction, and practical experience. In addition, Raffo et al. (2000) suggest that the best way of learning is through networking with others and by working with more experienced mentors.

Furthermore, tacit knowledge may be passed on unconsciously through modelling or teamwork (Nonaka & Konno, 1998 model in Haldin-Herrgard, 2000: 359-360).

A study done by Matlay (2000) in the United Kingdom found that two types of knowledge transfer take place: incidental (informal) and intentional (formal) knowledge. Micro-enterprises and small businesses experience the incidental knowledge as it occurs, occasionally through a routine daily task. Such knowledge is short-term, time consuming and not cost-effective. Incidental knowledge often passes unnoticed and unrecorded and is mainly confined to individual functions. It deteriorates quickly or is replaced by new knowledge without any regard to its quality or relevance to wider issues.

In a few small enterprises, the learning process is intentional, resulting in direct interaction between the owner/manager and the employees in order to collect and update their knowledge. The intentional learning process proves more successful in sustaining competitiveness and organisational growth (Matlay, 2000).

In the history of small businesses and trades, people have been using the apprenticeship system for centuries without the aid of any technological system (Lim & Klobas, 2000). However, there are some significant challenges in accessing human sources. In general, people do not share knowledge unless coaxing measures are taken for them to articulate what they know. People think that having knowledge is empowerment. According to Wilson (1993), people will not pass on their tacit knowledge within an organisation if it means losing their bargaining power, control of their work or if they believe it may endanger their own job security.

A study conducted by Jacob & Ebrahimpur (2001: 75) in Sweden found that a company's culture remains inflexible and presents a difficult area for people in which to transfer their knowledge. According to these authors, knowledge transfer occurs only when people move from one department to another.

#### **4.6 Sharing and refinement of tacit knowledge**

Knowledge is viable as long as it works, as long as it stands up to the constraints of experiences. The ideas, theories and models we construct in our minds are constantly tested against our experiences and they survive in a pragmatic or instrumental sense as long as they are useful (Bodner, 1986: 875).

Tacit knowledge is based in people and cannot be readily collected and disseminated; it requires employees to use person-to-person knowledge sharing effectively. The process of knowledge sharing starts when team members meet to share their tacit knowledge. In order for team members to share their tacit knowledge, individuals should gain one another's trust and rely on one another to listen to and react to their ideas. Trust and empathy make it possible to understand someone else's experiences. Sveiby (1998: 20) indicates that people tend to be loyal if they are treated fairly and feel a sense of shared responsibility.

In a team environment, members may use market studies, trend studies or the company's expressed vision and strategy to build debates (Von Krogh, Ichijo & Nonaka, 2000). The collision of ideas fuels creativity and generates new knowledge that could be used successfully in any enterprise. Moreover, in an environment that promotes creativity, the technique of brainstorming can determine the knowledge available from employees. Brainstorming creates collaboration and provides a large number of ideas in a relatively short period. However, Sveiby (1998: 21) emphasizes that many brilliant ideas are generated outside formal meetings. This type of interaction enables employees to articulate their tacit knowledge. The general feeling is that more information flows through a business enterprise in an oral than in a written form.

Communication and discussion help in the refinement of subjective tacit knowledge. The linking of several facts during knowledge sharing can generate new ideas that manifest unique products and services, problem solving or an exploitation of opportunities in the markets. The shared knowledge is unique and cannot be copied by other enterprises. People assimilate or accommodate the new knowledge created to make it fit into their particular frame of reality. In the process of constructing understanding, they apply their existing knowledge and discard misconceptions (Gardner, 1991 and Perkins, 1992).



According to Wilson (1996), to form new ideas, there must be random thoughts in an open mind and the time to reflect. Once owner/managers recognise that there is a problem, they need to reflect on it and compare it with past experiences. Reflection considers what has been learnt, and uses that to make improvements. Lynas & Dorrian (1987: 28) point out that too often owner/managers in small enterprises are faced with the temptation to rush through each day without taking the time to reflect on the learning opportunities presented. Indeed, reflection time is scarce in a small enterprise as the speed of today's business world demands immediate decisions.

The rapid change in today's working life calls for continuous lifelong learning and employees are expected to take care of the learning needed. Skyrme (1999) suggests the development of an idea bank of unused ideas for future use.

#### **4.7 Organising tacit knowledge**

An approach to organising tacit knowledge is to capture explicitly the most important knowledge and enter it into knowledge repositories. Knowledge, beliefs and opinions are personal and subjective. In order to communicate them, they have to be expressed, described or represented in some physical way that is tangible. To represent this, Buckland (1991: 43) called such knowledge "information-as-thing". Information-as-thing comprises physical objects such as data and documents that are referred to attributively as information because they are regarded as being informative, as having the quality of imparting knowledge or communicating information. Furthermore, Buckland points out that information-as-thing is of special interest in the study of information systems.

However, Beijerse (2000), Haldin-Herrgard (2000) and Klobas (1997) indicate that tacit knowledge is mostly stored in the human mind. Furthermore, Lim & Klobas (2000) in Perth, Western Australia, found that small enterprises relied heavily on the owner/managers' tacit knowledge. According to Clarke & Rollo (2001), knowledge is a social construct and cannot be managed as a physical asset. This is the tacit knowledge that is tied to senses and skills and is thus difficult to explain to others. However, knowledge is explicit and tacit. Beckett (2000) points out that any organisation, even a newly formed one, will have its own practices and routines that reflect the purpose of the organisation and the prior experiences of the

people. According to Beckett, a corporate memory incorporates tacit and explicit components.

An owner/manager, who cares about the employees, establishes an inventory system of the employees and enters their qualifications immediately after recruitment (Beijerse, 2000 and Shair, 1998: 56). This system identifies the knowledge, experience and expertise that employees within an enterprise hold, which the management can use for productive performance. One of the best methods of accomplishing this is for employees themselves to maintain their CVs and keep them up-to-date (Choo, 2000). This knowledge is recorded to save it from loss due to retirement, rightsizing or employees moving to other firms.

Malhotra (2000) indicates that employees are free to leave the enterprise but the value of their experiences will be incorporated in the information systems for future reference. However, Marshall (2000) advises organisations to retain existing employees since their knowledge could be useful for efficient daily operations and in helping the company to grow. On the other hand, if the owner/managers stick to long-time employees, they may miss perspectives that are brought forward by other sources. Nonetheless, the investment in employees' skills is regarded as a lifelong commitment in developing small enterprises. However, as can be seen from the small enterprises studied by Lynas & Dorrian (1987: 30), systematic recording of personnel information is seldom found.

Some enterprises seem to value the opportunity of having someone, a specific expert or mentor figure, to support them with their daily problem solving needs (Raffo et al., 2000). In addition, some owner/managers turn for assistance to specific knowledgeable individuals who possess crucial skills and who have been part of the organisation. In that regard, the best organisational memory is in the minds of its people, which also exists in explicit form as in documents and expert systems. As a consultant, Skyrme (1999: 56) points out that he has been used as part of the organisational memory as when clients have requested an assignment copy that has been misplaced.

In general, organisational memory incorporates what employees already know, which is mostly the organisation's internally generated data. The organisational memory is used to avoid repeating mistakes of the past and to draw lessons from similar situations from elsewhere. In enterprises in developing communities, most knowledge presented by sources is intangible. This is the knowledge small enterprises need in order to transform their products and services into profit. The vital knowledge presented needs to be organised systematically with a suitable retrieval tool.

The next chapter looks at systems that capture and organise the tangible and intangible knowledge in organisations.

## **CHAPTER FIVE: INFORMATION ORGANISATION IN SMALL ENTERPRISES**

### **5.1 Introduction**

This chapter deals with information accumulated from formal and informal sources that becomes useful in an organisation. According to De Beer et al (1996: 136), the provision of the right information at the right time and in the right form is essential for the survival and success of enterprises. This acquired information has to be organised in some fashion. In that regard, retrieval based information systems are created for the repository of the organisation's knowledge and expertise. The role of these information systems is to facilitate access to information in order to support the management in decision-making and problem solving.

Every conversation and every new document in an organisation adds to the organisation's knowledge pool (Skyrme, 1999: 59). However, judgement should be applied as to which knowledge is critical and worth managing for the enterprise's objective.

### **5.2 Information systems**

Laudon & Laudon (1995: 11) define an information system as encompassing technologies, organisational procedures, practices and policies that generate information. An information system is a system that uses information technology to capture, transmit, store, retrieve or display information used in one or more business processes (Alter, 1996: 61). Information contained in a system can take a variety of forms including data items, text, sound, pictures, drawings and graphs. Information systems deal with different kinds of information such as events, objects, people, documents, business transactions and processes. Information systems should include informal as well as formal components (McLeod, 1990: 18).

An information system supplies the required information that owner/managers use for decision-making and planning (Norton & Peel, 1989: 37). The information system connects and interprets interrelated data, permitting easy access in order to facilitate the decision-

making process. The information system increases the possibility of arriving at good decisions, and of analysing and visualising complex problems (Laudon & Laudon, 1995: 5; Scarborough & Zimmer, 1993). The interrelated information is capable of coordinating the flow of work in an enterprise.

Among that purposes the information systems serve is to provide information to the owner/managers. Information is derived from data that have undergone some processing and the results of that processing are communicated for a particular purpose (Rowley & Farrow, 2000: 6). The need for information arises whenever individuals want to deal with a specific situation at a particular time. Some information systems supply the owner/managers with data that are used in determining a solution to the problem at hand, in making a decision and in developing a plan of action. Others direct the owner/managers to yet other sources of data.

Some owner/managers prefer their information systems to have both substantive and directional data. According to Alter (1996: 151), the traditional business information systems contained formatted and textual data. Formatted data conveys pre-specified types of facts such as the selling price, date and purchaser's name. These facts suit the owner/managers because they reduce the situation to the few limited items that the owner/managers need to do their jobs. Conversely, reading and interpreting the data determine the meaning of text.

Moreover, an information system enables an enterprise to evaluate current working practices continuously and to modify operations and actions accordingly. The more information-intensive the business process is, the larger the role the information system plays. An information system forces the enterprise to perform functions consistently. According to O'Brien (1995: 35), business information systems support the operational and managerial applications of the basic business functions of a firm. An information system often plays a crucial role in the business processes it supports. Every aspect of information systems depends on people, business processes and structure.

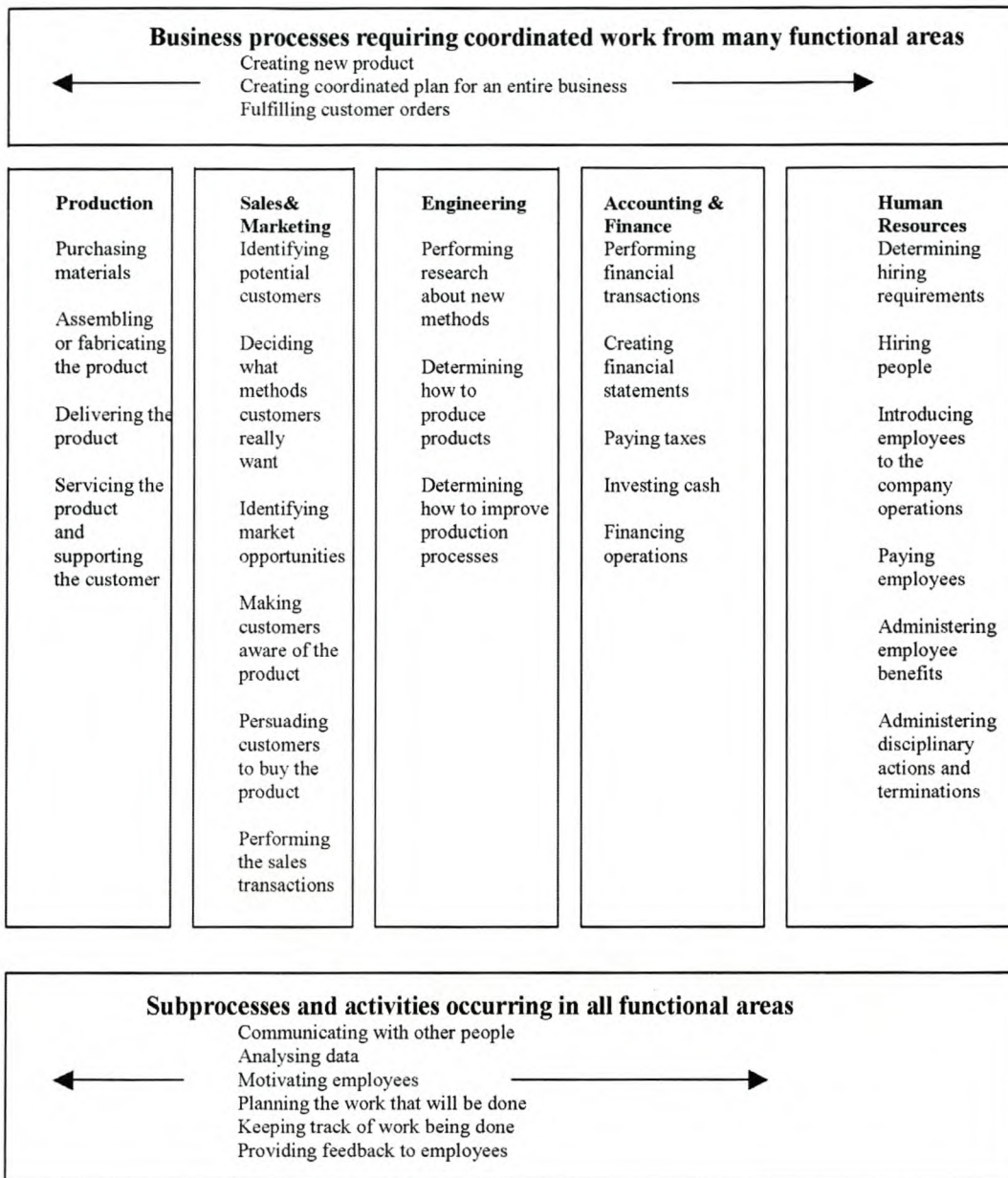
Alter (1996: 106) emphasizes that the purpose of many information systems is "to systematize and structure business processes through information". This statement shows that a relationship exists between information systems and business processes.

### **5.3 The relationship between the information system and business process**

People decide what business processes to improve, then build appropriate information systems, put them into operation in organisations and use them. Owner/managers are faced with the challenge of improving business processes to produce results the customers want. Today's world is competitive. Business processes form the basis of competition. The firm's products and services are viewed by customers in terms of cost, quality, responsiveness, reliability, and conformance to standards and regulations (Alter, 1996). Business processes determine information needs, whereas information quality and availability determines what activities and methods are feasible.

Business processes are related groups of steps or activities that involve the use of people, information and other resources to create value for customers (Alter, 1996: 3). The scope of business processes is the specific set of sub-processes and activities that they include. The sub-processes exist in their own right because they consist of well defined steps related in time and place, have a beginning and end, and have inputs and outputs. These sub-processes of an enterprise relate to specific functional areas of business.

Figure 1: Business processes and functional areas of business (source: Alter, 1996: 60).



The general approach for this division of labour is to assign tasks in a way that emphasizes the strengths and de-emphasizes the weaknesses of each process. However, in a developing community's enterprises, the principle of division of labour seldom exists because of the small number of employees and lack of skills.

Every business process contains entrenched knowledge. In addition, much tacit knowledge is frequently needed to perform the processes effectively, hence training, procedure manuals and access to experts accompany the business processes (Skyrme, 1999: 56). Business

knowledge in a small enterprise seems to be more likely to exist when information is integrated across functional areas taking the opportunity of changing processes when appropriate. Business processes in an enterprise can be totally unrelated to one another or can be related. Nonetheless, consistency in each business process is needed in order to obtain the desired results. The competitive advantages of flexibility would be apparent and flexibility of a business process can be adjusted to meet immediate customer needs/wants as business conditions change.

De Beer et al. (1996) and Laudon & Laudon (1995: 5) indicate that business processes in an information system comprise three basic activities, namely:

- Input - the collection of raw data resources from within or outside the enterprise's environment;
- Processing - the conversion of raw input into a more appropriate and useful form;
- Output - the processed information transferred to people or activities for use.

Information gathered from the external environment should be processed and compared with planned performance. An enterprise's inputs are the physical objects, and formal and informal knowledge that cross the boundary to enter its environment. Without the kind of information provided by such sources alone, the owner/manager cannot expect to make the sound business decisions that are required in today's competitive environment.

On the other hand, the outputs of a business process consist of tangible and intangible benefits. Tangible benefits are measured to evaluate system performance. Intangible benefits that affect business performance are difficult to measure because they refer to comparatively vague concepts (Alter, 1996: 571). Intangible benefits are difficult to measure in monetary terms.

Information systems and business processes are interrelated and their main function is to respond to people's needs and deliver accordingly. In order for the information systems to be



effective in supporting the business processes, involvement of sources is vital. Moreover, the structure of systems supports the business processes in achieving the enterprises' objectives.

#### **5.4 Structure of the information system**

In business enterprises, the owner/managers' primary objective is profit. It then becomes the responsibility of the owner/manager to guarantee that the enterprise meets that objective. In order to meet the organisation's objectives, variables such as assessment of needs and involvement of sources are considered when structuring the information systems. The aim of the owner/manager centred approach with its associated variables is to ensure that the enterprise is productive. Information systems are effectively used when owner/managers contribute to their structuring. By integrating this approach within an information system, a transparent business environment is constructed for the owner/manager to assist service delivery.

In meeting the enterprise's objective, owner/managers should ensure that various components work together. Soergel (1985: 44) lists the functional components that need to be considered when structuring an information system.

- The information storage and retrieval system;
- Making information available to the user.

##### **5.4.1 The information storage and retrieval system**

The information storage and retrieval system is a subsystem of the total information system. Matching available information with information needs is the task of the information storage and retrieval system. According to Soergel (1985: 56), the information storage and retrieval system has two inputs: a collection of information as acquired, and a description of the needed information. According to the author, these two aspects cannot be separated from each other. The retrieval requirements dictate how the system should be organised, whereas the organisation of the system determines its use for retrieval and its ability to search.

Information retrieval makes use of relationships between documents in a number of ways. The output of the information storage and retrieval system consists of information about entities and their relationships that are presumed relevant for solving the problem that gave rise to the query. According to Rowley & Farrow (2000: 362), "recall" and "precision" are terms often used to measure the effectiveness of a retrieval system. These terms are concerned with gathering a more general perspective on the user reaction's to the system. "Recall" relates to the system's ability to retrieve wanted items on a subject search (as opposed to a known-item) while "precision" relates to the system's ability to filter out unwanted items.

However, evaluation has to be conducted on the effective and efficient use of information storage and retrieval systems. The systems need to be maintained and updated because people's needs change continuously. According to Rowley & Farrow (2000: 365), a good information retrieval system should be efficient and cost-effective.

#### 5.4.2 Making information available to the user

Information from sources should benefit the owner/managers. Lim & Klobas (2000), De Beer et al. (1996) and Norton & Peel (1989) point out that relevant information generated internally should be recorded systematically. In addition to records created by the enterprise, there are a number of external records to which reference should be made from time to time. Internal and external records can be written or stored on any medium that forms an integral part of the quality system documentation (International Trade Centre, 1996: 45-46). Information is for use, whether it takes the form of a report or financial statement (Norton & Peel, 1989). The information is used to improve decision-making and operational activities in the small enterprise.

According to the International Trade Centre, quality records are kept for demonstration purposes, to ensure traceability, and as aids for preventive and corrective actions. The records are kept as evidence of quality activities and supply the following types of information:

- The extent to which the quality objective has been achieved;

- The level of customer satisfaction or dissatisfaction with the service;
- The findings of results obtained by the quality system, to be used for reviewing and improving the service;
- Basis for analysis of quality trends;
- Corrective actions taken and their effectiveness;
- Personnel skills and training.

An important part in quality planning is the identification and preparation of a quality record. A record provides evidence of activities performed or results achieved. Information is required for operational and managerial control of the enterprise. Strategic decision-making depends on reliable information generated internally as well as that obtained from external sources. The processed internal and external information is systematically stored into one integrated system, and accessibility of information brings benefits to the enterprise.

### **5.5 Designing an information system**

Business organisations take responsibility for designing systems in relation to the type of information that supports the effective operation of the particular organisation (Rowley & Farrow, 2000: 361). A reliable information system does not have to be complex. Also, there is no hard and fast rule on how an information system should be designed but it should suit the business (Bennett & Cheesley, 1982: 158). Sugar (1995: 211) points out that there are no standard or universally accepted methods on how best to design an information system.

Scarborough & Zimmer (1993: 265) and Gold & Lewis (in Parker-Nance, 1991: 17) list the following as characteristics of a good information system:

- Simple to use;
- Easy to understand;
- Reliable;
- Accurate;
- Consistent;

- Designed to provide information on a timely basis;
- Economical – filing equipment should not be too expensive (Bennett & Cheesley, 1982: 158 and De Beer, 1996: 148).

Each business has its own information system that stores and organises information in a logical way and one that is easy to find. A straightforward and an easy-to-use information system simplifies access to records. An information system should be logically arranged, so that it can be easily used by everyone including the owner/manager and employees within the enterprise. The system must be kept up to date, in order to provide information that is current and relevant. A good information system should be expandable in order to cope with an increase in the amount of information to be stored.

Rational decisions are impossible without the information system, and yet profitability depends upon decision-making throughout the small enterprise. As Wilson (1993: 17) puts it: “information is the lifeblood for decision-making and control”. The ability of any individual or organisation to accomplish any given task or reach any desired goal is directly related to the ability to find the right information at the right time (Hemphill, 2001). In order to arrive at an effective system, the involvement of the organisation's stakeholders is desirable.

The world of information is growing each day and becoming increasingly difficult to manage. It becomes necessary that once the needed information is identified, it should be acquired and made accessible through an information system. According to De Beer et al. (1996) and Wilson (1993), every organisation should be able to collect information to survive in a changing, competitive environment. In addition, Pearlson (2001: 4) points out that information systems are a major investment for any firm in today's environment. Conversely, a poorly designed information system can become an obstacle to achieving the enterprise's objectives. Moreover, if the system lacks the capacity needed to collect, store and utilise critical information for the enterprise, the results can be devastating.

Systems are primarily intended to gather, process, store, disseminate and use information. However, in developing communities, infrastructure to support machine-based systems is inadequate and lacking.

## **5.6 Management support systems**

The prevailing information economy is characterised by information systems that emphasise accessibility, providing relevant information at the right time to fit users' needs. These systems collect and store knowledge that is sought and retrieved by the user. The systems vary greatly with respect to sources of information, the form of information and the extent to which they deal with that particular information. These systems may be either functionally based, designed for the exclusive support of a specific application area or they could be integrated, in which case elements of a system have some logical relationship.

The systems today imply an automated system that includes elements such as hardware, software, people, procedures and data. The automated elements (hardware and software) do not come into play in manual systems. Laudon & Laudon (1995: 10) define a manual system as an information system that uses only paper and pencil technology and does not rely on computers. People, procedures and data are combined to create the manual system. According to Long (1989: 37), computer-based and manual information systems have an established pattern for work and information flow. In that regard, several types of retrieval-based information systems have been developed to meet specific needs of organisations. However, these systems record what was alleged to be accurate at some past time and thus assume that records are still accurate at the time of retrieval.

Some information systems are briefly discussed below. These are: management information systems (MISs), accounting information systems (AISs), decision support systems (DSSs), and expert systems (ESs).

### **5.6.1 Management Information System (MIS)**

An MIS is a system that assists owner/managers in carrying out their responsibilities as it relates to the objectives of the organisation. According to Licker (1997:5), a MIS is an

integrated user and machine system that provides information to support operations, management analysis and decision-making functions in an organisation. An MIS possesses the knowledge of all functional areas that it services. Furthermore, each component in the system is as important as the others and, to an extent, they influence one other.

Long (1989: 44) lists the advantages of a MIS:

- The integrated database of an MIS enables greater flexibility in meeting the information needs of management;
- The MIS integrates the information flow between functional areas;
- The MIS caters to the needs of all levels of management;
- The MIS tends to be most useful for decision-makers concerned with relatively short-term operational and tactical decisions that are relatively well defined (Buckland, 1991: 31).

An MIS comprises various systems that have been blended in to create one system. This system allows the coordination between business processes and provides information about an enterprise and its environment.

### 5.6.2 Accounting Information System (AIS)

An AIS, also referred to as a transaction processing system, is widely used and the largest information subsystem in a business organisation (Cushing & Romney, 1994: 14). An AIS is concerned with financial information and information generated from processing transactions. These systems describe how income and expenditures were supposed to be at the time the record was made. In some organisations the AIS employs professionals such as accountants and auditors to play key roles in system administration and operation. This essential system supports day-to-day operations by collecting and storing data about an organisation's transactions. The information produced by an AIS is used in planning and controlling an organisation's activities.

### 5.6.3 Decision Support System (DSS)

Making decisions is a complex process of convincing oneself that a specific course of action is the best one. A DSS is developed by the user rather than by a professional and helps users to make decisions in unstructured environments in which there is a high degree of uncertainty (Cushing & Romney, 1994: 14). A DSS can work on specific functional areas and in situations in which user requirements are in a state of change. A DSS is intended to assist management in making semi-structured decisions that are non-routine and involve human judgement while requiring the processing and display of information (Licker, 1997: 220). A DSS is used in determining a solution to the problem, making a decision and developing a plan of action.

### 5.6.4 Expert System (ES)

The hidden tacit knowledge is articulated and represented in this system. The term "expert system" refers to a system that uses computer technology to store and interpret the knowledge and experience of one or more human experts in a specific area of interest (Grabowski & Wallace, 1993: 2). However, according to these authors, the process needed to acquire the knowledge is lengthy, demanding intensive interviews, and is time consuming. Expert systems are constructed by people who are far less knowledgeable of the domain, resulting in communication problems in the process of transferring expertise into a program. One of the most difficult aspects of the knowledge engineer's task is helping the expert to structure the domain language, and to identify and formalise the domain concepts (Hayes-Roth, Waterman, Lenat, in Gaines & Shaw, 1993)

Expert systems help to resolve problems and to make better decisions that normally require human expertise. Skyrme (1999:57) points out that the on-line directory of expertise often called "Yellow Pages" makes it easier to access the minds of experts because it is structured by skill and discipline.

Morris (1992: 5) and Long (1989: 70) list the general advantages of expert systems:

- The specialised knowledge of real human experts can be captured in the form of an expert system;

- An expert system reduces dependencies on critical personnel. Human beings retire, get sick, take vacations and only a few attain the status of expert.
- An expert system is an excellent training tool. It can expand the decision-making capabilities of many people. An ES has the potential for saving companies a vast amount of money, thus increasing profit;
- An expert system can provide stability, consistency to a particular area of decision-making, and improve the productivity and performance of decision-makers;
- An expert system offers the expert an opportunity to critically assess and improve his problem solving behaviour
- In many situations, an expert system can provide solutions to problems far more quickly than a human expert.

For the effective and efficient use of the expert systems, evaluation has to be conducted continuously. These systems need to be maintained and updated so that the data remain relevant and valid because knowledge is constantly changing. On the other hand, there are some limitations concerning expert systems. The systems describe what was accurate at certain time and the knowledge could be inaccurate at the time of retrieval. In addition, because of factors such as technological resources, level of education and information literacy, expert systems are costly for enterprises in developing communities.

### **5.7 Information retrieval systems: computerised and manual**

Once the information system is structured, a decision is made regarding the retrieval tool to be used within that particular system. Information retrieval tools are created to retrieve information from systems. Resources of all kinds, irrespective of their source, need organising so that their contents can be retrieved when required. Each organisation organises its resources to suit itself. Taylor (1999: 17) emphasises that the retrieval tools are essential as they are the building blocks for a system that organises the recorded information.

There are varieties of tools for the organisation of recorded information. The major retrieval tools are bibliographies, catalogues, indexes, finding aids and registers (Taylor, 1999: 18).



According to Rowley (1992:7), these varieties of information retrieval tools have a number of common features, which are to provide access to information or documents. This access is achieved by organising the tool so that a user may search under specific access points or headings in an index using terms such as subject, author, or title. However, these tools are not generally available in developing communities because of existing problems such as technical and administrative and lack of trained technical staff.

However, according to Rowley (1992), a manual file is also one of the tools concerned with the organisation of information. Enterprises in developing communities often organise and arrange their information in document form due to lack of funds to acquire the technological resources. The manual file as a tool fits well in a developing community that lacks technological infrastructure.

## **5.8 Organising information in manual files**

There is no single way of organising information, but the tool adopted should suit the enterprise's structure. Some organisations need to retain their documents for information, as a record of transactions or communication, and store most of their records in manual files. These files are either accessed by employees or may be personally restricted to owner/managers. Organising data in an individual file works well when information needed for the situation is limited to a single type of entity because entity types are related.

A manual file is the simplest form of data organisation and comprises a set of related records. Rowley & Farrow (2000: 27) define "file" as a collection of letters or documents dealing with one organisation, person, area or subject. These authors point out that manual files are paper-based filing systems that are still widely used for storage and retrieval of documents. According to Buckland (1991: 32), record management is concerned with the mostly paper-based documents of an organisation, ranging from the official files of individual workers to the massive operational records of the entire organisation. In addition, the records are mostly internally generated. These form the core of the records management systems of many organisations.

### **5.9. Types of manual files, their advantages and disadvantages**

Accessibility of the documents stored in files is an important factor and the type of physical storage used is vital. Rowley (1992: 63) lists the different kinds of physical formats for storing files:

- Drawers of standard filing cabinets, with folders or pockets or both. Folders allow a set of papers on a given topic to be kept together when removed from the file. Pockets maintain a space for each category;
- File boxes. This arrangement may facilitate browsing across different kinds of materials;
- Upright divider filing is a variation on filing cabinets;
- Guard book or scrapbook-type arrangement, possible with a loose-leaf format. It is suitable for organising and keeping cuttings, letters and other small items. However, the drawbacks of this form are its limited flexibility and the time taken in maintenance;
- Small documents such as cuttings can alternatively be mounted on catalogue cards.

According to De Beer et al. (1996: 148), a system can be made up of filing equipment such as concertina, book or box file, vertical filing cabinet and lateral filing cabinet. The advantage of using manual files is that they are quick to compile and give direct retrieval to records. In addition, browsing is the simplest way to search for a document in a file and the owner/managers can go through the collection record by record to find the required information.

However, according to Rowley & Farrow (2000: 339), some disadvantages exist in manual files and are listed below:

- Files can be arranged in only one order, and grouped according to one characteristic;
- Any given document can be located in only one place in any given sequence;
- The document arrangement adopted is often broken;
- Only part of the collection will be visible in filing cabinets;
- Files are slow and expensive to maintain;

- For large files, the consultation process is slow and more complex. Some users will have difficulty finding their way through the large and complex files.

### 5.10 Search strategies: directed searching versus browsing

There are search strategies to use in locating documents from the file. In any environment, knowledge structuring often needs to be able to cater for directed searching and browsing strategies. It is important to recognise that the user may lack the searching skills, especially when the file embraces a range of different sources. The objective of the organisation of knowledge is the successful retrieval of documents. Different people may approach the retrieval process in different ways.

Rowley & Farrow (2000: 104) list the search strategies:

- **Directed search** – is performed by users when they know what they are looking for and usually possess some characteristic of the information or document. A common process is the broadening or narrowing of a search strategy on the basis of the outcome from the first search statement. This is achieved by introducing different search terms. The effective development of a search strategy requires knowledge of an author or a set of subject terms, databases and literature being searched;
- **Browsing** – is generally preferred to directed searching because it is performed when the user has a less precise view of the information or document that might be available and is not sure whether his or her requirements can be met or how they might be met. Browsing can be general or purposive. The purposive browsing occurs when the user has fairly specific requirements, whereas general browsing, such as over the Internet, encourages browsing through the types of search facilities that it offers.

In enterprises in developing communities, these strategies can be used in searching and retrieving documents from the information system.

## 5.11 Filing order and sequences

Every business, whatever its size, should keep a record of its documents in some way. In any situation in which headings or terms are displayed one after another in a static list, some well-recognised filing order must be adopted (Rowley & Farrow, 2000: 354). If no filing order is adopted, the only way in which appropriate headings and their associated records can be retrieved is by browsing the entire file. Filing is the way in which all documents and files are systematically stored to facilitate their further use for internal reference and enquiries (De Beer, 1996: 143). A logical sequence requires a set of filing rules that will be followed accurately and consistently.

In retrieval-based information systems, different owner/managers adopt filing orders and sequences that will suit their enterprises. The manual method of organising knowledge can be through classification by using any kind of filing system. Classification consists of arranging the data according to a specific characteristic in order to place it in meaningful groups (De Beer et al. 1996:138). The arrangement could be through access points such as an index, headings and description.

### 5.11.1 Index

An index is an alphabetically arranged list of pointers guiding the user to entries in specific places in the text of a document (Rowley & Farrow, 2000: 27). In addition, the pointers, or index entries, are derived from the items contained in the collection. The index entries can be by author, title or subject. If the user knows the index, it will be easy to look up and to find the document. A keyword is used to describe the general area of information in which a document may be classified. However, according to Alter (1996: 146), the term may be unreliable because the keyword in the index may not be stated in exactly the terms the user might expect.

### 5.11.2 Headings

Headings may arise as author, title and subject, and all types of headings may commence with the same word (Rowley & Farrow, 2000: 359). The arrangement of entries under the same heading could consist of an author responsible for a number of books, or a subject

heading assigned to several books that discuss the same subject. The preferred sequence for multiple entries under the same heading or term needs to be established. Subject headings are important in indexing but according to Rowley (1992: 251), they have the following limitations:

- Headings tend to be broad and cannot represent complex or specific subjects;
- Headings are not constructed and selected systematically. Such variation not only confuse users but make it difficult for a cataloguer to retain consistency;
- References are not always constructed systematically;
- Sub-arrangement under headings is not purely alphabetical.

Indexes identify the documents that are required to meet a specific request. It is the sequence of characters at the beginning of an index or catalogue entry or record that determines the position of the record within the filing sequence.

### 5.11.3 Description

The success of retrieving documents depends on the ability of the user to specify a query statement that in some sense matches the document description.

Rowley & Farrow (2000: 75) list the functions of description as follows:

- Describe each document as a document to identify it;
- Distinguish it from other items;
- Show relationships with other items.

In preparing the description of a document, it is necessary to make rules so that identical records for the same document can be produced. The objective of access points is to provide entries that represent the whole contents of documents. Moreover, access points facilitate the retrieval of documents.

## 5.12 Application to records and documents in small enterprises

A document records items of information that belong together. According to Rowley & Farrow: (2000: 40), a document is a record of knowledge, information, data or creative expression. A record contains the information relating to and describing one document. Organised information could be in the form of records and documents.

However, since developing communities lack technology, manual systems can still provide a solution regarding organised information. For the easy operation of small enterprises, a record management system (RMS) as discussed by Buckland (1991: 32) can be designed as an organisational repository and be utilised by the owner/managers in developing communities. This system stores mostly internal data generated by the enterprise because, in the developing communities, resources for acquiring information from external sources are scarce. However, acquired external information can be represented in various information packages and be incorporated into this record management system. The external information is important for the organisation's survival because reference has to be made to it from time to time for interpreting situations such as making decisions and solving problems.

In choosing a filing system, a decision should be made on how files are going to be classified or arranged. According to Rowley & Farrow (2000: 354), card indexes and the physical location of documents are the places where manual filing is most likely to be encountered. There are various methods of filing and De Beer et al. (1996: 149) list the following:

- **Alphabetical filing** - this system is very popular in businesses. The files are filed in strict alphabetical order. Alphabetical filing can be by surname and initials, subject, or geographic location. A guide card is used for each letter of the alphabet. The guide card must be larger than the files and if possible in another colour, so that it is easily visible. A card on the outside of the file must indicate which files are kept in that drawer.
- **Numeric classification** - the files are filed in strict numeric order. Businesses that might use this system are those that link numbers to such things as drawings, specifications, catalogue items, sales invoices and sales ledgers. A number is allocated to the file of every correspondent or client, and it is entered on the projecting tabs of the file. In addition, separate index cards recording the number of every client are used and these index cards are arranged alphabetically in an index behind alphabetic guide cards.

- **Alphanumeric filing** - this filing system combines the alphabetical and numerical filing systems. The businesses that use this system are those that continually enlist new clients. The files are partly arranged alphabetically. On the file's cover is the letter of the alphabet with which the client's name begins and the client's number. For this system, an index drawer is also used. As in the numeric filing system, the index cards are arranged alphabetically;
- **Filing by colour codes** - this system files by colour codes that can be traced easily. Colour coding can be used for any type of filing system.

The composition of functions and the relationship between them should be connected. What is preserved is what should be available and what is available should easily be identified by the arrangement. The manual method is easy to use and only a little understanding of the filing method is required. The less educated owner/managers can easily comprehend and use one of the methods. The system could be quite small as long as it works and meets the needs of the individual owner/manager. A system can be made up of filing equipment such as a concertina, book or box file, a vertical filing cabinet or a lateral filing cabinet (De Beer, 1996: 148 and Rowley, 1992: 63). Moreover, some filing equipment in good condition might be available in second-hand shops. While using the manual system, technological systems can be introduced over time, to cope with the technological world.

In the developing communities, owner/managers usually share their problems and possible solutions with other people. It is then necessary to include this acquired written and oral knowledge in the retrieval-based information system (knowledge repositories and pool). The external information, such as contact details of different experts, can be filed for future reference. These information systems are created to store the needed knowledge and information in a documentary form for future use. However, the most important thing is to design and structure a system that works for the owner/manager's mindset and needs. Moreover, it is important to use the retrieval tools that provide effective and efficient access to the systems.

The next chapter focuses on the survey of information and knowledge organisation in small enterprises in Kayamandi, Stellenbosch.

## **CHAPTER SIX: SURVEY OF INFORMATION AND KNOWLEDGE ORGANISATION IN SMALL ENTERPRISES IN KAYAMANDI, STELLENBOSCH: METHODOLOGY**

### **6.1 Introduction**

In order to find solutions to the research questions as highlighted in section 1.2, appropriate methods and procedures were followed. This chapter outlines the methods and tools which were used in collecting and analysing the data obtained. The adopted methods, questionnaires, interviews and analyses of documents have provided the required information to achieve the objectives of the study.

### **6.2 Sampling frame**

A sampling frame is defined as a list, map or trade directory of population members used to obtain a sample. The sampling frame serves as a boundary that circumscribes members of a relevant population to obtain a sample (Luck & Rubin, 1987). According to Crouch & Housden (1996: 119), if every member of the population is to have a chance of being included in the sample then every member of the population should be known. However, people on a sampling frame are difficult to trace because they move or change their names. It is extremely difficult to keep the sampling frames up to date (Trochim, 1999).

In this study, two sampling frames were used: registered (formal) and unregistered (informal) small enterprises in the Stellenbosch district. The alphabetical business list of registered (formal) large and small enterprises was purchased from Stellenbosch Municipality. The list of informal small enterprises was requested from the Stellenbosch Business and Learning Centre (SBLC).

A sampling frame consists of sampling units. Sampling units are elements considered available for selection in some stage of the sampling process. It is important to note that the researcher indicated in section 1.7, that each unit of the population will be represented in the sample. The sampling unit mentioned comprises all the formal and informal small

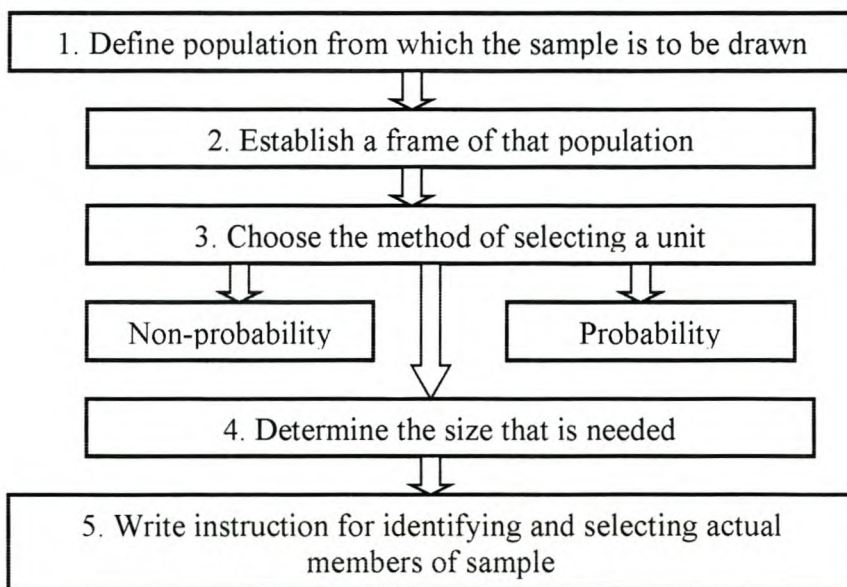


enterprises in Kayamandi. The researcher used quota control sampling (non-probability method) to arrive at a sampling unit within a sampling frame.

Quota control sampling attempts to ensure that the sample selected is representative of the population by selecting sampling units based on certain parameters (Luck & Rubin, 1987: 221). The parameter used in this study constituted the formal and informal small enterprises of Kayamandi. The parameter was chosen on the basis that Kayamandi was previously disadvantaged under the past government. It is now a developing community but still lacks resources when compared to surrounding areas.

All the Kayamandi small enterprises in the sampling frames were used as a sample. The total number of formal small enterprises within the sampling frame was 765. From the sampling frame, the formal small enterprises in Kayamandi amounted to only 8. On the other hand, the total number of informal small enterprises was 37, of which those in Kayamandi comprised 12.

According to Luck & Rubin (1987: 212), the schematic sketch below is an overview of steps in sampling planning.



For the purpose of the study, the target population were owner/managers of small enterprises that are geographically situated in Kayamandi. The research sample was initially restricted to 20 (8 formal and 12 informal) small enterprises that were on sampling frames. However, when the survey was conducted, one formal enterprise could not be located and two informal enterprises had been in business for less than a year. As indicated in section 1.7, enterprises to be investigated had to be in existence for more than a year. The interviewer filled in seventeen questionnaires on behalf of the respondents. The focus of the survey was on information and knowledge organisation in the small enterprises.

### **6.3 Primary data**

Primary data are of importance and entail the collection of first hand information. Leedy (1997: 101) defines primary data as the “data that lie closest to the source of the ultimate truth underlying the phenomenon, moreover, the data reflect truth more faithfully than any other approach to truth”. In order to gather primary data for this study, questionnaires, interviews and analysis of documents were used.

#### **6.3.1 Questionnaires**

A questionnaire was constructed and used to obtain the primary data in a logical and efficient manner. Questionnaires require respondents who can read. However, even if the respondents could read to some degree, the questionnaire may contain difficult or technical vocabulary (Trochim, 1999).

The majority of questions were closed-ended, meaning that responses conform to options provided. The questionnaire was designed for completion in approximately thirty minutes in order to encourage response because people are often reluctant to complete lengthy questionnaires.

The sequencing of the questions was carefully considered and the questions were linked to one other with a lot of emphasis on appearance and layout. The appearance of one question can affect the answers given to later ones (Babbie & Mouton, 2001: 243). Questions were designed to follow one another logically in order to stimulate interest.

However, no matter how carefully the questionnaire is designed, there is always the possibility of errors. To avoid such errors, a pre-test of the questionnaire is desirable. Unfortunately, pre-testing is a much-neglected phase in questionnaire construction in many studies undertaken in South Africa (Babbie & Mouton, 2001: 244). According to the authors, the pre-test subjects do not have to be a representative sample but should be people for whom the questionnaire is at least relevant. In this study, the pre-test was completed by 5 owner/managers from Kayamandi, Stellenbosch.

To obtain the required information, the questionnaire was designed using the following sections (see appendix A):

- Resources that contribute to profitability in small enterprise;
- Information sources for small enterprise;
- Information systems in small enterprises;
- Small enterprise: structure and culture;
- Personal information of owner/managers.

In this study, questionnaires were used to extract information by means of structured interviews.

### 6.3.2 Interviews

There are two basic types of interviews i.e. semi-structured (informal) and structured (formal) (Aaker & Day, 1980: 123). Their differences lie in the amount of guidance provided by the interviewer. In semi-structured interviews, the respondent is given maximum freedom to respond within the bounds of topics of interest to the interviewer. The success of these interviews depends on the establishment of a relaxed and sympathetic relationship (Aaker & Day, 1980). Furthermore, it gives the interviewer the ability to probe in order to clarify and elaborate. However, in the structured interview, the interviewer attempts to cover a specific list of topics. The timing, exact wording and time allocated to each question area are left to the discretion of the interviewer. Aaker & Day (1980: 123) emphasise that this mode of interviewing is effective especially with business people.

Face-to-face interviews are the most common method of collecting survey data from the South African population that is illiterate and less educated (Babbie & Mouton, 2001: 249). Luck & Rubin (1987: 104) indicate that the face-to-face interview is a traditional medium and may take place in various types of location. The major challenge is to establish rapport and credibility in the early moments of the interview and then maintain that atmosphere. Face-to-face interviews occur when the interviewer orally asks the prearranged set of questions exactly as they are written and then records the respondent's answers. It is very important for the interviewer to record the answers exactly as given. Moreover, the interviewer remains neutral in the data collection process and does not influence the responses given to questionnaire items.

The ability to speak the home language of the respondent is essential because the researcher can clarify some questions (Babbie & Mouton, 2001: 249). These authors point out that it is preferable to use an interviewer from the same area, but not necessarily from the same village, depending on the survey content.

Babbie & Mouton (2001: 250) list the advantages of the face-to-face interview:

- Fewer incomplete questionnaires – the presence of an interviewer generally decreases the number of “don't knows” and “no answers”;
- Less misunderstanding of questions – the interviewer can clarify matters, thereby obtaining relevant responses;
- Generally face-to-face interviews attain higher response rates;
- Greater flexibility in terms of sampling – the interviewer can conduct a survey based on a sample of addresses or phone numbers;
- Special observation regarding the dwelling, the presence of various possessions and respondents' general reactions to the study;
- Questioning methods and use of visual materials may be varied (Luck & Rubin, 1987: 105);
- Long questionnaires may be used successfully under interviewer's urging (Luck & Rubin, 1987: 105);

Bell (1993: 91) states, “a major advantage of the interview is its adaptability. A skilful interviewer can follow up ideas, probe responses and investigate motives and feelings, which the questionnaire can never do. The way in which responses are made (the tone of voice, facial expression, hesitation, etc.) can provide information that a written response would conceal. Questionnaire responses have to be taken at face value, but response in an interview can be developed and clarified.”

Nine respondents were randomly selected for the semi-structured interviews. Some respondents were probed because they were evasive regarding the questions while others only needed one or two questions to lead them into a lengthy discussion on the topic. Interviews lasted for 45 minutes for each respondent. The type of questions that were asked during the interview are summarised below:

- What kind of information would the owner/manager like to obtain to make the business more profitable?
- Where do you think you can get the needed information?
- Are there support structures that assist in the development of business management?
- What type of training and support might benefit the future running of small enterprises?
- To what extent do you know about customer needs?

### 6.3.3 Analyses of records and documents

According to Babbie & Mouton (2001: 374), "unobtrusive" or "non-reactive measures" are terms used when eliciting information indirectly from research subjects (as is the case in interviews or self-administered questionnaires). Moreover, because no direct research relationship is established, the subject cannot react to the fact that he or she is investigated. The researcher examined sales records in the enterprises. According to Babbie and Mouton, these records are referred to as "episodic records". However, no records were found on the financial positions of the enterprises. Refer to section 7.7 tables 7.15 and 7.16.

## **6.4 Data analysis**

In order to combine all the answers and make a meaningful summary of responses, there are a number of stages in the analysis process. Analysis involves breaking up the data into manageable themes, patterns, trends and relationships (Mouton, 2001: 108). According to the author, "the aim of analysis is to understand the various constitutive elements of one's data through an inspection of the relationships between concepts, constructs or variables, and to see whether there are any patterns or trends that can be identified or isolated, to establish themes in the data". In order to do analysis, collected data need to be engaged in a coding process.

The questions and answers in the questionnaire were coded using numbers. The encoding and analysis of the questionnaires were undertaken using Excel spreadsheets. The responses to the questionnaires were punched into Excel for numerical interpretation.

The methods adopted have provided the required information to achieve the objective of the study as outlined in Chapter 1. In the following chapter, some tables displayed a better understanding of the relationship between some variables. Chapter 7 presents the data from the investigation.

## CHAPTER SEVEN: ANALYSIS AND INTERPRETATION

### 7.1 Introduction

In this chapter the results of the questionnaires and interviews conducted with the respondents and the analysis of the documents are presented in an integrated way. The structure of the questionnaire is reflected in the subsections of this chapter although the section numbering has been altered. Each subheading is analysed and interpreted.

In the questionnaire, some questions required respondents to choose between two options while in other questions it was applicable to mark more than one response and options were then prioritised according to the responses. In the latter case, each response was divided by the total sample, which is 17, and then multiplied by 100 to obtain the percentage.

### 7.2 Personal information of owner/managers

This subsection deals with the responses to questions 5.1, 5.2, 5.3 and 5.4 (see appended questionnaire).

The table below indicates the gender of the owner/managers of the sampled enterprises in the developing community.

**Table 7.1: Gender of owner/managers**

Gender	%
Male	76
Female	24

Most respondents are males. According to the respondents, enterprises in developing communities are managed predominantly by males because by culture they are expected to support their families. In a Black community, this is a pre-conceived traditional norm.

Table 7.2 below lists the age groups of respondents in the sample.

**Table 7.2: Age groups involved**

Age groups	%
21-29	29
30-39	24
50-59	24
40-49	17
60+	6

The largest proportion as a majority is normally regarded as constituting over 50%.

Table 7.3 below reflects the level of education of respondents.

**Table 7.3: Level of education of respondents**

Formal education	%
High school	65
Tertiary	23
Primary	12

Most of the respondents had high school education.

Table 7.4 below reflects how technical skills are obtained in small enterprises.

**Table 7.4: Ways to obtain skills in small enterprises**

Ways to obtain skills	%
Experience	65
Apprenticeship	29
Vocational training	12

The majority of the respondents obtained their skills through experience. Experience is found to play a major role in the daily activities of small enterprises. Some respondents have obtained their experience from previous jobs, while others were born and bred in family businesses. Experience that encompasses knowledge and skills is stored in an individual's mind. According to the respondents, they also share knowledge informally



among themselves as indicated in 7.5. In addition, through the utilisation of apprenticeship, knowledge increases in enterprises. In this way, knowledge gained through an apprenticeship is passed around and guides the owner/managers in managing their businesses. Respondents agree that vocational training in business management might contribute to productivity and efficiency. However, cost might be a deterrent to attending educational institutions.

### 7.3 Resources that contribute to profitability in small enterprises

Table 7.5 below prioritises the resources in small enterprises. The table is based on section 1 of the questionnaire (questions 1.1-1.14).

**Table 7.5: Resources**

Resources	%
1) Use customers' and suppliers' knowledge to improve performance	100
2) Education assists in running the business	94
3) Employees allowed to learn by making mistakes	94
4) Owner/managers regularly share business knowledge among themselves	88
4) Determine business needs in order to realise the goals	88
4) Encouragement of team building	88
4) Spending time in training inexperienced employees	88
5) Owner/manager encouraging employees to share their business related knowledge	82
6) Take some time to read promotional materials	76
6) Owner/managers share business knowledge with employees	76
7) Practise apprenticeship system	71
8) Practise brainstorming sessions	65
9) Upgrading of owner/managers and employees through business education	59
10) Hiring of external expertise	24

Table 7.5 shows that the respondents frequently use informal sources of information such as customers and suppliers. Moreover, because of lower educational qualifications and fewer educational opportunities, respondents in developing communities seem to rely heavily on knowledge shared informally among themselves and with employees, rather than on recorded information. Majority of the respondents do read promotional materials

that would benefit them because they buy advertised products and services. However, hiring of external expertise is not favoured in enterprises of developing communities because such expertise is expensive.

#### 7.4 Information sources for small enterprises

The tables below indicate different internal and external information sources that the enterprises interact with in order to survive. The tables are based on section 2 of the questionnaire (questions 2.1 to 2.10).

In section 2 of the questionnaire, respondents had to rate a number of information sources in terms of how frequently they use them, how accessible they are, and what the relevance of information of each one is. These three issues are addressed separately, and each information sources is prioritised according to frequency of use, accessibility of information and the relevance of information.

##### 7.4.1 Frequency of use

Table 7.6 below prioritises frequency of use according to the respondents.

**Table 7.6: Information sources according to frequency of use**

Sources	Often (%)	Seldom (%)	Never (%)
1) Discussion with customers	94	6	0
2) Family	65	24	11
3) Suppliers	59	35	6
4) Friends	41	12	47
5) Individual employees	41	35	24
6) Visiting exhibitions	36	35	29
6) Professional meetings	35	41	24
7) Consultants	24	29	47
8) Public library	18	29	53
9) Academic library	6	12	82

The information source used most often is that of customers. The enterprises connect to the external environment through the customers. Customers shop around at different

enterprises before buying and in the process they compare products and services. According to the respondents, during encounters with customers, customers say what kinds of products and services they would like to buy from an enterprise. In addition, customers comment on prices and the quality of products and services. According to respondents, that kind of information assists in decision-making and in improving the products and services.

In contrast, the frequency of using an academic library is very low because the service is fee-based. According to the respondents, they cannot afford to pay for the services of an academic library.

#### 7.4.2 Accessibility of information

Table 7.7 below prioritises the accessibility of information according to the respondents.

**Table 7.7: Information sources according to accessibility of information**

Sources	High (%)
1) Discussion with customers	94
2) Public library	75
3) Family	73
4) Individual employees	69
5) Professional meetings	62
6) Suppliers	56
6) Consultants	56
7) Friends	53
8) Visiting exhibitions	50
9) Academic library	33

According to the respondents, customers are the most accessible sources. They are easy to reach because they are available daily when they are shopping. More often than not, the demand for a product or service by customers indicates their needs and wants.

Respondents confirm that they do go to the public library (see Table 7.7 above), the accessibility of information in it seems to be high. According to the respondents, obtaining information from the family is easy because of the cultural standard of respect. However, the accessibility of information in the formal source, namely an academic library, is low.

Respondents assumed that the standard of information in an academic library is too high for them since they have a low education, which reflects inequality of access to information. Moreover, the fee-based service is another reason why respondents are reluctant to use the academic library. According to the respondents, accessing real information is not only expensive, but the ability to understand and apply that information for the purpose of enterprises' development is also a significant factor.

#### 7.4.3 Relevance of information

Table 7.8 below shows the information sources according to the relevance of information that is supplied by each source to the owner/managers.

**Table 7.8: Information sources according to relevance of information**

Sources	Good (%)
1) Discussion with customers	100
1) Academic library	100
1) Friends	100
2) Family	93
3) Suppliers	88
4) Visiting exhibitions	83
5) Consultants	78
6) Professional meetings	77
7) Public library	75
8) Individual employees	69

Customers, are favoured above individual employees for the relevance of the information that they supply. The rating of information is similar for customers, an academic library and friends. Respondents said the information provided by friends is relevant because it helps to improve operational activities.

In addition, since town is only few kilometres from the developing community, respondents take advantage of this proximity to deliver the desired products and services with the information gleaned by customers who have been to town. According to the respondents, information received from customers is utilised effectively in decision-making and operational activities.

According to the responses in Table 7.6, the frequency of using an academic library is very low. In Table 7.8, respondents rated an academic library as having relevant information because they assume that it stocks materials of a high standard with accurate and up-to-date information for educated people. Nonetheless, respondents actually rely on friends who are prospering in their businesses or who have genuine skills in business management. Furthermore, the response in Table 7.7 for accessing information in public libraries is high while in Table 7.8 the relevance of information from that source is low. Respondents highlight the language barrier as problematic because the business related materials in the public library are not in their home languages.

### 7.5 Communication methods used in small enterprises

Table 7.9 below is based on question 2.11 and reflects the communication methods that are found to be used in obtaining information from sources.

**Table 7.9: Communication methods used in obtaining information**

Communication modes	%
Oral	82
Documents	41
Electronically	6

According to the respondents, oral communication is heavily used in obtaining information from sources. The oral method appears to be the most frequently employed since it is cheap and simple to use. Respondents said they pick up the information from sources, interpret what is said and what lies behind the words. Moreover, respondents still regard oral tradition as an invaluable component of the African heritage.

Table 7:10 below shows that information received from sources is used effectively and efficiently by the owner/managers. The table is based on question 2.12.

**Table 7:10: Effective and efficient use of information**

Information used	%
Yes	94
No	6

Respondents used heavily the oral information received from sources such as customers and suppliers to improve performance as indicated in Table 7.5. In fact, oral information seems to be the only mode of communication that is utilised by the respondents.

Table 7.11 below, based on question 2.13, shows whether recorded information received is paid for or not.

**Table 7.11: Payment of recorded information received**

Information paid for	%
Do not receive recorded info	67
No	28
Yes	6

Most respondents do not receive recorded information. Some respondents received promotional materials that does not require payment from suppliers, as indicated in Table 7.5.

## 7.6 Type of information needed by the small enterprises

Table 7.12 below is based on question 2.14, on the type of information needed by the small enterprises.

**Table 7.12: Information needed by the small enterprises**

Information needed	%
Where to get goods at lower prices	71
Where to get money to buy more stock	71
Competitors' information	24
Other (Training and education)	12

Respondents mostly need information about where to get goods at lower prices and also where to get money to buy more stock. According to the respondents, the profit they make is not enough for buying stock and for their families to survive on. Respondents are not concerned so much with competitors' information on operational activities because the proximity of enterprises to one another results in the same products and services being sold

to customers. Some respondents point out that training and education constitute essential information that is needed in running a business.

### 7.7 Information systems in small enterprises

Tables 7.13 and 7.14 below are based on section 3 of the questionnaire (questions 3.1 to 3.2).

**Table 7.13: Records in the enterprise**

Records	%
Filed	94
Destroyed	6

According to the respondents, records are filed although the filing systems differ from enterprise to enterprise.

Table 7: 14 below, based on question 3.1, shows where records are stored.

**Table 7.14: Records storage**

Records storage	%
Folders	82
Cabinet	12
Safe	6
Computer	0

According to respondents, records in the enterprises are filed mostly using folders, although the filing systems used differ. Some records are placed in folders and every folder is labelled with its contents.

There is no use of computers because information and communication technologies require people who are computer literate to operate them. According to the respondents, infrastructure seems to be necessary for economic growth, which in turn supports social development.

Table 7.15 below refers to question 3.3 and lists the types of documents filed by the small enterprises.

**Table 7.15: Types of records kept**

Types of records kept	%
Receipts for materials bought	94
Bank transactions	59
Receipts of customers' payments	41

Respondents mostly keep receipts for materials bought. A receipt serves to confirm to the owner/manager that payment has been effected. Respondents agree that in order for the purchasing function to be successful, it must fit into the organisational structure of the enterprise in such a way that it contributes to attaining the enterprise's objectives. Receipts constitute a complete register of the names and addresses of suppliers. Moreover, receipts assist in researching prices, discounts and other related conditions.

The receipts for materials bought seem to be significant and serve as a benchmark in measuring the profitability of a business. Respondents said that the profit determines whether the business is regressing or prospering. During analysis of documents, the researcher found that the bank transactions which had been highlighted in the questionnaire as one of the records kept, were not in the filing systems of the enterprises. According to the respondents, bank transactions are confidential reports that are kept separately and access to them is denied. Receipts of customers' payments are also kept as proof of the payments being executed.

Table 7.16 below, which is based on question 3.4, shows the record systems preferred in enterprises.

**Table 7.16: Record arrangement**

Scheme of record arrangement	%
Alphabetical by subject	41
Mixed	35
Chronological by date	24



According to the responses, alphabetical arrangement by subjects is mostly preferred. During the analysis of documents, the researcher found that the sampled enterprises mostly filed lists from suppliers although they differed in the scheme of arrangement. According to the respondents in a sample, they used different suppliers for goods and services. They filed suppliers so that they could compare prices when they wanted to buy products and services.

Four enterprises file their records in a cabinet. The researcher found that there are subject headings in the filing systems that include customers, goods needed, and suppliers. The subject headings are written on guide cards that protrude above the records filed. Records are filed according to the letters with which their subjects begin. Small sections of records are visible below the upper guide cards. In the customers' card index, customers' cards are filed and each customer's cards has two sections. On the front section of a card, products and services supplied on credit are written and at the back of the card the amount paid and the date when the payment was executed are written. The respondents said that the customers' card indexes are only for regular customers that could take products and use services on credit. According to the respondents, the customer records are those who frequently use the enterprise for products and services. These customers are arranged alphabetically by surname on the cards. In the goods needed file, products and services frequently asked for by customers are recorded. However, this section is in fact seldom used. Receipts of materials bought are filed behind the guide cards for suppliers.

In contrast to the above, the folders of ten other enterprises were made up of old exercise and notebooks with the subdivisions of suppliers and regular customers. In the suppliers' subdivision, the scheme of arrangement was mixed, but the lists of customers were arranged alphabetically by surname. In the customers' subdivision, each customer's products and services supplied on credit were listed on a separate page and the payments made were deducted from the credit amounts. The payment dates were also written. Moreover, three out of those ten enterprises attached copies of receipts as proof of payments made. The receipts of customers' payments were arranged chronologically by date from the beginning to the end of each month. In addition, at three of these ten enterprises, tax forms were found at the back of the notebooks. In three enterprises, records

were mixed in one folder without any subdivision. The records were receipts of different suppliers and receipt books recording customers' debits and credits on products and services.

Table 7:17 below shows who is responsible for maintaining the records in the enterprises. The table is based on question 3.5.

**Table 7:17: Responsibility for maintaining the records**

Responsibility of records	%
Owner/manager	82
An employee	18
Consultant	0

It is the responsibility of most owner/managers to maintain their records since most enterprises are owned and managed by one person as indicated in Table 7.18. According to some respondents, an employee would only maintain the records if requested to do so. A consultant is not hired because of the cost factor.

Table 7:18 below is based on question 3.6 and indicates who uses the records.

**Table 7:18: Users of records in the enterprise**

Records user	%
Owner/manager	82
Staff	18
Auditors	0
None	0

The records are mostly used by the owner/managers. As indicated in Table 7.18, staff seldom use the records. Auditing is not carried out due to the cost involved.

Table 7.19 below, which is based on question 3.7, shows when records are utilised.

**Table 7.19: Times when records are utilised**

Times	%
Month-end	44
Occasionally	31
Daily	19
Never	6

According to the respondents, records are heavily used at month-end. During the interview, respondents pointed out that they use records to check the profitability of their businesses. If a profit is made, it is used to buy new stock and the remainder is used to support the family. In a very few enterprises the profit is banked.

Table 7.20 below, based on question 3.8, shows the use of records in small enterprises.

**Table 7.20: Use of records**

Use of records	%
Decision-making	65
Check profitability	59
Operational activities	24

According to the respondents, they need information to make meaningful decisions and to check the profitability of their small enterprises. Respondents try to accumulate information from customers and suppliers, which then forms part of their decision-making and planning. Respondents have less information on operational activities because most information from external sources is received through word of mouth.

Table 7.21 below indicates how owner/managers view their information systems. The table is based on question 3.9.

**Table 7.21: Information systems viewed**

Information systems	%
Systematic	48
Easy to update	26
Convenient for access	26

According to the researcher, some information systems are systematic, reflecting detailed arrangement of records. Although the filing systems varied according to the enterprises, they were all suited to their particular needs because they were simple and easy to understand. The filing systems observed were simple, easy to maintain and to update and could be expanded as the amount of information available on the information system increased.

## 7.8 Structure and culture of the small enterprise

Table 7.22 below is based on question 4.1 and looks at the area of major activity of the small enterprises.

**Table 7.22: Area of major activity**

Type of enterprise	%
Retail	45
Manufacturing	41
Service	14

It is clear from the responses that the retail sector is an area of major activity in enterprises. Respondents rely heavily on suppliers. According to respondents, they choose suppliers who offer best service and who can deliver on time.

Table 7.23 below shows the structure of enterprises in a developing community. The table is based on question 4.2.

**Table 7.23: Ownership structure**

Type of structure	%
Sole proprietorship	59
Family business	35
Partnership	6

Most enterprises are owned and managed by one person. In addition, family members are found to be the employees in enterprises. According to the respondents, sole proprietorship is preferred because it is the simplest form of ownership and it is easy to establish and to dissolve. Such owner/managers are also able to keep all profits for themselves. Moreover, there is flexibility in decision-making and in responding to changes.

However, these respondents highlighted the disadvantage of being the sole proprietors. They are personally responsible for debts incurred by their enterprises. There are limited capital resources available to their enterprises since the owner/managers are restricted to funds acquired in their personal capacity.

Table 7.24 below reflects the inventory of personnel and their qualification.

**Table 7.24: Personnel inventory and their qualification**

Inventory & qualifications	%
Yes	53
No	47

According to some of the respondents, they do keep an inventory of personnel and their qualifications. However, during the analysis of documents, those documents were not found in the filing systems of the enterprises. In the interview, the respondents said that they could keep knowledge of employees' qualifications in their heads since their employees were few. In that regard, tacit knowledge is utilised by respondents, which indicates that personnel inventory and qualification are seldomly used in these enterprises.

According to the respondents, the level of education of the employees is not important as long as the business operates while the owner/manager is not on the business premises. However, some respondents prefer their wives to be at the till.

Table 7.25 below, which is based on questions 4.4, highlights problems encountered in the running of the small enterprises.

**Table 7.25: Problems encountered**

Problems met	%
Lack of information	71
Lack of skills	29
Unmotivated staff	18
Lack of finance	12

According to respondents, lack of information (information poverty) plays a large role in enterprises. Respondents highlighted that the inability to obtain access to essential information and the lack of skills development are some of the reasons behind the closure of some enterprises. Respondents indicated growing information isolation because, without funds, resources are scarce. They are aware that information could bridge the “digital divide” between the developed and developing communities.

Skills in enterprises are obtained through experience, as indicated in Table 7.4, which means that there are no attractive performance-related incentives. According to the respondents, there are no intrinsic (satisfaction, promotion and development) and extrinsic (medical schemes, housing, and pension) benefits to motivate the employees to share their knowledge. Mostly, employees that share their knowledge do so voluntarily.

Table 7.26 below, based on question 4.5, shows factors found to cause failures in enterprises.

**Table 7.26: Causes of failure**

Causes of failure in small enterprises	%
Lack of knowledge in business processes	76
Strong competition	53
No profit	29

According to the respondents, lack of knowledge in business processes associated with flow of work through the enterprises, is a cause of failure. Respondents are conversant with their daily routine of work processes. They no longer organise their work according to the principle of division of labour because this is not seen to deliver to their expectations.

Respondents agree that nowadays they face a rapidly changing business environment with increased competition and higher customer expectations. They recognise that in a democratic society, free trade should prevail. However, respondents point out the strong competition that is coming from the established businesses in developed communities rather than from other enterprises in the developing community. According to the respondents, the established businesses have moved into the developing communities and they are selling their products and services at low prices.

Table 7.27 below, based on question 4.6, indicates factors significant to the survival and success of the small enterprises.

**Table 7.27: Factors behind survival and success**

Aspects of survival and success	%
Sharing of tacit knowledge	53
Information organisation	41
Previous work experience	29
Other (Profit)	18

According to respondents, they rely mostly on sharing of tacit knowledge among themselves as indicated in Table 7.5 because they are less educated and are unable to

access the formal institutions that demand fees. They meet informally with other owner/managers at any time and place and exchange ideas about running their businesses because others had run small units in previous jobs and so had gained experience of management.

Some respondents recognised the importance of organised information, which is why they maintain a filing system. Other respondents point out that previous work experience plays a role since they are less educated and lack training in business processes. The knowledge gained in previous work is implemented in some of their current work processes. However, some respondents highlighted that profit determines the survival and success of the business.

## 7.9 Discussion of the results

The structured and semi-structured interview questions were analysed and provided the following findings:

**Kind of information the owner/managers like to obtain to make their businesses more profitable:** Owner/managers seem to be unaware of the management needs that they themselves require and what is required within their enterprises. Although they would like to deliver according to market demands, they lack resources for obtaining that kind of information. Moreover, the kind of information needed should be simple, and its supply should be related to the economic level of the developing community.

**Sources of obtaining the information needed:** Owner/managers' consider that the government services and library networks do not currently adequately serve small enterprises. They do, however, acknowledge that ignorance of utilising the available supports plays a role in some enterprises' poor performance. The government's incentive structures are too complex to be accessed by owner/managers in developing communities. Owner/managers tend to share knowledge and information informally among themselves.

**Support structures that assist in the development of business management:** Occasionally, various formal institutions provide free business management courses, which are advertised in the local media, resulting in the interested owner/managers grasping the



opportunity. In some cases, information received through support structures becomes too complex to be implemented in enterprises in developing communities. Moreover, that kind of information is rather of use to well developed rather than developing enterprises.

Owner/managers emphasise that there is no relevant and specific training available for them. To run a business requires knowledge of business principles and the accumulation of business experience. The establishment of support structures in line with the owner/managers' mindset and needs should be developed if enterprises are to alleviate unemployment and assist in economic development.

**Type of training and support that might benefit the future running of small enterprises:** Owner/managers agree that business management courses and training that are in line with their communities' needs may empower them to run their enterprises successfully. Furthermore, provision of follow-up training is essential.

The reduction of rates of business tax may lead to some of them registering their enterprises. In doing so, owner/managers would also have access to formal institutions for advice.

**Knowledge about customer needs:** Owner/managers know that, for their small enterprises to survive and be successful, they have to deliver their products and services according to customer needs. Moreover, they know very well that customers form a vital part of their businesses. However, feedback in the developing community's business environment is generally weak, incomplete and lacking.

## CHAPTER EIGHT: CONCLUSION AND RECOMMENDATIONS

### 8.1 Introduction

The findings of this study have been analysed and interpreted in Chapter seven. This chapter reflects on the findings of the study in relation to the objectives laid out in section 1.3. Lastly, the chapter recommends an information system model that can work for owner/managers' needs in enterprises in developing communities.

### 8.2 Conclusion

- It can be concluded that personal retail is the dominant activity in developing communities. The small enterprises in developing communities are flat structured resulting in owner/managers being dominant and having a subjective role in the management of business. There is less determination to grow in some enterprises, which is revealed by those owner/managers who have been in business for a long time, but whose enterprises are still failing to expand. Some owner/managers are living from hand to mouth on their profits. In some enterprises, managing finance is not regarded as important in the expansion of business.
- It is evident that a low educational level results in poor management of the enterprises because business processes require co-ordinated work from many functional areas of business. In addition, small enterprises in developing communities have not started to follow the international trend of using information and knowledge resources as a strategic competitive advantage. Transformation of the small enterprise's culture to that of the information-driven economy is still out of reach because the owner/managers are not making the transition to face new forms of competition. Owner/managers in developing communities risk exclusion from a world economy that relies on knowledge and information. Efforts of established information systems to support owner/managers in general have not been very successful. Owner/managers' knowledge and experiences are in their minds and not represented in information packages.
- Finance frustrates the owner/managers and is also a major problem facing the small enterprises in developing communities. On the one hand, the private sector financial

institutions have still not changed their attitude toward the financing of small enterprise development. There is a stigma attached to owner/managers in developing communities by financial institutions that they are incapable of managing their finances. The financial institutions have little faith that the enterprises will produce the expected profits. The issue of finance raises the major concern within small enterprises of where to buy more goods at lower prices. The reluctance of the banks to invest in the small enterprises sector especially where Black businesses are involved creates a serious equity gap which prevent many Black businesses from participating effectively as they might in the economic growth process. On the other hand, there are formal incentive schemes established by the government to assist enterprises in their development. However, the structures of these schemes are difficult to access by the developing communities' owner/managers. This suggests that formal schemes are less supportive of owner/managers' in developing communities.

- This study confirms the findings of research by previous authors such as Vaughan & Taugue-Sutcliffe (1997), Johannessen & Kolvereid (1994) and Fann & Smeltzer (1989) that owner/managers do most of their information gathering using a variety of informal sources. Owner/managers consult mostly with customers, friends and their families, depending on the availability of relevant information. However, such information as constitutes knowledge is not organised. At present, owner/managers depend on one another for much of the information they need for survival and success in business. There is knowledge sharing between some owner/managers and employees but there are no organisational systems that capture the knowledge of employees. The employees work for only short periods in such enterprises because there are no incentive systems for motivating them. Most employees leave the small enterprises without their knowledge and expertise being documented. Moreover, some enterprises' structure and culture are not conducive to knowledge sharing. On the other hand, formal sources provide fee-based information to their clients but developing owner/managers lack funds to access such information. This situation shows that information is still a privileged asset of the elite. Moreover, it reflects unequal societies as Haywood (in Morris & Meed, 1996: 5) indicate that, if information is indeed becoming the new means of production, a new divide is opening between the information rich and the information poor.

- The business education presented by some voluntary support structures does not seem to reflect the values and norms of the developing communities. The absence or insufficient business education of owner/managers in Kayamandi has a damaging effect on their ability to acquire the information they need for their daily business work and operational activities. This, in turn, affects their business development.

### **8.3 Recommendations**

It is recommended that a banking system be established that would assist and encourage owner/managers to save a little from their profits. The banking system could be essential and helpful in organising the enterprises' data bank in the long run. This organisation could be made possible through the establishment of an association of small enterprises' owner/managers wherein sharing of knowledge and experiences could be practised. In addition, new partnerships need to be established at all levels between small enterprises and trade organisations, businesses of all sizes, financial and educational institutions. This collective responsibility of partnership will lay the groundwork for the development of an infrastructure for the new economy and the imparting of trade expertise. Moreover, the barriers and frustrations confronting small enterprises can be identified and prevented.

Owner/managers find it hard to share information, hence, the local municipality should be involved in the control of small enterprises' influx. The use of a database could be essential where small enterprises' particulars are captured and resulting in enterprises being monitored. In that sense, incentive schemes, education and training of owner/managers could be made available through the local municipality. The tax system could be introduced depending on the level of a particular business. Suppliers could make this viable and encourage the emerging business people to be captured in the local municipality's database.

Oral communication as an information resource plays an important role in the daily running of the small enterprises in developing communities. Libraries in such communities could take on the role of promoting these informal sources because most knowledge and experiences reside in the minds of its people. Knowledge from informal sources is intangible and libraries could organise workshops at which experts on different themes

could be presented. Such workshops would create opportunities for personal contacts and networking among owner/managers and experts who are knowledgeable in specific functional areas of business processes. In that sense, libraries would create an environment of knowledge sharing, enabling intangible tacit knowledge to be articulated and converted into explicit knowledge which could then be recorded in various tangible formats. In that sense, information as a commodity would come to owner/managers in various formats. Maintaining such formats could assist owner/managers in the overall functioning of their business because owner/managers are faced with the challenge of responding effectively to changing customer expectations.

Hosting such projects in the library environment can help to bring the library at the centre of community development and regain the respect of society. Library Business Corner (LBC) forms a possible service that could be rendered in such communities. It is suggested that if each library can stock or display popular and useful business literature, videos, training materials and contact addresses, then a far greater percentage of entrepreneurs needing information and advice would be reached.

#### **8.4 An information system model**

An information system can be made up of a box file with alphabetical filing guide cards. A box file facilitates direct and browsing search strategies across different kinds of materials. The guide cards would reflect access to the documents by subject. The guide cards should be larger and, if possible, in another colours, so that they are easily visible. A guide card should be pasted outside on the box to indicate the contents of the stored files.

The guide cards listed below can be incorporated in a box file.

##### **A box file guide card (This is pasted outside detailing the contents in a box)**

- Instructions for operating the information system (written rules that state how, where and when something is filed)

### **Community involvement**

- Letters from the community requesting donations
- Trade association/union

### **Competitors**

- Advertisements cut out of magazines
- News articles on various small businesses providing the same products and services
- Catalogues/price lists of products

### **Customers' profiles**

- Information about customers (spending capacity and geographical location)
- Products or services frequently requested by customers

### **External resources** (Advice and information established through networks and contacts)

- Information from various sources that may have been approached, with comments on the enterprise
- Business cards of experts
- Some materials given by voluntary formal organisations that seem important or may in future be used by the owner/manager
- Field intelligence reports
- Promotional materials

### **Financial documents**

Purchase documents (they can be by supplier's name/product or service title)

- Order forms
- Purchase invoices

- Delivery notes
- Accounts
- Payment of creditors
- Receipts

Sales documents (by customer's name)

- Order forms
- Invoices
- Collecting from debtors (customers)
- Receipts

### **Government**

- National Government policies on SMMEs
- Information and contact details of incentive schemes
- Municipality by-laws regarding SMMEs
- Letters from the municipality

### **Human Resources**

- Conditions of employment (Practices and routines reflecting the purpose of an enterprise)
- Employees profiles, including skills acquired through apprenticeship or vocational training, and details on previous working experience
- Health regulations
- Human resources staff association/trade union's policies
- Training materials (see radio and video cassettes at the end of the box file)

## **Suppliers**

- Contracts
- Correspondence
- Catalogues/price lists of products
- Information on potential suppliers that can satisfy owner/managers' requirements in the short and long term
- Letters from suppliers inviting owner/managers to their exhibitions

## **Transactions (month-end function)**

- Checking of enterprise' s stock levels
- Checking the income of the enterprise
- Bank statements

## **Other information packages if any (This is put at the end of the box file)**

- Radio cassettes
- Videos cassettes

The development of a flexible, inexpensive and easily operated information system would satisfy owner/managers' business needs. These systems would enable the owner/managers to use their resources in order to perform their tasks better. Simplicity and straightforwardness is the key in designing an information system in a developing community. The system of headings designed for the arrangement of information resources in a manual system, as set out above, can also be used for the categorisation of information in an electronic system, should the small business develop to such an extent that computers can be afforded.



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**Questionnaire on information and knowledge management in small enterprises**

**Dear respondent**

You are kindly requested to answer the following questions and respond to statements, which should only take approximately 30 minutes of your time. The information provided will be treated as strictly confidential and will be used for study purposes only. I therefore value your cooperation in answering frankly and truthfully. The title of the study is " *the role of organised information and tacit knowledge in the survival and success of small enterprises in developing communities*" (Tacit knowledge refers to the knowledge and skills that the individual acquires through experience. This knowledge is stored in the person's mind and is not available in recorded form, e.g. on paper or computer disk). If you want a feedback about the results of the study, please give an indication at the end of the questionnaire.

**Note:** Please where appropriate mark with a cross, (Y = Yes & N = No). Where applicable mark more than one response.

<b>1. RESOURCES THAT CONTRIBUTE TO PROFITABILITY IN SMALL ENTERPRISE</b>		
1.1) Does the education you have assist in running your business?	<b>Y</b>	<b>N</b>
1.2) Do you regularly share your business knowledge with owner/managers of other businesses?	<b>Y</b>	<b>N</b>
1.3) Do you share your business knowledge with your employees?	<b>Y</b>	<b>N</b>
1.4) Do you ever determine what knowledge your business needs in order to realise its goals?	<b>Y</b>	<b>N</b>
1.5) Do you actively encourage your employees to share their business-related knowledge with you and their colleagues/fellow workers?	<b>Y</b>	<b>N</b>
1.6) Do you use knowledge of customers' and suppliers' to improve performance?	<b>Y</b>	<b>N</b>
1.7) Do you use brainstorm sessions?	<b>Y</b>	<b>N</b>
1.8) Do you have a system of apprenticeship?	<b>Y</b>	<b>N</b>
1.9) Do you allow your employees to learn by making mistakes?	<b>Y</b>	<b>N</b>
1.10) Do you upgrade yourself and your employees through business education?	<b>Y</b>	<b>N</b>

1.11) Do you obtain external expertise by hiring professionals (e.g. consultants)?	<b>Y</b>	<b>N</b>
1.12) Do you take some time to read promotional material?	<b>Y</b>	<b>N</b>
1.13) Do you encourage team building?	<b>Y</b>	<b>N</b>
1.14) Do you spend time in training inexperienced employees?	<b>Y</b>	<b>N</b>

**2. INFORMATION SOURCES FOR SMALL ENTERPRISE**

Indicate which of the following information sources (2.1-2.10) do you use (often/seldom/never) and evaluate each according to frequency, accessibility and relevance	Frequency of use			Accessibility of info		Relevance of info	
	Often	Seldom	Never	High	Low	Good	Bad
2.1) Visiting exhibitions							
2.2) Discussion with customers							
2.3) Family							
2.4) Friends							
2.5) Professional meetings							
2.6) Consultants							
2.7) Suppliers							
2.8) Public library							
2.9) Academic library							
2.10) Individual employees							
<i>Other(Specify)</i>							

*Please mark with a cross in the following*

2.11.) Which communication method is used in getting information from the external environment?	Oral	Documents	Electronically
2.12) Is the information received used effectively and efficiently?	<b>Y</b>	<b>N</b>	
2.13) Do you pay for the recorded information received?	<b>Y</b>	<b>N</b>	Don't receive recorded info

2.14) What type of information is needed in your enterprise?	Where to get goods at lower price	Where to get money to buy more stock	Competitors' information
Other types (Specify)			
2.15) Are the known information needs met?	<b>Y</b>	<b>N</b>	

### 3. INFORMATION SYSTEMS IN SMALL ENTERPRISES

3.1) What happens to the records within your enterprise?	Filed	Destroyed		
3.2) Where are the records stored?	Folder	Cabinet	Safe	Computer
Other (Specify)				
3.3) What information records do you keep?	Bank transactions	Receipts for materials bought	Receipts of customers' payments	
Other (Specify)				
3.4) What is the filing system used in records arrangement?	Alphabetical by subject	Chronological by date	Mixed	Alph by person/co.
Other (Specify)				
3.5) Who is responsible for maintaining the records?	Owner/manager	An employee	Consultant	
3.6) Who uses the records?	Owner/manager	Staff	Auditors	None
3.7) When are the records used?	Daily	Month-end	Occasionally	Never
3.8) In which way are the records helping?	Decision-making	Operational activities	Check profitability	
Other (Specify)				
3.9) How do you view the information system in your small enterprise?	Convenient for access	Easy to update	Systematic	

### 4. SMALL ENTERPRISE: STRUCTURE AND CULTURE

4.1) What is the area of major activity in the business?	Manufacturing	Service	Retail
4.2) What type of business is your enterprise?	Sole proprietorship	Partnership	Family business
4.3) Indicate in the following what methods are practised in your business			

4.3.1) Meetings on improving performance	Y	N				
4.3.2) Inventory of the personnel and their qualifications	Y	N				
4.4) What problems are encountered in daily running of the small enterprise?	Lack of information	Unmotivated staff	Lack of skills			
<i>Other (Specify)</i>						
4.5) What are the factors that cause failures of small enterprises?	Lack of knowledge in business processes		No profit	Strong competition		
<i>Other (Specify)</i>						
4.6) What can help the small enterprise to survive and be successful in the competitive environment?	Info organisation	Previous work experience	Sharing of tacit knowledge			
<i>Other (Specify)</i>						
<b>5. PERSONAL INFORMATION OF OWNER/MANAGERS</b>						
5.1) Gender	Male	Female				
5.2) Age group	Under 20	21-29	30-39	40-49	50-59	60+
5.3) What formal education do you have?	Primary school		High School	Tertiary	None	
5.4) How did you obtain the present skills?	Apprenticeship		Vocational training		Experience	
<b>Do you want a feedback on the study?</b>						
	Y	N				

**THANK YOU FOR COMPLETING THE QUESTIONNAIRE**