The relationship between Corporate Entrepreneurship, Market Orientation, Organisational Flexibility and Job Satisfaction.

by

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ABSTRACT

The relationship between Corporate Entrepreneurship, Market Orientation, Organisational Flexibility and Job Satisfaction

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Corporate entrepreneurship (CE) is seen as an important facet of strategic renewal, profitability, innovativeness and growth of organisations. This study examined the relationship between CE, Market Orientation (MO), Organizational Flexibility (F) and Job Satisfaction (JS). The outcomes of the influence of CE, organisational flexibility and market orientation on job satisfaction were also assessed. The Corporate Entrepreneurship Assessment Instrument (CEAI) developed by Hornsby, Kuratko and Zahra (2002) was used to measure CE. Market orientation was measured by the Market Orientation Scale developed by Kohli, Jaworski and Kumar (1993). The Organisational Flexibility Scale developed by Khandwalla (1977) was used to measure flexibility of organisations. Job satisfaction was measured by the means of the short form of the Minnesota Satisfaction Questionnaire developed by Weiss, Davis, England and Lofquist (1967). Data were gathered from 333 respondents representing four different sectors namely, life assurance, information technology, transport and education.

Factor Analysis was employed to revalidate the structure and internal reliability of each instrument used in the study. This resulted in a five-factor solution for the CEAI, named management support, work discretion, rewards/reinforcement, time availability, support for innovation and work improvement. A three-factor solution emerged in the case of market orientation, named intelligence generation, inertia and responsiveness. A two-factor solution was identified for the organisational flexibility scale, namely formality and authoritarianism. The two components of job satisfaction were identified as extrinsic and intrinsic job satisfaction.

Pearson Product Moment Correlation was done, investigating the relationship between corporate entrepreneurship, market orientation and flexibility and job satisfaction sub-scales. Multiple Regression Analysis investigated the prediction of job satisfaction by means of corporate entrepreneurship, market orientation and flexibility as independent variables. Of the six Structural Equation Models built in this study, three indicated a good fit with the data. From a managerial perspective the results of two of the models indicate that the corporate entrepreneurship factors of rewards/reinforcement, formal organisational flexibility and an intelligence generative market orientation contribute statistically significantly toward higher levels of extrinsic and total job satisfaction. Additionally the corporate entrepreneurship factor of work improvement, formal organisational flexibility and an intelligence generative market orientation contribute statistically significantly toward higher levels of intrinsic job satisfaction. Though the remaining three models showed a weaker fit with the data, indications are that extrinsic and total job satisfaction could be negatively influenced by CE factors of rewards/reinforcement, inflexible authoritarianism and a market orientation of inertia. Furthermore intrinsic job satisfaction could be negatively influenced by work improvement CE, inflexible authoritarianism and an inertia market orientation.

CHAPTER 1

THE PROBLEM AND ITS SETTING

1.1 Introduction

The demise of apartheid and the concomitant collapse of trade barriers ushered new challenges for South African business organisations. Some of the challenges facing South African business organisations centre around managing in a globalised context. Michie and Padayachee (1997) aver that intensified international competition and the growth of some protectionist measures among some major industrialized countries have combined to make entry into external markets difficult while at the same time pressure is brought to bear on developing countries such as South Africa by institutions such as the World Trade Organisation to open their domestic markets to imports. Competing in global markets will require new ways of managing.

The global economy is no doubt creating profound and substantial changes for organisations and industries throughout the world. Markets, consumers, competitors and technology are constantly changing. Among the vast array of factors that have growing and far-reaching influences upon these challenges is the explosive growth in globalisation. As a result of increased global competition, organisations have been forced to rethink how they produce and deliver products and services (Kemelgor, 2002). Kemelgor (2002) asserts that stagnation in this environment leads to erosion of market share or quick failure. A firm in a turbulent environment, therefore, must continually innovate to remain competitive.

There is a general recognition that incremental innovations are essential in maintaining an organisation's well being (Herbert & Bazeal, 1998). However, true competitive advantage arises from radical innovations (David, 1994, Kemelgor, 2002). The challenge facing business organisations is therefore how to create and manage an organisational environment where multiple innovations can occur on a sustained basis. As indicated by Chittipeddi and Wallett (1991: 97) "the organisational archetype of the future will be entrepreneurial". The argument

advanced in this study is that corporate entrepreneurship (CE) is the ideal strategy for creating and managing such an organisational context.

According to Zahra, Kuratko and Jennings (1999) empirical research into firm-level entrepreneurship spans over a quarter of a century. According to these authors, research into the nature, antecedents and effects of corporate entrepreneurial activities has grown rapidly over the past 25 years. It was Peterson and Berger (1972) who first sought to identify organisational and environmental factors that relate to a company's entrepreneurial activities. Zahra, et al. (1999) aver that earlier researchers focused their attention on processes by which established firms venture into new businesses and identified factors that account for success of corporate ventures. Burgelman's (1983) research into corporate venturing processes yielded a wealth of new knowledge to the literature by documenting the interplay between autonomous and formal strategic behaviours that exist in a firm's entrepreneurial activities. However, it was Miller (1983) whose work created a turning point in the research on corporate entrepreneurship. Subsequent to the publication of his work, scholars from the U.S and other countries used Miller's theory and research instruments to examine connections between environmental, strategic and organisational variables, and a company's entrepreneurial activities (Zahra, et al., 1999). Research into these complex linkages continues to grow.

In their review of the literature on corporate entrepreneurship, Zahra, et al. (1999) identified 45 empirical papers on corporate entrepreneurship. According to these authors, three papers on the topic appeared in the 1970's, 10 were published in the 1980's and 32 were published in the 1990's. These authors cite three contributing factors that account for the dramatic increase in the number of papers published in the past decade. First, the growth of the field of entrepreneurship itself has added legitimacy to research into firm-level entrepreneurship. This growth also resulted in the establishment of entrepreneurship-related journals that were especially interested in research into firm-level phenomena. Most of the papers have appeared in specialized journals such as the *Journal of Business Venturing* and *Entrepreneurship Theory and Practice*. The second factor that accounted for growth in publications on corporate entrepreneurship was the social interest in the U.S and elsewhere in revitalizing established companies and improving their ability to innovate and take calculated risks. The third factor was

the availability of reliable instruments that enabled researchers to examine this complex phenomenon.

Barlett and Ghoshal (2002) have characterized the new economy as being information-based, knowledge-driven and service-intensive. According to these authors the new game requires speed, flexibility and continuous self-renewal. In this new economy, skilled, knowledgeable and motivated people are central to the operations of any business organisation that wishes to flourish (Barlett & Ghoshal, 2002). For innovation to occur, the ideas and insights of employees are of crucial importance (Nijhop, Krabbendam & Looise, 2002). These authors argue that it is not just the inventiveness of creative people that leads to innovations. Equally important is the commitment of these people to turn an idea into a concrete improvement. It is argued in the present study that CE provides an environment that fosters the creativity and inventiveness of organisational members, and that this experience leads to a high level job satisfaction.

In an effort to respond to the discontinuities ushered in by the new global economy, many established companies have restructured their operations in fundamental and meaningful ways (Morris & Kuratko, 2002). It is argued in the present study, and in line with Barlett and Ghoshal (2002) that appropriate strategic responses to these discontinuities require organisations to be flexible and adaptable.

The challenge facing business organisations today is to build sustainable competitive advantage. The ability of organisations to manage discontinuities creates the potential for competitive advantage. Competitive advantage is realized, amongst other things, through continuous innovation and proactiveness, that is, the pursuit of new business opportunities, and the generation of novel ideas about business (Tidd, Bessant & Pavitt, 1999). If South African business organisations are to remain competitive both in domestic and international markets, it is essential to assist them to understand organisational processes that facilitate entrepreneurial attitudes, thinking and behaviour.

Gupta, MacMillan, and Surie (2003) indicate that the intrapreneurship literature suggests four pre-requisites for effective entrepreneurial action in firms, namely: (1) the presence of the

effective communication of an entrepreneurial vision; (2) the nurturing and encouragement of entrepreneurial initiatives; (3) the availability of adequate resources to support entrepreneurial effort; and (4) the facilitation of exploration and idea generation on a continuous basis.

As will be shown in the following sections of this report, corporate entrepreneurship (CE), or intrapreneurship (Pinchot, 1985) or as Barrett and Weinstein (1998) put it: the renaissance in entrepreneurial thinking is a strategic way of marshalling all the resources of the firm in optimising organisation-wide performance.

The aim of this study is to investigate the relationships between corporate entrepreneurship (CE), market orientation (MO), organisational flexibility (F) and job satisfaction (JS). This study is based on the works of Kuratko, Montagno and Hornsby (1990), and Hornsby, Kuratko and Montagno (1999). These authors have developed a tool that assesses organisational factors that foster a CE culture in an organisation. The present study is also related to the work of Barrett and Weinstein (1998) who report a significant relationship between business performance and CE ($r = .34$; $p < .0001$); F($r = .33$; $p < .0001$); and MO ($r = .48$; $p < .0001$). The present study extends the work of these authors by investigating the influence of CE, F and MO on job satisfaction.

Although past and current research efforts have focused on corporate entrepreneurship and its relationship to market orientation and organisational flexibility (Barrett and Weinstein, 1998), as far as it could be established, no empirical efforts have been directed at understanding the influence of corporate entrepreneurship and organisational flexibility and market orientation on job satisfaction internationally or within the South African context. The central argument advanced by the present study is that CE promotes strategic agility, creativity and continuous innovation throughout the firm. It is further argued that CE fosters a corporate culture that facilitates opportunity identification, discovery of new sources of value, product and process innovation that lead to greater organisational performance. CE can therefore be conceptualised as the strategic force that drives effective market orientation and organisational flexibility, and generates high levels of job satisfaction among organisational members.

1.2. Description Of Constructs

1.2.1 What is Corporate Entrepreneurship?

It was Schumpeter (1934) who defined the entrepreneur as anyone who helps move the economy forward by disrupting the equilibrium of the market through new combinations of resources. What all this amounts to, is that entrepreneurship can occur throughout large corporations involving any number of individuals. A scan of the literature on corporate entrepreneurship suggests that there are differences of views among researchers regarding the attributes that must be present for an organisation to qualify as entrepreneurial. The concept of corporate entrepreneurship was coined and established by Pinchott (1985). Pinchott's book outlined guidelines and recommendations for people inside organisations to bring forth and develop new ideas into actual business ventures.

Although there is an increasing awareness of the importance of CE within existing firms, ambiguities continue to plague attempts to define such activities. Vesper (1984) developed three components of corporate entrepreneurship, which he identified as (1) new strategic direction, (2) initiative from below and (3) autonomous business creation. Vesper's conceptualisation illustrates that corporate venturing can be any of these three individual types, as well as any or all of the possible combinations. Covin and Miles (1999) similarly identify three forms of corporate entrepreneurship. These are (1) an established organisation that enters a new business (2) an individual or individuals who champion new product ideas within a corporate context; and (3) a situation where an entrepreneurial philosophy permeates an entire organisation's outlook and operations. Jennings and Lumpkin (1989) identified four organisational activities that are associated with corporate entrepreneurship. These activities include participative decision-making, involvement of specialized personnel, participative development of performance objectives, and risk taking by managers.

This definition is similar but more inclusive than that offered by Birkinshaw (1997) who defines corporate entrepreneurship as an initiative of a discrete, proactive undertaking that advances a new way for the corporation to use or expand its resources. Stevenson and Jarillo

(1990) conducted an extensive review of the entrepreneurship literature in an effort to provide a paradigm to build a bridge between entrepreneurship in small or start-up organisations and corporate entrepreneurship. These authors defined entrepreneurship as a process by which individuals either on their own, or inside organisations pursues opportunities without regard to the resources they currently control. These authors recognize in their definition that entrepreneurship is not a single activity in the corporation. It represents a set of organisation-wide activities.

Covin and Miles (1999) attribute the problem of identifying sources of corporate entrepreneurial actions to the lack of precise meanings of what is meant by corporate entrepreneurship. What confounds the problem according to these authors is the myriad of meanings that have been attached to the construct of corporate entrepreneurship.

Covin and Miles (1999) argue that no compelling reasons have been advanced on why this phenomenon leads to competitive advantage. These authors argue that the bases for competitive advantage have not been explicitly and systematically linked to corporate entrepreneurial actions. Furthermore it is argued that the arch-typical forms in which corporate entrepreneurial actions are often manifested have not been consistently or clearly delineated in the literature on corporate entrepreneurship (Covin & Miles, 1999). The definition offered by these authors acknowledges that corporate entrepreneurship is not only a multidimensional process, but it also may involve many individuals in the organisation.

Dess, Lumpkin and McKee (1999) argue that although the concept of entrepreneurship has been limited to new venture creation by some scholars like Vesper (1984), CE may be viewed more broadly as consisting of two types of phenomena and processes. These are (1) the birth of new businesses within existing organisations, whether through internal innovation or joint ventures (2) and the transformation of organisations through strategic renewal, that is, the creation of new wealth through new combinations of resources.

Further, Birkinshaw (1999) draws a distinction between focused and dispersed CE. According to this author focused CE occurs in especially created “new venture divisions” whose

primary mandate is to identify and nurture new business opportunities for the corporation (Burgelman, 1983; Sykes, 1986, Kuratko, Montagno & Hornsby, 1990). Dispersed CE occurs throughout the firm. Birkinshaw (1999) avers that rather than hiving off separate divisions or groups to be entrepreneurial, this approach sees the development of an entrepreneurial culture as the key antecedent to initiative (Kanter, 1985; Covin & Slevin, 1991; Zahra, 1993). This study will adopt the dispersed view of CE as a governing framework as described by Birkinshaw (1999).

Table 1.1 below, reflects some of the definitional ambiguities in the literature on corporate entrepreneurship (Sharma & Chrisman, 1999).

Table 1.1 Existing Definitions of corporate entrepreneurship/intrapreneurship

Authors/s and Year	**Suggested definition**
Schollhammer (1982)	Internal (or intra-corporate) entrepreneurship refers to all formalized entrepreneurial activities within existing business organisations. Formalized internal entrepreneurial activities are those which receive explicit organisational sanction and resource commitment for the purpose of innovative corporate endeavours – new product developments, product improvements, new methods or procedures (p. 211)
Burgerlman (1983)	Corporate entrepreneurship refers to the process whereby the firms engage in diversification through internal development. Such diversification requires new resource combinations to extend the firm's activities in areas unrelated, or marginally related, to its current domain of competence and corresponding opportunity set (p. 1349)

Vesper (1984)	Corporate entrepreneurship involves employee initiative from below in the organisation to undertake something new. An innovation which is created by subordinates without being asked, expected, or perhaps even given permission by higher management to do so (p. 295).
Nielson, Peters, and Hisrich (1985)	Intrapreneurship is the development within a large organisation of internal markets and relatively small and independent units designed to create, internally test-market, and expand improved and/or innovative staff services, technologies or methods within the organisation. This is different from the large organisation entrepreneurship/venture units whose purpose is to develop profitable positions in external markets (p. 181).
Pinchot III (1985)	Intrapreneurs are "dreamers who do", those individuals who take hands-on responsibility for creating innovation of any kind within an organisation. They may be the creators or inventors but are always the dreamers who figure out how to turn an idea into a profitable reality (p. ix).
Spann, Adam, and Wortman (1988)	Corporate entrepreneurship is the establishment of separate corporate organisations (often in the form of a profit centre, strategic business unit, division, or subsidiary) to introduce a new product, service or

	create a new market, or utilize a new technology (p. 149).
Jennings and Lumpkin (1989)	Corporate entrepreneurship is defined as the extent to which new products and/or new markets are developed. An organisation is entrepreneurial if it develops a higher than average number of new products and/or new markets (p. 489)
Schendel (1990)	Corporate entrepreneurship involves the notion of birth of new businesses within on-going businesses, and … the transformation of stagnant, on-going businesses in need of revival or transformation (p. 2.)
Guth and Ginsberg (1990)	Corporate entrepreneurship encompasses two types of phenomena and the processes surrounding them: (1) the birth of new businesses within existing organisations, i.e., internal innovations or venturing, and (2) the transformation of organisations through renewal of the key ideas on which they are built, i.e. strategic renewal (p 5)
Covin and Slevin (1991)	Corporate entrepreneurship involves extending the firm's domain of competence and corresponding opportunity set through internally generated new resource combinations (p. 7, quoting Burgelman, 1983, p. 154)
Jones and Butler (1992)	Internal Corporate Entrepreneurship refers to entrepreneurial behaviour within one firm (p. 734)

Zahra (1995, 1996)	Corporate entrepreneurship is seen as the sum of a company's innovation, renewal, and venturing efforts. *Innovation* involves creating and introducing products, production processes, and organisational systems. *Renewal* means revitalizing the company's operations by changing the scope of its business, its competitive approaches or both. It also means building or acquiring new capabilities and then creatively leveraging them to add value for shareholders. *Venturing* means that the firm will enter new businesses by expanding operations in existing or new markets (1995, p. 227; 1996 p. 1715).
Chung and Gibbons (1997)	Corporate entrepreneurship is an organisational process for transforming individual ideas into collective actions through the management of uncertainties (p. 14)

A careful examination of the above table reflects that different authors sometimes use the same term differently, and some authors use different terms to describe the same phenomenon. However, analysis of the above table indicates a common pattern with mutual elements among the various definitions. A general thread that runs through the various conceptualisations of corporate entrepreneurship is that corporate entrepreneurship is characterized by the following:

- The birth of new businesses within existing businesses

- The transformation or rebirth of organisations through a renewal of key areas of business. Renewal or rebirth is entrepreneurial since it reflects a radical departure from historical and predominant structural patterns.

- Creation, innovation and renewal within an existing organisation. The creation of an organisation is entrepreneurial in that it entails fundamental strategic and structural decisions. So, intrapreneurship is about bringing entrepreneurial behaviour into an organisation and focusing on extending the firm's domain of competence and functioning. Innovation is entrepreneurial because it involves new combinations of resources and the way in which they are used that may dramatically alter bases of competition in an industry or lead to the creation of a new industry.

What follows below is a description of the major components of CE that will be used in this study, namely new business venturing, innovativeness, self-renewal, proactiveness and risk-taking.

- *New business venturing* refers to new business creation within an existing organisation by redefining the company's products or services or by developing new markets.

- *Innovativeness* indicates product and service innovation with emphasis on development and innovation technology. It includes new product development, product improvements and new production methods and procedures. The emphasis here is on concepts or activities that represent a departure from what is currently available. The fundamental question is to what extent is the company doing things that are novel, unique or different? In other words does the concept address a need that has not previously been addressed? Does it change the way the organisation goes about addressing the need? Is it a dramatic improvement over conventional solutions?

- *Self-renewal* addresses the transformation of organisations through the renewal of key ideas on which they are built. Self-renewal has strategic and organisational change implications and includes the redefinition of the business concept, reorganisation, and the introduction of system-wide changes for innovation. Self-renewal is entrepreneurial because it involves entrepreneurial efforts that result in significant changes to an organisation's business or corporate level strategy or structure. These changes alter pre-

existing relationships within the organisation or between the organisation and its external environment.

> It follows from the foregoing discussions that both self-renewal and corporate venturing suggest changes in either the strategy or structure of an existing corporation, which may involve innovation. According to Sharma and Chrisman (1999) the principal difference between the two is that new business venturing involves the creation of new businesses whereas self-renewal leads to the reconfiguration of existing businesses within a corporate setting.

- *Proactiveness*: This term signifies aggressive posturing relative to competitors. A proactive firm is inclined to take risks through experimentation. It takes initiatives and is bold and aggressive in pursuing opportunities. It attempts to lead rather than follow competitors. Miller (1983) sees entrepreneurial companies as acting on rather than reacting to their environment. Morris and Kuratko (2002), aver that the essence of proactiveness is about implementation. Implementation is about bringing an entrepreneurial concept to fruition. Venkatraman (1989) conceives of proactiveness as a continuous search for market opportunities and experimentation with potential responses to changing environmental trends.

- *Risk-taking*: According to Morris and Kuratko (2002) risk-taking involves a willingness to pursue opportunities that have a reasonable likelihood of producing losses or significant performance discrepancies. These authors are quick to state that entrepreneurship does not entail reckless decision-making. It involves a realistic awareness of the risks involved. By engaging in numerous experiments, testing markets, and trial runs, the entrepreneur is better able to determine what works and what does not. These authors further argue that this form of quickened learning may come at the expense of minor failures, but it is also likely to ensure more sustainable long-term success. Companies that do not innovate are likely to face a higher risk of not perceiving market and technology shifts that are capitalized on by competitors.

In summary it seems inconceivable to think of CE without the external organisational environment in which its activities are carried out. CE by its nature seeks to exploit external opportunities in order to improve organisational growth and profitability. As Schumpeter (1934) noted the essence of entrepreneurship is capitalizing on environmental change. Lumpkin and Dess (1996) argue that CE plays a pivotal role in the improvement of the competitive position and transformation of corporations, their markets and industries and in identifying opportunities for value creating and value adding innovation. Covin and Miles (1999), in highlighting the pivotal role of innovation in CE, argue compellingly that more innovation is necessary for a firm to be considered entrepreneurial. These authors aver that CE activities focus on increasing competitiveness through organisational rejuvenation, renewal, and domain definition. They go on to argue that CE revitalizes, reinvigorates and reinvents the company.

A critical mechanism in linking organisational entrepreneurship to the external environment is market orientation. The authors Hamel and Prahalad (1994) as well as Slater and Narver and Slater (1995) indicate that the healthy balance between both market and entrepreneurial orientations is fundamental in the prosperity and survival of any organisation. As will be shown in the next section, market orientation facilitates a fit between the entrepreneurial organisation and its business environment. As indicated by Kwaku and Ko (2001) the over emphasis of MO or CE exclusively, would impair the process potential of an organisation.

1.2.2 What is Market Orientation?

Market orientation is envisaged as the direct linkage between marketing and corporate entrepreneurship and as the basis for a sustainable competitive advantage (Barrett & Weinstein, 1997). Kohli and Jarwoski (1990) aver that market orientation is the firm's implementation of the marketing concept. Narver and Slater (1995) define market orientation as the organisational culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and, thus continuous superior performance for the business. It has three components: customer orientation, competitive orientation, and inter-functional coordination, hence market orientation involves learning about customers and competitors. Kohli, Jaworski and

Kumar (1993) define market orientation as the organisation-wide generation of market intelligence pertaining to current needs of customers, dissemination of intelligence horizontally and vertically within the organisation, and organisation-wide action or responsiveness to market intelligence.

Building on their seminal work, Jarwoski and Kohli (1993) add that market orientation has three components: (1) generation of market intelligence, (2) sharing of this intelligence throughout the firm, (3) and a marketing response. Intelligence generation is conceived of by Kohli, et al. (1993) as the beginning of market orientation, being wider than consumers' verbalized needs as it includes the analysis of external factors, which influence consumers' needs. Intelligence dissemination according to Kohli, et al. (1993) refers to the need to communicate, disseminate and even sell market intelligence. Dissemination is therefore a two-way process that involves lateral and horizontal free communication. According to Kohli, et al. (1993) responsiveness refers to the ability of the organisation to react to generated and disseminated information, in terms of two types of activity, namely response design (this involves using market intelligence to develop plans) and response implementation (this involves executing the plans). In brief, Kohli, et al. (1993) view of market orientation centres around the ability of the organisation to collect, distribute and react to intelligence about the market.

Loubser (2000) defines market orientation as the business culture that is focused on creating mutually rewarding relationships between customers and the organisation based on (1) the active pursuit of the interests of all stakeholders; (2) competitive advantage that it based on the ability of the organisation to learn from the market itself and to mobilize core competencies in response; (3) a set of beliefs that puts the customer first; and (4) the existence of processes that support this belief.

Kohli, et al. (1993) definition focuses more on specific activities or behaviours rather than philosophical concepts (Brown, 1987; Dreher, 1994). Loubser (2000) avers that this type of definition facilitates the operationalisation of the market orientation construct. Loubser's (2000) conceptualisation of the market orientation construct combines Kohli, et al. (1993) definition with Narver and Slater's (1990). Subsuming market orientation within a broad concept such as

culture in our view clouds the construct and makes it nebulous and less specific. In this study we will adopt the definition offered by Kohli, et al. (1993) for its precision and parsimony.

Market orientation as already mentioned, involves the generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organisation-wide responsiveness to it. Tuominen and Moller (1996) aver that market orientation as business behaviour can be conceived of as market information processing and inter-functional coordination of market- related information. These authors' conceptualisation of market orientation emphasizes the processing of external intelligence in the same manner that Kohli, et al. (1993) do, and emphasizes, the importance of inter-functional coordination for the effective implementation of a market orientation.

The definition of market orientation that will be adopted in the present study is derived from Kohli, Jaworski and Kumar (1993: 467) who define market orientation "as the organisation wide generation of market intelligence pertaining to current and future needs of customers, dissemination of intelligence horizontally and vertically within the organisation, and organisation wide action or responsiveness to market intelligence."

Information processing, its dissemination both vertically and horizontally within the organisation and the strategic response based on the information, require more than just inter-functional coordination, they require an organisational architecture that is flexible (Barrett & Weinstein, 1997). Flexible organisations create more autonomy for employees. This could lead to higher levels of job satisfaction.

1.2.3 What is Organisational Flexibility?

Kukalis (1989) suggested that firms in highly complex environments need flexible planning systems due to the frequency of change that occurs in their environments. As the global business environment has become increasingly dynamic, organisations have been looking for ways to increase their flexibility, to be able to react to changing conditions (Reef & Blundsdon,

1998). A firm exhibiting low flexibility is seen as rigid in administrative relations and strictly adheres to bureaucratic practices (Khandwalla, 1977; Barrett & Weinstein, 1998).

Although a variety of labels have been applied to designate flexible organisations, for example "organic" (Burns & Stalker, 1961); "theory Y" (McGregor, 1960); "human resource" (Miles & Snow, 1978); "high commitment" (Whaton, 1985); "high involvement" (Lawler, 1992); and "high performance" (Betcherman, McMullen, Leckie & Caron, 1994), in essence they share common features. These common features include aspects such as decentralized decision making, as well as adaptable and versatile organisational forms within which employees are expected to exercise self-control, referred to as structural flexibility. The ability of employees to successfully exercise self-control and enjoy work autonomy is the cornerstone of structural flexibility (Long, 2001).

Kukalis (1989) uses the term "planned flexibility", defined as the firm's ability to change its strategic plan as environmental opportunities and threats emerge. Flexibility is also defined as the degree to which a business unit is adaptable on administrative relations and the authority that is vested in situational expertise (Reef & Blundsdon, 1998). Long (2001) argues that although there are various ways of looking at flexibility, the defining characteristics of flexibility include the design of organisations in which employees are afforded wide latitude in performing their jobs. Organisational flexibility by definition seeks, as it were, to eliminate the need for extensive and rigid systems of control, which would otherwise be necessary to ensure effective employee behaviour.

For the purposes of this study the definition used for flexibility is derived from Barnett and Weinstein's (1998) argument, indicating flexibility as the degree to which a business unit is adaptable in administrative relations and the authority is vested in situational expertise. A firm that exhibit low flexibility is therefore rigid in administrative relations, and adheres to bureaucratic practices.

1.2.4 What is Job Satisfaction?

It is generally accepted in the organisational behaviour field that job satisfaction is the most important and frequently studied variable. Employee attitudes toward involvement in and satisfaction with the job in the employing organisation have become of compelling interest to organisational behaviour researchers, primarily because of the impact on behaviour at work (Knoop, 1995; Luthans, 1998; Robbins, 2001).

Weiss, Dawis, England and Lofquist (1967, p.13) refer to job satisfaction as the actual satisfaction of the individual with intrinsic and extrinsic reinforcers. Job satisfaction is therefore seen as the achieved correspondence sought by the individual in relation to intrinsic and extrinsic environmental factors leading to work contentment (Dawis, Lofquist & Weiss, 1968).

Smith, Kendall and Hulin (1969) state that there are five dimensions that represent the most important characteristics of a job about which people have affective responses. What follows is a brief description of these:

1. The work itself: This refers to the extent to which the job provides the person with interesting tasks, opportunities for learning and the chance to accept responsibility.
2. Pay: This refers to the amount of financial remuneration that is received and the degree to which it is perceived as equitable in comparison to that of others.
3. Promotion Opportunities: This refers to prospects of advancement in the organisation.
4. Supervision: This refers to the competencies of the supervisor to provide technical assistance and behavioural support.
5. Co-workers: This refers to the extent to which fellow workers are technically competent and socially supportive.

McCormick and Illgen (1985) distinguish between intrinsic and extrinsic job satisfaction. Intrinsic satisfaction is described as the experience of a sense of competence. Simultaneously extrinsic satisfaction is described as contentment derived from external rewards. Job satisfaction in the broadest sense refers to a person's general attitude toward the job or toward specific dimensions of the job (Robbins, 2001; Knoop 2001). Knoop (1995) argues that job related

attitudes tend to cluster and categorize themselves. For example a person who has developed a favourable attitude toward one aspect of the job based on unique experiences is likely to react favourably to other related job aspects.

Building on Locke's definition of job satisfaction as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience, Luthans (1998) avers that job satisfaction is a result of employees' perception of how well their jobs provide in those qualities that they perceive as important. This argument also relates to Dawis, Lofquist & Weiss's (1968) argument of correspondence of contentment with the job. Luthans (1998) further states that there are three important dimensions to job satisfaction. The first dimension refers to the emotional response to a job situation. As such it is intangible and can only be inferred. The second dimension refers to how well outcomes meet or exceed expectations. The third dimension refers to a cluster of attitudes that together constitute job satisfaction.

The foregoing discussion demonstrates that job satisfaction is a complex and multidimensional construct. For purposes of this study however the intrinsic/extrinsic dimensions of job satisfaction will be operationalised, as measured by Weiss, Dawis, England and Lofquist's (1967) Minnesota Job Satisfaction Scale. Job satisfaction will be seen as the actual satisfaction of the individual with the achieved correspondence in relation to intrinsic and extrinsic job environmental factors leading to work contentment.

1.3 Aim

The aim of this study is to investigate if significant relationships exist between corporate entrepreneurship, organisation flexibility, market orientation, job satisfaction and biographic variables. It is further envisaged to build models of causal relationships between continuous variables.

1.4 The structure of the dissertation

Chapter 2 focuses on the theoretical assumptions underpinning CE as an organisational phenomenon. It examines the critical elements and dimensions that constitute CE, and critically evaluates the relationship of CE to the key variables in this study, namely organisational flexibility, market orientation and job satisfaction and biographic variables.

Chapter 3 focuses on the research methodology that undergirds this study. It furnishes descriptive statistics of participants who took part in this study and a detailed description of the four instruments used in this study. The various statistical techniques used in this study are described in detail.

Chapter 4 presents the findings of this study. The findings are evaluated against the eight research problems that underpin this study.

The fifth and final chapter furnishes a discussion of the findings, the limitations of the present study, implications for management and recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

In this literature review the concepts that are investigated in the study, namely corporate entrepreneurship, flexibility, market orientation and job satisfaction are explored, as well as the relationship between these concepts. Furthermore previous studies concerning the relationship between the corporate entrepreneurship and biographic variables are examined. Research problems are stated on grounds of the investigated concepts and their possible relationships. A tentative model is built, derived from the discussion, postulating the possible influence of corporate entrepreneurship, flexibility and market orientation on job satisfaction.

2.1 Corporate Entrepreneurship

A great deal of the literature on CE assumes that it is important and desirable to foster corporate entrepreneurial thinking and behaviour in organisations (Covin & Slevin, 1991; Zahra, 1993, 1994; Lumpkin & Dess, 1996). While much has been written about the need for established firms to become entrepreneurial, not much progress has been made to determine exactly how entrepreneurship can be accomplished and sustained in these organisations.

Recent integrative models in the realm of CE have indicated that there are mainly individual, organisational and environmental factors that are related to CE behaviour (Covin & Slevin, 1991; Birkinshaw, 1999):

- *Individual* propensity to act entrepreneurially is a function of motivation (McCLelland, 1967; Kets de Vries, 1977), which in turn is a function of the individual's innate personality and the context in which he or she is working (Birkinshaw 1999).
- Different authors support the view that CE activity is a function of the *organisational* context (Birkinshaw, 1999; Morris & Kuratko, 2002). Birkinshaw (1999) defines organisation context as a set of administrative and social arrangements that shape the behaviours of individuals in the

organisation over which top management have some control. The essence of Birkinshaw's (1999) definition is that entrepreneurial initiative, like any other behaviour is a function of the setting in which it occurs, and that within an organisation many of the critical success factors for CE are under the direct and indirect influence and control of top management. Reward systems, reporting relationships, access to financial resources and a host of other factors, all influence and shape the behaviour of people in an organisation. These factors together constitute the organisational context.

- *Environmental* factors relate to Ghoshal and Nohria (1989); Westney (1994); and Birkinshaw (1999) argument that the behaviour of individuals within the organisation is shaped by more than just administrative factors. These authors argue that external environmental factors such as customers, suppliers, competitors and institutional bodies with which the organisation interacts, all profoundly influence the behaviour of individuals in the organisation.

What follows, is a discussion of the individual, internal/organisational and external/environmental variables that are related to CE in organisations. These variables can however not be seen as totally independent, but in interaction, reciprocally related. This relationship is visually conceptualised in figure 2.1

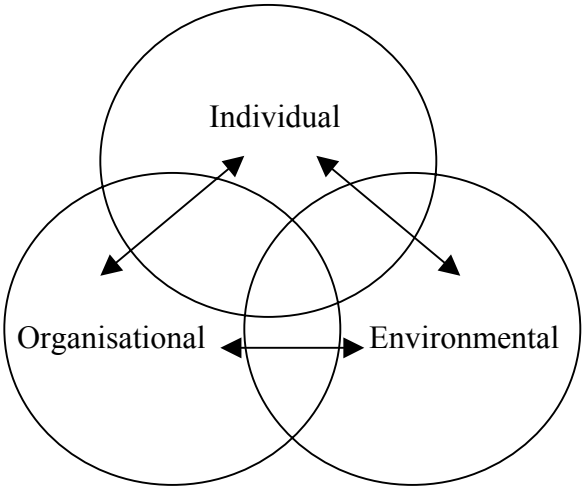

Figure 2.1 The Inter-active relationship between Individual, Organisational and Environmental Factors in Corporate Entrepreneurship

2.1.1 Individual factors related to corporate entrepreneurship

The identification of individual characteristics that foster CE is important for a number of reasons. The aim is that latent individual variables should be recognized that could be developed through a number of interventions, such as coaching, training and development. Much of the resent research on individual characteristics however has focused on the traits that distinguish entrepreneurs from the rest of the population (Brockhaus, 1982; Brockhaus, 1982; Wortman, 1986; Gartner, 1988).

Hornsby, et al. (1992) argue that there are distinctive characteristics that define potential entrepreneurial behaviour, these are risk-taking propensity, desire for autonomy, need for achievement, goal orientation, and internal locus of control. Although the suggested individual characteristics by Hornsby et al. (1992) are notions, with empirical basis in the CE literature, they nevertheless furnish useful guidelines to avoid incompatibility between the individual and the organisation. Hornsby et al. (1992) suggest that, though this suggested list of individual characteristics is not exhaustive, it is nevertheless important to understand these individual characteristics in order to match them with particular organisational entrepreneurial needs.

2.1.2 Individualism vs. collectivism

The fundamental argument of individualism is that the individual who champions a concept and overcomes internal and external obstacles is the single most important factor in CE (Souder, 1981). It has been a tradition in the writings of sociologists and social psychologists to conceptualise individualism-collectivism as a continuum (Hofstede, 1980). According to Morris and Kuratko (2002) individualism refers to a self-orientation and an emphasis on self-sufficiency and control. This orientation may or may not be consistent with group goals. The major thrust of collectivism is the subordination of personal interests to the goals of the group. In the collectivistic orientation group members feel personally responsible for the group product and are oriented towards sharing group rewards (Morris & Kuratko, 2002).

Morris et al. (1993, 1994) caution against completely abandoning the individual and embracing the collective in facilitating CE, in spite of the conventional wisdom to the contrary. It is argued that teams and groups "are invaluable in modern organisations, and play a critical role in accomplishing CE" (1994: 13). However, the authors maintain that the individuals matter, and must be given the incentive and autonomy to identify opportunities and champion innovative products and processes. As the authors put it "the key is to balance the need for individual initiative with the spirit of cooperation and group ownership of innovation" (1994: 13).

The role of individuals as opposed to groups in facilitating CE seems to be important (Morris, Avila & Allen, 1993; Morris, Davis & Allen, 1994). Morris et al. (1993) hypothesized that there is a curvilinear relationship between individualism-collectivism and CE, and that the greatest levels of CE can be achieved when there is a balance between the needs of the individual and the group. The fundamental argument advanced by these authors is that CE is highest in environments that maintain this individualism-collectivism balance, and deteriorates in the highly individualistic or collectivistic conditions.

2.1.3 Empowerment of individuals to become entrepreneurial and advance CE

Sundbo (1999) argues that individuals need to be empowered to become innovatively entrepreneurial. The author identifies three pre-conditions of successfully empowering employees to promote CE, namely double-loop, single-loop and deutero learning, described as follows:

(1) Double loop learning: the development and harnessing of entrepreneurial spirit and competency;

(2) Single loop learning: employees' development of entrepreneurial skills and ideas, guided by management with satisfactory and healthy exchange of ideas between parties; as well as

(3) Institutionalising of double and single loop learning as part of employees' tasks in order to establish a learning-oriented corporate entrepreneurial culture with flexible exchange and application of knowledge.

This last argument emphasises the importance of the relationships between individual and organisational factors in the advancement of a CE culture.

2.1.4 Organisational factors related to corporate entrepreneurship

Unless opportunities and events are perceived and acted upon by members of the organisations, entrepreneurship may not take place. Russell (2002) argues that entrepreneurial firms create mechanisms that focus the attention of organisational members on innovative opportunities and generate behaviours that support entrepreneurial venturing. The following organisational variables identified seem to be instrumental in the creation of attention to innovative opportunities and in generating entrepreneurial organisational behaviours: entrepreneurial strategy, organisational culture, organisational structure, resource availability, rewards systems, management support, and risk taking. These organisational characteristics and their relationship with CE are subsequently discussed.

2.1.4.1 Entrepreneurial Strategy

According to Russell (2002) the pursuit of an entrepreneurial strategy represents a policy decision to seek competitive advantage through innovation on a sustained basis. The process of strategizing entails the following:

(1) the design of an organisational context conducive to the autonomous generation of entrepreneurial initiatives. This requires the creation of structures and cultures that facilitate entrepreneurial behaviour;

(2) provision of a sense of overall direction for innovative initiatives through an entrepreneurial vision; and

(3) ensuring that promising ventures receive the necessary resources as they go through the uncertain development process (Mintzberg, 1987; Burgelman & Sayles, 1986).

2.1.4.2 Organisational Culture

Early writings on culture, define the behavioural context of the organisation as comprising a set of guiding beliefs and values that are defined by top management (Barnard, 1938). Culture is broadly defined as the way in which things are done in an organisation (Schein, 1999; Deal & Kennedy, 2000). Chung and Gibbons (1997) conceptualise corporate culture as a social structure that comprises two components that are central to CE, namely a superstructure that provides an ideology to which organisational participants can commit to, and a socio-structure that facilitates the emergence of social capital which provide a form of sustainable competitive advantage. According to these authors the term superstructure refers to the widely shared beliefs, values, and ideological tenets in the organisation. Ideologies are logically integrated sets of beliefs that integrate and bind individuals and that provide a shared meaning to the organisation.

Many authors have emphasized the critical role that corporate culture plays in the entrepreneurial processes (Ouchi, 1980; Deal & Kennedy, 1982; Deshpande & Webster, 1989;

Sackmann, 1992; Martin, 1992). Kanter (1985) has emphasised the fundamental role culture plays in motivating and shaping entrepreneurial behaviour in organisations. Culture emphasizes the socio-structural dimension that binds the organisation together, the social glue that knits the organisational members into a cohesive entrepreneurial entity. Chung and Gibbons (1997) aver that entrepreneurial behaviour in an organisation can only be effectively created and controlled through an appropriate corporate culture. These authors go on to argue that culture does not only shape CE but that it is a source of competitive advantage. The socio-structure enables organisational members to increase their knowledge of the manner in which technology, product markets and organisational dynamics interact to provide opportunities (Bogner & Thomas, 1994; Chung & Gibbons, 1997).

The following concepts relate to culture: diversity, trust, creativity and innovation.

Cultural diversity

Chung and Gibbons (1997) explain that what differentiates effective entrepreneurial organisations from the less effective ones is the ability to manage cultural diversity. This aspect of culture acknowledges the diversity that exists in the organisation, because different norms emerge within different groups (Schein, 1999). Chung and Gibbons (1997) reinforce this perspective by arguing that cultural values that encourage championing innovative new products, new processes, and the encouragement of experimentation, all provide vital information to organisational members about what is expected in the organisation. These authors cite Sony's culture, which is based on the ideology that celebrates and extols being different, as a powerful tool that fosters CE. The key to success for Sony, and to everything in business, science, and technology for that matter is never to follow the others. For Sony, stepping aside from the well-trodden path and differentiating from the average, is the cultural norm (Chung & Gibbons, 1997).

Morgan (1986) warns that if not properly monitored, culture can act as an intra-psychic prison. An intra-psychic prison disables learning by forcing organisational members to apply old solutions to future problems, which inversely hampers corporate entrepreneurship. Schein (1999) cautions that as the companies age, if they do not evolve, adapt, and change elements of their culture, they grow increasingly maladapted, and the culture becomes a serious constraint on

learning and change. As Schein puts it: "the organisation clings to whatever made it a success" (Schein, 1999: 13). Chung and Gibbons (1997) further argue that cultural norms paradoxically both facilitate and constrain entrepreneurial activities within the organisation. They constrain entrepreneurial activities through the establishment of normative limits on acceptable behaviour. Accordingly organisations should caution that normative limits should not be immutable but open to interpretation.

On the other hand Morris and Kuratko (2002) argue that firms that are successful tend to possess and foster strong cultures. These cultures are built around a set of core values that permeate every aspect of the organisation. The values are the lifeblood of the firm, creating standards and development. Entrepreneurship itself therefore becomes part of the organisational value system. It seems that though organisational culture can foster entrepreneurial behaviour, one should at the same time also be vigilant that it does not cause the contrary.

The Cultural Aspects of trust

According to Sathe (1985) a fundamental dilemma of a large organisation seeking to nurture for CE while maintaining corporate controls, could be managed if disciplined reporting systems are balanced with a strong entrepreneurial culture of mutual trust and open communication. This view is reinforced by Chung and Gibbons (1997) who argue that like formal contracts, corporate cultural norms act as a mechanism that undergirds the rational behaviour of individuals.

Chung and Gibbons (1997) aver that high levels of trust among organisational members have a positive influence on innovation through information exchange. Accordingly trust flourishes when information channels are open and strong norms of information sharing are prevalent (Coleman, 1988; Nonaka & Takeuchi, 1995; Garud & Nayyar, 1994).

The Cultural Aspects of Creativity and Innovation

The literature supports the strategic importance of creativity and innovation to keep intrapreneurial organisations healthy, viable and competitive (Guth & Ginsberg, 1990; Bartlett & Ghosal, 1993; Boisot & Child, 1998). Woodman, Sawyer and Griffin (1993) aver that

organisational culture, rewards, and resources are determinants of creative behaviour in organisations. In a similar vein, Amabile, Conti, Coon, Lazenby and Herron (1996) found that the perceived work environment influences the level of creativity in organisations.

As industries evolve under global market forces, the organisational ability of creative innovation has become critical to success. Establishing and nurturing intrapreneurial behaviour and practices so they become part of an organisation's culture and ethos can provide the opportunity to initiate renewal and create innovation (Robinson, 2001). In other words strategy should be managed to create a sustainable competitive advantage.

Russell and Russell (1992) have identified eight dimensions of culture that may be related to innovative intrapreneurial process. These are:

(1) value for innovation as a practice and as a source of competitive advantage,
(2) norms encouraging creativity among organisational members,
(3) norms encouraging search for innovative opportunities from external sources,
(4) norms that facilitate resource support for innovative ventures (championing norms),
(5) norms supporting information-sharing between individuals and groups regardless of organisational position,
(6) norms that promote tolerance for failure when creative ideas or projects are not successful,
(7) norms that encourage the open-minded consideration of new ideas and projects, and
(8) norms that support the implementation of innovations regardless of the individual or group's involvement in the development of the venture.

Subsequently Amabile et al. (1996) identified six stimulants and obstacles to creativity. The stimulants are work group support, challenging work, organisational encouragement, supervisory encouragement, freedom, and sufficient resources. The obstacles are workload pressure and organisational impediments.

Based on the work of Woodman et al. (1993) and Amabile et al. (1996) Chandler, Keller, & Lyon (2000) studied 429 employees in 23 small to medium-sized manufacturing firms in order to identify constructs associated with an innovative-supportive culture. The authors developed 28 items intended to measure employee perceptions of culture. Factor Analysis indicated a four-factor solution. The four-factor solution explained 54% of the total variance. Based on factor analysis, resulting factors were as follows: factor 1: innovative-supportive culture (α = .88.); factor 2: organisational reward systems (α = .87.); factor 3: management support (α = .83.); factor 4: workload pressure (α = .74.).

The Chandler et al.'s (2000) study indicate that an innovative-supportive culture significantly positively correlated with managerial support (r = .504; p > .01) and reward system support (r = .380; p > .01) and significantly correlated negatively with workload pressure (r = -.339; p > .01). In a Multiple Regression Analysis, reward system contributed significantly positively (p > .01) and workload pressure significantly negatively (p > .01) to the prediction of innovative supportive culture as dependent variable. Managerial support did however not enter the acceptable prediction level. The relationships between these variables are further investigated in the present study.

2.1.4.3 Structure

A supportive organisational structure is seen as pivotal to successful CE (Khandwalla, 1977; Sathe, 1985; Hisrich & Peters, 1998; Sykes & Block, 1989; Schuler, 1986; Brazeal, 1993; Hornsby et al., 1992, Barrett and Weinstein, 1998). Although structure stabilizes an organization when environmental conditions change, the organizational inertia associated with a particular form, can inhibit adaptive change and therefore, survival (Hannan & Freeman, 1984). According to Burgelman and Sayles (1986) organisational structure provides the administrative mechanism by which ideas are evaluated, chosen and implemented.

Structure therefore involves organisational boundaries. These are the boundaries real or imagined, which could prevent or encourage employees to looking at problems outside their own jobs. It seems that traditional rigid structural approaches of creating and implementing strategic

plans are inadequate to deliver intrapreneurial success (Miller & Friesen, 1982; Kanter, 1985; Pinchott, 1985; Kuratko & Hodgetts, 1998; Vozikis, Garry, Bruton, & Merikas, 1999; Zahra et al., 1999; Antoncic & Hisrich, 2001; Morris & Kuratko, 2002).

Formalized structures have been documented as negatively correlated with intrapreneurial innovation (Zaltman, Duncan & Holbek, 1978). A presumed reason for this finding is that in a formalized context, work-related behaviours are largely controlled by strict rules and procedures, allowing little opportunity for creativity and innovation. Informal structures, on the other hand, tend to be characterized by low emphasis on work rules and formal procedures, providing increased autonomy to experiment with innovative solutions and permitting relatively easy exchange of information across organisational boundaries (Zaltman, et al., 1973). A flexible structural design is likely to facilitate the openness and exchange of ideas and information among organisational participants that are required for the successful development of innovative intrapreneurial ventures (Kanter, 1985; Van de Ven & Poole, 1995). Chung and Gibbons (1997) argue that the creation of CE is not achieved through rules because it is largely spontaneous and cannot be planned - it is by its nature an inspired process.

Elongated organisational structures also tend to obstruct the identification of market opportunities, the pursuit of opportunities, risk taking and the implementation of effective marketplace moves (Morris & Kuratko, 2002). Further, hierarchies tend to foster top-down management and restrictive channels of communication. The outcome is frequently intransigence, which leads to lack of commitment to innovation and change at all levels of the organisation. Furthermore, as employees become more segmented and compartmentalized, frames of reference become quite narrow and constricted. The ability to integrate perspectives and methods across boundaries becomes stifled. In terms of the present study, flexibility in organisational forms plays a crucial role in facilitating CE. The volatile environment discussed earlier required that organizations respond with speed and flexibility to marketplace opportunities. Also, the dissemination of marketplace information requires flexibility in order to permeate cross-functional boundaries.

Hornsby et al. (1992) aver that in order to support intrapreneurial opportunities and avoid the limitations of rigid structural approaches, individuals must be encouraged to look at the organisation from a broad perspective. These authors argue that organisations should reduce dependence of narrow job descriptions and inflexible standards of performance. Organic structures in contrast to mechanistic ones, are much more flexible and therefore supportive of CE (Burns & Stalker, 1961; Khandwalla, 1977; Tornatzky, Eveland, Boylan, Herner, Johnson, Roitman & Schneider, 1983; Covin & Slevin 1989; Hornsby et al., 1992; Damanpour, 1991).

2.1.4.4 Organisational Resources

Organisational resources are broadly defined to include money, time, people, equipment, and competencies. Resources (which include time) and their availability constitute an important element in the facilitation of CE process, employees must perceive the availability of resources for innovative activities (Sathe, 1985; Schuler, 1986; Sykes & Block, 1989). Hornsby et al. (1992) aver that fostering new and innovative ideas require that individuals be afforded time to incubate these ideas. The workload of people must be moderated to allow people to work with others on long-term problem solving.

Organizational resources are an important variable to CE because, as Covin and Slevin (1991) point out, entrepreneurial ventures are resource-consuming activities and, therefore, a firm's ability to pursue innovation will be constrained by available resources. Moreover, since decentralized structure is associated with innovation through increased discretionary control over resources, it makes sense to include a variable that is related to the availability of those resources. Hornsby, Kuratko and Montagno (1999) argue, that one of the challenges facing the pursuit of CE as a strategy is resource deployment to support strategic entrepreneurial efforts. The challenge to organisations pursuing CE is to embed it within the corporate strategic framework of the organisation. This means that CE as a critical component of the organisation strategy will receive priority in terms of the allocation of resources. The resource view of strategy therefore holds internal resources of the organisation as a source of unique and inimitable competitive advantage (Twomey & Harris, 2000).

In terms of a resource-based perspective of strategy, CE is an organisational asset that is difficult to imitate (Barney, 1991, 1995). A resource view of strategy holds that rare and unique inimitable internal resources create sustainable competitive advantage. Twomey and Harris (2000) argue that while competitors may imitate technology, economies of scale and scope, and other resources traditionally used in strategy studies, complex social structures such as human resource systems, and workforce culture are difficult to copy.

Kraatz and Zajac (2001) argue that the organisations' resource endowments affect the propensity of the organisation for strategic change under turbulent conditions, which generally appear to necessitate it. Basing their work on current and classical research on the resource-based tradition and research on organisational learning and evolution, Selznick, Kraatz and Zajac (2001) reason that resources can affect the organisations' propensity to adapt their strategies in response to environmental change. Accordingly resources can also act as barriers. This view emphasizes how the role of a firm's accumulated stock may affect strategic change. The major thrust of this argument is that historically accumulated resources may disturb and misdirect the search for behaviours and organisational learning necessary for adaptation in turbulent environments. Kraatz and Zajac (2001) refer to this phenomenon as the competency trap. These authors argue that the competency trap may occur largely because of the general tendency of organisations to engage in "exploitation" (i.e. the use and development of things already known) at the expense of "exploration" (i.e. the pursuit of new knowledge). Because the returns from exploiting existing resources are generally more certain than those from exploration, the former often drives out the latter. Exploring new resources seems to be at the centre of CE.

The foregoing discussion indicates that resource availability is an essential organisational characteristic to the implementation of CE. This means that the ability of an organisation to provide resources and otherwise support new CE initiatives is crucial to the successful operationalisation of CE. Pierce and White (1999) argue that resource availability should be seen as the configuration of both internal and external resources on which the organisation depends for its survival. In the current study, corporate entrepreneurial resources, particularly time availability and rewards/reinforcement are examined for their potential relationship with variables such as market orientation, organisational flexibility and job satisfaction.

2.1.4.5 Organisational Reward Systems Supportive of CE

The literature on CE emphasizes that an effective reward system that spurs entrepreneurial activity must consider goals, feedback, stress individual responsibility, and results-based incentives (Kanter, 1985; Sathe, 1985; Barringer and Milkovich, 1998). The use of appropriate rewards can enhance and motivate employees' willingness to assume the risks associated with corporate entrepreneurial activity.

Organisational systems must provide rewards and recognition for creative work and performance accomplishments (Amabile et al. 1996). There is a burgeoning literature on organisational control systems such as pay-for-performance that could lead to innovative activity by employees. Paradoxically, while pay-for-performance may encourage in-role behaviour (Oliver & Anderson, 1995), it may also discourage behaviours not linked to specific rewards (Morrison, 1996). Hence, the reward system can have a significant impact on entrepreneurial activity, both because it can be a tool to increase such activity and because it can discourage innovative activity by rewarding other behaviours. Further, expectancy theory (Vroom, 1964) predicts that individual effort requires that the individual must believe that goal accomplishment will lead to a reward. Therefore, the perception that organisational systems support innovative activity seems to be an important component of individual motivation to engage in such activities.

2.1.4.6 Management Support

Management support refers to the willingness of managers to facilitate and promote entrepreneurial activity in the organisation (Quinn, 1985; Hisrich & Peters, 1986; MacMillan et al., 1986; Sykes & Block, 1989; Stevenson & Jarillo, 1990; Damanpour, 1991; Kuratko, Hornsby, & Montagno, 1993; Pearce, Kramer & Robbins, 1997, Hornsby et al. 1999). According to these theorists, support can assume many forms, including championing ideas, providing necessary resource or expertise, or institutionalising the entrepreneurial activity within the firm's systems and processes.

Barringer and Bluedorn (1999) and Zahra et al. (1999) indicate that the ability of the firm to increase its entrepreneurial behaviour is largely determined by the compatibility of its management practices with its entrepreneurial intentions. Some of these practices relate to leadership in the strategic management practices of the organisation (Covin & Slevin, 1991; Zahra, 1993; Herbert & Brazeal, 1998; Barringer & Bluedorn, 1999). Strategic leadership implies the facilitation of managers who commit to both incremental and radical innovations as strategically important to the competitiveness of the organisation and tactically important to its operations and processes (Kemelgor, 2002).

Entrepreneurial posture, dominant logic and bureaucracies seem to play an important role in management's influence on CE.

Entrepreneurial posture

Covin and Slevin (1991) coined the concept "entrepreneurial posture" to capture top management behaviours related to CE. Entrepreneurial posture is identified as comprising three components:

(1) strategic management's propensity to support risky ventures;
(2) the extent and frequency of product innovation; and
(3) the pioneering nature of management to engage in proactive competition with industry rivals.

Dominant logic

Managerial attitudes or the entrepreneurial posture reflect the dominant logic of the organisation. The notion of a dominant logic originates from Bettis and Prahalad (1995) and refers to the way in which managers conceptualise the business and make critical resource allocation decisions. It is implicated that every organisation has a dominant logic even if managers do not recognize or formally acknowledge it. The dominant logic of a company attempts to capture the prevailing mindset, and it drives the overall focus of the systems and routines in the company. Bettis and Prahalad (1995) indicate that the dominant logic formally or informally, consciously or unconsciously provides filters in the interpretation of information from

the environment, attenuates complexity and guides the strategies, systems and behaviour of the organisation. According to these authors, managers will often consider only information and intelligence that is believed to be relevant to the firm's prevailing dominant logic effecting behaviours in the organisation towards CE.

Morris and Kuratko (2002) argue that for a firm to achieve an entrepreneurial sustainable competitive advantage it must examine its dominant logic, as the crucial risk in dominant logic is its vulnerability to obsolescence. These authors argue that should a dominant logic be optimal for today's environment, it may be inappropriate for tomorrow's environment. In other words, the dominant logic tends to capture competitive advantage in the present and may be oblivious to future possibilities. Morris and Kuratko (2002) assert that the dominant logic must be periodically unlearned and the openers to these unlearning and de-learning processes should be an integral part of the organisation's culture. Routines and habits relevant to the prevailing dominant logic can inhibit the learning of new processes and operating methods.

Morris and Kuratko (2002) argue that a powerful tool for creating what they call a dynamic dominant logic, is to make entrepreneurship the basis upon which the organisation is conceptualised and resources are allocated. These authors further argue that the dominant logic and corporate entrepreneurship promote strategic agility, flexibility, creativity, and continuous innovation throughout the firm. The dominant logic also promotes opportunity identification, discovery of new sources of value, product and process innovation that lead to greater profitability. Morris and Kuratko (2002) embed the dominant logic within the cultural paradigm of the organisation and argue that a dynamic dominant logic can revitalize an entrepreneurial culture.

Bureaucracies

Miles and Snow (1978) assert that adherence to an outmoded strategy and bureaucratic structures create entrepreneurial problems. Bureaucracies have been with humanity since ancient times (Kieser, 1987). Bureaucracy's familiar forms include hierarchical control and authority relations, relatively fixed boundaries, and top down authority (Khandwalla, 1977; Galbraith & Nathans 1978; Mintzberg, 1988, 1979; Miles & Snow, 1978; Burgelman, 1983, Boisot & Child,

1998; Devanna & Tichy, 1990, Cummings & Worley, 2001; Child & McGrath, 2001). These authors have argued that the bureaucratic organisational forms are maladaptive and tend to stifle innovative behaviour.

Sharma (1999) avers that observers of innovation in organisations noted that the bureaucracies that govern large firms suppress both the creativity necessary to generate radically new ideas, and the initiative to embark on new ventures. This author goes on to say that mechanisms that facilitate predictability and order in existing operations smother the entrepreneurial flair indispensable for dealing with the unpredictable and the disorderly nature of the innovation process.

2.1.4.7 Risk-taking

Risk-taking involves tolerance for failure. It is important that employees perceive an environment that encourages calculated risk-taking while maintaining reasonable tolerance for failure (MacMillan et al., 1986; 1994).

Morris and Kuratko (2002) assert that in order to understand risk within the context of CE, it is important to appreciate its relationship with innovation. These authors go on to differentiate among four innovation types as follows:

- Discontinuous innovation: This involves breakthrough innovation and results in the development of products and services that address needs that have not yet emerged. The authors postulate that risk is highest with this type of innovation. The reason is that this form of innovation involves entry into uncharted waters, as the authors put it, it is movement into an area where no one has been. Consequently there is a high risk of failure, owing to improper market analysis or a possible mismatch of technology to market needs or inadequate design of marketing programmes. These authors go on to argue that sometimes the requisite infrastructure that supports the innovation is inadequate.

- Dynamically Continuous innovation: This involves the improvement over the existing solutions. Consequently, this form of innovation is not disruptive to the markets as the discontinuous innovation. This form of innovation is less risky in that it involves minor modifications to existing product offerings.

- Continuous innovation: This form of innovation involved incremental changes which tend to enhance the performance or functionality or existing products or services. Because new features are added to existing products, risk is minimal.

- Imitation innovation: This form of innovation involves copying, adapting or mimicking the innovations of other organizations. Morris and Kuratko (2002) argue that firms that pursue an imitation strategy incur high risks, principally because they tend to follow market leaders. Because of the speed involved in technological development firms pursuing the imitation strategies find it harder to catch up with more innovative companies.

In summary it can be argued that although corporate entrepreneurial organizations by definition tend to show risk propensity, the form of risk management strategies adopted by these organizations will, to a large degree, be determined by the nature of innovation strategies being pursued.

2.1.4.8 The relationship between organisational environment and the external environment

Both external and internal environmental conditions could either facilitate or constrain the emergence of corporate entrepreneurial ventures (Russell, 2002). These conditions also present information of intrapreneurial opportunities, which should be seized by members of entrepreneurial organisations. Russell (2002) argues that employees of effective entrepreneurial organisations tend to be sensitive to these events and perceive them as opportunities for pursuing innovative ventures. This author further argues that conversely, employees of less entrepreneurial firms tend not to notice these opportunities.

According to Russell (2002) there are three ways in which the entrepreneurial environment can be characterized, namely dynamic, heterogeneous and hostile:

Firstly, *dynamic* environments provide precipitating events in the environment. Dynamic events are defined by Zahra (1991) as events that tend to displace existing bases for competitive advantage and generate a search for innovative sources of competitive advantage (Khandwalla, 1977; Miller & Friesen, 1982, Kanter, 1985). Static environments, on the other hand tend to reinforce and maintain existing sources of competitive advantage thus providing few opportunities for innovative change (Miller & Friesen, 1982; Covin & Slevin, 1989; Zahra, 1991).

Secondly, environments can be characterized as *heterogeneous* (Zahra, 1991). These environments, associated with CE, are marked by multiple market segments with diverse customer needs and characteristics. Russell (2002) avers that this diversity provides expanded scope and multiple opportunities for innovation that entrepreneurial firms tend to exploit.

Thirdly and finally, environments can be characterized as *hostile* (Covin & Slevin, 1989; Zahra, 1993; Zahra & Covin, 1995). According to Russell (2002) these environments demonstrate high levels of uncertainty and vulnerability to external influences, probably inhibiting innovation.

From the foregoing discussion it is seen that although firms can pursue entrepreneurial ventures in all types of environments, the concentration will tend to be in dynamic, heterogeneous and hostile contexts (Miller & Friesen, 1982; Covin & Slevin, 1991). Dynamic and heterogeneous environments may provide more opportunities for entrepreneurial ventures to be exploited by entrepreneurial firms. Hostile environments necessitate strong incentives from firms to pursue innovation as a source of competitive advantage.

2.1.4.9 External environmental and corporate entrepreneurship

External environments constitute everything beyond the boundaries of organisations that can directly or indirectly affect organisational performance and outcomes. The external environment seems to play a major role in influencing corporate entrepreneurial behaviour (Covin & Slevin, 1991; Russell, 1992; Kemelgor, 2002). Covin and Slevin, (1991) argue that the external environment plays a pivotal role in corporate entrepreneurship theory and research, and that current findings suggest that the environment has a strong effect on entrepreneurial activity within the firm. The argument advanced in this study is that market orientation and flexibility influence the markets in which the organisation operates. As mentioned in the previous chapter, it is inconceivable to think of CE without linking it to the external environment.

The foregoing discussion on the organisational context indicates the complex nature of variables related to entrepreneurial behaviour in organisations. As late as 1991 research on CE was critiqued on the basis of weak theory development, lack of causal research and an excessive reliance on individual variables to explain what is essentially an organisational phenomenon (Wortman, 1997; Low & MacMillan, 1988; Guth & Ginsberg, 1990; Bygrave & Hofer, 1991). According to Hornsby and Naffziger (1992), the paucity of research in CE necessitates that further research be done to establish theoretical frameworks or models that explain how the CE process is created in organisations. Such conceptual frameworks help researchers to recognize the relationship among the multiple factors that possibly constitute CE, and thereby advance the quality of empirical and theoretical work in the field of CE (Shane & Venkataraman, 2000).

Consequently current models and theories of CE are reviewed in order to determine if there is consensus regarding important variables and their influence on entrepreneurial outcomes.

2.2 CE Theories

Owing to the embryonic state of intrapreneurial literature, much of the empirical work on CE has drawn material from entrepreneurship research (Hornsby & Naffziger, 1992). Contemporary theories and models of entrepreneurial behaviour emphasize the interaction

between an individual's personality and the environment (Endler, 1983; Martin, 1984; Gartner, 1988; Potkay & Allen, 1986). These theories include Gartner's (1988) conceptual framework for describing new venture creation, Birds' (1988) model of entrepreneurial intentions, Greenberger and Sexton's (1988) model of new venture creation and Bygrave's (1989) paradigm for entrepreneurship research. These theories are accordingly discussed.

2.2.1 The CE model of Guth and Ginsberg

Guth and Ginsberg (1990) developed a CE model based on their conceptualisation and definition of CE. These authors, as shown in chapter 1, conceive of CE as comprising two phenomena, namely (1) the birth of new businesses within existing organisations and (2) the transformation of organisations through renewal. Their model which depicts CE from a strategic management viewpoint is shown in figure 2.2

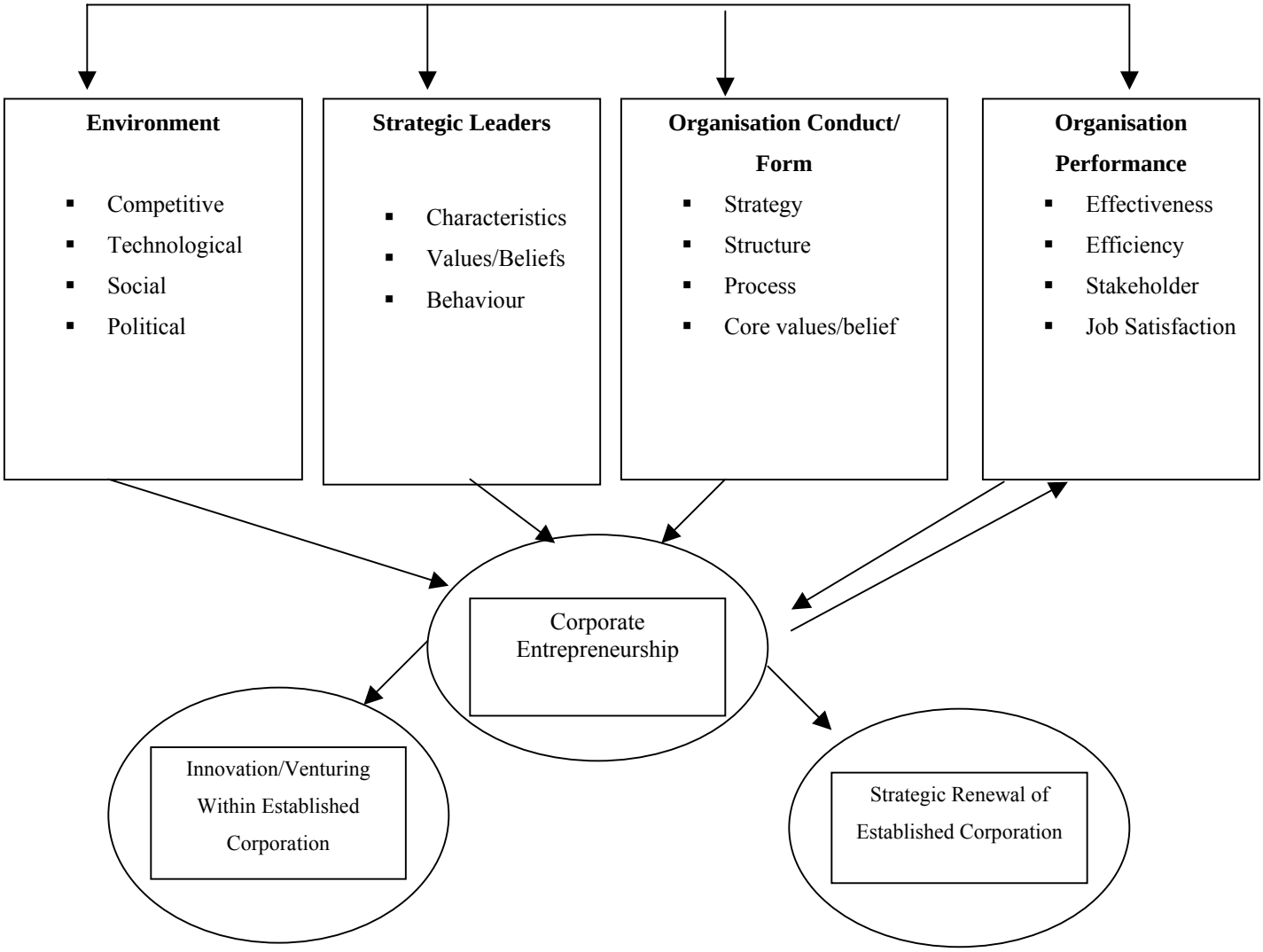

Figure 2.2 Conceptual Model for Corporate Entrepreneurship (Guth & Ginsberg, 1990)

The Guth and Ginsberg (1990) model breaks CE into the categories of innovation/venturing and strategic renewal. Environment, strategic leadership, organisational conduct/form and organisational performance are identified as antecedents of CE.

The current author argues from the above information that, although the Guth and Ginsberg (1990) model is meant to be generic, its drawback is that it does not recognize the reciprocal influences between the factors, except in the case of organisation performance. There is an unjustified assumption in this model that there is a one-way influence from the

environmental, leadership and organisational forms on the entrepreneurial activities, without acknowledging feedback loops that may be involved.

2.2.2 The CE model of Covin and Slevin

Covin and Slevin (1991) have suggested an integrative model that explains the association between a company's entrepreneurial posture and its environment, strategy, internal factors and organisational performance. Their model presents a less generic view of CE and focuses on Entrepreneurial Orientation (EO) or firm-level behaviour. Their model is shown in figure 2.2

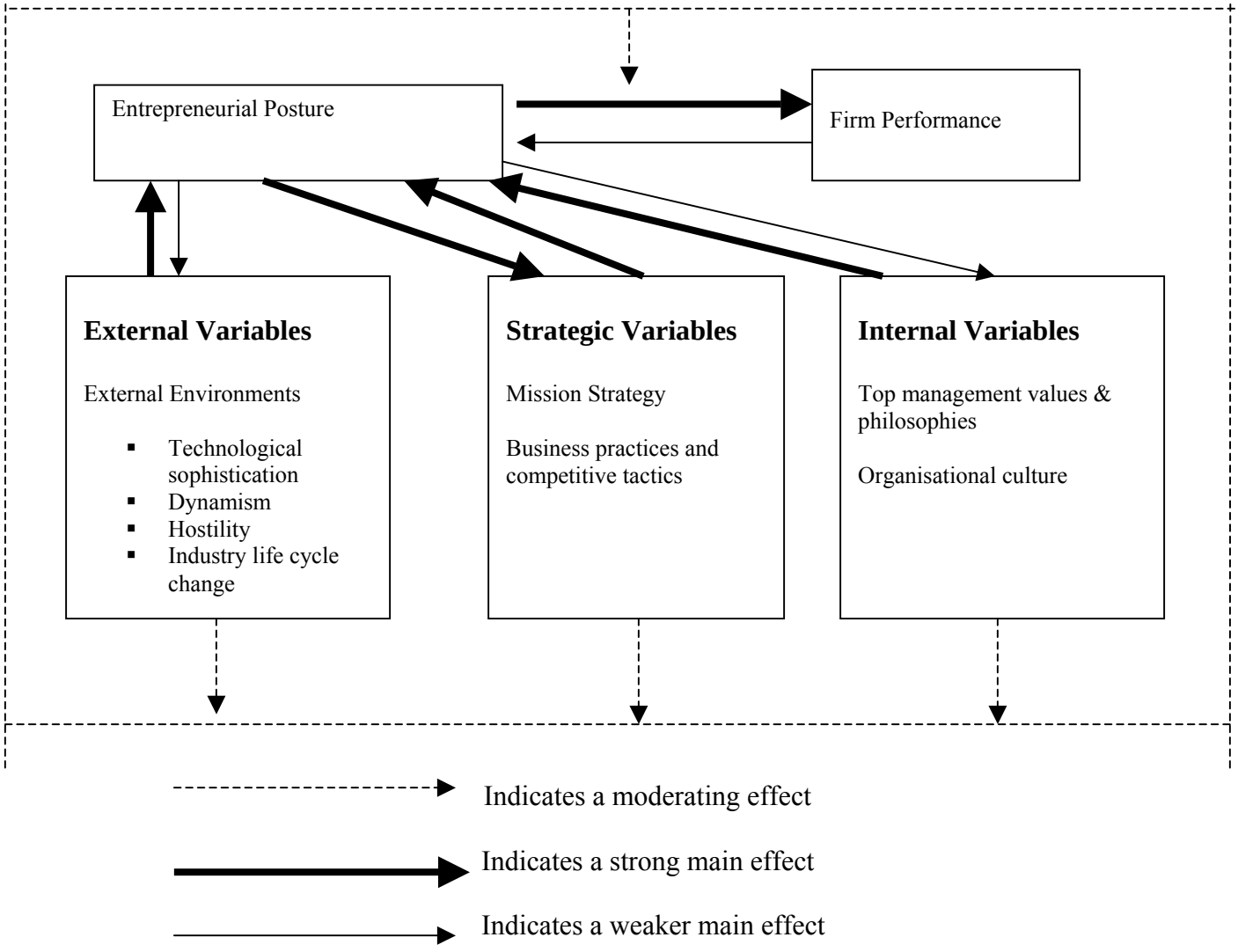

Figure 2.3 The Covin and Slevin Model for corporate entrepreneurship level of behaviour in organisations (Covin & Slevin, 1991)

The key features of the model are external environmental, strategic and internal variables, which lead to firm level behaviour. According to this model entrepreneurial orientation leads to the three categories of external environmental, strategic and internal variables although with a weaker effect, but has a stronger relationship with firm performance. In the reverse, firm performance has a weaker effect on entrepreneurial orientation. Another key feature of this model is that it indicates that the three categories of external environmental, strategic and internal variables have a moderating effect on the relationship between entrepreneurial orientation and firm performance.

Concerning the nature of entrepreneurial behaviour, Zahra (1993) criticises Covin and Slevin's (1991) model on the grounds that it does not clearly define what entrepreneurial behaviour is nor does it differentiate from constructs such as "intensity of behaviour", "formality of entrepreneurial activities", the "types of entrepreneurial activities undertaken by the firm" as well as the "duration of such efforts". This author argues that such constructs, although related, they are essentially distinct.

With regard to the locus of entrepreneurship, Zahra (1993) argues that CE occurs at multiple levels within a firm. Therefore Covin and Slevin's (1991) model should account for these multiple levels in their conceptualisation of the CE-performance relationship. Regarding redundancy in some constructs in the model, Zahra (1993) argues that antecedent conditions lack clarity. The author cites as an example, the relationship between technological sophistication and entrepreneurial posture. Zahra (1993) further criticises Covin and Slevin's (1991) model on the grounds that it fails to recognize the possibility that different entrepreneurial postures may influence different dimensions of performance quite differently and perhaps at different points in time.

2.2.3 The CE Model of Zahra

In summary, Zahra's (1993) revised model suggests a more parsimonious classification of the environment set than suggested by Covin and Slevin (1991) and eliminates the technological sophistication, which is encapsulated in environmental dynamism (see figure 2.4).

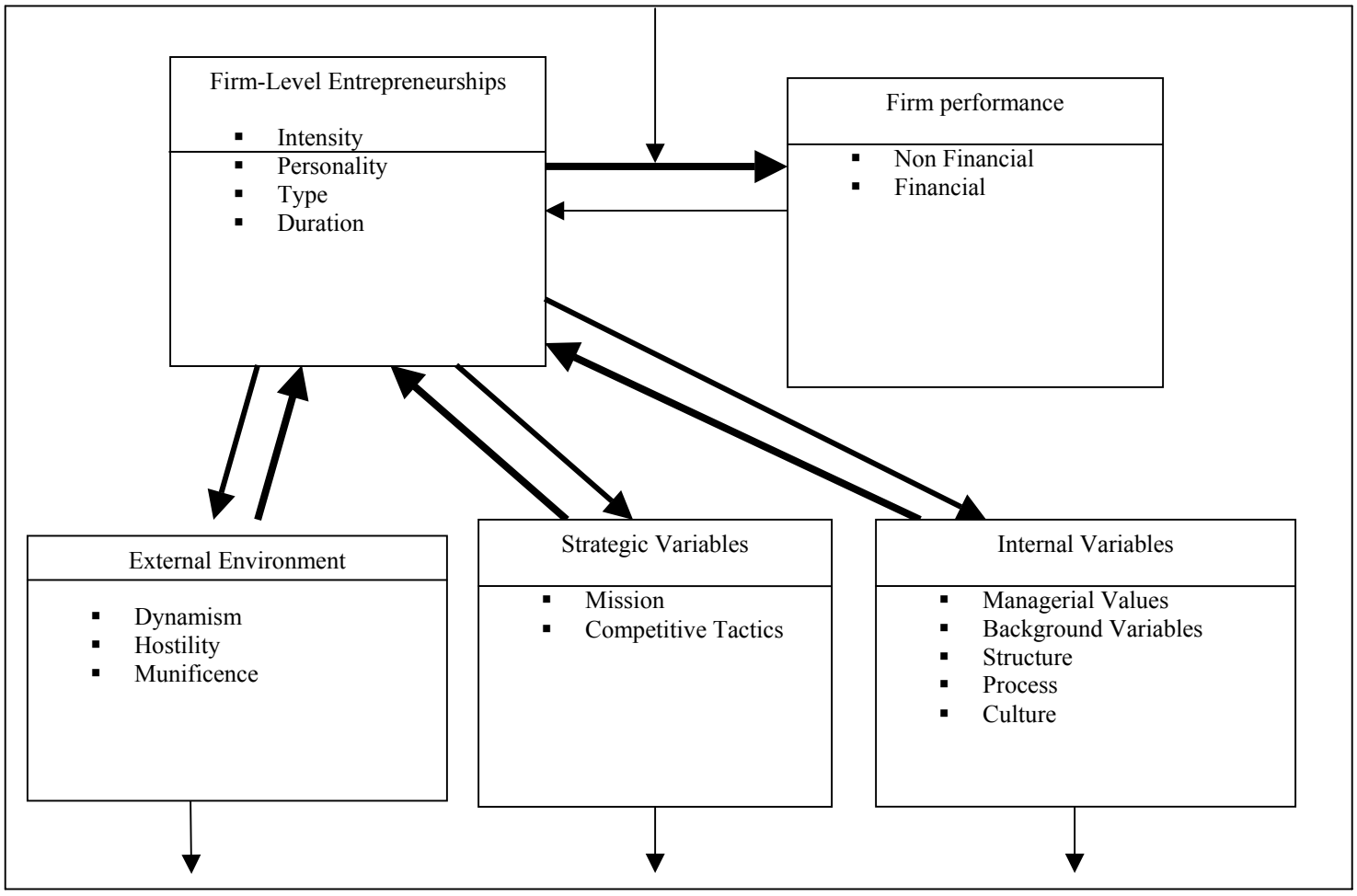

Figure 2.4 The Zahra (1993) revised conceptual framework of firm-level entrepreneurship

Zahra (1993) makes an additional construct "munificence" which refers to the abundance of opportunities for innovation in the industry. As argued before, this author recommends the use of an encompassing concept to cover aspects of the industry lifecycle. In defining entrepreneurial behaviour, Zahra (1993) emphasizes the need to consider domestic as well as international entrepreneurial activities. Finally, Zahra (1993) argues that managerial values and background,

organisational structure, managerial process and organisational culture should be considered in the development of CE models.

The present study has taken cognisance of the importance of a more parsimonious classification system and many of the variables mentioned by Zahra have been subsumed under more comprehensive categories such as management support for innovation, market orientation which as argued before, extends beyond the marketing function, flexibility which encompasses other variables other than just organisational structure.

2.2.4 The CE model of Lupkin and Dess

In comparison, Lumpkin and Dess (1996) present an alternative model for entrepreneurial orientation represented in figure 2.5 These authors describe entrepreneurial orientation in terms of the five dimensions (autonomy, innovativeness, risk taking proactiveness and competitive aggressiveness). Entrepreneurial Orientation, according to Lumpkin and Dess (1996) refers to the processes, practices, and decision-making activities that lead to a new entry. They state that a new entry is accomplished by entering new markets with new or existing goods and services. In this context a new entry is the idea that underlies the concept of CE. Key dimensions that characterize EO include a propensity to act autonomously, a willingness to innovate and take risks and a tendency to be aggressive toward competitors and proactive relative to marketplace opportunities (Lumpkin & Dess, 1996).

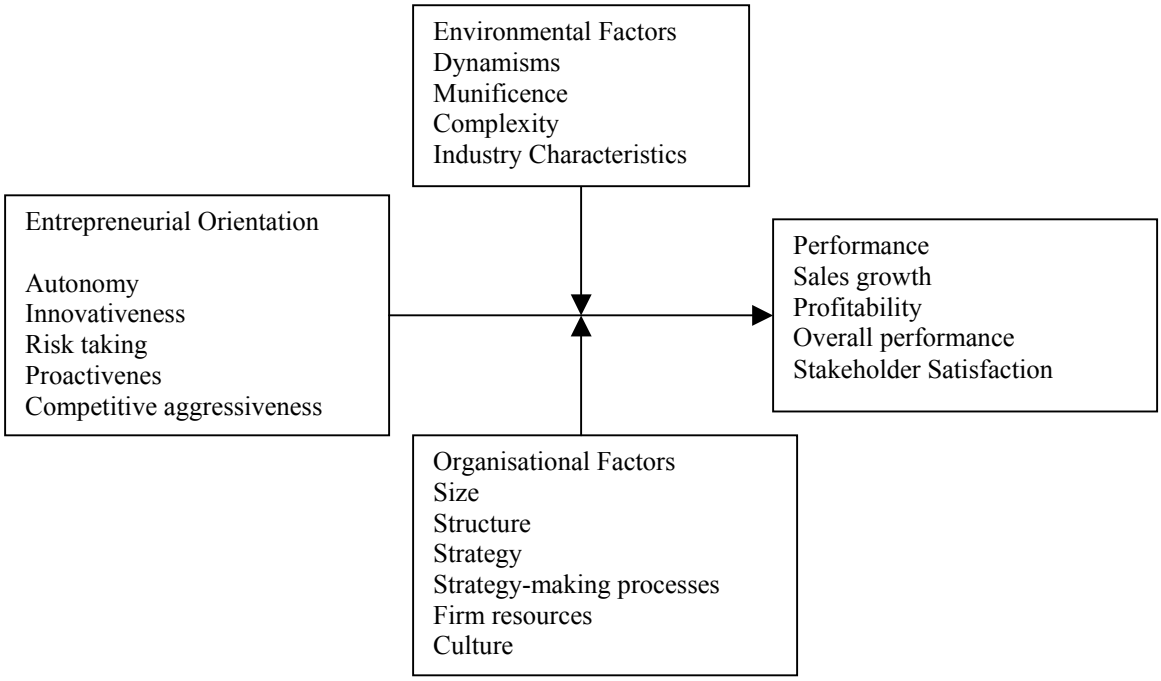

Figure 2.5 Conceptual model of the entrepreneurial orientation–performance relationship (Lumpkin & Dess, 1996)

The Lumpkin & Dess model (1996) differs from the Covin & Slevin (1991) model since it indicates that both environmental and organisational factors influence the relationship between entrepreneurial orientation and firm performance, yet there is no recognition that firm performance influences entrepreneurial orientation. This implies that the model presented by Lumpkin and Dess represents a static view of the firm with no feedback between performance, entrepreneurial orientation and the environment and organisational factors. The Covin and Slevin model incorporates feedback between the different relationships implying that entrepreneurial orientation itself is a dynamic concept.

2.2.5 The CE model of Barrett and Weinstein

Barrett and Weinstein (1998) designed the Corporate Entrepreneurship, Flexibility and Market Orientation (CEFMO) model in an effort to explicate the mission strategy of a business, depicting the relationships between CE, F, MO and business performance. In their model they

acknowledge the reciprocal influences between the different strategic constructs. The model is seen in figure 2.6.

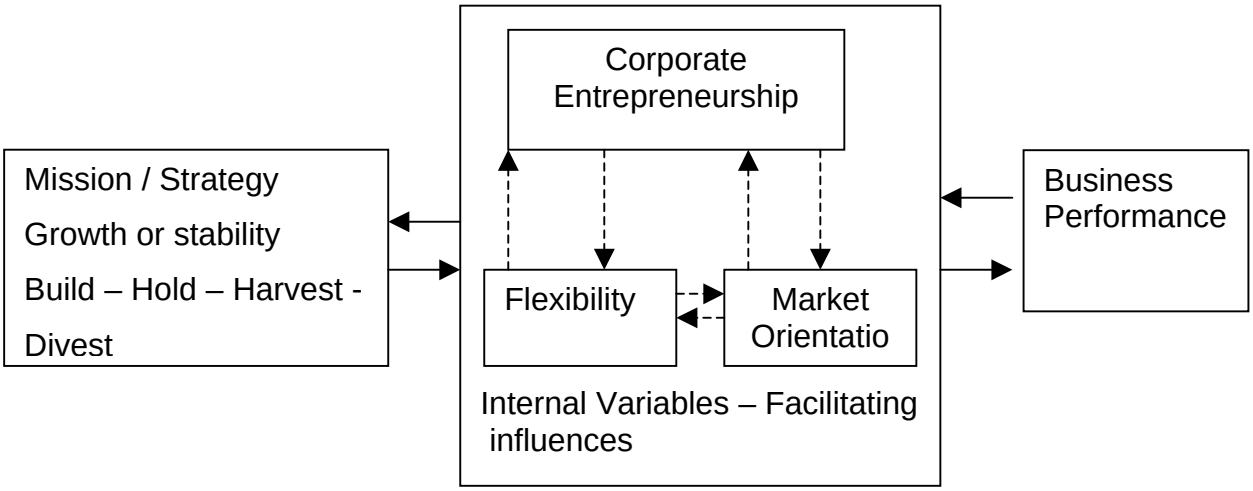

Figure 2.6 The CEFMO Model of Barrett and Weinstein (1998)

2.2.6 The CE model of Goosen, de Coning and Smit (2002)

Goosen, de Coning and Smit (2002) developed a CE model incorporating three components of CE that have been well documented in the literature. These are innovativeness, self-renewal and pro-activeness. The authors also included the component "new business venturing" from the work of Antoncic and Hisrich (2001). The final CE model with new features is shown in figure 2.7

Internal Variables – Facilitating influences

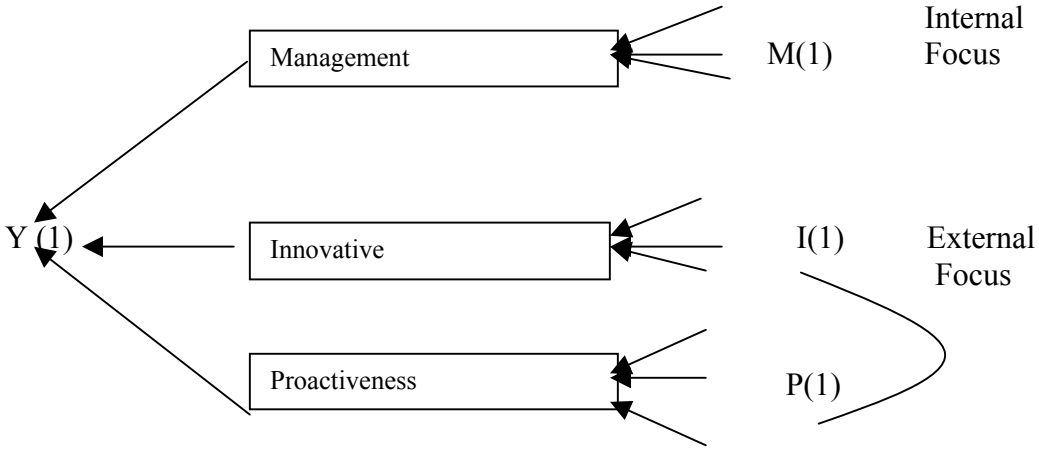

Figure 2.7 The development of a factor based instrument to measure CE (Goosen, de Coning & Smit, 2002)

In the model Y(1) is the level of CE; I(1) is the innovativeness factor; P(1) is the pro-activeness factor; and M(1) is the management factor. The Goosen, de Coning and Smit (2002) model is particularly germane to the present study. It has offered rich and new dimensions to the construct of CE. Although the literature on CE recognizes the importance of management support, the Goosen, et al. (2002) study has amplified on the CE construct by recognising nine related dimensions, namely management style, management orientation, communication, environment, structures, strategy, risk-taking, creativity and innovation, product innovativeness and proactiveness. The new additional dimensions add to the richness of the CE culture. Some of the aspects have not been captured in CE models developed before.

Barrett and Weinstein (1998) state that in order to survive in a global competitive economy, the combination of the following two key success factors need to be incorporated to assure viable corporate entrepreneurship, namely flexibility and market orientation. The constructs of flexibility and market orientation will consequently be discussed.

2.4 Market orientation

From the works of Slaver and Narver (1995), Kohli, et al. (1993), Barrett and Weinstein (1997, 1998) it can be seen that there is conceptual affinity between CE and market orientation

(MO). Barrett and Weinstein (1998) argue that market orientation is the direct linkage between marketing and corporate entrepreneurship and that it constitutes the basis for a sustainable competitive advantage.

McNamara (1972) sees the marketing concept as a business philosophy based upon a company-wide acceptance of the need for customer orientation, profit orientation, and recognition of the important role of marketing in communicating the needs of the market to all major corporate departments. The construct "market orientation" implies the generation of intelligence as a prerequisite for marketing (Kohli, et al. (1993). Kohli, et al. (1990); Slater and Narver (1995) Barrett and Weinstein (1998) argue that the concept "market orientation" extends beyond the customers verbalized needs and preferences in that it includes an analysis of exogenous factors that influence those needs and preferences. Further, market intelligence pertains not just to current needs but to future needs as well. Market oriented organisations anticipate needs of customers and take initial steps to meet them. This futuristic orientation necessitates proactiveness and innovativeness, which are salient features of an entrepreneurial corporate culture.

Kohli, et al. (1993) conducted an empirical investigation, with the purpose of developing a theoretical framework for understanding the implementation of the marketing concept. The authors interviewed 62 managers in four US cities. Since the purpose of the study was theory construction, the sample included marketing as well as non-marketing managers in industrial/consumer and service industries. A total of 47 organizations comprising large and small organisations were included in the sample. In addition to managers, 10 business academics at two large US universities were interviewed. The purpose of these interviews was to gain insights that might not emerge from the literature review and field interviews.

This study of Kohli et al. (1990) indicates three themes that underpin the marketing concept. These are (1) customer focus (2) coordinated marketing and (3) profitability.

- *Customer Focus:* Customer focus is the central element of a market orientation. Being customer oriented means obtaining information from customers about their needs, and

preferences. It also involves taking action based on market intelligence, not based on verbalized customer opinions alone. According to Kohli et al. (1990) market intelligence is a broader concept in that it includes consideration of exogenous factors such as competition and regulation and current as well as future needs of customers.

- *Coordinated Marketing:* This concept extends beyond the marketing function, that is, market orientation is not the sole responsibility of just the marketing department. A variety of departments must be cognizant of customer needs, share information and be responsive to these needs.

- *Profitability*: Profitability is not viewed as an integral component of only market orientation, as various departments should be engaged in activities designed to meet select customer needs. Instead, profitability should rather be seen as a consequence of a market orientation. According to these authors, this finding is consistent with Levitt's (1969) strong objection to viewing profitability as part of only market orientation.

Kohli et al. (1990) conclude from the literature on market orientation over the last 35 years, that though the marketing concept is a cornerstone of the marketing discipline, very little attention has been given to its implementation. According to these authors, the marketing concept is essentially a business philosophy, an ideal or a policy statement. The business philosophy should be contrasted with its implementation reflected in the activities and behaviours of an organisation. Accordingly, these authors aver that market orientation is the implementation of the marketing concept. A market-oriented organisation is therefore one in which actions are consistent with the marketing concept.

Market orientation therefore refers to the organisation wide generation, dissemination and responsiveness to market intelligence. Basing their arguments on the work of Shapiro (1988), Kohli et al. (1990) argue that the label "market orientation" is preferable to "market intelligence" for three reasons, namely (1) it clarifies that the construct is not exclusively a concern of the marketing function; rather, a variety of departments participate in generating market intelligence,

disseminating it, and taking actions in response to it, (2) the label "market orientation" is less politically charged in that it does not inflate the importance of the marketing function in the organisation. These authors argue that the label removes the construct from the province of the marketing department and makes it the responsibility of all departments in the organisation. Consequently market orientation is likely to be embraced by non-marketing functions, (3) the label focuses attention on markets and the different strategic business units of a corporation are likely to be market oriented to different degrees.

Market orientation is the responsiveness to market intelligence. It is not enough just to generate and disseminate intelligence. Equally important is to respond to market need (Kohli et al., 1990; Kohli, et al. (1993). Responsiveness is the action taken in response to intelligence that is generated and disseminated. Kohli et al. (1990) argue that market orientation focuses on specific activities rather than on philosophical issues. As such it facilitates the operationalisation of the marketing concept. These authors go on to say that it is more appropriate to view a market orientation as a continuous rather than a dichotomous either-or construct. Consequently it is important to recognize that there is no absolute in the description of this construct, there are many shades of grey. What this means is that organisations differ in the extent to which they generate intelligence, disseminate it internally, and take action based on this intelligence. Consequently it is important to conceptualise the market orientation of an organisation as one of degree, on a continuum, rather than as being present or absent. According to Kohli et al. (1990) this conceptualisation facilitates measurement by avoiding difficulties of asking respondents whether or not their organisation is market oriented.

Responding to a market need requires the participation of virtually all departments in an organisation. Respondents to the study by Kohli et al. (1990) noted that for an organisation to adapt to market needs, market intelligence must be communicated, disseminated, and perhaps even sold to relevant departments. Kohli et al. (1990) emphasize the educational role of intelligence dissemination and the fruitful cross-pollination of ideas that it facilitates. Although a formal intelligence dissemination is important, respondents to the Kohli et al. (1990) study indicated that the informal "hall talk" is an extremely powerful tool for keeping employees tuned to customers and their needs.

From the foregoing discussion it is clear that marketing orientation flourishes in an organisation that fosters a corporate entrepreneurial culture of intelligence generation. Further, intelligence generation is not the exclusive responsibility of a marketing department. Rather, market intelligence is generated collectively by individuals and departments throughout an organisation. Kohli et al. (1990) suggest that mechanism should be in place for intelligence generated at one location to be disseminated effectively to other parts of an organisation. Flexibility in the organisation's architecture and boundarylessness would be key factors that facilitate intra-organisational dissemination of information.

In their subsequent work, Slater and Narver (1995) aver that appropriate organisational processes coupled with an entrepreneurial spirit are essential for an effective market orientation. Barrett and Weinstein (1997) subsequently linked corporate entrepreneurship to the marketing mix response elements of product, place and promotion. These authors maintain that there is a definite relationship between the dimension of corporate entrepreneurship and the components of the market orientation with respect to being:

- Proactive in obtaining intelligence about customers needs and the competition
- Innovative by recombining resources
- Able to implement the strategic response, which entails some degree of risk and uncertainty.

2.4.1 External Task environment and internally enacted environment in market orientation

Cummings and Worley (2001) differentiate between the external task environment and the internal enacted environment concerning market orientation. The task environment consists of external agents that directly affect the organisation such, as suppliers, customers, regulators and competitors. These agents interact directly with the organisation and can affect goal achievements. The enacted environment consists of the organisation's internal perceptions and representation of its task environment.

Cummings and Worley (2001) indicate that on the basis of this observation, it can be argued that the enacted environment can determine the choice of organisational responses. The task environment, however, can determine whether those responses are successful or ineffective. The implication is that both the enacted and task environments can potentially shape the market orientation and flexibility of the organisation. The relationship between external task environment and the internal enacted environment are accordingly discussed under environmental vo1atility and opportunity recognition as a function of internal organisational variables.

2.4.2 Environmental volatility and market orientation

The concept of environmental volatility has been a central construct in the strategy literature ever since organisational theorists started advocating the contingency theory (Lawrence & Lorsch, 1967; Thompson, 1967) and open systems approaches (Child, 1972; Kast & Rosenaweig, 1979) in the studying of organisations. Environmental volatility is generally viewed as an external phenomenon that affects the internal working and the adaptive capability of the organisation (Kohli et al., 1990). However, the present study argues that volatility can also be caused by changes within the organisation. Over the years researchers have identified the factors of instability (Emery & Trist, 1965; Tung, 1979), stability (Hitt, Nixon, Hoskinson & Kockhar, 1999), dynamism (Duncan, 1972; Miller & Friesen, 1983), variability (Child, 1972; Wholey & Britain, 1989), turbulence (Aldrich, 1972), discontinuity (Bourgeois, 1980) and environmental change (Jurkovich, 1974) as aspects of volatility. As argued before, an external environmental orientation of CE is critical in aligning the organisation with the entrepreneurial milieu and in coping with volatility. The factors associated with volatility are illustrated in figure 2.8

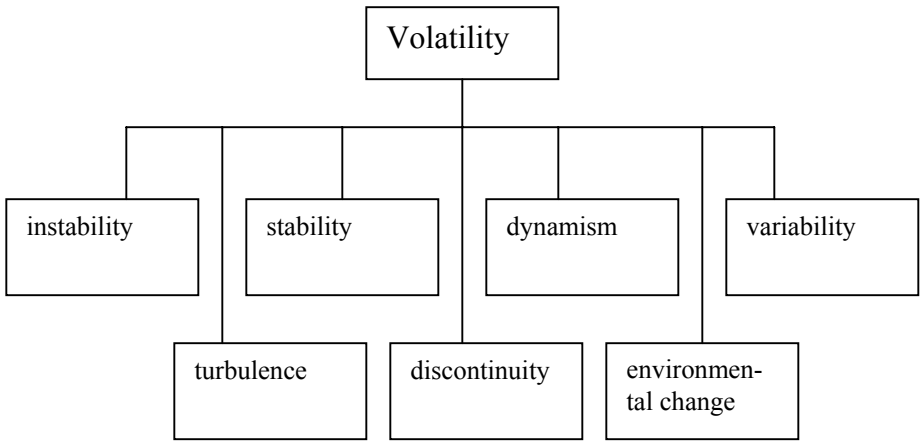

Figure 2.8 Factors associated with volatility in organisations

The central argument advanced in the present study is that the rapid change in the environment and the diffusion of technology, along with substantial competition in domestic and international markets, has placed increasing emphasis on the ability of organizations to innovate and introduce new innovations into the marketplace.

2.4.3 Antecedents of market orientation

Antecedents to a market orientation refer to organisational factors that enhance or impede the implementation of the business philosophy represented by the marketing concept. According to Kohli et al. (1990) there are three hierarchically ordered categories of antecedents. These are individual managerial, inter-group and organisation contextual factors.

2.4.3.1 Individual managerial factors

Research by Kohli et al. (1990) has indicated that senior managers have a powerful influence in fostering a market orientation. Webster (1988) avers that a market orientation originated with top management and that customer oriented values and beliefs are uniquely the responsibility of top management. Felton (1959) likewise, asserts that the most important element of a market orientation is an appropriate state of mind, and that it is attainable only if the board of directors, chief executives and top-echelon executives appreciate the need to develop this

marketing state of mind. In other words the commitment of the leadership of an organisation to a market orientation is an essential prerequisite. One of the top key responsibilities of the top leadership of the organisation is to foster an entrepreneurial culture (Hornsby, et al., 1999). It therefore follows that by supporting a corporate entrepreneurial culture, senior management, ipso facto, foster a market orientation. It also follows that by being committed to a market orientation, the leadership must clearly communicate its commitment to all concerned in the organisation.

In summary it can be argued that because market orientation involves being responsive to a changing environment, or to changing customer needs with innovative offerings it can be viewed as a reflection of a corporate entrepreneurial culture. It can therefore be argued that market orientation will flourish in an organisational environment that pursues corporate entrepreneurship as a strategic thrust.

2.4.3.2 Inter group/departmental dynamics

Interdepartmental dynamics refer to the formal and informal interactions and relationships among organisational departments. Ruekert and Walker (1987) suggest that interdepartmental conflict, which often is triggered by departments being more important and powerful, may be detrimental to the implementation of the marketing concept. Kohli et al. (1990) argue that interdepartmental conflict tends to lower the market orientation of an organisation. It is further argued that interdepartmental conflict appears to inhibit market intelligence dissemination, an integral component of a market orientation. Additionally unproductive and/or unresolved conflict among departments is likely to inhibit and dilute concerted responses by departments to market needs, also a component of market orientation.

From the foregoing discussion it seems that unproductive interdepartmental conflict is the antithesis of an entrepreneurial culture, which by its nature seeks to promote and foster interdepartmental cohesiveness. However, if properly managed, Kohli et al. (1990) argue that conflict can lead to further creativity. These authors argue that interdepartmental connectedness enhances the development of a vigorous market orientation. Interdepartmental connectedness refers to the degree of formal and informal direct contact among employees across departments.

Interdepartmental connectedness facilitates communication across departments and supports the dissemination and sharing of market intelligence (Kohli et al.1990).

2.4.3.3 Factors in the organizational context

2.4.3.3.1 Concern for 'others' ideas

"Concern for others' ideas" refers to openness and receptivity to the suggestions and proposals of other individuals and groups. Agyris (1966) argues that low levels of concern for others' ideas are related directly to restricted information flows, distrust, and antagonism, which result in ineffective group processes. It is argued that low levels of concern for the ideas of others, impede the dissemination of market intelligence across departments. Since corporate entrepreneurship by its nature involves, inter alia, participative decision-making (Jennings & Lumpkin, 1989) collaborative efforts (Covin & Miles, 1999) and initiatives from below (Vesper, 1984) it follows that low levels of concern for others' ideas will stifle corporate entrepreneurial efforts, and therefore impact adversely on the strategic change of the organisation.

2.4.3.3.2 Structural forms

As argued in the introductory chapter of this report, structural characteristics of an organisation can influence its market orientation and possibly influence the functioning of CE. Stampfl (1987) argues that greater formalization and centralization make organisations less adaptive to market place and environmental changes. Formalization is the degree to which rules define roles, authority relations, communications, norms and sanctions, and procedures (Daft, 2001). Centralization is defined as the delegation of decision-making authority throughout an organisation and the extent of participation by organisational members in decision-making (Daft, 2001). Greater formalization and centralization have been found to be inversely related to information utilization (Deshpande & Zaltman, 1982; Daft, 2001; Robbins, 2001). Information utilization corresponds to being responsive to market intelligence.

2.4.4 Consequences of market orientation

According to the findings of a study by Kohli, et al. (1990), a market orientation facilitates clarity of focus and vision in an organisation's strategy. It also provides a unifying focus for the efforts and projects of individuals and departments within the organisation, thereby leading to superior performance. In terms of the Kohli, et al.(1990) study, market orientation was perceived to lead to positive consequences, such as return on investment, profits, sales volume, market share and sales growth. It is further anticipated that a market orientation provides psychological and social benefits to employees. According to these authors, several respondents noted that a market orientation leads to a sense of pride in belonging to an organisation in which all departments and individuals work toward the common goal of serving customers. Accomplishing this objective results in employees sharing a feeling of worthwhile contribution, as well as higher levels of job satisfaction and commitment to the organisation. It is argued that market orientation could lead to higher job satisfaction of employees.

2.3 Organisational flexibility

The term "organisational flexibility" has been the subject of considerable research over the last decade. Earlier studies on the subject tended to concentrate on the definition of various components of flexibility (McInnes, 1988; Blyton, 1991) while later studies focused on the relationships between organisational flexibility and other variables (Shephard, Clifton & Kruse 1956; Greiner, Giles & Belanger, 1997). In order to survive the turbulent business conditions many organisations have had to seek more effective methods for rapidly adjusting to new and highly unfamiliar environments (Lansley, 1983; Dess et al., 1999). The need for flexibility, an ability to realign existing resources to meet new demands, is accepted by most organisations, but for many the means for achieving flexibility remain elusive (Lansley, 1983).

Product, process and volume flexibility is of importance in organizational elasticity (DeMeyer et al. 1989). Product flexibility addresses the firm's ability to (1) handle non-standard orders to meet special customer specifications and (2) to produce products characterized by numerous features, options, sizes, and/or colours. Process flexibility (product mix flexibility) relates to the firm's ability to produce small quantities of products cost efficiently so that changes

in the product mix are easy to accommodate. Tangential to these two types of flexibility, is volume flexibility relating to the firm's ability to adjust in order to accelerate or decelerate production in response to changes in customer demand. Chaganti and Mahajan (1989) identified product scope as the relative breadth of the firm's product line that includes product, process volume flexibility.

Pasmore (1994) asserts that when the business environment experiences rapid change, responding to complex changes require complex responses, which in turn require a great deal of flexibility. This author goes on to argue that in a competitive environment, flexibility becomes the source of competitive advantage, as the company's products, services and ways of doing business evolve more quickly than the competitions'. Pasmore (1994) argues that the organisation, only by virtue of its ability to be flexible and adapt, becomes an industry leader and remains in a leadership position.

2.3.1 Organizational forms and their relationship with flexibility

Dess, et al. (1999) raise the question whether contemporary organisational forms are always more compatible with corporate entrepreneurship than traditional structures. Citing a number of restructuring activities inhibiting flexibility in organisations, these authors argue that traditional organisational models built around rigid hierarchies and clearly defined boundaries are poorly suited for today's entrepreneurial organisations. These authors criticize such models with their inherent bureaucracies as tending to limit flexibility and stifle communication.

According to Devanna and Tichy (1990) the concept of "boundarylessness" is centred on a deliberate effort to improve flexibility and replace the boundaries delineated in the traditional model of organisations with boundaries that are more porous and permeable. The emphasis on clearly defined boundaries tends to limit flexibility and suffocate communication. Dess et al. (1999) suggest that in order to overcome the rigidity of hierarchy-driven organisational forms, firms should embrace the concept of "boundarylessness" by adopting innovative organisational compositions.

Dess et al. (1999) posit three types of organisation designs that reduce boundaries and improve flexibility. These are the *modular* type, the *virtual* type, and the *barrier-free* type. The modular and virtual types are ideal for reducing boundaries between firms (external). The barrier-free type is ideal for reducing all boundaries inside and outside organisations. According to these authors, these structural types may be used in a variety of combinations depending on the organisation's context and style.

The *modular design* improves flexibility by focussing on the core functional activities and outsources its component and business services requirements to outside specialists (Dess, et al., 1999). This design offers the dual advantages of reduced overall costs and improved flexibility by contracting with service providers who possess superior talent and resources, reducing inventory carrying costs, and avoiding excessive reliance on rapidly changing technologies. What this means is that modularity permits a company to concentrate on its distinctive competencies while gathering efficiencies from other firms that are concentrating on their respective areas of expertise. Dess et al. (1999) aver that in its purest form, the modular structure allows a company to become an entrepreneurial hub, with full strategic control, surrounded by other entrepreneurial firms.

The *virtual* design improves flexibility in companies that are part of a continually evolving network of independent businesses. The virtual network comprises of a wide array of suppliers, customers and even competitors who share, skills, costs and access to each other's markets. In contrast to the modular type that retains full strategic control, the virtual company is characterized by alliances in which participants share responsibilities, relinquish part of their strategic control and accept independent destinies. This arrangement allows companies in the network to exploit complementary skills to achieve common objectives and gain access to more capabilities than they currently possess. Dess et al. (1999) argue that flexibility of the virtual firm particularly enhances innovation due to the access, technology and know-how of other network participants.

The *barrier-free* design advances flexibility, based on its philosophy that of management's willingness to seek closer integration and coordination, both within the

organisation and with its suppliers, customers and other closely involved external stakeholders, by encouraging interdivisional coordination and resource sharing (Dess et al., 1999). Dess et al. (1999) argue that the internal structures of barrier-free organisations are often characterized by fluid, ambiguous and deliberately ill-designed tasks and roles. Flexibility is enhanced because these designs have fewer layers of management; smaller-scale business units; advocate the creation of process teams and interdisciplinary work groups; empower first-line supervisors, personnel, and non-managerial staff; open communication vertically and laterally; as well as emphasise accountability for results rather than an emphasis on activity.

2.3.2 The relationship between rules/regulations and flexibility

According to Ng (2001) flexibility requires fewer rules and regulations so that managers have more discretion in hiring and laying off people (numerical flexibility); assigning people to different tasks (functional flexibility); and paying employees (financial flexibility). Ng (2001) decries the fact that the literature on organisational flexibility has limited itself mainly to those rules restricting managerial freedom and that it paid scant attention to rules impinging on how employees do their work. This author argues that from the employee's perspective, increasing organisational flexibility (that, is reducing rules on managers) weakens job security, pay stability and protection against arbitrary decisions by management. In contrast, reduced rules enhance employee's autonomy and control over their day-to-day activities. Contemporary managerial practices make the absolute distinction between managers and employees obsolete. Therefore, Ng's (2001) arguments may not necessarily apply to contemporary organizations.

The evidence seems to be that the conversion of bureaucratic organisations to flexible and efficient designs/forms, accommodating rules and regulations, goes a long way in improving business performance (Kohli, Ajay & Bernard, 1990; Hornsby et al. 1999) and organisational renewal (Guth & Ginsberg, 1990).

Pervaiz, Hardaker and Carpenter (1996) warn that flexibility in the organisation alone does not guarantee a competitive advantage, but that the optimisation thereof has to occur holistically on all functional levels of the organisation. The qualitative study by Jabłecka (2001)

is a practical example of how flexibility in an organisation with a visionary strategy, by an in depth market assessment can lead to a success narrative of an innovative competitive advantage of a company. Market Orientation, therefore seems to be the next important factor to investigate in the CE, FL association.

2.5 Job satisfaction

As shown in Chapter 1, job satisfaction is defined by Weiss, England and Lofquist (1967, p.13) "as the actual satisfaction of the individual with intrinsic and extrinsic reinforcers" concerned with his/her job. Job Satisfaction is also seen as the summation between what an individual expects/wants from a job on the one hand, and what is offered by the job on the other hand (Locke, 1969). It can be seen as an attitudinal (and affective) response to one's job (McCormick & Ilgen, 1985). The job itself seldom serves as a unitary attitude object. The attitude, in this case satisfaction, that the individual associates with his or her job is really the degree of satisfaction with a number of different dimensions of a job (McCormick & Ilgen, 1985). These views relate to the Hackman and Oldham (1980) argument that job satisfaction refers to the individuals' attitude toward specific facets of work. Schultz and Schultz (1994) however indicate that positive and negative feelings of job satisfaction develop from such a variety of work related factors that can range from a sense of fulfilment with daily activities to the availability of parking.

2.5.1 Possible theories underlying job satisfaction

Some prominent theories are employed in the discussion to describe the phenomenon of job satisfaction:

2.5.1.1 Need Theories

The earliest application of the approach to understanding job satisfaction involved the concept of needs. Need theories were developed primarily to explain motivation (Furnham, 1992;

Luthans, 1998). Murray's (1938) manifest needs theory assumes that different people may be motivated by, or satisfied with, different conditions. The central thrust is that workers continually compare the current status of their needs to the level of need fulfilment that they desire from their jobs. Consequently those workers who are high in need achievement are likely to be more satisfied when they are solving problems and successfully accomplishing their job tasks. In contrast, those workers who are high in need for affiliation will probably be most satisfied by maintaining social relationships with their co-workers. When needs are unfulfilled, an unpleasant state of tension results and hence workers are not likely to experience job satisfaction. Fulfilment of the need eliminates the tension, thereby allowing people to feel satisfied.

Murray's (1938) study has important implications for the present study. The theory highlights the importance of conditions that foster problem solving and task accomplishment for satisfying employees who have a high need for achievement. An analysis of the definition of CE adopted in the present study indicates that problem solving and task accomplishment are salient features of CE. In CE problem solving manifests itself through, amongst other things, innovative thinking and behaviour. These characteristics are regarded as important for entrepreneurial behaviour (Schumpeter, 1934; Kanter, 1985; Pinchot, 1985; Zahra, 1995, 1996).

McClelland (1962) has written extensively on the need for achievement. From the works of McClelland (1962) has emerged a clear profile of the high achiever. The specific characteristics of the high achiever can be summarized as follows:

- Risk-taking: Taking moderate risks is the single most descriptive characteristic of the person possessing a high need for achievement.
- Need for immediate feedback: Closely linked to high achievers' taking moderate risks, is their desire for immediate feedback. People with a high need for achievement tend to prefer activities that provide immediate and precise feedback information on how they are progressing toward a goal (Luthans, 1998).
- Satisfaction with accomplishments: High achievers find accomplishing a task intrinsically satisfying in and of itself. Luthans (1998) argues that these people do not expect or necessarily want the accompanying material rewards.

- Preoccupation with the task: Once they have selected a goal, high achievers tend to be totally engrossed in the task until it has been completed.

Herzberg, Mausner and Snyderman (1959) distinguished between hygiene and motivator needs. Accordingly hygiene needs, are influenced by the physical and psychological conditions in which people work. Motivator needs are described as being very similar to the higher-order needs in Maslow's (1954) need hierarchy theory. Herzberg et al. (1959) report factors found to be related to hygiene needs as: supervision, interpersonal relations, physical working conditions, salary, company policies and administrative practices, benefits, and job security. These factors are all concerned with the context or environment in which the job has to be done. When these factors are unfavourable, then job dissatisfaction is the result. Conversely, when hygiene factors are positive, such as when workers perceive that their pay is fair and that their working conditions are good, then barriers to job satisfaction are removed (Furnham, 1992). The fulfilment of hygiene needs, however, cannot by itself result in job satisfaction, but only in the reduction or elimination of dissatisfaction (Furnham, 1992; Ivancevich & Matteson, 1996; Luthans, 1998). Unlike hygiene needs, motivator needs are fulfilled by what Herzberg et al. (1957) called motivator factors, or satisfiers. They identified the following motivator factors: achievement, recognition, work itself, responsibility, advancement. Whereas hygiene factors are related to the context of work, motivator factors are concerned with the nature of the work itself and the consequences of work. According to the theory, the factors that lead to job satisfaction are those that satisfy an individual's need for self-actualisation (self-fulfilment) in one's work, and it is only from the performance of the task that the individual can get the rewards that will reinforce his/her aspirations.

2.5.1.2 Cognitive dissonance

Perceived inconsistencies in the workplace can also generate the cognitive dissonance. Leon Festinger (1957) proposed the cognitive dissonance theory, focussing on two principal sources of belief-behaviour inconsistency, namely, the effects of making decisions, and the effects of engaging in counter attitudinal behaviour. Such inconsistencies produce dissonance, which may be reduced in three major ways: (i) by diminishing the importance of the dissonant

element; (ii) by adding consonant elements, (iii) or by changing one of the dissonant elements so that it is no longer inconsistent with the other.

2.5.1.3 Equity theory and cognitive dissonance theories

Social comparisons among employees regarding rewards are inevitable. It was Stacy Adams (1963) who propounded the equity theory that shed lights upon the consequences of social injustice in the workplace. The essence of the theory is that employees compare their efforts and rewards with those of others in similar work situations. The theory argues that a major input into job performance and job satisfaction is the degree of equity or inequity that people perceive in the workplace. Creating a fair environment seems to be a key to successful job satisfaction. According to Adams (1963) inequity occurs when an individual perceives that the ratio of his or her outcomes to inputs and the ratio of a relevant other's outcomes to inputs are unequal. Equity exists when employees perceive that the ratios of their inputs to their outcomes are equivalent to the ratios of other employees. In order to restore equity, the person may alter the inputs or outcomes, cognitively distort the inputs or outcomes, or leave the field.

2.5.1.4 Locke's Value Theory

Locke (1969) in his seminal paper on a theory of goal setting, advocates for the purposefulness of human behaviour and the importance of values or valence and consequences. Locke (1969) argues that goal setting is a cognitive process that shapes human action. He argues that the individual's conscious goals and intentions are the determinants of behaviour. One of the characteristics of intentional behaviour is that it persists until the goal is achieved. This is similar to McClelland's need for achievement. A goal is the object of action. People strive to attain their goals in order to satisfy their emotions and desires.

Locke (1976) describes the attributes of goal setting as comprising goal specificity, difficulty and intensity. According to Locke (1976) goal specificity leads to precision and clarity. Goal difficulty refers to the degree of proficiency or the level of performance that is sought. Goal intensity refers to the process of setting the goal or determining how to reach it. It is argued that

job satisfaction may be more closely related to whether or not work provides people with what they want, desire or value. Workers examine what their jobs provide in terms of, for example, pay, working conditions and promotion opportunities, and then compare those perceptions to what they value or find important in a job. To the extent that the two match, job satisfaction results. Thus, value theory implies that the more important a job-related factor is to a worker, the greater its potential effect on his/her satisfaction (Furnham, 1992).

The implication of Locke's (1976) theory for the current study is that managerial practices that align employees' values with corporate entrepreneurial activities, flexibility and market orientation could result in high job satisfaction among employees.

2.5.1.5 Lawler's Facet Satisfaction Model

Another comparison theory of satisfaction is Lawler's facet satisfaction model (1973). This theory is an elaboration on portions of the Porter-Lawler motivation model. The facet satisfaction model derives its name from the fact that it is intended to describe the processes by which satisfaction with any individual job component, or facet, is determined (Furnham, 1992). The comparison specified in Lawler's theory is between perception of what a worker believes he/she should receive, in terms of job outcomes such as pay, recognition and promotions, and perception of the outcomes that are actually received.

Perceptions of actual outcomes depend, of course, on the outcomes themselves, as well as perceptions of the outcomes of referent others, or people holding similar jobs with whom workers compare themselves. Perceptions of what should be received depend on perceptions of the inputs the worker brings to the job such as skill, education and experience, as well as perceptions of job characteristics, such as responsibility and difficulty, and perceptions of the inputs and outcomes of others (Judge, Locke & Durham, 1997). The facet model is highly cognitive in nature and reflects the view that people respond to their perceptions of reality more directly than to reality itself.

2.5.1.4 Social Learning Theory

According to the social learning theory of Bandura (1977), self-reinforcement develops whereby individuals improve and maintain their own behaviour by giving themselves rewards over which they have control whenever they attain self-imposed standards of performance. Bandura (1982) coined the concept of "self-efficacy" to describe self-perceptions of how well individuals can cope with situations as they arise. According to Bandura (1982), self-efficacy originates from four sources, namely 1. performance accomplishment, 2. modelled exposure, 3. verbal persuasion and 4. physiological arousal.

Since both negative as well as positive self-reinforcement are possible, Bandura (1977) coined the term "self-regulation" to include both the enhancing and reducing effects of self-evaluative influences. Self-regulated incentives increase performance mainly through their motivational function. In this sense, it can be argued that it could satisfy intrinsic job satisfaction. Bandura (1977) argues that people expend little or no effort in activities that have no personal relevance for them. Rather it is in those areas of life affecting one's well-being and self-esteem that self-evaluation activates persistent effort and commitment. Bandura (1977) avers that a wide spectrum of human behaviour is regulated through self-evaluative consequences as expressed in the form of self-satisfaction, self-pride, self-dissatisfaction and self-criticism.

2.5.2 Precipitating factors of job satisfaction

Dodd-McCue and Wright (1996) indicate that the research literature reporting on the predictor variables of job satisfaction, seem to lack in the clarification of organisational and job characteristics as causal factors. The literature on job satisfaction divides causal factors of job satisfaction into three distinct groups (Furnham, 1992). These are: (1) organisational characteristics: these concern such things as the reward system, supervision and decision-making practices, perceived quality of supervision (Wyatt & Marriott, 1956; Moss & Weiss, 1960; Locke, 1976, Tosi, Rizzo & Carroll, 1990); (2) specific aspects of the job: these refer to aspects such overall workload, skill variety, autonomy, feedback and the physical nature of the work environment (Locke, 1976; Hackman & Oldham, 1980); and (3) individual characteristics, these

refer to personal characteristics such as self-esteem, ability to tolerate stress, as well as general life satisfaction (Murray, 1938; Maslow, 1954; Lawler, 1973; Locke, 1976). The current study will explore the possible influence of organisational and job characteristics underlying CE, flexibility and market orientation on job satisfaction as outcome variable. Previous studies that have investigated parts of these relationships are subsequently reported.

2.6 Empirical investigated relationships between corporate entrepreneurship, market orientation, flexiblitiy, job satisfaction and biographic variables

As indicated by Hornsby and Naffziger (1992) much of the empirical work on CE has been drawn from entrepreneurship research. In the discussion of the following relationships between the variables to be investigated in the current study, the findings on previous relationships findings will be presented both in terms of entrepreneurship and intrapreneurship. As indicated, the variables under investigation in the current study, is corporate entrepreneurship, market orientation, flexibility, job satisfaction and biographic variables.

2.6.1 The relationship between corporate entrepreneurship and market orientation

All of the following studies indicate a significant positive relationship between corporate entrepreneurship and market orientation:

The study by Barrett and Weinstein (1998) of 750 business units, measuring CE (by means of the Covin & Slevin, 1989 nine-question construct) and MO (by means of the Kohli, et al. 1993, 20-question instrument) indicated CE significantly positively correlated with MO (r = .34; p = .001).

Kwaku and Ko (2001) studied a sample of 145 firms identified as either both CE and MO orientated, only CE orientated or only MO orientated. In this study CE was measured by six semantic differential items adapted from the Covin and Slevin (1989) scale, MO by the 20-item Kohli et al. (1993) measure, and perceived new product performance, by a four item scale. One-way ANOVA organisations that scored high on both CE and MO scored significantly higher on

perceived new product performance than organisations that were either only CE or MO inclined, or identified as CO (conservative in both). The same study indicates a significant positive correlation between CE and MO ($r = .39$; $p < 0001$).

In a study by Liu, Luo and Shi (2002) in a sample of 304 Chinese individuals working in major state-owned enterprises, the relationship between customer-focused market orientation, measured by the Deshpandé and Faley (1998) Market Orientation Scale) and corporate entrepreneurship measured by the Covin and Slevin (1989) scale, indicated a significant positive correlation of $r = .69$; $p < .001$.

The Wood, Bhuian and Kiecker (2002) study of 237 top hospital administrators, indicate a significant positive association between market orientation and organizational entrepreneurship ($r = .63$; $p < .001$). MO was measured by a newly developed 11-item 5-point Likert scale (Wood, et al., 2002) and organizational entrepreneurship was measured by using eight adopted items from literature on a 5-point Likert scale.

Matsuno, Mentzer and Ozsomer (2002) indicate that entrepreneurial proclivity is significantly positively related to market orientation, with a path coefficient of .468 in a study of 364 companies in the USA. Market orientation was measured by the Matsuno and Mentzer (2000) scale and entrepreneurial proclivity by the Miller (1982) scale. It was further indicated that entrepreneurial proclivity only had a significant positive influence on self-reported business performance in this study, only where business performance was mediated by market orientation (path coefficients were indicated as: .340 on market share, .281 on new product and total sales, and .536 on return on investment). Entrepreneurial proclivity had no significant effect on self-reported performance where it was not mediated by market orientation.

The study by Luo, Zhou and Liu (2003) indicate a significant positive relationship between CE and MO ($r = .68$; p .0001) in a sample of 218 Chinese firms, with CE measured by a six-item seven-point Likert scale (developed from a combination of different CE scales) and MO measured by a 10-item seven-point Likert scale, taken from different previous studies.

Matsuno et al. (2002) argue that both CE and MO on its own may not bring about sufficient willingness by organizations to successfully capture opportunities in the markets. Flexibility seems to also play an important role.

2.6.2 The relationship between corporate entrepreneurship and organisational flexibility

The following studies acknowledge the significant positive relationship between corporate entrepreneurship and organisational flexibility:

The Barrett and Weinstein (1998) study, with a sample of 750 business unites, indicated a significant positive correlation between CE, measured by the Covin & Slevin (1989) nine-question construct and FL, measured by the Khandwalla (1977) seven-point Likert scale (r = .53; p = .0001).

The Barringer & Bluedorn (1999) study of 169 manufacturing firms in the USA, indicates CE and Fl to significantly positively correlate (p > .01). CE was measured by the Covin and Slevin (1986) scale, and FL by a self-developed nine-item scale.

Additional to these empirical studies, the study by Jabłecka (2001) is a qualitative explorative narrative of how flexibility in an organisation with a visionary strategy, by an in depth market assessment can lead to a success narrative of an innovative competitive advantage of a company.

2.6.3 The relationship between corporate entrepreneurship and job satisfaction

The Weaver and Franz (1992) study indicates entrepreneurs scoring significantly higher on job satisfaction (measured by the global indicator of the National Opinion Research Centre), than employees in private sector ($F2_{1498}$ = 17.05, p < .001). In a review of five different studies Katz (1993) demonstrated that entrepreneurs scored significantly higher on job satisfaction scores than employed individuals. The study by Van Wyk (1998) on 375 professionals indicates significant positive correlations between general job satisfaction and intrinsic job satisfaction and

the entrepreneurial attitude of innovation (r = .22; p = .0001 and r = .23; p = .0001 respectively) as well as intrinsic job satisfaction and the entrepreneurial attitude of achievement/personal control (r = .23; p = .0001).

Though these are not the exact variables to be explored in the current study, it is an indication that corporate entrepreneurship might also be significantly positively related to job satisfaction, therefore the current investigation. Previous relationships between corporate entrepreneurship and job satisfaction, as far as could be established, have not yet been investigated.

2.6.4 The relationship between market orientation and organisational flexibility

The following two studies indicate a significant positive relationship between MO and FL:

The Barrett and Weinstein (1998) study of 750 businesses unites indicate a significant positive relationship between MO (Kohli, et al. 1993, 20-question instrument) and FL (Khandwalla, 1977 seven-point Likert scale) (r = .43; p = .0001).

The study of 120 Thai managers by Grewal and Tansuhaj (2001) also indicates a significant positive relationship between MO and Fl (r = .48; p = .01). MO was measured by the Jaworski and Kohli (1993) 31-item questionnaire, and four items were developed to measure flexibility.

2.6.5 The relationship between market orientation and job satisfaction

The following articles indicates the relationship between MO and JS:

In a study by Sigauw, Brown and Widing (1994) indications are from a sample of 278 industrial sales people, that individuals in firms perceived as having a high market orientation (Narver & Slater (1990) scale) significantly expressed greater job satisfaction (Job Descriptive Index, Smith, Kendall & Hullin (1969) (r=.64; p=.001). In the same study the relationship

between customer orientation (Saxe & Weitz (1982) scale) and job satisfaction has a non-significant common variance of only 2.7%. The path coefficient indicates a significant increase of JS as dependent variable with MO as independent variable (b = .43; p = .001). The influence of customer orientation on job satisfaction was non-significant (b = .02; p = .001).

Mengüç (1996) replicated the study of Sigauw, et al. (1994) in 402 Turkish firms with MO and JS questionnaires translated into Turkish, factor analysed with acceptable Alpha Coefficients. Similarly to the Sigauw et al. (1994) study, MO and JS had a significant positive inter-correlation (r=.47; p=.001). The customer orientation/JS common variance was non-significant at 2.2%. The path coefficient indicates a significant increase of JS as dependent variable with MO as predictor (b = .63; p = .001). Similarly customer orientation showed a significant influence on JS (b = .14; p = .01).

In the study by Fountain (1999) it is concluded that market orientation could play a role in preventing job dissatisfaction. Statistics procedures and findings are however not provided.

Contrary to these findings Stratemeyer (2002) indicates form a study of 48 college professors and 1184 students that market orientation is negatively related to job satisfaction. The statistical procedures and numerical findings are however not reported. It is however argued that the sample in this study is not representative of individuals actively involved in organizational marketing.

2.6.6 The relationship between organisational flexibility and job satisfaction

Oleski (2000) indicates in a study of N=110 full-time workers that there is no indirect effect of flexibility on job satisfaction (actual measures are not provided), by means of Multiple Regression Analysis. In this study flexibility was measured by the Flexible and Inflexible measures of Humphrey's (1980) Life Experiences Questionnaire, and job satisfaction was measured by the Minnesota Satisfaction Questionnaire – Short Form.

2.6.7 The relationship between corporate entrepreneurship and biographic variables

Earlier studies on entrepreneurship concentrated mainly on biographical variables and personality characteristics. In these studies biographic variables in general showed very weak or no significant relationships with entrepreneurship. These studies were criticised as not yielding results of any consistency, nor a clear picture of the characteristics of entrepreneurial individuals (Bygrave, 1989; Gartner, 1988).

The study by Luo, et al. (2003) indicate a significant negative relationship between CE the age of a company (r = -.25; p .01) (N = 218 Chinese firms), with CE measured by a six-item seven-point Likert scale (developed from a combination of different CE scales). This is an indication that younger organizations are more inclined to search for needs in the market in order to develop entrepreneurial effectiveness.

2.6.8 Modelling the relationships between corporate entrepreneurship, market orientation, organisational flexibility with job satisfaction as outcome variable

The purpose of this study is to determine the relationships between corporate entrepreneurship, market orientation and organisational flexibility and the equational influence on job satifaction. The proposed relationships between these variables are illustrated in Figure 2.9. The results of such an equation could indicate to managers which intrapreneurial concepts, as well as market and flexibility orientations could play a role in the job satisfaction of the employee. Employee job satisfaction could consequently lead to positive internal and external job satisfactory outcomes in the organisation.

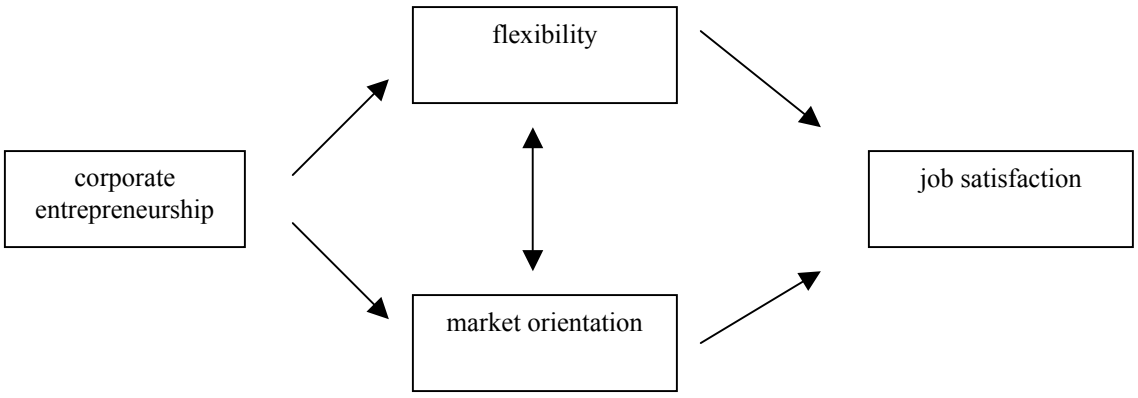

Figure 2.9 Modelling of the relationships between corporate entrepreneurship, market orientation, organisational flexibility with job satisfaction as outcome variable

2.7 The research problems

A fundamental research problem that this study seeks to investigate is, does corporate entrepreneurship, market orientation and flexibility have any measurable influence on job satisfaction?

It is argued that corporate entrepreneurship is the driving force, organisational flexibility the infrastructure through which business activities are performed, market orientation the conduit to the outside world, that is, the customers and the competition, which could contribute to job satisfaction, employees' general attitudes towards their jobs. In an effort to verify these relationships between CE, FL, MO AND JS as discussed in the literature, eighth research problems are formulated:

Research problem 1

Does a significant relationship exist between corporate entrepreneurship and market orientation?

Research ***problem*** 2

Does a significant relationship exist between corporate entrepreneurship and organisation flexibility?

Research *problem 3*

Does a significant relationship exist between corporate entrepreneurship and job satisfaction?

Research *problem 4*

Does a significant relationship exist between market orientation and organisation flexibility?

Research *problem 5*

Does a significant relationship exist between market orientation and job satisfaction?

Research *problem 6*

Does a significant relationship exist between organisation flexibility and job satisfaction?

Research *problem 7*

Do significant relationships exist between biographical variables and corporate entrepreneurship?

Research *problem 8*

Can a Structural Equation Model of the causal relationships between the organisational variables be built to predict job satisfaction?

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Introduction

The purpose of this study is to examine the relationships between the organisational factors entrepreneurial thinking, market orientation, flexibility and job satisfaction. The four organisations involved represent the following sectors, transport, life assurance, education, and information technology. This study further investigates the relationship between CE and biographic variables, as well as the effect of CE, flexibility and market orientation on job satisfaction.

3.2 Research design

Research design is the plan and structure in terms of which the study is carried out so as to obtain answers to research problems. According to Kerlinger and Lee (2000) the plan constitutes the overall scheme or program of the research. A survey research design was used in this study. According to Kerlinger and Lee (2000) survey research is useful in studying the relative incidence, distribution, and interrelations of sociological and psychological variables. For this reason, survey research can be classified as field studies with a quantitative orientation (Kerlinger & Lee, 2000).

3.3 Participants

A non-random quota convenience sample was drawn of individuals identified in the area of top and middle management in different economic sectors. The participants in this study comprised of 266 supervisors and managers from a life assurance firm, 33 managers from an information technology firm, 26 administrative and teaching staff from a technikon and 8 top managers from a parastatal organisation in the transport sector. Letters containing the different instruments, were sent to the 650 supervisors and managers of a life assurance company. The letter indicated that the research project was about a study of organisational behaviour. Only 266 questionnaires were completed and returned to the researcher. These represented a return rate of

41%. With regard to the 33 managers from the information technology firm, the researcher approached the Chief Executive Officer of the firm and explained the nature of the research project. The CEO agreed that letters and questionnaires could be distributed among his staff. The 26 administrative and teaching staff from a technikon were attending a management development programme facilitated by the researcher. Before the commencement of the programme all 26 staff members were requested to complete the questionnaire after it was explained that it is part of a research project about organisational behaviour. The 8 top managers from a parastatal in the transport sector were also attending a senior management development programme facilitated by the researcher. As in the technikon group, the top managers were requested to complete the questionnaire as part of a research project on organisational behaviour. The questionnaires are not attached as some of it are not in the public domain, and can therefore not be published. The questionnaires included are discussed in section 3.5 (measuring instruments).

Demographic variables on which information was obtained were as follows:

- Age
- Gender
- Marital Status
- Nationality
- Home Language
- Mother tongue
- Social heritage or culture
- Level of qualifications
- Current Job Level
- Number of years in the organisation
- Number of years in the present job
- Functional area within which the individual works
- Who employs the individuals
- The number of hours spent at work per week
- Work over weekends or holidays
- The number of days vacation leave taken in the previous year.

The biographical profiles of the sample are presented in order to get a clear picture of the survey group. The age distribution of the respondents is shown in table 3.1

Table 3.1

Age distribution of respondents

Age	Frequency	Percent	Cumulative Frequency	Cumulative Percent
21	2	0.60	2	0.60
22	5	1.50	7	2.10
23	6	1.80	13	3.9
24	8	2.40	21	6.31
25	7	2.10	28	8.41
26	10	3.00	38	11.41
27	7	2.10	45	4.02
28	12	3.60	57	17.12
29	16	4.80	73	21.92
30	25	7.51	98	29.43
31	18	5.41	116	34.84
32	12	3.60	128	38.44
33	12	3.60	140	42.04
34	16	4.80	156	46.85
35	16	4.80	172	51.65
36	8	2.40	180	54.05
37	9	2.70	189	56.76
38	17	5.12	206	61.86
39	13	3.90	219	65.77
40	12	3.60	231	69.37
41	7	2.10	238	71.47
42	4	1.20	242	72.67

43	10	3.00	252	75.68
44	4	1.20	256	76.88
45	6	1.80	262	78.68
46	5	1.50	267	81.2
47	4	1.20	271	81.38
48	7	2.10	278	83.48
49	7	2.10	285	85.6
50	8	2.40	293	88
51	3	0.90	296	89
52	5	1.50	301	90.39
53	7	2.10	308	92.49
54	2	0.60	310	93.09
55	1	0.30	311	93.39
56	1	0.30	312	93.69
57	3	0.90	315	94.6
58	3	0.90	318	95.5
60	2	0.60	320	96.1
61	1	0.30	321	96.4
63	1	0.30	322	96.7
70	1	0.30	323	97
Unknown	10	3.0	333	100.00

As shown in the above table, the respondents' age varies in years between a minimum of 21 and a maximum of 70. The mean age is 36.66 in years with a standard deviation of 9.26. Ten individuals did not indicate their age

Table 3.2

The gender distribution of the respondents

Gender	Frequency	Percent	Cumulative Frequency	Cumulative Frequency
Male	144	43.24	144	43.24
Female	187	56.12	331	99.4
Unknown	2	0.6	333	100.00

As shown in table 3.2, the majority of respondents are female (n=187) representing 56.50% of the sample. Two individuals did not indicate their gender.

Table 3.3

The respondents' marital status

Marital Status	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Unmarried	82	24.62	82	24.62
Married	194	58.25	276	82.9
Widow (er)	7	2.10	283	85
Divorced	36	10.81	319	95.8
Estranged	1	0.30	320	96.1
Co-habiting	11	3.30	331	99.4
Unknown	2	0.6	333	100.00

As shown in table 3.3, the majority of the respondents are married (n=194) and they constitute 58.25% of the sample. The marital status of two participants were not indicated.

Table 3.4

The nationality of the respondents

Nationality	Frequency	Percent	Cumulative Frequency	Cumulative percent
South African	326	97.9	326	97.9
Non-South African	4	1.20	330	99.1
Unknown	3	0.9	333	100.00

As can seen in the above table, the majority of the respondents are South Africans (n=326) and they account for 98.7% of the sample. Three of the participants did not indicate their nationality.

Table 3.5

The home language of the respondents

Home Language	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Afrikaans	86	25.83	86	25.83
English	202	60.66	288	86.49
Xhosa	2	0.60	290	87.09
Venda	1	0.30	291	87.39
Zulu	7	2.10	298	89.49
Ndebele	2	0.60	300	90.09
South Sotho	8	2.40	308	92.49
North Sotho	14	4.20	322	96.70
Tsonga	3	0.90	325	97.60
Tswana	8	2.40	333	100.00

As reflected in the above table, the majority of respondents (n=202) are English speaking and they constitute 60.6% of the sample.

Table 3.6

The mother tongue of the respondents

Mother Tongue	Frequency	Percent	Cumulative Frequency	Cumulative Frequency
Afrikaans	93	27.93	93	27.93
English	173	51.95	266	79.90
Xhosa	4	1.20	270	81.10
Venda	1	0.30	271	81.38
Zulu	4	1.20	275	82.58
Ndebele	5	1.50	280	84.08
South Sotho	6	1.80	286	85.90
North Sotho	14	4.20	300	90.09
Tsonga	2	0.60	302	90.69
Tswana	8	2.40	310	93.09
Swazi	1	0.30	311	93.39
Other	15	4.50	326	97.90
Unknown	7	2.10	333	100.00

As reflected in the above table, the slight majority of the respondents (n=173) come from English speaking homes. Fewer than 25% of the respondents did not have Afrikaans or English as mother tongue. It seems as if the mother tongue of some respondents changed, apparently towards English as their current home language.

Table 3.7

The social heritage or culture of the respondents

Social Heritage	Frequency	Percent	Cumulative Frequency	Cumulative percent
Sotho (Northern, Western, Southern)	23	6.91	23	6.91
Nguni (Zulu, Xhosa, Swazi, Ndebele)	15	4.50	38	11.41
Other African	8	2.40	46	13.81
Afrikaner	87	26.13	133	39.94
English	140	42.04	273	81.98
Jewish	4	1.20	277	83.18
Indian	25	7.50	302	90.69
Malayan	2	0.60	304	91.29
Arabic	1	0.30	305	91.59
Mediterranean	3	0.90	308	92.49
Western Europe	12	3.60	320	96.10
Other Asian	1	0.30	321	96.40
North American	5	1.50	326	97.90
Unknown	7	2.10	333	100.00

As shown in the above table, the single largest number of the respondents (n=140) come from an English cultural background and they constitute 43% of the sample. The second largest group comes from an Afrikaner cultural background (n=87) and they constitute 27% of the sample. Some respondents (27.9%) seem to indicate that their mother tongue differs from what is to be expected from their cultural background.

Table 3.8

The respondents' qualifications

Qualifications	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Secondary school	46	13.81	46	13.81
St 10 equivalent	87	26.13	133	39.94
Post-school certificate/diploma	75	22.52	208	62.46
National Diploma/National Higher Diploma	30	9.01	238	71.47
Bachelor's degree or equivalent	38	11.41	276	82.88
Honours degree or equivalent	33	9.91	309	92.79
Master's degree or equivalent	17	5.12	326	97.90
Unknown	7	2.10	333	100.00

Respondents with a standard 10 or equivalent qualification constitute the single largest group in the sample (n=87) and they account for 27%. The second largest group (n=75) possess a post-school certificate or diploma and they constitute 23% of the sample. Eighty-eight of respondents hold qualifications that range from Bachelor's degree to Master's degree. This group constitutes 27% of the sample. Seven individuals did not indicate their qualifications.

The current job levels of the respondents are shown in table 3.9

Table 3.9 Current job levels of the respondents

Job Level	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Non-management	152	45.65	152	45.65
First level supervisor	60	18.02	212	63.66
Middle management	84	25.22	296	88.89
Top management	12	3.60	308	92.49
Professional	19	5.71	327	98.20
Unknown	6	1.80	333	100.00

As shown in the above table, the single largest number of the respondents (n=152), hold non-management hierarchical positions and they constitute 46.48% of the sample. A total of 144 respondents hold supervisory to middle management jobs. This combined group accounts for 44% of the sample. About 6% of the sample see themselves as in none of the other groups and functioning as professionals in their organizations of employment.

The number of years worked by respondents in their respective companies is shown in table 3.10

Table 3.10
The number of years worked by the respondents

Years	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Less than 1	1	0.30	1	0.30
1	49	14.71	50	15.02
2	31	9.31	81	24.32
3	36	10.81	117	35.14
4	34	10.21	151	45.35
5	32	9.61	183	54.95

Table 3.10 continues

6	18	5.41	201	60.36
7	18	5.41	219	65.77
8	11	3.30	230	69.07
9	7	2.10	237	71.17
10	11	3.30	248	74.47
11	7	2.10	255	76.58
12	9	2.70	264	79.28
13	9	2.70	273	81.98
14	4	1.20	277	83.18
15	9	2.70	286	85.89
16	7	2.10	293	87.99
17	5	1.50	298	89.49
18	3	0.90	301	90.39
19	3	0.90	304	91.29
20	7	2.10	311	93.39
21	3	0.90	314	94.29
22	1	0.30	315	94.60
23	1	0.30	316	94.90
24	1	0.30	317	95.20
25	1	0.30	318	96.00
26	2	0.60	320	96.10
27	1	0.30	321	96.40
29	1	0.30	322	96.70
31	1	0.30	323	97.00
Unknown	10	3.00	333	100.00

The single largest number of respondents (n=49) have worked for the current employed companies for one year and they constitute 15.17% of the sample. The next largest group (n= 36) has worked for three years and it constitutes 11.15% of the sample.

The respondents' number of years in their present jobs is shown in table 3.11

Table 3.11

Tenure of respondents in current jobs

Tenure	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Less than 1	2	0.60	2	0.6
1	62	18.62	64	19.22
2	56	16.82	120	36.04
3	46	13.81	166	49.85
4	24	7.21	190	57.06
5	28	8.41	218	65.47
6	25	7.51	243	72.97
7	13	3.90	256	76.88
8	13	3.90	269	80.78
9	2	0.60	271	81.38
10	16	4.80	287	86.19
11	3	0.90	290	87.09
12	7	2.10	297	89.19
13	3	0.90	300	90.09
14	4	1.20	304	91.29
15	4	1.20	308	92.49
16	4	1.20	312	93.69
17	2	0.60	314	94.29
18	1	0.30	315	94.60
19	1	0.30	316	94.90
20	3	0.90	319	95.8
21	2	0.60	321	96.4
22	1	0.30	322	96.7
29	1	0.30	323	97.00
Unknown	10	3.00	333	100.00

As shown in the above table, the single largest number of respondents (n=62) have been in their present jobs for a year and they constitute 19.2% of the sample. The next largest group (n=56) has been in their current jobs for 2 years. This group constitutes 17.34% of the sample.

The names of the functional areas in which respondents work, are shown in table 3.12

Table 3.12
Functional areas of the respondents

Functional Areas	Frequency	Percent	Cumulative Frequency	Cumulative Percent
	1	0.30	1	0.30
General Management	38	11.41	39	11.71
Production	40	12.01	79	23.72
Marketing	68	20.42	147	44.17
Personnel	16	4.80	163	48.95
R&D	4	1.20	167	50.15
Accounting & Finance	37	11.11	204	61.26
Information Technology	15	4.50	219	65.77
Others	106	31.83	325	97.60
Unknown	8	2.40	333	100.00

As shown in the table, the single largest number of respondents (n=106) work in functional areas other than general management, production, marketing, personnel, research and development, accounting and finance, information technology. This group constitutes 32.6% of the sample. The next largest group (n=68) come from a marketing function, and constitutes 21% of the sample.

The business entities that respondents saw themselves as working for, are shown in table 3.13

Table 3.13 Employers of the respondents

Employer	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yourself	11	3.30	11	3.3
An organisation	265	79.57	276	82.88
More than one organisation	1	0.30	277	83.18
Yourself and an organisation	46	13.81	323	97.00
Unknown	10	3.00	333	100.00

As reflected in the above table, the majority of respondents (n= 265) work for an organisation and they account for 82% of the sample.

The number of hours worked by respondents in a week are shown in table 3.14

Table 3.14

Number of hours worked per week by the respondents

Hours	Frequency	Percent	Cumulative Frequency	Cumulative Percent
less than 1	5	1.50	5	1.5
1	1	0.30	6	1.8
2	1	0.30	7	2.1
8	10	3.00	17	5.11
9	5	1.50	22	6.61
10	3	0.90	25	7.51
15	1	0.30	26	7.81
22	1	0.30	27	8.11
24	1	0.30	28	8.41
26	1	0.30	29	8.71
27	1	0.30	30	9.01
30	1	0.30	31	9.31
32	5	1.50	36	10.81
35	1	0.30	37	11.11
36	1	0.30	38	11.41
37	3	0.90	41	12.31
38	10	3.00	51	15.32
39	7	2.10	58	17.42

Table 3.14 continues

40	96	28.83	154	46.25
41	2	0.60	156	46.85
42	9	2.70	165	49.55
43	13	3.90	178	53.45
44	2	0.60	180	54.05
45	51	15.32	231	69.37
46	4	1.20	235	70.57
47	3	0.90	238	71.47
48	9	2.70	247	74.17
49	1	0.30	248	74.47
50	41	12.31	289	86.79
55	10	3.00	299	89.79
56	3	0.90	302	90.69
58	1	0.30	303	90.99
60	10	3.00	313	93.99
62	1	0.30	314	94.29
65	1	0.30	315	94.60
70	4	1.20	319	95.6
75	1	0.30	320	96.10
80	2	0.60	322	96.70
90	1	0.3	323	97.00
Unknown	10	3.00	333	100.00

As reflected in the above table, the single largest number of respondents (n= 96) work a 40-hour week. This group constitutes 30% of the sample. Five respondents indicated that they work less than one hour per week. This could be attributed to the question possibly being miss-understood by some members of the sample. It could also be that the 7.51% of individuals indicating that they work less than 10 hours per week are temporary workers.

Work over week-ends or holidays by respondents is shown in table 3.15

Table 3.15

Work over week-ends or holidays by respondents

Weekends/Holidays	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	72	21.62	72	21.62
No	255	76.58	327	98.20
Unknown	6	1.80	333	100.00

As shown in the above table, the majority of respondents (n= 255) do not work over week-ends or holidays.

The number of vacation days taken during the previous year by respondents is shown in table 3.16

Table 3.16

Vacation days taken by the respondents

Days Vacation	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	23	6.91	23	6.91
1	2	0.60	25	7.51
2	7	2.10	32	9.61
3	8	2.40	40	12.01
4	4	1.20	44	13.21
5	14	4.20	58	17.42
6	8	2.40	66	19.82
7	7	2.10	73	21.92
8	4	1.20	77	23.12
9	1	0.30	78	23.42
10	77	23.12	155	46.55
11	5	1.50	160	48.05
12	19	5.71	179	53.75
13	9	2.80	188	56.46
14	16	4.80	204	61.26
15	59	17.72	263	78.98
16	2	0.60	265	79.58
17	2	0.60	267	80.18
18	7	2.10	274	82.28
20	20	6.00	294	88.29
21	6	1.80	300	90.09
22	1	0.30	301	90.39
23	3	0.90	304	91.29
24	1	0.30	305	91.59
25	8	2.40	313	94.00
28	1	0.30	314	94.29
30	4	1.20	318	95.50
39	1	0.30	319	95.80
45	1	0.30	320	96.10
Unknown	13	3.9	333	100.00

Slightly over 23% (n =77) of respondents have taken 10 days of vacation during the previous year. The next largest group 17.7% (n=59) took 15 days of vacation.

3.4 Procedures for data gathering

Questionnaires with a cover letter describing the study and assuring confidentiality were distributed to all respondents. In the life assurance company the questionnaires were distributed by the human resources manager. The supervisors and managers were given a total of 14 days within which to complete and return the questionnaires. In the information technology company, the questionnaires were distributed by the office of the chief executive officer (CEO) and were to be returned to the CEO's office in 14 day's time. At the technikon the questionnaires were distributed by the facilitator and collected after 14 days. The same procedure was followed for the 8 top managers from the parastatal.

3.5 Measuring instruments

3.5.1 The Corporate Entrepreneurial Assessment Instrument (CEAI)

The present study employed the Hornsby, et al. (1992) Corporate Entrepreneurship Assessment Instrument (CEAI) in order to measure corporate entrepreneurship. The authors developed this instrument by combining items of the previous instruments measuring CE by using a scale originally developed by Miller and Friesen (1982), and subsequently adapted by Ginsberg (1988), Morris and Paul (1987) and Covin and Slevin (1989). The CEAI was developed to gauge the organisational factors that foster corporate entrepreneurial activity within a company. While there have been a number of efforts focusing on various factors that contribute to the establishment of a CE culture, only a few studies have attempted to empirically test the hypothesized factors. Kuratko, et al. (1990) and Hornsby, et al. (1992) identified a factor structure that reflects what the authors defined as an intrapreneurial culture. The focus of the study was to gain a better understanding of the CE process both at a theoretical and an applied level. In pursuit of this objective, the selection of items focused on specific facilitating conditions for CE and the adequacy of the measuring instruments used.

Hornsby, et al. (1992) subsequently reported a five-factor solution. These factors were management support for CE (19 items) with a Chronbach alpha of .89, work discretion (10 items) with an alpha of .80, rewards/reinforcement (6 items) with an alpha of .65, time availability (6 items) with an alpha of .92, and organisational boundaries (7 items) with an alpha of .58. A re-test reliability study by Hornsby, et al. (1999) on US and Canadian managers showed no significant differences between the US and Canadian samples on any of the corporate entrepreneurship factors. Although differences were not significant, the US sample had higher values for all entrepreneurial behaviours.

In a further study by Hornsby et al. (2002) on two samples of 231 and 530 midlevel managers, the final CEAI scale consisted of 84 items measured on a five point Likert scale. Eleven items are negatively worded to avoid response tendencies by the subjects (Cooper and Emory, 1995). The results of the exploratory factor analysis on the data of the two samples yielded the following results:

Sample one revealed five significant factors of management support (19 items), work discretion (9 items), rewards/reinforcement (6 items), time availability (6 items), and organisational boundaries (7 items). The five-factor solution accounted for 46% of the total variance. The items loading on each factor were subjected to an internal consistency reliability analysis with resulting Cronbach Alpha of .89, 80, .65, .92, and .58 for management support, autonomy, rewards/reinforcement, time, and organisational boundaries, respectively.

The results of the second sample suggested a five-factor solution with the same identified factors as the first sample: management support (17 items), work discretion (10 items), rewards/reinforcement (5 items), time availability (6 items), and organisational boundaries (5 items). This five-factor solution accounted for 43.3% of the variance. However, five items from the original CEAI failed to meet the statistical requirements for inclusion in the second analysis. Reliability indices were indicated with Cronbach Coefficient Alpha's of .89, .87, .75, .77, and .64 for management support, autonomy, rewards/reinforcement, time, and organisational boundaries, respectively.

3.5.2. Assessment of Market Orientation (MARKOR)

Market Orientation was defined in chapter 1 as the organisation-wide generation of market intelligence pertaining to current and future needs of customers, dissemination of intelligence horizontally and vertically within the organisation, and organisation-wide action or responsiveness to market intelligence.

Kohli, et al. (1993) decry the use of ad hoc measures in the measurement of the market orientation construct. According to these authors most of the measures used were not developed on the basis of systematic procedures for scale development. Although Kohli et al. (1993) regard the Narver and Slater (1990) study as the most comprehensive to date, it has many positive features it is still flawed in that (1) it adopts a focused view of markets by emphasizing customers and competition as compared with a view that focuses on these two stakeholders and additional factors that drive customer needs and expectations, (2) it does not tap the speed with which market intelligence is generated and disseminated within an organisation, and (3) includes a number of items that do not tap specific activities and behaviour that represent a market orientation.

In response to these previous inadequate efforts at measuring market orientation, Kohli, et al. (1993) conducted a study whose primary purpose was to develop a measure of market orientation and to assess its psychometric properties. Three components of market orientation were identified (Kohli, et al. (1993):

1. Intelligence generation. The starting point of a market orientation is market intelligence. Market intelligence is a broader concept that extends beyond customers' verbalized needs and preferences in that it includes an analysis of exogenous factors that influence those needs and preferences. Environmental scanning activities are subsumed under market intelligence generation. Importantly, multiple departments should participate in this activity because each has a unique market lens.

2. Intelligence dissemination. Intelligence dissemination refers to the process and extent of market information exchange within a given organisation. It is argued that the strategic business unit is the focal point of dissemination, consequently attention should be balanced between both horizontal and vertical transmission of marketplace information. Further, the dissemination of intelligence occurs both formally and informally.

3. Responsiveness. Responsiveness is seen as action taken in response to intelligence that is generated and disseminated. An organisation can generate intelligence and disseminate it internally, however, unless it responds to market needs, very little is accomplished.

From the results of the Kohli et al.'s (1993) study it is clear that a key managerial property of the scale is its focus on activities that could potentially enhance a firm's overall market orientation. The MARKOR scale developed by Kohli et al. (1993) consists of 32 items measured on a seven-point Likert scale. The 32 items measure 3 factors identified as intelligence generation, intelligence dissemination and responsiveness. Confirmatory Factor Analysis indicate a very weak model fit, with all the Goodness of Fit indeces between .656 and .740.

Gauzente (1999) reports on a comparative analysis of the MARKOR and MKTOR Scales. She indicates that the measure of MARKOR is consistent with its definition of assessing the potential MO of a firm. She makes the observation, that the MARKOR exhibits a more varied structure than the MKTOR, on conditional and future forms, creating a possible 'scenario" evaluation. It is indicated by the author that the MARKOR assesses the potential market orientation of a firm, compared to the measure of customer orientation by MKTOR as indicated by Kohli et al. (1993).

For the purposes of the current study, the MARKOR's assessment of the potential market orientation of an organisation is therefore more appropriate. Though it is indicated by Gauzente (1999) that the statistical validity of MARKOR is questionable, the contents validity of the items represent the purposes of the current study, namely the measurement of the potential market orientation of a firm. Factor Analysis is therefore done in order to re-determine the construct validy of the instruments, as well as limit the error variance measure to the minimum.

3.5.3. Assessment of the Flexibility Scale

The organisational flexibility scale measures the extent to which an organisation is adaptable in terms of its architecture and the extent to which authority is vested in situational expertise. The levels of flexibility in the organisation reflect the following: (1) Changes in administrative arrangements that support strategic changes; (2) Changes in structural configurations of the organisations that consort with strategic change; and (3) Human resource practices that foster support for innovative and risky behaviour and that enable employees to keep up with new changes (Khandwalla, 1977).

The organisation flexibility scale used in this study Khandwalla (1977) is part of a bigger multi-scale which consists of seven broad categories, namely demographic, environmental, strategic, technological structural, control of behaviour, and performance variables. The flexibility scale falls within the strategic category. According to the author the ratings in the different scales were aggregated to measure the flexibility orientation style of top management in different representative samples in companies. The higher the score the more mechanistic the style would be.

In measuring multi-item variables, reliability or reproducibility was established by the Kuder Richardson formula. The degree of agreement or correlation was taken to mean "inter-judge reliability" and validity of the variables. A high degree of agreement, gave the author the confidence that the variables do indeed measure what they are intended to measure. The correlation between evaluations or judgements of executives ranged between .56 and .93. Khandwalla (1977) argues that these findings are consistent with previously established findings of researchers that employed different data-gathering procedures and done comparisons on different samples of organisations.

Although the psychometric properties of the organisational flexibility scale have not been furnished by the author, the scale has been used in research on CE (Barret & Weinstein 1998). As far as it could be established, there is no additional information available on the Khandwalla

(1977) scale. Therefore responses of the participants in the present study were subjected to Exploratory as well as Confirmatory Factor Analysis to provide information on the measurement characteristics of the scale.

3.5.4. Assessment of the Minnesota Job Satisfaction Questionnaire

Satisfaction is a variable measured by the extent to which the job is satisfying and as a result, individuals will strive to attain its objectives. It is indicated by Landy (1985) that satisfaction with one's job is emphasised by the Hawthorne studies, stressing the importance the feelings of workers that influence their work behaviour, and that the subjective perception of workers of reality is more important than the actual reality.

Job satisfaction in the present study was measured by means of the short form of the Minnesota Job Satisfaction Questionnaire (Weiss, Davis, England & Lofquist, 1967) consisting of 20 items. These items are measured on a five-point Likert-type scale, with scale responses varying between "very dissatisfied" to "very satisfied". These authors constructed the items of the questionnaire around the theory that job satisfaction is formed round the demonstration of each person to achieve in order to sustain correspondence with the work environment. The correspondence of the individual with the work environment would accordingly display the degree of fulfilment with environmental requirements (extrinsic satisfactoriness), and individual requirements (intrinsic satisfactoriness). The total satisfactoriness is described as general satisfaction. The authors of the Minnesota Satisfaction Questionnaire factor analysed two characteristics measured by this instrument, namely intrinsic, extrinsic and total (general) job satisfaction yielding Cronbach alpha coefficients of .86, .80 and .90 respectively. Weiss et al. (1967) indicate that the Minnesota Satisfaction Questionnaire provides a sound measure for overall job satisfaction.

McCormick and Ilgen (1985) differentiate between intrinsic and extrinsic satisfaction as follows: intrinsic satisfaction is seen as an experience of a sence of comptentece, while extrinsic satisfaction is perceived as contentment with external rewards. General satisfaction is portrayed as the total sum of both intrinsic and extrinsic characteristics of job satisfaction. Landy (1985)

describes total or general satisfaction as the aggregated amalgamation of feelings or judgements of an employee concerning all the aspects of his/her job.

This scale has been evaluated for use on South African samples (Boshoff and Hoole, 1998; Kamfer, Venter & Boshoff, 1998). The Kamfer et al. (1998) study indicates that all twenty items of the original items were retained in a two-factor solution. The Cronbach Alpha coefficients were reported as .87 and 75, explaining 40.62 of the total variance. The Boshoff and Hoole (1998) study however could not differentiate between the two factors in a sample of 1 791 professional people. Tthe authors conclude that the questionnaire is probably essentially one-dimensional. An exploratory factor analysis carried out on the responses of the participants in the Van Wyk, Boshoff and Owen, (1999) study identified three factors, namely general job satisfaction, intrinsic job satisfaction and satisfaction with supervision. The three sub-scales respectively consisted of six, six and two items yielding Cronbach Alpha coefficients of .82, .82 and .85 respectively.

3.6 Procedure for determining factor structure

The four instruments used in this study were all re-validated in order to determine their portability, structures and reliability. Factor Analysis was used for this purpose. The factor structures of all the instruments were determined by essentially the same procedure:

1. Eigenvalues > 1.00 were identified.
2. Clear "breaks" in the Scree-test between Eigenvalues > 1.00 were identified as indication of the differentiation of possible factors.
3. The possible identified factors were subjected to Exploratory Factor Analysis, for instance a one, two and three factor solution, if indicated by both the Scree test and Eigenvalues.
4. If any of the items loaded <.25 on any of the factors, or the difference between the loadings on the factors were <.25, these items was removed from the analyses and a further round of Exploratory Factor Analysis was performed.
5. This procedure was repeated until "clean" structures were formed.

6. Confirmatory Factor Analyses were performed on the aggregated items of the final structures. Items were only aggregated if a factor contained more than four items.

3.6.1 Procedures For Data Analysis

The data were first analysed by means of exploratory and confirmatory factor analyses in order to revalidate the measuring instruments. This step was taken to ensure the portability of the factors identified in eachinstrument. Care was taken that the sample size of N=333 was adequate (Hair, et al., p.682-690) for the execution of factor analyses.

3.6.1.1 Corporate Entrepreneurship

Exploratory factor analysis yielded Eigenvalues >1.00 obtained for the Corporate Entrepreneurship Assessment Instrument (CEAI) of 11.47, 3.20, 2.80, 2.50, 2.03, 1.81, 1.40, 1.31, 1,27, 1.08 and 1.03. Clear "breaks" were indicated between the third and fourth, fourth and fifth as well as the fifth and six Eigenvalues. According to the authors of the instrument it consists of five factors measuring management support, work discretion, rewards/reinforcement, time availability, and organisational boundaries. Exploratory Factor Analyses were executed specifying four, five and six factor solutions. The final structures obtained from the four, five and six factor solutions are indicated in tables 3.17, 3.18 and 3.19.

Table 3.17

Four factor solution for the four factor corporate entrepreneurship assessment instrument (CEAI) (N=333)

Factor 1		Factor 2		Factor 3		Factor 4	
Item	Loading	Item	Loading	Item	Loading	Item	Loading
D7	.273	D20	.539	D1	.823	D36	.599
D8	.375	D25	.731	D2	.921	D37	.747
D10	.607	D26	.757	D3	.704	D38	.654
D11	.488	D27	.813	D4	.514	D39	.293
D12	.705	D28	.722	D5	.391	D40	.547
D13	.754	D29	.510	D32	.309	D41	.473
D14	.773	D31	.412	D46	.249		
D15	.606	D35	.439				
D16	.664						

D17	.701						
D18	.484						
D19	.467						

The four factors had Cronbach Alpha Coefficients of .88, .84, .81 and .74 respectively. Factor one correlated .370 with factor two, .482 with factor three and .146 with factor four. Factor two correlated .364 with factor three and .070 with factor four. Factors three and four correlated .060. The four factors respectively explained 22.91, 6.59, 5.29 and 5.20 per cent of the total variance and together constitute 39.99% of the variance in the data space. The common variance contribution of the four factors was indicated as respectively 57.29%, 16.47%, 13.22% and 13.02%.

The factor loadings in the five-factor solution are shown in table 3.18

Table 3.18

Factor Loadings of the Five Factor Solution for the Corporate Entrepreneurship Assessment Instrument (CEAI) (N=333)

Factor 1 Support for innovation		Factor 2 Work discretion		Factor 3 Work improvement		Factor 4 Rewards/ Reinforcement		Factor 5 Time availability	
D8	.379	D20	.532	D1	.779	D30	.515	D36	.575
D9	.438	D25	.728	D2	.914	D32	.541	D37	.774
D10	.607	D26	.747	D3	.629	D33	.756	D38	.678
D11	.496	D27	.806	D4	.437	D34	.612	D39	.251
D12	.700	D28	.722	D6	.365	D46	.528	D40	.513
D13	.737	D29	.455						
D14	.757								
D15	.596								
D16	.669								
D17	.696								
D18	.485								
D19	.469								

The five factors had Alpha Coefficients of .88, .84, .85, .77 and .71 respectively. Factor one correlated .335 with factor two, .443 with factor three, .308 with factor four and .121 with factor five. Factor two correlated .632, .362 and .076 with factors three, four and five respectively. Factor three correlated .407 with factor four and .027 with factor five. Factors four and five had a correlation of .097. The five factors respectively explained 23.82, 6.43, 5.68, 5.27 and 3.31 per cent of the total variance. The proportion of the variance explained by the five factors is 44.51%. The common variance contributions of the five factors were 53.51%, 14.46%, 12.76%, 11.83% and 7.44%.

The factor loadings in the six-factor solution are shown in table 3.19.

Table 3.19

Six factor solution for the Corporate Entrepreneurship Assessment Instrument (CEAI) (N=333)

Factor 1		Factor 2		Factor 3		Factor 4		Factor 5		Factor 6	
Item	Load	Item	Load	Item	Load	Item	Load	Item	Load	Item	Load
D8	.386	D20	.541	D1	.754	D36	.557	D30	.464	D42	.341
D9	.423	D25	.739	D2	.920	D37	.798	D32	.522	D43	.350
D10	.606	D26	.741	D3	.616	D38	.683	D33	.725	D44	.366
D11	.478	D27	.814	D4	.417	D39	.252	D34	.562	D47	.716
D12	.684	D28	.714	D6	.334	D40	.515			D48	.777
D13	.724	D29	.456			D41	.449				
D14	.747										
D15	.582										
D16	.670										
D17	.700										
D18	.487										
D19	.471										

The six factors had Alpha Coefficients of respectively .88, .85, .74, .75 .69 and .63. Factor one correlated with factors one, two, three, four, five and six .320, .410, .135, .260, and -.232 respectively. The respective intercorrelation between factor two and factors three, four, five and six were .238, .095, .348, and -.146. Factor three respectively correlated with factors four, five and six .013, .293, -.278. Factor four correlated .146 and -.164 with factors five and six respectively. Factor five correlated -.176 with factor 6. The percentages of the total variance explained by the six factors are respectively 22.01, 5.47, 5.47, 5.31, 3.08 and 2.75. The common variance explained by the six factors is indicated as 49.93%, 12.40%, 12.40%, 12.06%,6.99% and 6.22%.

Confirmatory Factor Analyses were done on the four, five and six factor solutions. The indices obtained are indicated in table 3.20

Table 3.20

Results of Confirmatory Factor Analysis on the four, five and six-factor models for the Corporate Entrepreneurship Inventory (aggregated items) (N = 333)

Indices	**Four**	**Five**	**Six**
Fit criterion	.3809	.1936	.4276
Goodness of Fit Index (GFI)	.9416	.9681	.9491
GFI Adjusted for Degrees of Freedom (AGFI)	.8985	.9447	.9231
Root Mean Square Residual (RMR)	.0508	.0299	.0392
Parsimonious GFI (Mulaik, 1989)	.6505	.6601	.7118
Chi-square (df = , p > Chi²)	126.4469 (38; .0001)	64.2730 (45;.0310)	141.9772 (90; .0004)
Independence Model Chi² (df)	1341.2 (55)	1466.8 (66)	1868.4 (120)
RMSEA Estimate (90% limits)	.0837 (.0678-.1001)	.0359 (.0113-.0547)	.0417 (.0280-.0544)
ECVI Estimate (90% limits)	.5559 (.4633-.6723)	.4005 (.3482-.4780)	.7197 (.6333-8315)
Probability of Close Fit	.0004	.8844	.8518
Bentler's Comparative Fit Index	.9312	.9862	.9703
Normal Theory Reweighted LS Chi-square	113.2990	65.6725	142.4004
Akaike's Information Criterion	50.4469	-25.7270	-38.0228
Bozdogan's (1987) CAIC	-132.2626	-242.0934	-470.7556
Schwarz's Bayesian Criterion	-94.2626	-197.0934	-380.7556
McDonald's (1989) Centrality	.8756	.9715	.9249
Bentler & Bonett's (1980) Non-normed Index	.9005	.9798	.9604
Bentler & Bonett's (1980) NFI	.9057	.9562	.9240
James, Mulaik, & Brett (1982) Parsimonious NFI	.6258	.6519	.6930
Z-Test of Wilson & Hilferty (1931)	6.5225	1.8658	3.3522
Bollen (1986) Normed Index Rhoi	.8635	.9357	.8987
Bollen (1988) non-normed Index Delta2	.9321	.9864	.9708
Hoelter's (1983) Critical N	142	320	266

The five factor solution was seen as the best fit, and the factors were named: support for innovation, work discretion, work improvement, rewards/reinforcement and time availability. Organisational boundaries, named in the original instrument did not feature in this solution. The names assigned to these factors are consistent with those in the literature on CE.

3.6.1.2 Market Orientation

In the market orientation questionnaire there were 7 Eigenvalues above 1., indicated as 8.45, 2.86, 1.82, 1.29, 1.26, 1.10 and 1.04. The Scree-test indicated that clear breaks existed between the first and second, and the second and third Eigenvalues, suggesting a possible two or three factor solution. The authors of the original instrument indicated that the questionnaire consisted of three factors, called intelligence generation, intelligence dissemination and responsiveness. An Exploratory Factor Analysis was done on the two and three factor solutions with Direct Quartimin rotation of the axes. The two-factor solution was not pursued further, as the items that loaded on both factors, were a combination of items loading on the three factors indicated by the original authors and therefore uninterpretable.

The structure of the finally accepted three-factor solution are indicated in table 3.21

Table 3.21
Factor loading in the three-factor solution of responses to market orientation questionnaire (N=333)

Factor 1: Intelligence generation		Factor 2: Inertia		Factor 3: Responsiveness	
Item	Loading	Item	Loading	Item	Loading
A1	.640	A4	.521	A26	.399
A2	.594	A9	.510	A31	.770
A3	.607	A17	.556	A32	.772
A5	.582	A18	.569		
A6	.587	A19	.695		
A7	.591	A21	.714		
A8	.322	A25	.408		
A10	.522	A28	.390		
A11	.393	A29	.656		
A12	.455				
A14	.355				

Factor 1 correlated -.319 with factor two and .338 with factor three. Factor three correlated -.509 with factor two. The three factors were named intelligence generation, inertia, and responsiveness with Alpha Coefficients of .81, .83 and .74 respectively. Confirmatory Factor Analysis of the factor model of the Market Orientation Questionnaire was done and shown in

table 3.19. Factor 1 explained 22.97% of the variance in the data space and factors 2 and 3 explained 8.74% and 4.69% of the total variance respectively. The common variance explained by the three factors was respectively indicated as 64.88%, 24.69% and 10.43%. Factor 1 was named "intelligence generation" in line with the name given by the original authors. Factor 2 was named "inertia" because it denotes the organisational behaviour characterized by lethargy. Factor 3 was named "responsiveness" in line with the name given by the original authors.

Table 3.22

Results of Confirmatory Factor Analysis of the Market Orientation Inventory three-factor model (N = 333)

Indices	**Value**
Fit criterion	.0245
Goodness of Fit Index (GFI)	.9904
GFI Adjusted for Degrees of Freedom (AGFI)	.9711
Root Mean Square Residual (RMR)	.0252
Parsimonious GFI (Mulaik, 1989)	.4952
Chi-square (df = 5, p > Chi² =.1496)	8.1226
Independence Model Chi² (df = 10)	325.20
RMSEA Estimate (90% CI = 0. to .0954)	.0434
ECVI Estimate (90% C I = 0. to 1223)	.0858
Probability of Close Fit	.5119
Bentler's Comparative Fit Index	.9901
Normal Theory Reweighted LS Chi-square	8.0833
Akaike's Information Criterion	-1.8774
Bozdogan's (1987) CAIC	-25.9181
Schwarz's Bayesian Criterion	-20.9181
McDonald's (1989) Centrality	.9953
Bentler & Bonett's (1980) Non-normed Index	.9802
Bentler & Bonett's (1980) NFI	.9750
James, Mulaik, & Brett (1982) Parsimonious NFI	.4875
Z-Test of Wilson & Hilferty (1931)	1.0435
Bollen (1986) Normed Index Rhoi	.9500
Bollen (1988) non-normed Index Delta2	.9902
Hoelter's (1983) Critical N	454

The indices in the structure of the Confirmatory Factor Analysis indicated a good fit between the factor model and the data.

3.6.1.3 Flexibility

The Eigenvalues > 1 for the Flexibility Scale were found to be 3.35, 1.71, 1.08 with clear "breaks" between the first and second, second and third and third and fourth Eigenvalues. The author of the original instrument stated that the instrument measured only one factor. Exploratory Factor Analyses were done specifying one, two and three factors. The item loadings on the three different solutions are indicated in tables 3.23, 3.24 and 3.25.

Table 3.23

Factor loadings in one factor solution of the Organisational Flexibility Scale responses (N=333)

Factor 1	
Item	Loading
C1	.476
C2	.553
C3	.561
C4	.693
C5	.664
C6	.599
C7	.756

The single factor yielded an Alpha Coefficient of .81 and explained 38.56% of the variance in the data space.

Table 3.24

Organisational Flexibility Scale two factor solution (N=333)

Factor 1 : Formality		Factor 2 : Authoritarian	
Item	Loading	Item	Loading
C1	.475	C8	.725
C2	.545	C9	.695
C3	.561	C10	.440
C4	.691		
C5	.670		
C6	.603		
C7	.756		

Factor one correlated -.149 with factor two and the two factors explained 27.58% and 11.55% respectively of the total variance and together constitute 39.13% of the variance in the

data space with Alpha Coefficients of .81 and .64 . The common variance explained was indicated as 70.48% and 29.52% for the two factors respectively.

Table 3.25

Organisational Flexibility Scale three-factor solution (N=333)

Factor 1		Factor 2		Factor 3	
Item	Loading	Item	Loading	Item	Loading
C1	.601	C5	.577	C8	.748
C2	.586	C6	.748	C9	.686
C3	.624	C7	.627	C10	.439
C4	.555				

The three factors had Alpha Coefficients of .73, .77 and .64 respectively. Factor one correlated .510 with factor two and -.169 with factor three. Factor three correlated -.046 with factor two. The three factors respectively explained 28.24%, 11.67% and 5.36% of the variance in the data space.

Confirmatory Factor Analyses were done on the one, two and three factor solutions, with the results indicated in table 3.26.

Table 3.26

Results of Confirmatory Factor Analysis of the Flexibility Scale (aggregated items) (N = 333)

Indices	One	Two	Three
Fit criterion	.0000	.0331	.2024
Goodness of Fit Index (GFI)	1.0000	.9891	.9624
GFI Adjusted for Degrees of Freedom (AGFI)	.	.9714	.9353
Root Mean Square Residual (RMR)	.0000	.0270	.0406
Parsimonious GFI (Mulaik, 1989)	-1.0000	.5275	0.6844
Chi-square (df = , p > Chi²)	.0000 (-1; .)	10.9770 (8; .2030)	67.1803 (32; .0003)
Independence Model Chi² (df)	110.78 (1-.0)	427.14 (15)	851.99 (45)
RMSEA Estimate (90% limits)	.00 (. - .)	.0335 (.0-.0773)	.0575 (.0381-0768)
ECVI Estimate (90% limits)	.	.1131 (.0 - .1523)	.3457 (.2857-.4298)
Probability of Close Fit	.	.6801	.2422
Bentler's Comparative Fit Index	.9909	.9928	.9564
Normal Theory Reweighted LS Chi-square	.0000	10.9758	64.8957
Akaike's Information Criterion	2.0000	-5.0230	3.1803
Bozdogan's (1987) CAIC	6.8081	-43.4881	-150.6803
Schwarz's Bayesian Criterion	5.8081	-35.4881	-118.6803
McDonald's (1989) Centrality	.9885	.9955	.9485
Bentler & Bonett's (1980) Non-normed Index	.	.9865	.9387
Bentler & Bonett's (1980) NFI	1.0000	.9743	.9211
James, Mulaik, & Brett (1982) Parsimonious NFI	-1.0000	.5196	.6550
Z-Test of Wilson & Hilferty (1931)	.	.8340	3.4488
Bollen (1986) Normed Index Rhoi	.	.9518	.8891
Bollen (1988) non-normed Index Delta2	.9911	.9929	.9571
Hoelter's (1983) Critical N	.	471	230

The indices of the one-factor model were seen as uninterpretable. The two-factor solution was interpreted as having a good fit with the data. The two factors were identified as formality and authoritarianism. Formality refers to a manageable, adaptable and versatile organisational form. Authoritarianism refers to a rigid organisational form that does not allow for much flexibility.

3.6.1.4 Job Satisfaction

The Eigenvalues larger than one were 7.54, 1.65, 1.12 and 1.09. "Clear breaks" seemed to exist between the first and second, the second and the third, and the third and fourth Eigenvalues. The existence of two factors would be in accordance with the findings of the original authors of the instrument. Exploratory Factor Analysis was done by specifying two, three and four factor solutions with Direct Quartimin rotation of the axes. The three-factor solution was indicated as uninterpretable and the four-factor solution lost too many items. Though factor 1 contained 11 items, factors 2 and 4 had only 2 items and factor 3 only 3. Only the two-factor solution was pursued further. The two-factor structure is shown in table 3.27.

Table 3.27 Two factor structure obtained for Minnesota Job Satisfaction Questionnaire (N = 333)

Factor 1 : Extrinsic		Factor 2 : Intrinsic	
Item	Loading	Item	Loading
B5	.726	B1	.539
B6	.696	B3	.603
B12	.480	B4	.669
B13	.422	B8	.476
B15	.530	B9	.673
B16	.616	B10	.573
B17	.666	B11	.752
B18	.561	B20	.620
B19	.641		

The two factors were identified as extrinsic and intrinsic job satisfaction and this is consistent with the names assigned by the original authors. The two Chronbach Alpha Coefficients were calculated as respectively .86 and .85 for factors one and two. Factor 1 correlated .62 with factor two. The two factors explained 35.50% and 6.23% of the total variance in the data space respectively. The total percentage of variance explained by these two factors is therefore 41.73%. The common variance explained by the two factors was indicated as 85.06% and 14.94%. Confirmatory Factor Analysis was performed on the two-factor structure and the obtained indices are indicated in table 3.28.

Table 3.28

Results of Confirmatory factor Analysis of the Minnesota Job Satisfaction Questionnaire (items score aggregated) (N = 333)

Indices	**Value**
Fit criterion	.0497
Goodness of Fit Index (GFI)	.9840
GFI Adjusted for Degrees of Freedom (AGFI)	.9581
Root Mean Square Residual (RMR)	.0257
Parsimonious GFI (Mulaik, 1989)	.5248
Chi-square (df = 8, p > Chi² =.0358)	16.4940
Independence Model Chi² (df = 15)	941.47
RMSEA Estimate (90% CI = .0140 to .0954)	.0566
ECVI Estimate (90% C I = .1056 to.1775)	.1297
Probability of Close Fit	.3422
Bentler's Comparative Fit Index	.9908
Normal Theory Reweighted LS Chi-square	16.1528
Akaike's Information Criterion	.4940
Bozdogan's (1987) CAIC	-37.9712
Schwarz's Bayesian Criterion	-29.9712
McDonald's (1989) Centrality	.9873
Bentler & Bonett's (1980) Non-normed Index	.9828
Bentler & Bonett's (1980) NFI	.9825
James, Mulaik, & Brett (1982) Parsimonious NFI	.5240
Z-Test of Wilson & Hilferty (1931)	1.8032
Bollen (1986) Normed Index Rhoi	.9672
Bollen (1988) non-normed Index Delta2	.9909
Hoelter's (1983) Critical N	314

The Confirmatory Factor Analysis indicated a good fit between the factor model and the data.

CHAPTER 4
RESULTS

4.1 Introduction

This chapter describes the results of the analyses in order to furnish answers to the eight research problems that underpin this study. The first three research problems were tested using correlation analysis. Correlation analysis is used to examine the strength of the relationship between two variables when a linear relationship is believed to exist (Kerlinger & Lee, 2000). The fourth, fifth and sixth research problems were examined using correlation and multiple regression analyses. Multiple regression analysis studies the effects and magnitudes of the effects of more than one independent variable on one dependent variable (Hair, Anderson, Tathan & Black, 1998; Kerlinger & Lee, 2000). ANOVA was used in answering the seventh problem concerning the relationship between corporate entrepreneurship and biographic variables. Six different Structural Equation Models were built in answering the eighth research problem.

The aim of this study as mentioned in chapter 1, is to determine the relationship between CE, market orientation and flexibility with job satisfaction as outcome variable. The final factor structures identified in the factor analyses, and the biographic variables are identified in table 4.1

Table 4.1

Description of different factors as applied in statistical analyses

Variable	Description
MO1	Market orientation: intelligence generation
MO2	Market orientation: inertia
MO3	Market orientation: responsiveness
JS1	Job satisfaction: extrinsic
JS2	Job satisfaction: intrinsic
F1	Flexibility: formality
F2	Flexibility: authoritarianism
CE1	Corporate Entrepreneurship: support for innovation
CE2	Corporate Entrepreneurship: work discretion
CE3	Corporate Entrepreneurship: work improvement
CE4	Corporate Entrepreneurship: rewards/reinforcement
CE5	Corporate Entrepreneurship: time availability
MOT	Total market orientation
JST	Total job satisfaction
FT	Total flexibility
CET	Total corporate entrepreneurship
V115	Age
V116	Gender
V117	Marital status
V118	Nationality
V119	Home language
V120	Mother tongue
V121	Social heritage culture
V122	Highest educational attainment
V123	Current job level
V124	Number of years in the organisation
V125	Number of years in present job
V126	Functional area or work group
V127	Work association
V128	Working hours per week
V129	Regularly work over weekends
V130	Number of days vacation took last year

4.2 The relationship between CE, MO, F and JS

The first six research problems to which answers were sought, concerning the relationships between corporate entrepreneurship, market orientation, flexibility variables and job satisfaction, are investigated by means of Pearson Product-Moment correlations (see in Table 4.2).

Table 4.2

Pearson Product Moment Correlation CE and psychometric variables and job satisfaction (N = 333)

Variable	MO1	MO2	MO3	JS1	JS2	F1	F2	CE1	CE2	CE3	CE4	CE5
MO1	1.000											
MO2	-.35 .0001	1.000										
MO3	.36 .0001	-.52 .0001	1.000									
JS1	.36 .0001	-.28 .0001	.21 .0001	1.000								
JS2	.29 .0001	-.18 .0009	.23 .0001	.62 .0001	1.000							
F1	.35 .0001	-.21 .0001	.24 .0001	.39 .0001	.31 .0001	1.000						
F2	-.09 .1027	.21 .0002	-.15 .0051	-.35 .0001	-.18 .0010	-.17 .0329	1.000					
CE1	.41 .0001	-.30 .0001	.43 .0001	.31 .0001	.22 .0001	.36 .0001	-.25 .0001	1.000				
CE2	.28 .0001	.06 0.29	.03 0.5803	.58 .0001	.47 .0001	.35 .0001	-.22 .0001	.37 .0001	1.000			
CE3	.45 .0001	-.48 .0001	.45 .0001	.51 .0001	.41 .0001	.40 .0001	-.34 .0001	.52 .0001	.34 .0001	1.000		
CE4	.36 .0001	-.22 .0001	.23 .0001	.61 .0001	.45 .0001	.28 .0001	-.25 .0001	.36 .0001	.41 .0001	.48 .0001	1.000	
CE5	.02 .6993	-.06 .2684	-.04 .5080	.15 .0067	-.05 .4019	-0.03 .5668	-0.8 .1647	.14 .0089	.09 .0855	.08 .1283	.08 .1319	1.000
MOT	.73 .0001	.33 .0001	.23 .0001	.17 .0022	.19 .0006	.22 .0001	.04 .5150	.27 .0001	.21 .0001	.16 .0042	.21 .0001	-.04 .4448
JST	.37 .0001	-.26 .0001	.24 .0001	.92 .0001	.88 .0001	.39 .0001	-.31 .0001	.30 .0001	.46 .0001	.51 .0001	.60 .0001	.07 .2181
FT	.28 .0001	-.09 .0928	.15 .0060	.18 .0008	.20 .0002	.87 .0001	.39 .0001	.21 .0001	.16 .0039	.20 .0002	.14 .0103	-.07 .2206
CET	.48 .0001	-.35 .0001	.37 .0001	.59 .0001	.40 .0001	.41 .0001	-.34 .0001	.82 .0001	.66 .0001	.73 .0001	.67 .0001	.36 .0001

With N = 333 these findings have to be interpreted with caution, as indicated by Hair, et al. (1998). The common variances between CE variables and biographic/psychometric variables were processed to 100 r^2. Only relationships above 25% common variance are interpreted as conceptually significant. The results are shown in table 4.3

Table 4.3

Calculation of 100 r^2 (N = 333)

Variable	MO1	MO2	MO3	JS1	JS2	F1	F2	CE1	CE2	CE3	CE4	CE5
MO1	1.000											
MO2	12.25	1.000										
MO3	12.96	27.04	1.000									
JS1	12.96	7.84	4.41	1.000								
JS2	8.41	3.24	5.29	38.44*	1.000							
F1	12.25	4.41	5.76	15.21	9.61	1.000						
F2	.81	4.41	2.25	12.25	3.24	2.89	1.000					
CE1	16.81	9.00	18.49	9.61	4.84	12.96	6.25	1.000				
CE2	7.84	.36	.09	33.64*	22.09	12.25	4.84	13.69	1.000			
CE3	20.25	23.04	20.25	26.01*	16.81	16	11.56	27.04*	11.56	1.000		
CE4	12.96	4.84	5.29	37.21*	20.25	7.84	6.25	12.96	16.81	23.04	1.000	
CE5	04	36*	.16	2.25	.25	.09	64*	1.96	.81	64	64	1.000
MOT	53.29*	10.39	5.29	2.89	3.61	4.84	.16	7.29	4.41	2.56	4.41	.16
JST	13.69	6.76	5.76	84.64*	77.44*	15.21	9.61	9	21.16	26.01*	36*	.49
FT	7.84	8.1	2.25	3.24	4	75.69*	15.21	4.41	2.56	4	1.96	.49
CET	23.04	12.25	13.69	34.81*	16	16.81	11.56	67.24*	43.56*	53.29*	44.89*	12.96

*significant common variance ≥ 25.00.

Underlined = negative correlation

These correlational relationships are interpreted in terms of the conceptual significance due to the large N of 333 participants. Hair, et al. (1998) warns that intercorrelations with large sample groups could be inflated and therefore be significant by chance. The following interpretations are made:

Less that 5% is seen as a low conceptual correlation

6 - 10% is seen as a useful conceptual correlation

11 - 15% is seen as a moderate conceptual correlation

16 – 24% is seen as a high conceptual correlation

> 25 % is seen as a very high conceptual correlation

Table 4.3 relates to the first six research problems:

The first research problem investigates the possible significant relationship between corporate entrepreneurship and market orientation. The following was found: It is observed that only the CE5 time-availability sub-scale correlated significantly, but negatively with the MO2 sub-scale of inertia, with a common variance of 36%. (It seems that inactivity or apathy would be damaging to time-availability).

Concerning the second research problem, investigating the relationship between corporate entrepreneurship and job satisfaction, it was indicated that both the CE2 (work discretion), CE3 (work improvement) and CE4 (rewards/reinforcement) sub-scales had significant positive correlations with the JS1 (extrinsic job satisfaction) sub-scale with common variances of respectively 33.64%, 26.01% and 37.21%. Both the CE3 and CE4 sub-scales shared a significant common variance with job satisfaction total (26.01% and 36% common variance respectively). The CE total scale had a common variance of 34.81% with the JS1 extrinsic job satisfaction sub-scale. Intrinsic job satisfaction JS2 did not show a significant common variance with any of the CE sub- or total- scales.

The third research problem referred to the significance of the relationship between corporate entrepreneurship and organisation flexibility. The inter-correlation between CE and flexibility indicates only the CE5 time-availability sub-scale in a significant negative correlation with the F2 authoritarianism sub-scale with a 64% common variance. (This could indicate that authoritarianism works in negatively with time-availability).

The fourth research problem enquires about the significance of the relationship between market orientation and organisation flexibility sub-scales and totals. No significant common variance was indicated between these variables.

Research problem five relates to the investigation of the relational significance between market orientation and the job satisfaction sub-scales and total. Table 4.3 indicates no significant common variance between these variables.

Research problem six investigates the relationship between organisation flexibility and job satisfaction. No significant common variances were found between these variables.

4.3 The relationship between CE and biographic variables

Research problem 7, concerning the relationship between corporate entrepreneurship and biographic variables were investigated and reported in Tables 4.4 to 4.9. Kerlinger and Lee (2000) indicate that where there is uncertainty of the normality of the data, nonparametric tests should be used. The intercorrelations between the CE scales and continuous biographic variables were therefore done by means of Spearman Correlational Analysis (see table 4.4).

Table 4.4

Spearman Correlation between CE and biographic variables on continuous scales (N=333)

Variable	CE1	CE2	CE3	CE4	CE5	CET
age (N = 323)	.04 .4808	.08 .1365	.05 .3942	-.04 .4887	-.01 .8913	.03 .5476
No years in organisation (N = 322)	-.08 .1549	-.05 .4210	-.05 .3919	-.12 .0319	-.14 .0102	-.12 .0315
No of years in present job (N = 321)	-.00 .9649	-.07 .1919	-.01 .8920	-.11 .0454	-.06 .2783	-.06 .2488
Working hours per week (N = 318)	.00 .9587	.13 .0161	.05 .3318	.10 .0629	-.16 .0034	.06 .2655
No days of vocation during previous year (N = 320)	-0.02 .7765	-.04 .4403	-.09 .1113	-.10 .0620	-.04 .4649	-.08 .1379
Highest educational attainment (N = 326)	-.16 .0050	-.03 .5654	-.03 .5997	-.05 .4105	-.01 .8895	-.10 .0751

All the inter correlations between CE total and sub-scales were statistically insignificant, with the exception of the significant correlation between highest educational attainment and CE1 as shown in table 4.4. This significant correlation however indicated a low common variance of only 2.56%. This finding could be due to chance, as indicated by Hair, et al. (1998).

Analysis of Variance was done to investigate the relationships between the CE sub and total scales as dependent variables and categorical biographic variables as independent variables. These relationships were investigated by means of ANOVA and the results are shown in tables 4.5 to 4.9

Table 4.5

Results of Analysis of Variance with the support for innovation sub-scale (CE1) as dependent variable (N = 333)

Independent Variable	*F*	*df*	*p* > *F*
Gender	1.05	1	.3061
Marital Status	0.47	2	.6273
Home Language	4.19	2	.0165
Mother Tongue	3.56	2	.0302
Job Level	0.17	4	.9555
Social Heritage	0.44	4	.7763
Functional Areas	0.93	3	.4280
Business Activities	0.00	1	.9914
Week-ends work	0.19	1	.6674
Age	0.26	5	.9368
Tenure Years	0.77	3	.5137
Tenure	1.01	2	.3665
Hours Worked	0.74	2	.4771
Vacation Days	0.63	3	.5967
Qualifications	1.83	6	.0948

Only groups formed in terms of home language, and mother tongue were shown to be as significantly different on the support for the innovation sub-scale as shown in table 4.5.

These differences were further investigated by means of a t-test on the LS-mean scores on the support for innovation sub-scale. No significant differences were indicated between home language and mother tongue groups.

Table 4.6

Results of Analysis of Variance with the work discretion sub-scale (CE2) as dependent variable (N = 333)

Independent Variable	f	df	p > F
Gender	7.28	1	.0075
Marital Status	0.63	2	.5328
Home Language	2.78	2	.0640
Mother Tongue	1.97	2	.1415
Job Level	1.49	4	.2072
Social Heritage	1.58	4	.1795
Functional Areas	3.26	3	.0224
Business Activities	0.80	1	.3707
Week-ends	0.45	1	.5019
Age	1.10	5	.3602
Tenure Years	1.31	3	.2735
Tenure	1.79	2	.1702
Hours Worked	2.30	2	.1028
Vacation Days	0.56	3	.6398
Qualifications	1.79	6	.1034

Groups formed in terms of the variables of gender and functional area of work group, were indicated as significantly different on the work discretion sub-scale as shown in table 4.6. These differences were further investigated by means of a t-test on the LS-mean scores of the different sub-groups and Tukey Range Test scores of the sub-groups in different functional areas. No significant differences were indicated between the genders at the 95% level of confidence. The home language variable indicated a significant difference between Afrikaans and African speaking and between English and African speaking individuals on the work discretion sub-scale. Both Afrikaans and English speaking individuals scored higher on the work discretion sub-scale than African speaking individuals. Individuals working in production, marketing, personnel and R&D scored higher on the work discretion variable than individuals working in accounting/finance and information technology.

Table 4.7 Results of Analysis of Variance with the work improvement sub-scale (CE3) as dependent variable (N = 333)

Independent Variable	f	df	p > F
Gender	2.11	1	.1480
Marital Status	2.47	2	.0866
Home Language	2.56	2	.0799
Mother Tongue	0.60	2	.5510
Job Level	0.42	4	.7928
Social Heritage	0.66	4	.6192
Functional Ares	0.44	3	.7212
Business Activities	0.57	1	.4493
Week-ends	0.34	1	.5598
Age	0.31	5	.9037
Tenure Years	0.24	3	.8690
Tenure	1.18	2	.3079
Hours Worked	0.67	2	.5139
Vacation Days	2.17	3	.0923
Qualifications	1.62	6	.1429

None of the above biographic variables indicated a significant difference on the work improvement sub-scale as shown in table 4.7. The t-test on the LS-mean scores on the sub-scale was not further investigated.

Table 4.8

Results of Analysis of Variance with the rewards/reinforcement sub-scale (CE4) as dependent variable (N = 333)

Independent Variable	f	df	p > F
Gender	1.51	1	.2206
Marital Status	0.32	2	.7232
Home Language	0.34	2	.7145
Mother Tongue	0.26	2	.7691
Job Level	0.50	4	.7370
Social Heritage	0.88	4	.4753
Functional Areas	0.86	3	.4611
Business Activities	0.10	1	.7481
Week-ends	0.00	1	.9793
Age	0.34	5	.8880
Tenure Years	0.36	3	.7851
Tenure	0.64	2	.5303
Hours Worked	1.21	2	.3005
Vacation Days	0.77	3	.5104
Qualifications	0.59	6	.7412

None of the biographic variables were indicated as significantly different on the rewards/reinforcement sub-scale as shown in table 4.8. The t-test on the LS-mean scores on the sub-scale was not further investigated.

Table 4.9

Results of Analysis of Variance with the time availability sub-scale (CE5) as dependent variable (N = 333)

Independent Variable	f	df	p > F
Gender	1.74	1	.1883
Marital Status	0.92	2	.3993
Home Language	2.44	2	.0892
Mother Tongue	0.17	2	.8399
Job Level	1.74	4	.1423
Social Heritage	1.83	4	.1233
Functional Areas	5.27	3	.0016
Business Activities	0.35	1	.5572
Week-ends	8.59	1	.0037
Age	0.34	5	.8888
Tenure Years	2.27	3	.0814
Tenure	0.02	2	.9835
Hours Worked	2.63	2	.0746
Vacation Days	0.96	3	.4144
Qualifications	0.49	6	.8176

The functional area of work group as well as the regularity of working over weekends biographical variables were the only variables indicated as significantly different on the time availability sub-scale at the 95% confidence level as shown in table 4.9.

These differences were further investigated by means of a t-test on the LS-mean scores of the different sub-groups and Tukey Range Test scores of the sub-groups in the time availability sub-scale. The functional area of work group indicated individuals working in production, marketing, personnel and R&D scored higher than accounting/finance and information technology individuals; and general management scored higher than others as well as individuals working in accounting/finance and information technology. No significant difference was found on the weekend variable.

4.4 The relationship between JS and predictor variables

In order to investigate problem eight, the possible building of a Structural Equation Model/s with the job satisfaction sub- and total scales as a dependent variables and the sub and total scales of the CE, MO and FL as predictor variables, different Stepwise Multiple Regression Analyses were carried out.

Kaplan (1990) explains the meaning of each column in the stepwise regression analysis as follows:

F(df): This F value indicates the ratio of the regression mean square to the error mean square. This value demonstrates the strength of the independent variable as entered stepwise and the factors of the dependent variable of the Job satisfaction (Kaplan, 1990). The symbol (df) presents the degrees of freedom used in the computation.

p: this symbol is an indication of the significance of the relationship of the independent and dependent variables as calculated at each step. It is therefore an estimation of the probability of a larger F value occurring by chance.

R^2: The model R^2 demonstrates the combined strength of the *prediction* by the independent variables. This is seen as the variation in the dependent variable that can be ascribed to variation in the model of the independent variables.

Cp: In the final column the Cp value represents a good fit where the Cp value first approaches the number of variables in the model, including the intercept, which is represented by the *p* symbol. This author verifies that a variable is only entered into the model providing that it significantly and independently relates to the dependent variable.

The results of the Stepwise Multiple regression Analysis in which the psychometric scales were regressed on job satisfaction and total scores are shown in the tables 4.10 to 4.12.

What are the Relationships Between Job Satisfaction and predictor variables that are being addressed by this analysis?

Table 4.10

Results of Multiple Regression Analysis with extrinsic job satisfaction as dependent variable and psychometric sub-scales as independent variables (N = 333)

Variable	F(df)	***p***	R^2	C(p)
CE4	195.67 (1 ; 332)	.0001	.3715	99.4417
CE3	35.54 (2 ; 331)	.0001	.4326	59.7840
CE2	25.50 (3 ; 330)	.0001	.4734	33.9601
F2	11.17 (4 ; 229)	.0009	.4908	24.1390
F1	11.36 (5 ; 228)	.0008	.5079	14.4794
CE5	4.34 (6 ; 227)	.0379	.5144	12.0688
CE1	4.57 (7 ; 226)	.0334	.5211	9.4824

Table 4.10 indicates that with extrinsic job satisfaction as a dependent variable, seven of the sub-scales entered the model with a prediction of variance in the dependent variable of 52.11%. The C(p) value of 9.4824 indicates a reasonable fit with the data. The first variable, a dimension of corporate entrepreneurship (rewards/reinforcement) formed the largest part (37.15% vs. 52.11%) of the predicted variance. The other six variables significantly contributed 14.96% out of the total prediction of 52.11%.

Table 4.11 Multiple Regression Analysis with intrinsic job satisfaction as dependent variable and psychometric sub-scales as independent variables (N = 333)

Variable	F(df)	***p***	R^2	C(p)
CE4	82.78 (1 ; 332)	.0001	.2001	40.6938
CE3	20.76 (2 ; 331)	.0001	.2474	20.8144
CE2	10.10 (3 ; 330)	.0016	.2698	12.4574
F1	5.52 (4 ; 229)	.0194	.2819	8.8684
CE5	4.08 (5 ; 228)	.0442	.2908	6.7786

Table 4.11 represents intrinsic job satisfaction as dependent variable, with five of the sub-scales entering the prediction model. A prediction of 29.08% of the variance in the dependent variable is indicated. With the C(p) value of 6.7786 this indicates a reasonable fit with the data. The first variable (corporate entrepreneurship rewards/reinforcement) again formed the largest part (20.01% vs. 29.08%) of the predicted variance. The individual significant contributions of other variables included in the model only formed 9.07% of the total prediction of 29.08%.

Table 4.12

Multiple Regression Analysis with job satisfaction total as dependent variable and psychometric sub-scales as independent variables (N = 333)

Variable	F(df)	***p***	R^2	C(p)
CE4	182.14 (1 ; 332)	.0001	.3549	86.0947
CE3	38.53 (2 ; 331)	.0001	.4224	44.7011
CE2	24.01 (3 ; 330)	.0001	.4617	21.4243
F1	10.71 (4 ; 229)	.0012	.4787	12.4741
F2	4.87 (5 ; 228)	.0281	.4863	9.5554
CE1	4.54 (6 ; 227)	.0338	.4934	7.0106

Table 4.12 represents the job satisfaction total score as dependent variable, with six of the sub-scales entering the prediction model. The prediction of variance in the dependent variable is indicated as 49.34%. The C(p) value of 7.0106 indicates a reasonable fit with the data. It is noted that the first variable (corporate entrepreneurship rewards/reinforcement) again contributed most (35.49% vs. 49.34%) to the predicted variance. Though significant at an individual level the other variables included in the model only contributed 13.85% out of 49.34% of the prediction.

Multiple Regression Analyses were alse done on the different job satisfaction sub- and total scales as dependent variables with the psychometric total scales as independent variables. The results of these analyses are indicated in tables 4.13, 4.14 and 4.15.

Table 4.13

Multiple Regression Analysis results with extrinsic job satisfaction as dependent variable and psychometric totals as independent variables (N = 333)

Variable	F(df)	***p***	R^2	C(p)
CET	178.10 (1; 332)	.0001	.3498	1.7404

Table 4.13 indicates that with extrinsic job satisfaction as the dependent variable, only the corporate entrepreneurship (totals) entered the prediction model with a prediction of variance in the dependent variable of 34.98% The C (p) value of 1.7404 indicates a reasonable fit with the data.

Table 4.14 Multiple Regression Analysis results with intrinsic job satisfaction as dependent variable and psychometric totals as independent variables (N = 333)

Variable	F(df)	***p***	R^2	C(p)
CET	64.63 (1; 332)	.0001	.1633	7.1750
FT	5.55 (1; 331)	.0191	.1772	3.6138

Table 4.14 indicates that with intrinsic job satisfaction as the dependent variable only two sub-scales entered the prediction model with a prediction of variance in the dependent variable of 17.72%. The C (p) value of 3.6138 indicates a reasonable fit with the data. The first variable corporate entrepreneurship (total) formed the largest part (16.33% vs. 17.72%) of the predicted variance. The other variable flexibility significantly contributed 1.39% out of a total prediction of 17.72%.

Table 4.15

Multiple Regression Analysis with job satisfaction total as dependent variable and psychometric totals as independent variables (N = 333)

Independent Variable	F(df)	***p***	R^2	C(p)
CET	153.78 (1; 332)	.0001	.3172	4.8352
FT	4.37 (2; 331)	.0374	.3261	2.4726

Table 4.15 represents job satisfaction total as a dependent variable with two of the sub-scales entering the prediction model. The prediction of variance in the dependent variable is indicated as 32.61%. The C (p) value of 2.4726 indicates a reasonable fit with the data. The first variable corporate entrepreneurship (total) formed the largest part (31.72% vs. 32.61%) of the predicted variance. The other variable contributed only .89% out of a total prediction of 32.61%. Market Orientation did not enter any of the predictions of job satisfaction.

In order to develop Structural Equations Models (SEM), also called Analysis of Covariance, a combination of indications by theory, Correlational and Multiple Regression Analyses are considered (Kerlinger & Lee, 2000). Hair, et al. (1992) aver that SEM provides a straight forward method of dealing with multiple relationships simultaneously while providing statistical efficiency. It also has the ability to assess relationships comprehensively and provides the transition from exploratory to confirmatory analysis.

According to Millsap and Hartog (1988) a Structural Equation Model (SEM) represents a network of hypothesized linear relations among a set of variables. These authors aver that the hypothesized relations are causal, and the model represents a causal theory. Path analysis traditionally represents causal relations among a set of measured variables using linear equations (Millsap & Hartog, 1988; Hair et al., 1998) In contrast to ordinary regression equations, path model equations are conceived of as explicitly causal with path coefficients representing the direct causal influence of the predictor variable on endogenous variable (Millsap & Hartog, 1988; Hair et al., 1998; Kerlinger & Lee, 2000). Millsap and Hartog (1988) indicate that in path analysis predictor variables may themselves be endogenous in relation to other predictors or may

serve purely as predictors. This author goes on to state that variables of the latter type are denoted as exogenous variables in path analysis, all the other variables are regarded as endogenous.

Hair et al., (1998) stipulate four criteria for making causal assertions applied in the construction of the different Structural Equations Models. These are first of all, a theoretical basis for the relationship, as modelled in figure 2.8. Secondly, sufficient association between any two variables or the lack of alternative causal variables were considered. These criteria were used to evaluate causal relationships among variables in the models featuring in the present study. On grounds of these arguments by Hair, et al. (1998) six different Structural Equations Models are presented with CE, FL and MO factors as predictor variables and job satisfaction sub and total scales as criterion variables. Different models had to be built for evaluation, due to the respective positive (formality, intelligence generation) and negative (authoritarianism, inertia) relationships of flexibility and market orientation factors with different job satisfaction outcomes.

The first Structural Equations Model investigates the relationships between CE4, F1, MO1 and JS1 as end variable, as illustrated in figure 4.1.

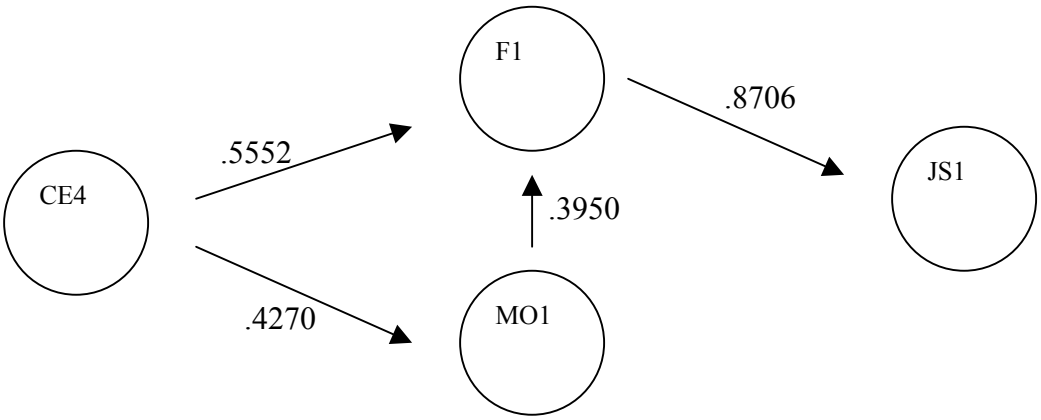

Figure 4.1 Structural Equations Model 1 with extrinsic job satisfaction as outcome variable

The path coefficients shown in figure 4.1 are all satisfactory. This empirically derived model was further subjected to Confirmatory Factor Analysis, and the results are shown in Table 4.16.

Table 4.16

Indices obtained from Structural Equations Analysis of Model 1 (N = 333)	
Indices	**Value**
Fit Function	.3687
Goodness of Fit Index (GFI)	.9310
GFI Adjusted for Degrees of Freedom (AGFI)	.8850
Root Mean Square Residual (RMR)	.0666
Parsimonious GFI (Mulaik, 1989)	.6828
Chi-square (df = 33, p > Chi² > .0001)	122.3938
Independence Model Chi² (df = 45)	1200.9
RMSEA Estimate (90% CI = .0735 to .1077)	.0903
ECVI Estimate (90% C I = .4139 to .6212)	.5057
Probability of Close Fit	.0001
Bentler's Comparative Fit Index	.9227
Normal Theory Reweighted LS Chi-square	121.0253
Akaike's Information Criterion	56.3938
Bozdogan's (1987) CAIC	-102.2749
Schwarz's Bayesian Criterion	-69.2749
McDonald's (1989) Centrality	.8744
Bentler & Bonett's (1980) non-normed Index	.8945
Bentler & Bonett's (1980) NFI	.8981
James, Mulaik, & Brett (1982) Parsimonious NFI	.6586
Z-Test of Wilson & Hilferty (1931)	6.7590
Bollen (1986) Normed Index Rho1	.8610
Bollen (1988) non-normed Index Delta2	.9235
Hoelter's (1983) Critical N	130

The goodness-of-fit index is seen by Hoyle (1995) and Hair et al. (1998) as the most common index of fit between the model and the data. Fit indices varying between 1.0 and 0.90 are commonly seen as acceptable indices for a model to be viewed as consistent with the estimated data (Hoyle, 1995; Hair, et al. 1998). The indices in Table 4.16 therefore indicate a good fit with the data with a high level of parsimony, with the highest GFI index as 0.93.

The Structural Equations Model 2 investigates the prediction of JS1 by means of the inter-relationships between CE4, F2 and MO2, as shown in figure 4.2.

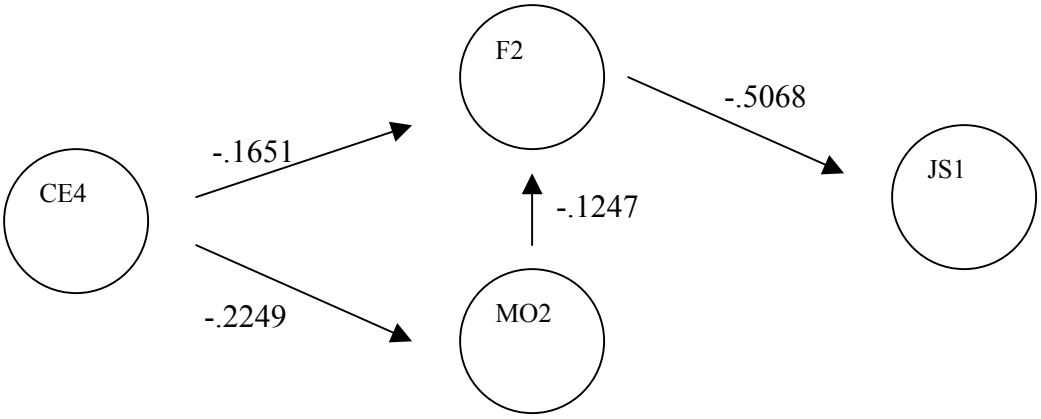

Figure 4.2 Structural Equations model 2 with extrinsic job satisfaction as outcome variable

Only the path coefficients between F2 authoritarianism and JS1 (extrinsic) were satisfactory, above .30 (see figure 4.2). Table 4.17 indicates a further investigation of this empirical model by means of Confirmatory Factor Analysis.

Table 4.17

Indices obtained from Structural Equations Analysis of model 2 (N = 333)

Indices	**Value**
Fit Function	.7081
Goodness of Fit Index (GFI)	.9056
GFI Adjusted for Degrees of Freedom (AGFI)	.8516
Root Mean Square Residual (RMR)	.1738
Parsimonious GFI (Mulaik, 1989)	.6915
Chi-square (df =42, p > Chi² > .0001)	235.1057
Independence Model Chi² (df = 55)	1276.8
RMSEA Estimate (90% CI = .1033 to .1326)	.1177
ECVI Estimate (90% C I = .7223 to 1.0175)	.8581
Probability of Close Fit	.0000
Bentler's Comparative Fit Index	.8419
Normal Theory Reweighted LS Chi-square	190.0166
Akaike's Information Criterion	151.1057
Bozdogan's (1987) CAIC	-50.8363
Schwarz's Bayesian Criterion	-8.8363

Table 17 continues

McDonald's (1989) Centrality	.7483
Bentler & Bonett's (1980) non-normed Index	.7930
Bentler & Bonett's (1980) NFI	.8159
James, Mulaik, & Brett (1982) Parsimonious NFI	.6230
Z-Test of Wilson & Hilferty (1931)	10.7351
Bollen (1986) Normed Index Rho1	.7589
Bollen (1988) non-normed Index Delta2	.8436
Hoelter's (1983) Critical N	.7081

The fit between the data and Model 2 is reasonable, but not good (highest GFI index = 0.90). This is especially clear when the value of RMR is taken into account. The path coefficients are in several relationships between variables not satisfactory. This is an indication that this model does not represent the data very well.

Structural Equations Model 3 investigates the relationships between CE3, MO1, F1 and JS 2 as end variable. This model is shown in figure 4.3.

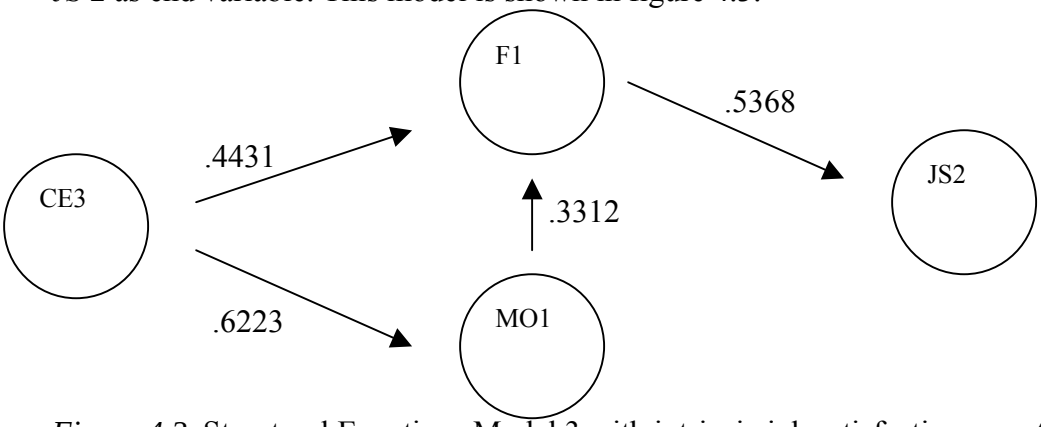

Figure 4.3 Structural Equations Model 3 with intrinsic job satisfaction as outcome variable

The path coefficients shown in figure 4.3 are all satisfactory. Confirmatory Factor Analysis was employed to further empirically investigate the data. The results are shown in Table 4.18.

Table 4.18

Indices obtained from Structural Equations Analysis of model 3 (N = 333)

Indices	**Value**
Fit Function	.2003
Goodness of Fit Index (GFI)	.9586
GFI Adjusted for Degrees of Freedom (AGFI)	.9256
Root Mean Square Residual (RMR)	.0971
Parsimonious GFI (Mulaik, 1989)	.6657
Chi-square (df = 25, p > Chi² > .0001)	66.4936
Independence Model Chi² (df = 36)	1005.1
RMSEA Estimate (90% CI = .0504 to .0916)	.0707
ECVI Estimate (90% C I = .2624 to .4104)	.3245
Probability of Close Fit	.0472
Bentler's Comparative Fit Index	.9572
Normal Theory Reweighted LS Chi-square	61.6489
Akaike's Information Criterion	16.4936
Bozdogan's (1987) CAIC	-103.7099
Schwarz's Bayesian Criterion	-78.7099
McDonald's (1989) Centrality	.9396
Bentler & Bonett's (1980) non-normed Index	.9383
Bentler & Bonett's (1980) NFI	.9338
James, Mulaik, & Brett (1982) Parsimonious NFI	.6485
Z-Test of Wilson & Hilferty (1931)	4.1834
Bollen (1986) Normed Index Rho1	.9047
Bollen (1988) non-normed Index Delta2	.9577
Hoelter's (1983) Critical N	189

Taking into account the value of the indices above, it can be stated that the causal model shown above indicates a good fit with the data. This finding is supported by the satisfactory path coefficients shown in Figure 4.3.

Model 4 illustrated in figure 4.4, indicates a Structural Equations Model investigating the relationships between CE3, F2, and MO2 with JS2 as predictor variable.

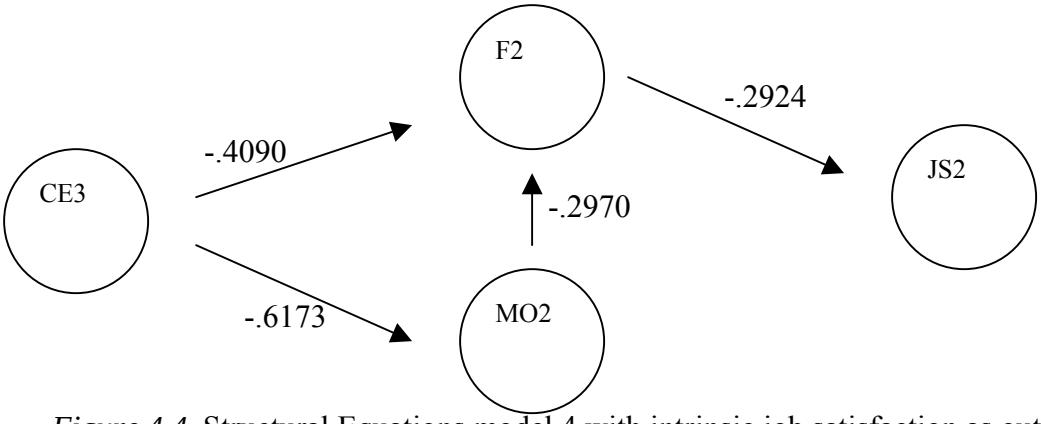

Figure 4.4 Structural Equations model 4 with intrinsic job satisfaction as outcome variable

The path coefficients in the above figure are all at an acceptable level. These relationships were further empirically investigated by means of Confirmatory Factor Analysis. The results are shown in Table 4.19.

Table 4.19

Indices obtained from Structural Equations Analysis of model 4 (N = 333)

Indices	**Value**
Fit function	.3843
Goodness of Fit Index (GFI)	.9380
GFI Adjusted for Degrees of Freedom (AGFI)	.8966
Root Mean Square Residual (RMR)	.1294
Parsimonious GFI (PGFI)	.6878
Chi-square (df = 33, p > Chi² > .0001)	127.5724
Independence Model Chi-square (df = 45)	1108.4
RMSEA Estimate (90% CI = .0762 to .1102)	.0929
ECVI Estimate (90% C I = .4270 to .6393))	.5213
Probability of Close Fit	0.0000
Bentler's Comparative Fit Index	.9111
Normal Theory Reweighted LS Chi-square	107.3120
Akaike's Information Criterion	61.5724
Bozdogan's (1987) CAIC	-97.0963
Schwarz's Bayesian Criterion	-64.0963
McDonald's (1989) Centrality	.8676
Bentler & Bonett's (1980) non-normed Index	.8787
Bentler & Bonett's (1980) NFI	.8849
James, Mulaik, & Brett (1982) Parsimonious NFI	.6489
Z-Test of Wilson & Hilferty (1931)	7.0214
Bollen (1986) Normed Index Rho1	.8430
Bollen (1988) non-normed Index Delta2	.9121
Hoelter's (1983) Critical N	125

The fit between the data and Model 4 is good (GFI = .94) and supportive of the acceptable path coefficients.

The Structural Equations model 5 investigates the relationships between CE4, F1 and MO1 with JST as outcome variable. This association is indicated in figure 4.5.

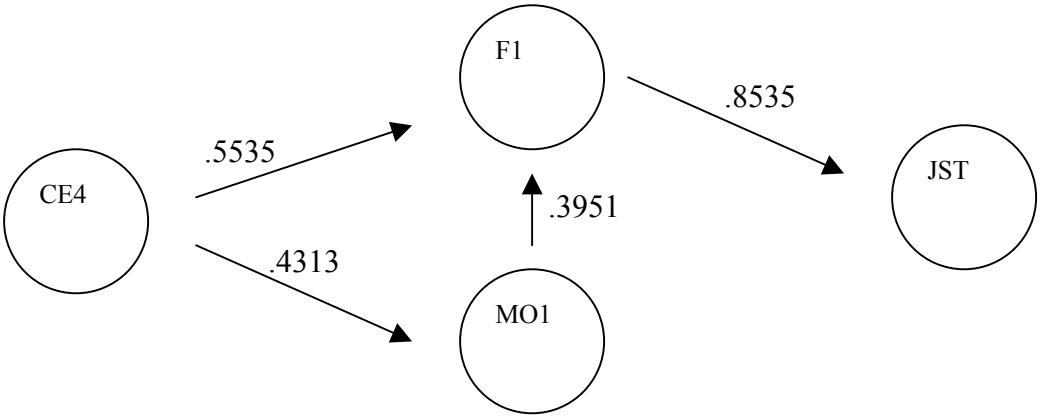

Figure 4.5 Structural Equations model 5 with total job satisfaction as outcome variable

All the path coefficients in figure 4.5 are at an acceptable level and the relationships subjected to Confirmatory Factor Analysis for further evaluation.

Table 4.20

Indices obtained from Structural Equations Analysis of model 5 (N = 333)

Indices	**Value**
Fit function	.6719
Goodness of Fit Index (GFI)	.8921
GFI Adjusted for Degrees of Freedom (AGFI)	.8304
Root Mean Square Residual (RMR)	.0695
Parsimonious GFI (PGFI)	.6812
Chi-square (df = 42, p > Chi² > .0001)	223.0678
Independence Model Chi-square (df = 55)	1519.2
RMSEA Estimate (90% CI = .0995 to .1289)	.1140
ECVI Estimate (90% C I = .6903 to .9770)	.8219
Probability of Close Fit	0.0000
Bentler's Comparative Fit Index	.8763
Normal Theory Reweighted LS Chi-square	217.4010
Akaike's Information Criterion	139.0678
Bozdogan's (1987) CAIC	-62.8742
Schwarz's Bayesian Criterion	-20.8742
McDonald's (1989) Centrality	.7620
Bentler & Bonett's (1980) non-normed Index	.8381
Bentler & Bonett's (1980) NFI	.8532
James, Mulaik, & Brett (1982) Parsimonious NFI	.6515
Z-Test of Wilson & Hilferty (1931)	10.3111
Bollen (1986) Normed Index Rho1	.8077
Bollen (1988) non-normed Index Delta2	.8774
Hoelter's (1983) Critical N	88

Taking into account the value of the indices above, it can be stated that the causal model shown above indicates a promising to reasonable with the data, with the highest GFI at .89.

The sixth Structural Equations Model, shown in figure 4.6 investigates the predictability of CE4, MO2 and F2, with JST as outcome variable.

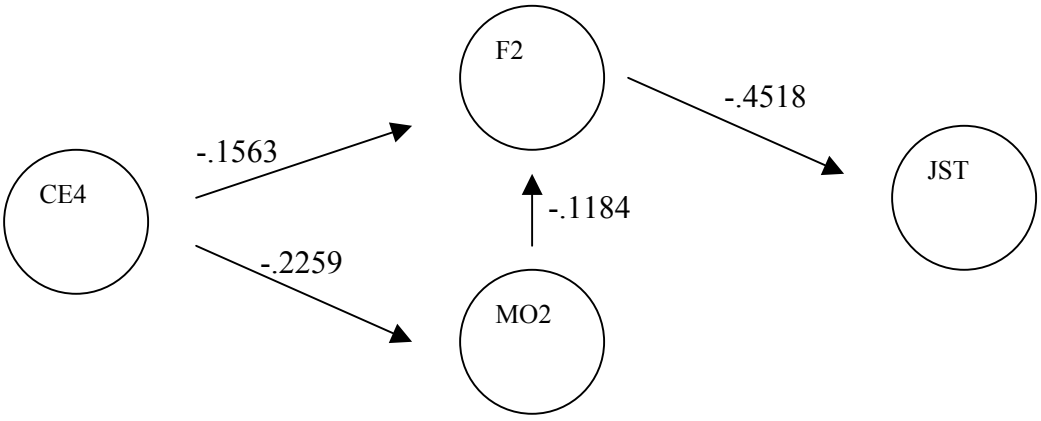

Figure 4.6 Structural Equations model 6 with total job satisfaction as outcome variable

Only the F2 – JST path coefficient in the above figure is seen as satisfactory. The remaining path coefficients are less than .3. The fit between the data and this model is further investigated by means of Confirmatory Factor Analysis, shown in Table 4.21.

Table 4.21

Indices obtained from Structural Equations Analysis of model 6 (N = 333)

Indices	**Value**
Fit function	1.0467
Goodness of Fit Index (GFI)	.8653
GFI Adjusted for Degrees of Freedom (AGFI)	.7979
Root Mean Square Residual (RMR)	.1734
Parsimonious GFI (PGFI)	.6817
Chi-square (df = 52, p > Chi² > .0001)	347.4998
Independence Model Chi-square (df = 66)	1593.5
RMSEA Estimate (90% CI = .1180 to .1441)	.1308
ECVI Estimate (90% C I = 1.0404 to 1.4026)	1.2097
Probability of Close Fit	0.0000
Bentler's Comparative Fit Index	.8065
Normal Theory Reweighted LS Chi-square	309.4495
Akaike's Information Criterion	243.4998
Bozdogan's (1987) CAIC	-6.5237
Schwarz's Bayesian Criterion	45.4763
McDonald's (1989) Centrality	.6417
Bentler & Bonett's (1980) non-normed Index	.7545
Bentler & Bonett's (1980) NFI	.7819
James, Mulaik, & Brett (1982) Parsimonious NFI	.6161
Z-Test of Wilson & Hilferty (1931)	13.5815
Bollen (1986) Normed Index Rho1	.7232
Bollen (1988) non-normed Index Delta2	.8083
Hoelter's (1983) Critical N	68

The fit between the data and Model 4.5 is unsatisfactory. The highest GFI was indicated as only .87.

CHAPTER 5
DISCUSSION

5.1 Introduction

In this final chapter, the results of this study will be evaluated and interpreted with respect to the eight research problems. Thereafter the contributions of the present study, implications for management, and limitations will be discussed and recommendations for future research will be made.

5.2 First Research Problem

The first research problem relating to possible significant relationships between CE and MO, shows a significant negative common variance of 36% between only the CE5 (time availability) and MO2 (inertia) sub-scales. This is an indication that a lack of time availability is associated with apathy or lethargy of individuals in the organization. Alternatively this would mean that time availability would be significantly positively associated with enthusiasm. All the other CE factors had non-significant inter-correlations with MO, with common variances ≤ 25%.

The positive significant relationship between CE and MO is confirmed by all the previous studies of Barrett and Weinstein (1998), Kwaku and Ko (2001), Kiu et al. (2002), Wood et al. (2002), Matsuno et al. (2002) as well as Luo et al. (2003).

5.3 Second Research Problem

The second research problem enquires about the relationship between corporate entrepreneurship and organisation flexibility.

An inspection of the correlation matrix shows that with the exception of CE5 (time availability) and F2 (authoritarianism), none of the other CE factors had a significant common variance ≥ 25% with the flexibility sub-scales (as seen in table 4.3). The significant negative common variance of 64% between CE5 (time availability) and the in-flexibility scale of F2

(authoritarianism) is similar to significant findings of the Barrett and Weinstein, (1998) and Barringer and Bluedorn (1999) studies, which indicate a significant positive relationship between CE and FL (indicated in chapter 2). Flexibility is a concept that has been used in this study to denote an organisational form that is highly versatile and easily adaptable, with in-flexibility having the opposite meaning. A flexible organizational form therefore seems to be positively aligned with CE, as also argued by Rajogopalan et al. (1997) and Jabłecka (2001).

5.4 The Third research Problem

The third research problem investigates the relationship between corporate entrepreneurship and job satisfaction. The CE sub-scales of work discretion (CE2), work improvement (CE3) and rewards/reinforcement (CE4) all showed a significant positive relationship ≥ 25% with extrinsic job satisfaction, but no-significant relationship with intrinsic job satisfaction. The CE sub-scales of work improvement (CE3) and rewards/reinforcement (CE4) also showed a significant positive relationship ≥ 25% with the job satisfaction total score 26.01% and 36% respectively. This is an indication of a significant positive relationship between external satisfaction and certain controlled CE work variables. In the three Multiple Regression Models with JS1, JS2 and JS total as dependent variables, CE4, CE3 and CE2 contributed most to the predictions in that respective order. CET also contributed to the predictions of JS1, JS2 and JS total.

Though previous studies did not measure the exact CE factors as in the current study, previous studies indicate a significant positive relationship between entrepreneurial individuals and job satisfaction (see discussion 2.5.3). A corporate entrepreneurial culture or rewards/reinforcement, work improvement and work discretion therefore seems to contribute significantly to the job satisfaction of individuals.

5.5 The Fourth Research Problem

The fourth research problem investigates a possible significant relationship between organizational flexibility and market orientation. The correlation matrix indicates no significant

common variances ≥ 25% between the flexibility and market orientation sub-scales. These findings differ from the Barret and Weinstein's (1998) and Grewal and Tansuhaj's (2001) studies, which indicated significant positive correlations between these variables. The common variances of these two studies (respectively 18.49% and 23.04%) however, are considerably higher than the common variances in the current study varying between 0.81% and 12.25%. It is not clear why the finding of the current study contrasts that of the previous studies. The relationship between these two variables needs further investigation.

5.6 The Fifth Research Problem

The fifth research problem relates to the relationship between market orientation and job satisfaction. An examination of the correlation matrix shows none of these associations having common variances > 25%. MO did not enter any of the predictions of JS in the Multiple Regression Analyses. Therefore MO does not seem to be much related to JS.

The findings of the current study are in contrast with that of the studies by Sigauw et al. (1994) and Mengüç (1996) indicating significant positive relationships between these two variables. These two studies did however not measure MO in the organisations per se, but the perception that the organisations were market orientated. Stratemeyer (2002) on the other hand indicates a significant negative relationship between MO and JS. The sample of this study is however not seen as representative of an entrepreneurial organisation, with participants being college professors and students. The relationship between these two variables needs further investigation.

5.7 The sixth Research Problem

The sixth research problem relates to the significance of common variance between organization flexibility and job satisfaction. An inspection of the correlation matrix shows that no significant relationships were indicated between the two flexibility factors formality and authoritarianism as well as flexibility total with internal, external and total job satisfaction. However F1 (formality) contributed to the prediction of both extrinsic and job satisfaction as well as JS total. F2 (authoritarianism) contributed to both the JS1 extrinsic and job satisfaction total

regression. Flexibility total contributed to the prediction of both the intrinsic and total job satisfaction. These findings are underscored by the strong path coefficients between the flexibility factors as independent variables and the job satisfaction factors as dependent variables in the structural equation models.

Contrary to the findings of the current study, the study by Oleski (2000) indicates no indirect relationship between flexibility and job satisfaction.

5.8 Research Problem Seven

The seventh research problem enquires about the relationship between biographical variables and CE. The ANOVA results in table 4.11 indicated that none of the biographic variables were significantly different on the support for innovation CE1 sub-scale.

An inspection of table 4.12 indicate that Afrikaans and English speaking individuals scored higher on the work discretion sub-scale than African-speaking individuals. This finding should be interpreted with caution, as the African-speaking individuals represented only 13.5% of the total sample, and is therefore not a representative sample of the population. With the demise of apartheid in South Africa and the concomitant integration of white and black communities, an increasing numbers of black homes use either Afrikaans or English as media of communication. Also, black individuals did not have the opportunities that whites had, and therefore could lack the courage, or experience due to being historically prohibited of taking part in entrepreneurial enterprises.

An interesting finding from table 4.12 and 4.15 is that individuals who work in production, marketing, human resources management and R & D departments scored higher on both work discretion and time availability CE sub-scales than those in accounting/finance and information technology departments. On the surface, this finding seems to suggest that people in the former work areas enjoy more latitude in their disciplines than those in the latter. This finding should be interpreted with caution. It is accepted in the business literature that discretionary powers enjoyed by individuals are a function of many factors including management style (Khandwalla, 1977; Mintzberg, 1988; Miles & Snow, 1978, Floyd & Woolridge, 1992).

Tables 4.7 and 4.8 both indicate that the work improvement and rewards/reinforcement CE sub-scales as dependent variables showed now significant differences in the biographic variables.

5.9 Research Problem Eight

The eighth research problem enquires about the feasibility of building a model of causal relationship between the predictor variables and job satisfaction as criterion variable.

In order to address our final research problem, six Structural Equation Models (SEM) were designed. The first two Structural Equations Models focus on Extrinsic Job Satisfaction as the Outcome Variable. The third and fourth Structural Equations Models focus on Intrinsic Job Satisfaction as the outcome variable and the last two Structural Equations Models focus on Job Satisfaction Total as the outcome variable.

As shown in the figures 4.1, 4.3 and 4.5, the path coefficients across all variables were satisfactory above .30, suggesting the causal links as discussed. The models illustrated in figures 4.1, 4.3 and 4.5 indicate the significant positive prediction of respectively internal, external and total job satisfaction as dependent variables by the independent variables of CE rewards, MO intelligence generation, FL formality. With slightly weaker path coefficients, figures 4.2, 4.4 and 4.6 indicate significant weak but negative influence of CE work improvement, MO inertia and FL2 authoritarianism on internal, external and total job satisfaction respectively.

5.10 Contributions of the current study

An emergent body of literature on CE seeks to identify organizational conditions required for intrapreneurship to occur. This study contributes to that body of knowledge by identifying a set of constructs that should be present if CE is to occur. Further the results of this study show that employee's perceptions of whether or not an organization's culture supports CE are crucial. For this reason, it is important that manager's support for CE becomes visible and that HRM policies and reward systems manifestly support CE. In brief, it is crucial that employees perceive

that management support and organizational practices and systema are consistent with a strategic intent and commitment to CE.

In the current study Principal Factor Analysis was implemented to investigate the portability of all the instruments used in order to ensure that error variance was limited to the minimum. The relationships between the different variables established by means of Factor Analysis, were further investigated by means of Pearson Inter-Correlation, Multiple Regression Analysis and Structural Equations Modelling. As far as could be established the relationships between these variables with job satisfaction as criterion variable have not been investigated previously. Anova was implemented to investigate the relationships between CE and biographic variables.

In summary, the present study showed that:

1. The Corporate Entrepreneurial Assessment Instrument (CEAI) Hornsby, et al. (1992) is not totally portable in the South African sample of the current study. Though the existence of five factors is indicated by the original authors, and a five factor model was identified in the current study, the factors had to be re-named, due to the loss of certain items. The organisational boundaries factor did not feature in the solution of the current study. New names were assigned to this newly defined five-factor structure that are consistent with the CE literature.
2. A Principal Factor Analysis on the responses of the current study, indicated a two-factor solution for the Kohli, et al. (1993) MARKOR market orientation instrument, compared to the three-factor solution indicated by the authors of the original instrument. The two newly identified factors identified as formality and authoritarianism.
3. The portability of the Khandwalla (1977) Flexibility scale indicated a two-factor solution compared to the one factor identified by the author. The newly defined two factors were identified as formality and authoritarianism.
4. The Principle Factor Analysis of the Minnesota Satisfaction Questionnaire developed by Weiss et al. (1967) replicated the existence of two factors in accordance with the

findings of the original authors, namely both extrinsic and intrinsic job satisfaction dimensions.

5. Findings of the current study indicate that biographic variables are with a few small exceptions not related to CE.
6. The current study indicates that intrinsic, extrinsic and general (total) job satisfaction is predicted well by the CE and FL sub-scales.
7. Indications of the current study are that market orientation does not seem to be directly related to JS, but seem to have an indirect relationship in collaboration with CE and FL.

As indicated by Knoop (1995), Luthans (1998) and Robbins (2001) job satisfaction is the most important and frequently studied variable, primarily because of the impact it has on work behaviour. The current study contributes considerably to the body of knowledge of organisational conditions required to advance job satisfaction from a CE, MO and FL perspective. Certain CE (rewards/reinforcement), MO (intelligence generation) and FL (formality) factors are identified that contribute positively to intrinsic, extrinsic and general (total) job satisfaction. On the other hand the F factor of authoritarianism, and the MO factor of intertia relates negatively to the CE path coefficient of work improvement, simultaneously negatively influencing extrinsic, intrinsic and total job satisfaction (see Structural Equation Models figures 4.1-4.6).

5.11 Implications for management

The implication of different findings in the current study should be noted by management in CE organisations:

Indications are that a structural flexibility needs to be nurtured by organisations, as it could facilitate intrapreneurial thinking and behaviour (Barrett & Weinstein, 1998; Nijhof, Krabbendum & Looise, 2002).

The current study is a warning to management that the lack of time availability to the development of CE could lead to an attitude of indifference of employees towards an organizational CE culture of MO. Alternatively this could mean that time availability could inspire an enthusiasm towards MO. The positive significant relationship between CE and MO is confirmed by different previous studies (Barrett & Weinstein, 1998; Kwaku & Ko, 2001; Kiu et al., 2002; Wood et al., 2002; Matsuno et al., 2002; Luo et al., 2003).

The current study clearly indicates the contribution of CE4 rewards/reinforcement, CE3, work improvement and CD2, work discretion towards both intrinsic, extrinsic and total job satisfaction. Management should integrate these CE factors in organisations, which should lead to higher satisfied individuals and add to other possible benefits in the organisation such as low absenteeism and turnover as well as higher productivity. Similarly indications are that CE orientations of rewards enhance MO intelligence generation and formality FL factors, which contributing to internal, externally and total job satisfaction simultaneously.

On the other hand, management should prevent negative reinforcement of inertia towards market orientation and inflexible authoritarianism, leading to internally, externally and total dissatisfaction. The positive and negative paths indicated by the Structural Equation Models should be proclaimed in managerial decisions in order to serve as both a challenge and a warning that certain CE, FL and MO organisational practices could enhance or restrict job satisfaction respectively.

Barrett and Weinstein (1998) argue that factors that constitute the CE culture are amenable to managerial control. This view is supported by Hornsby et al. (1999, 2002) indicating that factors such as management support, rewards and reinforcement could play a positive role in determinants of CE thinking and behaviour. The implication is, that by creating organisational flexible and market oriented cultures that are positively associated with CE, managers in South Africa can strategically reposition their organisations to negotiate the tide of change both in domestic and international markets.

From the foregoing discussion, it follows that, for South African organizations to upgrade their innovative prowess, they, need to recognize the importance of developing CE, FL and MO strategies, building human capability and rewarding corporate entrepreneurial thinking and behaviour, thereby creating healthy job satisfaction cultures.

5.12 Limitations of the current study

The following points are indicated as limitations of the current study:

* An obvious limitation of this study is the relatively few business sectors it covered. Ideally more sectors including the public sectors should have been covered, and the results compared across sectors to determine if certain sectors are more likely to exhibit different entrepreneurial patterns than others. Similarly this study could have looked at other factors (e.g. firm size) as predictive variables. The life assurance company was over-represented in comparison with other sectors.

* The low percentage individuals with an African heritage, limits the generelisability of the findings individuals with an African home language, mother tongue and heritage.

* The South African context of the study limits the generalisability of findings.

* The method used in the current study, was strictly paper-and-pencil questionnaires, which could lead to mono-method bias in the gathered responses.

5.13 Directions for future research

Future studies should investigate the measured variables in countries other than South Africa and a wider area of business sectors.

Future research should further explore the causal relationships between organizational flexibility and market orientation, as well as market orientation and job satisfaction as the current

study, compared to previous studies, has no clarity concerning the relatedness between these variables.

While this study suggests the existence of factors necessary for a corporate entrepreneurial environment, additional research is required to focus on a cross-cultural validation of the study's instruments. The rich cultural diversity of the South African society provides great opportunities to do research on the measurement of variables commonly used in studies of corporate entrepreneurship. Although this study has initiated the exploration of CE factors, an assessment of how CE activities contribute toward productivity as well as financial measures of a company, is imperative.

Future research should be directed at both the creation and advancement of CE and an empowerment process, induced by management as well as other related variables not investigated in the current study. It is hoped that the findings presented in this dissertation will spur further research work in corporate entrepreneurship, especially in South Africa as a developing 3rd world country.

In summary, this study provides empirical evidence regarding the existence of organisational factors of corporate entrepreneurship, flexibility and market orietnation believed to enhance or diminish job satisfaction in South African organisations. Of particular importance is the emergence of inertia and authoritarianism as variables that have the potential to either thwart or encourage initiatives at establishing job satisfactoin in organisations. This study has also demonstrated that factors that promote corporate entrepreneurship, flexibility and market orietnation are amenable to managerial actions and therefore could be managed. Finally this study has shown that job satisfaction can be created to improve organisational functioning through certain corporate entrepreneurial factors, flexibility orientations and market adjustments in organisations.

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