ABSTRACT
Strategy is not what it used to be. To compete effectively, large businesses must respond quickly, creatively and innovatively to develop an entrepreneurial environment to assist this response. Strategic leadership is crucial to develop the organizational environment needed to increase the entrepreneurial orientation in established businesses. The purpose of this article is to determine if the salient organizational factors that aid in the development of the corporate entrepreneurship (CE) capability are applicable in the South African context. A cross-sectional telephone survey of 315 South African companies indicated that strategic leadership of an enterprise is crucial to develop and support CE. Strategic leadership which encourages autonomy and provides rewards for entrepreneurial behaviour creates a supportive organizational structure to strengthen corporate entrepreneurship.

Keywords: strategic leadership, corporate entrepreneurship, organizational structure

INTRODUCTION
Strategy is not what it used to be. Rapid and continuous changes in the competitive environment have rendered traditional management approaches obsolete (Leibold, Probst & Gibbert, 2002; Drucker, 2003; Rigby, 2003; Planting, 2006; Morris, Kuratko & Covin, 2008). Today's organizations need strategic leadership to take advantage of uncertainty by being flexible, innovative, creative and managing entrepreneurial behaviour. However the management of innovation and corporate entrepreneurship (CE) is complex, challenging and filled with risk (Ahmed, 1998:30). The implementation of innovation and CE cannot be achieved by paying "lip service" to the ideal of increased innovative activity (Hof, 2004). A firm commitment to building the CE capability and a supportive organizational climate is needed for an organization to become "entrepreneurial" (Fahden, 1998; Mokoena, 1999). However, a certain kind of leadership is necessary to create and support this entrepreneurial orientation. Strategic leadership has been put forward by various authors as an approach to establish an innovative environment conducive to build organizational, human, social and structural capabilities (Hitt & Ireland, 2002; Bennis, 1997; Goffee & Jones, 2000; Ireland & Hitt, 1996).

This article aims to achieve this objective by firstly reviewing the CE and leadership literature, secondly examining the relationship between a supportive organizational climate and the CE capability and formulating research hypotheses; thirdly by reporting the research design and results and finally by examining the implications for theory and managerial practice.

DEFINING CORPORATE ENTREPRENEURSHIP (CE)
Corporate entrepreneurship (CE), generally, refers to the development of new business ideas and opportunities within large and established corporations. In most cases, CE describes the total process whereby established enterprises act in an innovative, risk-taking and pro-active way (Zahra, 1993; Dess, Lumpkin & McGee, 1999; Bouchard, 2001). This behaviour has various outcomes, such as the new products, services, processes or business development. CE may be chosen as a strategy to result in increased financial performance. It also leads to other non-financial benefits, such as increased morale of employees, collaboration and a creative working environment (Hayton, 2005). It may result in "new" organizations being created as "spin-out ventures" (Hornsby, Naffziger, Kuratko & Montagno, 1993; Altman and Zacharckis, 2003) or it may involve the restructuring and strategic renewal within an existing enterprise (Volberda, Baden-Fuller and Van den Bosch, 2001). CE is a multi-dimensional phenomenon. Corporate venturing, intrapreneurship and strategic renewal are, therefore, different components of CE (Hisrich and Peters, 2002; Covin and Slevin, 1989). In this study, the authors propose that CE be regarded as a process through which both formal and informal initiatives are encouraged, aimed at the creation of new products, services, processes and businesses to improve and sustain a company's competitive position and financial performance.
Many authors subscribe to the view that firm-level entrepreneurial orientation serves as an indicator of the CE capability. Firm-level entrepreneurial orientation is reflected by three dimensions: innovativeness, pro-active ness and risk-taking (Miller & Friesen, 1983; Covin & Slevin, 1991; Zahra, 1991; Knight, 1997). However, some authors, such as Lumpkin and Dess (1996) argue that five dimensions, not three should be used to measure entrepreneurial orientation (EO), namely autonomy, competitive aggressiveness, pro-activeness, innovativeness and risk-taking. In contrast with their views, this article argues that autonomy is an internal organizational driver of CE, which influences the organizational climate for CE. Furthermore, competitive aggressiveness forms part of the pro-activeness dimension and do not represent a separate dimension. Other researchers also support this view (Morris, Allen, Schindehutte and Avilla, 2006; Kreiser et al., 2002). The traditional school of thought views these three dimensions as contributing equally and in the same direction to entrepreneurial orientation (Miller & Friesen, 1983; Zahra, 1991; Barringer & Bluedorn, 1999), while the other school of thought led by Kreiser et al. (2002) and supported by Lumpkin and Dess (1996) argue that the three dimensions vary independently of one another. For the purposes of this article, the authors subscribe to the views of Kreiser et al. (2002) in this regard.

The international CE literature acknowledges that innovativeness, risk-taking and pro-activeness, as dimensions of the CE capability are influenced by the organizational climate within an enterprise (Ahmed, 1998; Morris & Kuratko, 2002; Hornsby, Kuratko & Zahra, 2002; Ngo & Lau, 2004; Martins & Terblanche, 2003).

FACTORS INFLUENCING THE ORGANIZATIONAL CLIMATE FOR CORPORATE ENTREPRENEURSHIP

Hornsby et al. (2002) built on the work of other authors and identified a set of organizational factors that are important facilitators of CE activities. These factors are strategic leadership and support for CE, empowered, autonomous employees, the use of appropriate rewards for CE, the availability of resources, especially time, and a supportive organizational structure. Based on extensive research in the field, Hornsby et al. (2002) developed and refined the Corporate Entrepreneurship Assessment Instrument (CEAI) to measure the five internal drivers of CE in enterprises.

Strategic leadership and support for corporate entrepreneurial strategy

The first factor as a facilitator for CE activities is strategic leadership. Ireland and Hitt (1999:42) defines strategic leadership as “a person's ability to anticipate, envision, maintain flexibility, think strategically, and work with others to initiate changes that will create a viable future for the organization.” The same authors elaborate on describing this viable future of the organization as one of creating value, and where the resources are configured that capabilities can be leveraged in ways to create competitive advantages (Hitt & Ireland, 2002). Other authors describe strategic leadership as the ability to create fit and alignment in all business levels (Beer, Voelpel, Leibold & Tekie, 2005), to appropriately balance the induced and autonomous processes with matching cycles of strategic dynamics (Burgelman & Grove, 2007), managing resources and that these managerial activities are a vital part of what is often a demanding work load for executives (Kotter, 1982). The link between strategic leadership and innovation (Elenkov & Wright, 2005), leadership and strategic management (Wesley & Mint berg, 1989), strategic leadership and super-growth companies (Tonge, Larsen & Ito, 1998) is well known.

New research confirms the linkages between strategy and leadership (Montgomery, 2008), leadership, strategy and competition (Porter, 2008), strategy and performance, (Kaplan & Norton, 2008) and leadership, ownership and value orientation (Kanter, 2008). These strategy experts agree that (strategic) leadership is the driver to add value to the firm and to ensure that companies’ use their capabilities to differentiate themselves from their competitors.

The above discussion provides a solid base for “strategic leadership” and its various attributes to support viable and sustainable innovation, competitive advantages and capabilities for the firm. It captures the encouragement and willingness of managers to facilitate CE activities within an enterprise (Hornsby et al., 1993; Goosen, 2002). These types of support should encourage employees to solve problems in innovative ways, seek opportunities in a pro-active manner and embark on moderately risky projects; therefore the following hypothesis is postulated:

Hypothesis 1: Strategic leadership and support for CE is positively related to innovativeness, pro-activeness and risk-taking, thus to firm-level entrepreneurial orientation.
Empowered, autonomous employees

The second organizational factor facilitating CE activities is the degree to which employees are empowered and function autonomously in their jobs. This factor refers to the discretion and extent that employees are empowered to make decisions about performing their own work in the way they believe is most effective. In entrepreneurial work environments employees are allowed to make decisions about their work processes and are seldom criticised for making mistakes when innovating (Hornsby et al., 2002). This tolerance of failure should facilitate innovative, pro-active and risk-taking behaviours in employees, therefore the following hypothesis is postulated:

Hypothesis 2: Autonomy and empowerment of employees is positively related to innovativeness, pro-activeness and risk-taking, thus to firm-level entrepreneurial orientation.

Rewards for corporate entrepreneurship

A third organizational factor encouraging entrepreneurial behaviour is the appropriate use of rewards for CE. Rewards and reinforcement develop the motivation of individuals to engage in innovative, proactive and moderate risk-taking behaviour (Kanter, 1989; Fry; 1987; Goosen, 2002). Theorists, therefore, stress that an effective reward system that spurs entrepreneurial activity must consider goals, feedback, emphasis on individual responsibility, and performance-based incentives. The use of appropriate rewards can also enhance managers' willingness to assume the risks associated with entrepreneurial activity. Innovative organizations are characterised by providing rewards based on performance, offering challenges, increasing responsibilities, and promoting the ideas of innovative people throughout the organization (Kuratko & Hodgetts, 2004). Therefore, it is expected that:

Hypothesis 3: Rewards for CE is positively related to innovativeness, pro-activeness and risk-taking, thus to firm-level entrepreneurial orientation.

Time and resource availability

The fourth organizational factor supporting the CE capability is the availability of resources, which seems best to be portrayed by time availability. To consider acting in entrepreneurial ways, employees need to perceive resources as accessible for CE activities (Pinchot, 1985; Covin & Slevin, 1991; Kreiser et al., 2002). For new and innovative ideas to thrive, individuals should have time to incubate their ideas. Organizations should be reasonable in assigning the workload of their employees and allow employees to work with others on long-term problem solving. In entrepreneurial work environments, employees are allowed to conduct creative, entrepreneurial experiments in a limited portion of their work time (Von Hippel, 1977; Kanter, 1989; Morris, 1998). Thus, the following hypothesis can be postulated with regard to time and resource availability:

Hypothesis 4: Time availability is positively related to innovativeness and pro-activeness.

Supportive organizational structure and organizational boundaries

The final organizational factor facilitating CE is the existence of a supportive organizational structure and boundaries (Morris, 1998; Lumpkin & Dess, 1996). A supportive organizational structure provides the administrative mechanism by which ideas are evaluated, chosen, and implemented (Goosen, 2002). However, a bureaucratic organizational structure leads to perceived boundaries, preventing people from noticing problems outside their own jobs. People should be encouraged to look at the organization from a holistic perspective. Organizations should avoid having standard operating procedures for all major parts of jobs and should reduce dependence on narrow job descriptions and rigid performance standards (Kuratko, Montagno & Hornsby, 1990; Hornsby et al., 2002). Thus, the following hypothesis can be postulated:

Hypothesis 5: Supportive organizational structures and boundaries are positively related to innovativeness and pro-activeness.

To summarise, the key factors of a supportive organizational climate facilitating CE should be characterised by strategic leadership and support for CE, rewards for CE, empowered employees who enjoy intrapreneurial freedom and autonomy, resource and time availability for CE and a supportive organizational structure and limited boundaries between departments.

RESEARCH DESIGN

The sample of firms that participated in the study included 315 companies, operating in South Africa. The following criteria was employed to select the sample (1) awareness of innovation practices and processes, by participating in the annual SA e-business survey, conducted by Trialogue (Hartley & Worthington-Smith, 2004); (2) active in e-business, since technological changes over the last five years have forced many
enterprises to overcome technological challenges in innovative manners (Hartley & Worthington-Smith, 2004); and (3) accessibility to firms, since few comprehensive updated databases exist in South Africa. The two main groups in the sampling frame were companies listed on the Johannesburg Stock Exchange (JSE) and companies operating in the information and communication technology industry (ICT). JSE companies were identified by using the register of all listed JSE operating companies at the end of 2004. ICT companies were identified, using the database obtained from IT Web in February 2005 (IT Web, 2005). The initial sample consisted of 715 companies. The key respondent (informant) targeted in JSE companies was the Information Technology (IT) manager or the Chief Information Officer (CIO), while the Chief Executive Officer (CEO) or Sales Manager was the key respondent in ICT companies.

Data was collected by a cross-sectional telephone survey between August to October 2005. The administration of the telephone surveys was preceded by a pilot study, involving interviews with middle and senior level managers of 41 companies in Gauteng, South Africa. The purpose of the pilot study was to assess the face validity and reliability of the measurement instrument. Based on the results of the pilot study the questionnaire was refined.

The telephone interview was based on a questionnaire which included scales designed to assess EO, the indicator used in this study to capture CE capability, and the organisational factors which create a supportive climate for corporate entrepreneurship. The ENTREscale was used to assess the EO of firms (Knight, 1997; Morris & Kuratkø, 2002) and the CEAI (Hornsby et al, 2002) was used to measure the five organisational factors. Each of the multi-item measures was based on a 9-point Likert scale, since it is easier for respondents to visualise a 9-point scale during a telephone interview, as opposed to a 7-point scale. Cronbach alpha coefficient values of 0.66 and 0.70 were obtained for EO and the organisational factors respectively. These coefficients would appear to satisfy Nunally’s (1978) suggested minimum criterion for internal reliability. Coefficients lower than 0.50 are regarded as questionable, coefficients close to 0.70 as acceptable and coefficients of 0.80 as good (Sekaran, 1992).

DATA ANALYSIS AND HYPOTHESES TEST RESULTS

Data analysis was conducted using Statistica (StaSoft, 2007) and Lisrel (Joreskog & Sörbom, 1998). Correlation coefficients were used to determine the associations between constructs and structural equation modelling was used to achieve the objectives of the article. The findings of these analyses are subsequently presented.

The correlation matrix shown in Table I indicate statistically significant correlations for the CE dimensions and three of the five organizational factors, which facilitate CE activities.

The correlation matrix shown in Table I was used to determine associations between constructs. The findings indicate correlations are statistically significant (p<0.05) between innovativeness, risk-taking and proactiveness, the three dimensions of EO. Three of the five

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-taking</td>
<td>0.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>0.42**</td>
<td>0.42**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial orientation</td>
<td>0.77**</td>
<td>0.77**</td>
<td>0.77**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic leadership and support for CE</td>
<td>0.29**</td>
<td>0.29**</td>
<td>0.31**</td>
<td>0.38**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>0.18**</td>
<td>0.29**</td>
<td>0.14**</td>
<td>0.27**</td>
<td>0.55**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rewards for CE</td>
<td>0.30**</td>
<td>0.18**</td>
<td>0.13*</td>
<td>0.27**</td>
<td>0.53**</td>
<td>0.44**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time availability</td>
<td>0.07</td>
<td>0.04</td>
<td>-0.01</td>
<td>0.05</td>
<td>0.26**</td>
<td>0.26**</td>
<td>0.20**</td>
<td></td>
</tr>
<tr>
<td>Organizational structure</td>
<td>0.04</td>
<td>-0.02</td>
<td>0.03†</td>
<td>0.02</td>
<td>-0.21**</td>
<td>-0.24**</td>
<td>-0.31**</td>
<td>-0.14*</td>
</tr>
</tbody>
</table>

n = 315  
†p<.10; *p<0.05; **p<0.01
organisational factors, namely strategic leadership and support for CE, autonomy of employees and rewards for CE also show statistically significant correlations between themselves and the dimensions of EO (p<0.05). Proactiveness is also correlated with organisational boundaries at the 90% confidence level (p<0.10). As the correlation matrix indicates, the intercorrelations among the dimensions of EO included in the study are significant, but lower than 0.60, thus multicollinearity is not considered to be a problem in this dataset (Hair et al., 2006). A high level of multicollinearity can result in unstable regression coefficients in linear regression models (Pedhazur, 1982).

Based on the CE literature, it was decided to construct a simple structural equation model of the influence of the organizational climate factors on the entrepreneurial orientation of firms. It was decided to modify the theoretical model, by omitting the measures, which did not contribute significantly to a construct, for example time availability and organizational structure. The subsequent Structural Equation Model (SEM) generated is shown in Figure I.

Figure I shows that strategic leadership (SL) and support for CE, autonomy (Au) and rewards for CE (R) contribute significantly to assess the organizational factors, since the paths from these variables exceed the 0.70 threshold (Hair, Black, Babin, Anderson & Tatham, 2006). Entrepreneurial orientation is measured by innovativeness (I), pro-activeness (P), and risk-taking (RT), which paths also exceed the 0.70 threshold recommended by Hair et al., (2006:747). The organizational climate factor construct has a significant influence (0.45) on the CE capacity. This finding suggests that that the entrepreneurial orientation is a construct that could be managed and improved by focusing on the organizational climate factors of strategic leadership and management support for CE, rewards for CE and allowing employees to function autonomously.

The multiple fit indices of the SEM for firm-level EO influenced by the organizational climate factors are compared to recommended guidelines, shown in Table II. Several of the fit indices evaluate different aspects of fit, and therefore it is important to evaluate fit based on multiple fit statistics, so that judgments will not be an artefact of analytical choice (Grimm & Yarhold, 2000).

Examining the multiple fit indices in Table II, the SEM model, shown in Figure I indicates a good fit. The overall model achieved a value of 0.96 for the Joreskog

![Figure I: A representation of the modified Structural Equation Model for the internal organizational factors and firm-level entrepreneurial orientation](image)

**Table II: A summary of multiple fit indices for the SEM model and recommended guidelines for the fit indices**

<table>
<thead>
<tr>
<th>Single Fit Indices</th>
<th>Overall Model</th>
<th>Recommended GuidelineHair et al.(2006:747)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joreskog GFI</td>
<td>0.96</td>
<td>0.95</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.94</td>
<td>0.90</td>
</tr>
<tr>
<td>Non Normed Fit Index (NNFI)</td>
<td>0.99</td>
<td>0.90</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.99</td>
<td>0.90</td>
</tr>
<tr>
<td>Adjusted Population Gamma Index</td>
<td>0.99</td>
<td>0.95</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.03</td>
<td>Below 0.05 - 0.10</td>
</tr>
</tbody>
</table>
GFI, which meets the threshold of 0.90. The values for NFI, NNFI and CFI were 0.94, 0.99 and 0.99 respectively. These values exceed the recommended threshold of 0.90. The Adjusted Population Gamma Index was 0.99, which exceeds the recommended threshold for this fit index of 0.95. Finally, the RMSEA value of the overall model was 0.03, which is below the recommended threshold value of 0.05 to 0.10 (Hair et al., 2006:747). To summarise, all the fit indices reviewed exceeded the recommended guidelines for good fit and, therefore, it could be concluded that the model reflects adequate measurement characteristics and statistical fit.

The previous statistical analyses aid in assessing the hypotheses. The correlation analysis and structural equation modeling support the first hypothesis. For the firms in the sample, there is a positive relationship between strategic leadership and support for CE and the three dimensions of EO: innovativeness, risk-taking and pro-activeness. Regarding hypothesis two, a positive relationship exists between the autonomy of employees and risk-taking (p <0.01), however no relationship was found between autonomy and innovativeness or pro-activeness. The structural equation modeling supports the assertion that empowered, autonomous employees facilitates the CE capability.

Concerning hypothesis three a positive relationship exists between rewards for CE and innovativeness (p<0.001), however no relationship was found between rewards for CE and pro-activeness or risk-taking. The structural equation modeling supports the assertion that rewards for CE facilitates the CE capability.

Hypothesis four and five were assessed on the basis of the correlation analysis, since these two factors were not suitable in the initial SEM-model. Hypothesis four, which postulated a positive relationship between time availability and innovativeness and pro-activeness, was not supported, on the basis of the correlation analysis. The failure of this hypothesis may be due to a bias in the data or measurement problems. Hypothesis five, which postulated a positive relationship between loose organizational boundaries and innovativeness and pro-activeness, was also not supported. Loose organizational boundaries only show a positive relationship with innovativeness, based on the correlation analysis. No relationship was found between loose organizational boundaries and proactiveness.

CONCLUSION
The results of this study suggest that the dimensions of firm-level entrepreneurial orientation are most strongly influenced by strategic leadership and support for CE, autonomy of employees and rewards for CE, thus creating a supportive organizational structure. Autonomy of employees showed the strongest relationship with risk-taking, while rewards for CE encourage innovativeness.

On the basis of the SEM, the organizational climate factors strategic leadership, rewards and autonomy are significant and enable managers to focus on building a supportive organizational climate for CE inside their organizations. Thus, the most crucial organizational factor which facilitates CE is strategic leadership and top management support for CE.

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REFERENCES


Hitt, M.A. & Ireland, R.D. (2002), The essence of strategic leadership: Managing human and social capital., 9(1)


