Strategizing to improve entrepreneurial orientation: the case of small firms

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ABSTRACT
Developing an entrepreneurial orientation has been proven beneficial to firms, but for small firms this may be too resource consuming. This paper aims to offer a unique perspective on how small firms can improve their entrepreneurial orientation while making optimal use of limited resources. It describes the results of an empirical study of strategy-making processes and entrepreneurial orientation in small firms. The structural equation analysis of the data from 454 small firms indicates that adaptive strategy-making has the strongest impact on entrepreneurial orientation, supported by participative and intrapreneurial strategy-making.

Key words: Strategy-making process, entrepreneurial orientation, small firms

INTRODUCTION
Firms differ radically from one another in terms of the strategy-making processes that they use. A strong tradition of investigation into these strategy-making processes of firms has developed over the past 40 years (e.g. Hart & Banbury, 1994; Miller & Friesen, 1982, 1983; Mintzberg, 1973; Mintzberg & Waters, 1982). Finding its place in organizations such as the Academy of Management and the Strategic Management Society, this research stream focuses on building models that explain, predict and facilitate the positive influence of strategy-making processes on the performance of the firm. Initially focusing on the role of formal, rational processes in the competitive advantage of firms, this research went on to investigate the performance differences of formal and informal processes (e.g. Robinson & Pearce, 1983), evolving further to identify a variety of strategy-making processes that may exist in firms (e.g. Mintzberg, 1973), investigating the performance implications of the different processes (e.g. Hart, 1991) as well as the role of a number of contextual circumstances in the strategy-making/firm performance relationship (e.g. Dess, Lumpkin & Covin, 1997).

The focus on the influence of the strategy-making processes on firm performance is important because it investigates an aspect of strategic management that is often neglected, not only by researchers, but also by managers. However, few researchers consider the influence of strategy-making processes on firm characteristics other than performance. In particular, the influence of the strategy-making process that a firm uses on the entrepreneurial nature of the firm has not been investigated. An entrepreneurial nature is generally considered as desirable for a firm. Advantages of an entrepreneurial nature such as
a positive impact on small firm performance (Wiklund, 1999) have been established in the literature. A variety of methods to develop such a nature have been offered by researchers, including corporate strategies and a ‘conducive climate’ (Kuratko, Hornsby, Naffziger & Montagno, 1993), and training and development (Coulson-Thomas, 2002). However, research that investigates a similar effect as a result of strategy-making processes is not in abundance. In particular, no such research focusing on small firms has been uncovered. This paper addresses this lack of research by exploring the effect of strategy-making processes on the EO of small firms. It further endeavors to answer the recent call for a change in direction in EO research by Green et al. (2007), who highlight the need for research into the ‘boundary conditions’ of EO, that is, those concepts which are necessary for EO to be present in a firm.

This paper aims to investigate how different approaches to strategy-making will be more or less successful in creating an entrepreneurial nature in small firms. Due to definitional confusion it has wrongly been accepted that small firms are by nature entrepreneurial (Carland, Hoy, Boulton, & Carland, 1984), a claim that has disputed (Beaver, 2003). The positive contribution of an EO to small firm performance remains undisputed, and research such as this is therefore timely. It starts by providing an overview of the literature on strategy-making and EO, whereafter four hypotheses considering the relationships between strategy-making processes and EO are introduced. The methods and findings for a large scale study of small firms with fewer than 100 employees are followed by a discussion and conclusions.

BACKGROUND AND HYPOTHESES

Strategy-making processes of small firms

Strategic management research can generally be divided into content (strategies), context and process research (Pettigrew, 1987). Whereas the first two categories received much attention over a long period, and are still viewed as central to strategic management theory (e.g. Miles & Snow, 1978; Parnell, 2006; Porter, 1980), process theories have grown steadily in importance (e.g. Hart, 1991, 1992; Mintzberg, 1973). Strategy-making process can be defined as ‘a process that involves the range
of activities that firms engage in to formulate and enact their strategic mission and goals’ (Dess et al. 1997: 679). The array of strategy-making processes is seldom conceptualized similarly between studies.

This paper considers, in the context of small firms, the strategy-making processes identified by researchers in large firms. It argues, based on the work of Verreynne and Meyer (2007), that of these processes the adaptive (Chen & Hambrick, 1995; Harris, Forbes & Fletcher, 2000; Keeley & Roure, 1990), participative (Bourgeois & Brodwin, 1984; Cutting & Kouzmin, 2000; Floyd & Wooldridge, 1992; Hillman & Hitt, 1999), intrapreneurial (Hart, 1991; Lumpkin & Dess, 1995) and simplistic (Lumpkin & Dess, 1995; 2006; Miller, 1993) processes are important processes that small firms use. Adaptive strategy-making is viewed as an active engagement of external stakeholders in the direction of the firm. Firms that use this approach are able to adapt their strategy to changing market conditions or to pursue opportunities quickly (Barringer & Bluedorn, 1999). This process is often employed by small firms because of their dependence on these stakeholders, who typically include customers and suppliers. Participative approaches to the strategy-making process can be undertaken by employees, managers, shareholders or corporate boards, or other stakeholders. Participative strategy-making is defined as a mode of strategy-making in which strategies are the result of the inclusion of various internal (mostly employee) stakeholder views in the different stages of the strategy-making process (Verreynne, 2006), that is, more than one individual is actively involved in strategy-making (Covin, Green & Slevin, 2006). The intrapreneurial mode of strategy-making implies independent behavior by innovative employees who are encouraged and sponsored by top-management to experiment and take risks with, for example, product/service ideas. Intrapreneurial strategy-making can be described as a mode of strategy-making in which innovative employees come up with new ideas for products, services or processes which are entrepreneurial in nature (Verreynne & Meyer, 2007). Such an approach is expected to be used in some small firms where owner/managers are often caught up with operational issues. Miller (1993) defines ‘simplicity’ as a frame of mind or perspective in which highly successful firms become overconfident in pursuing a single strategic goal, something that may ultimately affect such a firm negatively. He suggests that firms which employ simplistic strategy-
making focus on the factors that lead to success in the past and repeat these actions, developing an ‘overwhelming preoccupation with a single goal, strategic activity, department or worldview’ (Miller, 1993: 117). Therefore decisions, values and ultimately strategy-making, are simplistic.

Thus, through their close physical proximity and small size, small firms lend themselves ideally to adaptation and participation. In addition it seems that, when younger, small firms will be entrepreneurial, using intrapreneurial strategy-making. However, the limits of resources and experience may lead to the use of simplistic strategy-making processes. Strategy-making process researchers have found a direct, and often positive relationship between strategy-making and firm performance (Hart, 1991; Verreynne, 2006). In practice, the outcomes from strategy-making processes are usually strategic decisions in the form of corporate, business or other strategies which are implemented with the purpose of having a positive influence on competitive advantage and firm performance. Some of these decisions can be to affect other organizational phenomena, such as service quality, operations, organizational culture and potentially EO, which is introduced next.

**Entrepreneurial orientation**

In the last couple of decades, however, there has been a growing emphasis on entrepreneurship as a firm behavior. This firm level approach explains how a firm can behave in entrepreneurial ways (Covin & Slevin, 1991). EO is one such example of firm level entrepreneurship. Briefly explained, EO refers to the extent to which firms are inclined to act innovatively, pro-actively and to what degree they are prepared to engage risk (Covin & Slevin, 1989). An entrepreneurial firm will exhibit a high level of EO (Morris & Kuratko, 2002). Wiklund and Shepherd (2005: 74) explain that an EO ‘reflects how a firm operates rather than what it does’. This supports the view that EO is a firm orientation, a culture that permeates how the firm operates – consisting of aspects such as risk-taking, innovativeness, pro-activeness, aggressive competitiveness and autonomy (Covin & Slevin, 1989, Lumpkin & Dess, 1996; Neubaum, Mitchell & Schminke, 2004). A firm can be more or less entrepreneurial depending on the level of EO that it exhibits (Green, Covin & Slevin, 2007). Stevenson and Jarillo (1990) propose that an entrepreneurial firm is a firm that pursues opportunity,
regardless of whether it has the resources to do so successfully and Mintzberg and Waters (1982) describe it as a firm with a simple structure, which is small, personalised, flexible, and knowledge-based. An EO is often developed as a reaction to environmental uncertainty (Weaver, Dickson, Gibson & Turner, 2002). However, processes to enhance the development of an EO in small firms are less frequently investigated.

**Strategy-making processes and entrepreneurial firms**

Although some firms are entrepreneurial from inception, Wiklund (1999) suggests that it is resource consuming for firms to maintain and EO or for other firms to develop an EO. This issue is of particular importance to small firms which are generally considered to be resource poor. The literature is replete with concepts that are related to EO and even contribute to the development of an EO such as corporate strategy and training and development. In this section the potential of different strategy-making processes to contribute to the development of an EO is explored.

EO and *intrapreneurial strategy-making* constructs are linked through recurring themes such as innovation, risk-taking, autonomy and pro-activeness. At the same time, EO and intrapreneurial strategy-making are different, intrapreneurial strategy-making being a process and EO an organizational culture. Covin et al. (2006) find a relationship between strategy-making processes and EO, however, studies such as this assume that this is not a supporting relationship. Yet, it seems logical to argue that intrapreneurial strategy-making processes will have a positive influence on EO. If some employees are exhibiting innovative and risk-taking behaviors, the small firm is likely to accept these behaviors as appropriate and worthy of more universal adoption. Intrapreneurial employees will find opportunities and come up with ideas on how to deal with these opportunities. It is up to the owner/manager to take advantage of these ideas, which is more likely in small firms with close proximity and often, uncertain environments. It can therefore be argued that,

\[ H1 \text{ The intrapreneurial mode of strategy-making will have a positive influence on EO} \]
There are a number of reasons why it is expected that adaptive strategy-making will also have a positive impact on the EO of a firm. Covin et al. (2006) suggest that market feedback and the retention of strategic flexibility may have a role here. First, market feedback and the incorporation of the feedback into the strategic decisions of the firm is a central element of adaptive strategy-making. How then is such feedback used by the small firm? By including the feedback in the strategic direction of the small firm, it is almost certain that the firm will either improve its processes or products, or introduce new products or markets (Green et al. 2007). In fact, interaction with stakeholders facilitates the advancement of opportunity recognition by the firm. Such interaction can be viewed as leading to innovation and sometimes risk-taking, and although not pro-active in the strict sense of the word, it can be viewed as competitive aggressive, since the purpose is to stop competitors from gaining advantage. Second, adaptive strategy-making is by nature a flexible process, allowing the firm to commit to a project, or abandon or postpone it and to reallocate resources when necessary (Covin et al. 2006). Such flexibility may further support the development of an entrepreneurial nature (Barringer & Bluedorn, 1999). Therefore,

**H2**  The adaptive mode of strategy-making will have a positive influence on EO

By contrast, more rational processes such as simplistic strategy-making are viewed as supportive of conservative strategic postures (Covin et al. 2006). Repetition of planning blueprints and set practices for example, is likely to have a negative influence on the development of an EO by not allowing room for opportunity seeking behavior, experimentation or flexibility. Entrepreneurial behaviors also demand broad scanning of the environment and a search for opportunities that may satisfy customer demand and are therefore incongruent with simplistic strategy-making (Lumpkin & Dess, 1996). Therefore,

**H3**  The simplistic mode of strategy-making will have a negative influence on EO

Finally, there are at least two reasons why a relationship between participative strategy-making and EO is unclear. On the one hand, Covin et al. (2006) predict that participative strategy-making is expected to be time consuming, but this may not be the case in small firms, such as those investigated
in this study, because interaction with a small number of employees is much easier. However, they also suggest that it may be a process which leads to consensus seeking behavior. This may limit even a small firm’s ability to react quickly to opportunities, thereby impacting negatively on EO. On the other hand, it is possible that participation improves discussion and analysis, introducing new opportunities and ideas into the strategy-making process, suggesting that participation can support innovation (Ciavarella, 2003). For the same reason participative strategy-making may also increase the likelihood of higher risk decisions and may lead to pro-active identification of opportunities. There is therefore support for and against the possibility that participative strategy-making may support EO. However in the case of small firms there seems to be more support for a positive relationship than a negative relationship. Therefore,

\[ H4 \text{ The participative mode of strategy-making will have a positive influence on EO} \]

**RESEARCH METHOD**

**Data collection**

A questionnaire that contains scales identified through a literature review was mailed to 2,000 small firms in New Zealand, chosen randomly from the Kompass database. A cross-sectional design was employed targeting the owner/managers of these firms. The questionnaire was mailed to the owner/manager of each small firm, and a reminder was mailed one month later. A total of 477 usable questionnaires were returned, for a response rate of 23.85 per cent. After deleting firms with fewer than five employees (O’Regan & Ghobadian, 2004) and firms subjected to external decision making (farming operations and foreign-owned firms) a final sample size of 454 small firms remained. Data comparisons in terms of three questionnaire return periods suggested response similarity, confirming that non-response bias is not significant. In addition a comparison of performance perceptions across sector seemed to agree with industry sector providing some support for external validity. However, there was an over-representation of larger small firms in this sample. The national statistics indicate that for firms with between 10 and 99 employees 58 per cent will have fewer than 20 employees whereas only 40 per cent of the firms included in this sample of firms had fewer than 20 employees. This result was expected because larger firms should typically have more resources to devote time to
non-core tasks such as completing questionnaires for researchers.

**Measurement instrument**

The independent variable, *strategy-making process*, was measured with the Hart (1991) scale as modified by Dess et al. (1997). They found that four modes resulted from their factor analysis. These modes are similar to the four modes identified earlier in this paper, although the items that explain each factor differ slightly. These differences are elaborated in the discussion. Their scale consists of 25 items and is scored on a five point Likert scale, ranging from 1 ‘Strongly disagree’ to 5 ‘Strongly agree’. The dependent variable, *EO*, was measured by using the scale developed by Covin and Slevin (1989). This scale consists of nine items, three items measuring each of innovativeness, pro-activeness and risk-taking. Covin and Slevin (1989) and Miller (1983: 79) explain that the items in this scale should be aggregated together because EO can be viewed as a ‘basic, uni-dimensional strategic orientation’. Furthermore, EO has been used as a dependent variable in previous studies (Miller & Friesen, 1982; Voss, Voss & Moorman, 2005; Zahra, 1991).

**Data-analysis**

The measurement model for the strategy-making process previously developed by Dess et al (1997) was for large firms. It is expected that a different measurement model will emerge for small firms. The *measurement model* for the four modes of strategy-making described in this paper was developed first and analysed using an exploratory factor analysis, using principal axis factoring and an oblique promax rotation. The validity of each of the strategy-making modes as well as the EO was confirmed using confirmatory factor analysis with goodness of fit measures recommended by Byrne (2001): CMIN/DF<3, GFI>0.90, AGFI>0.90, RMSEA<0.07. Each of these constructs was then tested for discriminant validity resulting in the deletion of five items originally allocated to the participative strategy-making mode. Summated scales were then calculated for all these constructs with Cronbach alpha tests for scale reliability. Descriptive statistics were computed showing several significant Pearson correlations. Second, a *causal model* based on the hypotheses were tested using the summated scale for strategy-making modes and entrepreneurial orientation. The above goodness of fit
criteria (Byrne, 2001) were used to test the adequacy of the hypotheses using AMOS version 6. Links with insignificant weights were removed and modification indices were used to suggest additional links resulting in an improved model.

Findings

The descriptive analysis of the age, industry and size variables suggests that the small firms included in this study are relatively young and relatively small, with a bias towards manufacturing. In this section the findings are presented according to the four hypotheses formulated earlier. First, the measurement models for strategy-making process and EO were developed and tested. The initial exploratory factor analysis of the strategy-making modes suggested four constructs corresponding to the adaptive, participative, intrapreneurial and simplistic processes described earlier. Confirmatory factor analysis produced adequate goodness of fit statistics and discriminant validity for the strategy making process model once five items had been removed from the participative strategy-making scale (CMIN/DF = 2.646, GFI = 0.905, AGFI = 0.879, RMSEA = 0.060). Similarly adequate results were obtained for the EO construct (CMIN/DF = 2.883, GFI = 0.963, AGFI = 0.935, RMSEA = 0.064). These measurement models can therefore be used as a basis for further hypotheses testing. Tables 1 and 2 show the standardised weights for the EO and strategy-making constructs, with imputed correlations given in brackets. In all cases the correlations are strongest for the construct to which items are assigned, confirming that all the constructs do have discriminant validity.

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<th>Insert Table 1 about here</th>
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<td>Insert Table 2 about here</td>
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Table 3 shows descriptive statistics for these scales. Cronbach Alpha values in excess of 0.7 are indicative of good scale reliability (Hair, Anderson, Tatham & Black, 1995). Only in the case of simplistic strategy-making was the reliability too low, despite the validity of this measure (CMIN/DF = 1.882, GFI = 0.991, AGFI = 0.974, RMSEA = 0.044). This means that although the correlations between the items for this construct are relatively low, these items do provide a valid measure of the
underlying construct. Therefore it is still possible for this construct to be included in structural models allowing for a variation in weighting for the constituent items, but the scale allowing for no variation in weights should not be used.

There are clearly numerous significant correlations in Table 3 justifying the use of structural equation modeling to test the hypotheses. Any insignificant links were removed and any links with high modification indices were inserted. In particular it was found that there was no direct link between intrapreneurial strategy-making and EO (t = 1.226, p = 0.220), however, the link between participative strategy-making and EO was significant (t = 2.207, p = 0.027) as was the link between adaptive strategy-making and EO (t = 6.088, p < 0.001). As expected there was also a significant link between simplistic strategy-making and EO (t = 2.682, p = 0.007), but the weight associated with this link was negative.

Figure 1 shows the final model with standardized regression weights provided at the mid-point of each link. This model explains 32.9 per cent of the variation in EO with adequate fit statistics (CMIN/DF = 1.96, GFI = 0.90, AGFI = 0.88, RMSEA = 0.046). This model shows strong support for the hypothesis (H2) in that adaptive strategy-making is linked directly to EO, however, it seems that although adaptive strategy-making is supported by intrapreneurial strategy-making, there is no direct link (influence) between intrapreneurial strategy-making and EO (H1). Interestingly the direct link between participative strategy-making and EO has a negative weight suggesting that participative strategy-making will have a negative impact on EO if it does not lead to intrapreneurial and adaptive strategy-making. However, when participative strategy-making leads to intrapreneurial and adaptive strategy-making the total effect (direct + indirect effect) of participative strategy-making on EO is positive (H4). As hypothesized there is a negative relationship between simplistic strategy-making and EO (H3).
DISCUSSION AND CONCLUSIONS

The advantages of an EO for firms have been explained in many studies. Few of these studies, however, provide the small business owner/manager with approaches to introduce such an orientation in existing firms. This paper makes several important findings, the most crucial that adaptive strategy-making processes can be used to support an EO in small firms. Such a strengthening of EO may be a reaction to interesting or exciting opportunities which present themselves through feedback and other information from external stakeholders such as customers and suppliers. Furthermore, small firms may feel that they have to react to this information to prevent their competitors from taking advantage of these opportunities.

This relationship between adaptive strategy-making and EO was hypothesised, but not fully explained in the literature as far as could be ascertained. Covin et al. (2006) find that emergent processes and EO are more congruent, and that flexibility and adaptiveness may be essential in creating an EO. It is also proposed that the way that adaptive strategy-making is defined in this paper, as an active engagement which indicates that firms use this interaction as a source for ideas in a pro-active manner, may be supportive of an entrepreneurial culture. This view is different from that espoused by authors such as Mintzberg (1973) who view adaptive strategy-making as a reactive approach, and supports pro-activity as a dimension of EO (Covin & Slevin, 1989). Voss et al. (2005) explain that when a firm’s strategic actions satisfy stakeholders, they may expect advantages. They do, however, explain that it is unlikely that these stakeholders will be able to come up with creative ideas to satisfy the opportunities identified through an adaptive strategy-making process. For this, participative and intrapreneurial processes are essential.

Therefore, it is not only adaptive strategy-making processes that support EO in small firms, but also participative strategy-making which supports intrapreneurial strategy-making which in turn supports adaptive strategy-making, in other words, the way that these three processes interact. The teamwork processes which form the basis of participative processes are likely to strengthen the use of
intrapreneurial processes (Barringer & Bluedorn, 1999) especially since both are bottom-up, emergent processes. Intrapreneurial strategy-making processes make it necessary for employees to interact with external stakeholders in order to understand market needs and opportunities better (Barringer & Bluedorn, 1999). The processes through which employees seek feedback, information or other interaction are therefore essentially intrapreneurial in nature. But intrapreneurial strategy-making does not impact directly as hypothesized on EO, most likely because it is a bottom-up process, while EO is a culture which permeates the whole organization, supported strongly by top management (Lumpkin & Dess, 1996). Similarly the absence of a direct effect of participative practices in entrepreneurial firms is supported by Ciavarella (2003) who explains that entrepreneurs are more likely to exert strong leadership and make decisions by themselves. The latter argument is further corroborated by the earlier definitions of entrepreneurs who make strategy by providing a strong vision and by commanding the firm (Dess et al., 1997; Mintzberg, 1973). The negative link between participative strategy-making and EO supports the inconclusive discussion leading up to Hypothesis 4, indicating that the negative aspects raised such as political and consensus seeking behavior may hamper the EO of a firm. The literature and this research therefore confirm a direct link between EO and strategy-making process only in the case of adaptive strategy-making. However, a high percentage of the variation in EO is explained by this model, supporting the importance of the role of strategy-making processes in enhancing the EO of small firms.

A number of limitations have to be kept in mind when reading the results of this study. First, the strategy-making modes in the measurement model suggested in this paper are comprehensive, but certainly not exhaustive. Second, the data analysis merely shows that some strategy-making practices are likely to influence EO. The reverse relationship is not supported confirming Covin and Slevin’s (1989) finding that entrepreneurial firms may not engage in strategy-making at all. In effect, less than 50 per cent of the variation in EO can be explained by the use of the suggested strategy-making practices. Third, since data were collected from New Zealand small firms, the generalizability of the results to other settings needs to be explored through further studies. Fourth, the cross-sectional design may be another limitation (Bowen & Wiersema, 1999; Schwartz & Teach, 2000).
A longitudinal study may provide some additional advantages and insights. Fifth, this study used self-reporting measures (Covin et al. 2006). An owner/manager who views his/her firm as entrepreneurial is therefore likely to match their actions to that perception and similarly for the strategy-making process. However, the scales used in this study were worded neutrally in order to minimize this problem.

As suggested by Wiklund and Shepherd (2005), EO can be used to overcome constraints such as limited resources and hostile environments, and even stable environments with fewer opportunities. This provides small firm owners/managers with a way to differentiate their offering from those of competitors. However, it seems that other strategy-making processes, such as simplistic strategy-making, may have the opposite effect.
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Figure 1: Causal model for Strategy-making and Entrepreneurial Orientation

Table 1: Standardised weights for strategy-making process and imputed correlations in brackets

<table>
<thead>
<tr>
<th>Strategy making Process</th>
<th>Participative (PSM)</th>
<th>Intrapreneurial (ISM)</th>
<th>Adaptive (ASM)</th>
<th>Simplistic (SSM)</th>
<th>EO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work as part of a team</td>
<td>0.728 (0.722)</td>
<td>(0.534)</td>
<td>(0.452)</td>
<td>(-0.030)</td>
<td>(0.149)</td>
</tr>
<tr>
<td>Most people are treated equally</td>
<td>0.601 (0.613)</td>
<td>(0.453)</td>
<td>(0.384)</td>
<td>(0)</td>
<td>(0.126)</td>
</tr>
<tr>
<td>Cooperation and collaboration are encouraged</td>
<td>0.674 (0.661)</td>
<td>(0.489)</td>
<td>(0.414)</td>
<td>(-0.027)</td>
<td>(0.138)</td>
</tr>
<tr>
<td>People with unpopular views are heard</td>
<td>0.686 (0.681)</td>
<td>(0.503)</td>
<td>(0.426)</td>
<td>(-0.028)</td>
<td>(0.140)</td>
</tr>
<tr>
<td>Most people have input to decision-making</td>
<td>0.565 (0.589)</td>
<td>(0.435)</td>
<td>(0.368)</td>
<td>(-0.024)</td>
<td>(0.121)</td>
</tr>
<tr>
<td>Modus operandi is well suited to the business</td>
<td>0.532 (0.556)</td>
<td>(0.411)</td>
<td>(0.348)</td>
<td>(-0.023)</td>
<td>(0.115)</td>
</tr>
<tr>
<td>Long-term potential is valued more than short-term performance</td>
<td>(0.396)</td>
<td>0.437 (0.535)</td>
<td>(0.372)</td>
<td>(-0.122)</td>
<td>(0.217)</td>
</tr>
<tr>
<td>Clear and consistent set of values</td>
<td>(0.471)</td>
<td>0.563 (0.637)</td>
<td>(0.442)</td>
<td>(-0.146)</td>
<td>(0.258)</td>
</tr>
<tr>
<td>Business strategy decisions by consensus</td>
<td>(0.474)</td>
<td>0.650 (0.642)</td>
<td>(0.445)</td>
<td>(-0.147)</td>
<td>(0.260)</td>
</tr>
<tr>
<td>Conflict is often suppressed</td>
<td>(0.415)</td>
<td>0.572 (0.561)</td>
<td>(0.389)</td>
<td>(-0.128)</td>
<td>(0.227)</td>
</tr>
<tr>
<td>Experimentation is encouraged</td>
<td>(0.433)</td>
<td>0.582 (0.585)</td>
<td>(0.406)</td>
<td>(-0.134)</td>
<td>(0.237)</td>
</tr>
<tr>
<td>Decision making at level with best data</td>
<td>(0.337)</td>
<td>0.374</td>
<td>0.544 (0.539)</td>
<td>(-0.050)</td>
<td>(0.264)</td>
</tr>
<tr>
<td>Business planning is ongoing involving all</td>
<td>(0.399)</td>
<td>(0.442)</td>
<td>0.639 (0.637)</td>
<td>(-0.059)</td>
<td>(0.313)</td>
</tr>
<tr>
<td>Listen to what stakeholders say</td>
<td>(0.412)</td>
<td>(0.457)</td>
<td>0.668 (0.658)</td>
<td>(-0.061)</td>
<td>(0.323)</td>
</tr>
<tr>
<td>Stakeholders involved in our planning</td>
<td>(0.348)</td>
<td>(0.386)</td>
<td>0.542 (0.556)</td>
<td>(-0.051)</td>
<td>(0.273)</td>
</tr>
<tr>
<td>Continuous adaptation to market feedback</td>
<td>(-0.018)</td>
<td>(-0.098)</td>
<td>(-0.040)</td>
<td>0.443 (0.429)</td>
<td>(-0.118)</td>
</tr>
<tr>
<td>Top-down decision-making</td>
<td>(-0.019)</td>
<td>(-0.105)</td>
<td>(-0.043)</td>
<td>0.426 (0.460)</td>
<td>(-0.127)</td>
</tr>
<tr>
<td>Planning is an internal process</td>
<td>(0.018)</td>
<td>(0.088)</td>
<td>(0.036)</td>
<td>-0.389 (0.384)</td>
<td>(0.106)</td>
</tr>
<tr>
<td>CEO places his mark on almost everything</td>
<td>(-0.016)</td>
<td>(-0.089)</td>
<td>(-0.036)</td>
<td>0.390 (0.388)</td>
<td>(-0.107)</td>
</tr>
<tr>
<td>Clear blueprint for strategy</td>
<td>(-0.012)</td>
<td>(-0.065)</td>
<td>(-0.026)</td>
<td>0.304 (0.282)</td>
<td>(-0.078)</td>
</tr>
</tbody>
</table>

Table 2: Standardised Weights for EO and imputed correlations in brackets

<table>
<thead>
<tr>
<th>Entrepreneurial Orientation</th>
<th>EO</th>
<th>PSM</th>
<th>ISM</th>
<th>ASM</th>
<th>SSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager emphasis on research and development, technological leadership and innovation</td>
<td>0.572 (0.556)</td>
<td>(0.115)</td>
<td>(0.225)</td>
<td>(0.273)</td>
<td>(-0.133)</td>
</tr>
<tr>
<td>Many new lines of products and services</td>
<td>0.552 (0.566)</td>
<td>(0.117)</td>
<td>(0.229)</td>
<td>(0.278)</td>
<td>(-0.156)</td>
</tr>
<tr>
<td>Changes in product or service lines have usually been quite dramatic</td>
<td>0.665 (0.662)</td>
<td>(0.137)</td>
<td>(0.269)</td>
<td>(0.325)</td>
<td>(-0.182)</td>
</tr>
<tr>
<td>Organization typically initiates actions which competitors respond to</td>
<td>0.519 (0.580)</td>
<td>(0.120)</td>
<td>(0.235)</td>
<td>(0.285)</td>
<td>(-0.160)</td>
</tr>
<tr>
<td>Organization is very often the first to introduce new products/services, administrative techniques, operating technologies, etc.</td>
<td>0.582 (0.641)</td>
<td>(0.132)</td>
<td>(0.260)</td>
<td>(0.314)</td>
<td>(-0.176)</td>
</tr>
<tr>
<td>Organization typically adopts a very competitive, &quot;undo-the-competitors&quot; policy</td>
<td>0.538 (0.534)</td>
<td>(0.110)</td>
<td>(0.217)</td>
<td>(0.262)</td>
<td>(-0.147)</td>
</tr>
<tr>
<td>Top managers have high-risk projects with chances of very high returns</td>
<td>0.667 (0.618)</td>
<td>(0.127)</td>
<td>(0.251)</td>
<td>(0.303)</td>
<td>(-0.170)</td>
</tr>
<tr>
<td>Top managers believe that, owing to the nature of the external environment, bold wide-ranging acts are necessary to achieve the organization’s objectives</td>
<td>0.721 (0.747)</td>
<td>(0.154)</td>
<td>(0.303)</td>
<td>(0.367)</td>
<td>(-0.206)</td>
</tr>
<tr>
<td>When confronted with uncertainty organization typically adopts a bold, aggressive approach in order to maximise the probability of exploiting potential opportunities</td>
<td>0.641 (0.686)</td>
<td>(0.141)</td>
<td>(0.278)</td>
<td>(0.337)</td>
<td>(-0.189)</td>
</tr>
</tbody>
</table>
Table 3: Descriptive Statistics and Correlation matrix (** p<0.01)

<table>
<thead>
<tr>
<th></th>
<th>EO</th>
<th>ASM</th>
<th>PSM</th>
<th>ISM</th>
<th>SSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>37.30</td>
<td>3.48</td>
<td>3.91</td>
<td>3.38</td>
<td>3.34</td>
</tr>
<tr>
<td>Standard Deviation (COV)</td>
<td>8.76 (24%)</td>
<td>0.69 (20%)</td>
<td>0.59 (15%)</td>
<td>0.62 (18%)</td>
<td>0.50 (15%)</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>0.845</td>
<td>0.689</td>
<td>0.802</td>
<td>0.727</td>
<td>0.186</td>
</tr>
</tbody>
</table>

**Correlations with:**

<table>
<thead>
<tr>
<th></th>
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<th>ASM</th>
<th>PSM</th>
<th>ISM</th>
<th>SSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Orientation (EO)</td>
<td>1.00</td>
<td>0.38**</td>
<td>0.6**</td>
<td>0.31**</td>
<td>-0.01</td>
</tr>
<tr>
<td>Adaptive SM (ASM)</td>
<td>0.38**</td>
<td>1.00</td>
<td>0.46**</td>
<td>0.48**</td>
<td>0.06</td>
</tr>
<tr>
<td>Participative SM (PSM)</td>
<td>0.16**</td>
<td>0.46**</td>
<td>1.00</td>
<td>0.52**</td>
<td>0.13**</td>
</tr>
<tr>
<td>Intrapreneurial SM (ISM)</td>
<td>0.31**</td>
<td>0.48**</td>
<td>0.56**</td>
<td>1.00</td>
<td>-0.05</td>
</tr>
<tr>
<td>Simplistic SM (SSM)</td>
<td>-0.01</td>
<td>0.06</td>
<td>0.13**</td>
<td>-0.05</td>
<td>1.00</td>
</tr>
</tbody>
</table>