ELEMENTS OF ORGANISATIONAL ARCHITECTURE CONDUCIVE TO CORPORATE ENTREPRENEURSHIP STRATEGY

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Corporate entrepreneurship has been emphasised as the key for companies in an emerging economy to revitalise, reconfigure resources and transform into market-orientated firms that are ready to compete in the global economy. A first-phase closed questionnaire survey is conducted to verify the presence and strength of entrepreneurial orientation among firms in the greater Johannesburg area. The second-phase of the study is based on 203 respondents, where data on organisational elements is regressed on various firm performance outcomes. The results indicate several significant and positive correlations between elements of pro-entrepreneurship architecture, the firm's competitive capability and growth indicators. The study has important implications for South African firms where the presence of an entrepreneurial orientation and pro-entrepreneurship architecture can be critical for growth, profitability and survival.

Key words: Corporate entrepreneurship, organisational architecture, entrepreneurial orientation, profitability, firm growth

1 INTRODUCTION

The scope of corporate entrepreneurship (CE) is widening as organisations that have not previously been recognised as entrepreneurial begin to adopt an entrepreneurial approach in order to survive and succeed in increasingly competitive and financially constrained environments (Antoncic 2006:53; Kuratko, Ireland & Hornsby 2001:65; Phelps 2009:13; Van Vuuren, Groenewald & Gantsho 2009:348). Entrepreneurship and its relation with strategy is studied extensively within organisations and has been conceptualised as a fundamental posture, instrumentally important to strategic innovation, particularly under shifting external environmental conditions (Knight 1997:218).

At the level of the organisation, entrepreneurship can provide direction to the company's entire operation, serve as an integral component of a firm's strategy, and it may serve as the core component of corporate strategy (Morris, Kuratko & Covin

2008:85). Stevenson (1983:392) conceptualised entrepreneurship as a management approach that has at its heart an all-consuming passion for the pursuit and exploitation of opportunity without regard to resources currently controlled. Stevenson's view of entrepreneurial management puts opportunity-based behaviour at the centre.

CE strategy can be regarded as a specific type of strategy, where firms must significantly display the three foundational elements of an entrepreneurial strategic vision, a pro-entrepreneurship organisational architecture, and entrepreneurial processes and behaviour as manifested throughout the organisation. Consistent with the strategic entrepreneurship concept (Ireland & Webb 2007:54) and the status of the field's knowledge about CE as strategy, Ireland, Covin & Kuratko (2009:9) argue that CE strategy implies that a firm's strategic intent (Hamel & Prahalad 1989:70) is to continuously and deliberately leverage entrepreneurial opportunities (Anderson, Covin & Slevin 2009:229; Phan, Wright, Ucbasaran & Tan 2009:12; Shane & Venkataraman 2000:220) for growth- and advantage-seeking purposes.

Despite the weight of positive empirical findings and observations that CE is a strategic imperative for firms (Antoncic 2006:57), there is a danger that firms in South Africa are lagging behind (Urban 2010:58), and subsequently a study of this nature aids in understanding these imperatives. Moreover, while evidence of entrepreneurial initiatives may be located in some parts of the organisation, the mere presence of those initiatives should not be interpreted as evidence that a CE strategy is in use (Ireland, Covin & Kuratko 2009:27). For CE to become a meaningful strategy it cannot be confined to a specialist function within the organisation, but rather requires support through an entire pro-entrepreneurship organisational architecture that contains key attributes that individually and collectively encourage entrepreneurial behaviour. This problem is reinforced when Gries and Naude (2010:29) suggest that firms need to develop new and improved products and services, as well as better operating technology and methods that are more effective than those of competitors to ensure a competitive advantage.

2 STUDY OBJECTIVES AND APPROACH

The focus of this study is on the set of organisational locations from which entrepreneurial behaviour and processes may emerge (Zahra, Jennings & Kuratko

1999:54). Pursuing an alternative route, entrepreneurial orientation (EO), as a preliminary screening tool to select firms exhibiting an entrepreneurial strategic vision and entrepreneurial behaviour and processes, is used. Measuring EO, through the established dimensions of risk-taking, innovativeness, pro-activeness, as a first-phase survey verifies the presence and strength of an entrepreneurial strategic vision as a defining mind-set shared by the organisation's top managers. Firms with higher levels of EO would reflect consistent behaviour required to enact a CE strategy as captured in the CE strategy model through entrepreneurial processes and behaviour, including its intellectual capital (Ireland, Covin & Kuratko 2009:29; Pienaar & Du Toit 2009:128).

Building on data gathered during phase one, by drawing a sample of firms with higher levels of EO in the second phase of the study, for the sake of parsimony, elements of the "pro-entrepreneurship" organisational architectures and the organisational-level consequences of the CE strategy framework are empirically tested. These principal outcomes as specified in the framework are: (1) capability development, and (2) strategic repositioning. Moreover a third set of outcomes, in the form of (3) growth indicators, are added. By proposing specific linkages between the various components of the CE strategy framework as well as linkages between those CE strategy components and their consequences, the study is able to empirically test these hypothesized links.

3 THEORETICAL OVERVIEW

3.1 CORPORATE AND STRATEGIC ENTREPRENEURSHIP

Entrepreneurship in corporations has been labelled in many different ways, with conceptual roots in innovation entrepreneurship (Schumpeter 1934) and innovation management (Drucker 1979:57). More recent terms include intrapreneurship (Antoncic & Hisrich 2001:511, 2004:511), venture entrepreneurship (Tang & Koveos 2004:167), corporate intrapreneurship (Dess, Ireland, Zahra, Floyd, Janney & Lane 2003:368), strategic entrepreneurial posture (Covin & Slevin 1989:81), and internal corporate venturing (Hornsby, Kuratko & Zahra 2002:262); these not being merely differences in nomenclature, but each having specific meaning and focus.

A longstanding literature has conceptualised CE as a multidimensional phenomenon which incorporates the behaviour and interactions of the individual, organisational, and environmental elements within organisations (Dess, Lumpkin & McGee 1999:92; Hayton, George & Zahra 2002:45). CE includes strategic renewal (organisational renewal involving major strategic and/or structural changes), innovation (the introduction of something new to the marketplace), and corporate venturing (corporate entrepreneurial efforts that lead to the creation of new companies within the corporate company), which are all important and legitimate parts of the CE process (refer to Covin & Miles 1999:54; Morris & Kuratko 2002:77).

Strategic entrepreneurships' domain consists of a complex set of phenomena that cannot be neatly bundled according to disciplinary boundaries. Strategic entrepreneurship (SE) is defined as *"the integration of entrepreneurial (i.e., opportunity-seeking behaviour) and strategic (advantage-seeking behaviour) perspectives in developing and taking actions designed to create wealth"* (Hitt, Ireland, Camp & Sexton 2002:481). Moreover, SE has been conceptualised as a value-creating union in which a balance is sought between exploration and exploitation (Ireland, Hitt & Sirmon 2003:978), and which centres on the notion of an opportunity space and a paradigm built around forms, flows, and functions.

Covin and Kuratko (2008:9) discuss SE within the realm of CE. Ireland, Covin and Kuratko (2009:21) define CE strategy as *"a vision-directed, organisation-wide reliance on entrepreneurial behaviour that purposefully and continuously rejuvenates the organisation and shapes the scope of its operations through the recognition and exploitation of entrepreneurial opportunity"*. Not only can entrepreneurship serve as the dominant logic of a company, but it also plays an important role in the firm's strategy. The model of CE strategy, under investigation is distinct from prior models of entrepreneurial phenomena in established organisations in four important aspects; the behavioural dimension, the locus of entrepreneurship, the philosophical justification, and CE as a unique and identifiable strategy.

3.2 ENTREPRENEURIAL ORIENTATION

Extensive research also exists on the EO construct. Prior theory and research (Covin & Slevin 1989:82; Lumpkin & Dess 1996:147) indicates that an EO is a key

ingredient for organisational success, and has been previously linked to increased performance (Zahra & Covin 1995:51; Wiklund & Shepherd 2003:1309). The theoretical basis of the EO construct lies in the assumption that all firms have an EO, even if levels of EO are very low, with extant organisational research providing theoretical support for the EO construct, in both the fields of entrepreneurship and strategic management (Marino, Strandholm, Steensma & Weaver 2002:154). Extensive research confirms that EO has three dimensions: innovativeness, risk taking, and proactiveness (Covin & Slevin 1989:81, 1991:13, 1997:144; Kreiser, Marino & Weaver 2002:84; Lumpkin & Dess 1996:145, 2001:439). These dimensions have been extensively documented, and according to Lumpkin and Dess (1996:145), all the dimensions are central to understanding the entrepreneurial process, although they may occur in different combinations, depending on the type of entrepreneurial opportunity the firm pursues. EO is manifested across the organisation by the implementation of a particular strategy.

3.3 ELEMENTS OF PRO-ENTREPRENEURSHIP ARCHITECTURE

Businesses which incorporate innovation into their vision by relying on entrepreneurial strategies and actions, understand that innovation is at the core of an entrepreneurial organisation. It is around this core that other elements of the organisation such as strategy, management style and structure are built. Corporate environments supportive of entrepreneurship must provide appropriate reward systems, top management support, explicit goals and appropriate organisational values which signal to employees that entrepreneurial behaviour is desirable. For CE to become a meaningful conduit for a corporation's value creation activities it cannot be confined to a specialist function within the organisation.

A pro-entrepreneurship organisational architecture is not a unique organisational form but an internal environment or organisational context exhibiting certain attributes that individually and collectively encourage entrepreneurial behaviour. It involves integrating hardware elements (e.g. characteristics of organisational structure) with software elements (e.g. culture and climate) (Covin & Slevin 2002:314). Pro-entrepreneurship organisational architectures are likely to take shape when there is an entrepreneurial strategic vision endorsed by top management that encourages

entrepreneurial thought and action throughout the organisation (Morris & Kuratko 2002:49). Salient elements of CE strategy that encourage entrepreneurial processes and behaviour, can be traced to Stevenson's (1983:399) generic forms of entrepreneurial behaviour, which he categorised along six dimensions: (1) strategic orientation, (2) commitment to opportunity, (3) commitment of resources and control of resources, (4) management structure, (5) reward philosophy, he later added two more dimensions: (6) entrepreneurial culture and growth orientation (Brown, Davidsson & Wiklund 2001:961; Stevenson 1983:398; Stevenson & Gumpert 1985:89; Stevenson & Jarillo 1990:22).

3.4 CONSEQUENCES OF CORPORATE ENTREPRENEURSHIP

For the organisation, consequences primarily concern the degree to which using a CE strategy resulted in acceptable (or better) current performance and portends the possibility of acceptable (or better) future performance, where performance is defined in terms of the outcomes of interest. The CE model emphasises the organisational-level outcomes of CE strategy, which are adopted in the present study.

There are two principal types of such outcomes: capability development and strategic repositioning. The strategic renewal form of CE enables firms to assume new strategic positions vis-à-vis competitors. Likewise, Covin and Miles (1999:53) assert that "major repositioning actions" are typical of established firms that engage in CE. A multidimensional approach to capturing performance, as advocated by Wiklund and Shepherd (2003:1310), is used, particularly as the outcomes may be uniquely associated with the various organisational architecture elements. More specifically, the study empirically tests to what extent particular combinations of the above-stated elements are able to predict firm outcomes.

Hypothesis 1: The elements of pro-entrepreneurship architecture are positively associated with CE outcomes.

Hypothesis 2: The (a) level of entrepreneurial strategic orientation, (b) commitment to opportunity exploitation (c) the degree of structural organicity, (d) the strength of cultural norms favouring entrepreneurial behaviour, (e) the strength of the organisation's entrepreneurial capability, and (f) the extent to which the organisational

reward systems encourage entrepreneurial behaviour, are positively related to (a) the strength of the organisation's competitive capability and (b) the realisation of strategic repositioning, (c) to sales growth, (d) higher employee growth, and (c) equity growth.

4 METHODOLOGY

Following the advice of Ireland, Covin and Kuratko (2009:29) the study sought to operationally identify samples of firms that exhibit CE strategies to various degrees (thus minimising the restriction of range problem within the sample). This was daunting as: (1) CE strategies may not be robust in firms, and (2) firms with highly entrepreneurial CE strategies may be few in number, as continuously employing entrepreneurial CE strategies may render these firms vulnerable to collapse. To counteract such sample identification challenges, a two phase research procedure which included a preliminary sample screen, was relied upon.

The first phase served as a screening process to allow for identifying organisation whose actions were entrepreneurial. To this end, as previously mentioned, the EO construct was used. In existing EO models, the presence of EO is inferred from evidence of organisational behaviour reflecting the risk-taking, innovativeness, proactiveness, competitive aggressiveness, and/or autonomy dimensions. EO was used to denote an organisational state or quality. Indeed it is acknowledged that by contrast, the model of a CE strategy treats entrepreneurial behaviour as but partial evidence of the presence of a CE strategy. Nonetheless the CE strategy phenomenon also has a philosophical component, represented by entrepreneurial strategic vision that accompanies and provides the value justification and stimulus for a pro-entrepreneurial organisational architecture as well as for entrepreneurial processes and behaviour. By focusing on pro-entrepreneurship architecture it is demonstrated how CE can be manifested as an identifiable strategy, as inferable from the presence of patterns of entrepreneurial behaviour as represented by dimensions of EO.

4.1 DATA COLLECTION AND SAMPLING

The sampling frame for this study was based on generic membership lists representative of businesses operating in the greater Johannesburg area. Johannesburg is situated in the Gauteng province, the economic hub of South Africa,

which has the highest number of businesses (JCCI 2011; South Africa Business Guidebook 2008/9:39). Systematic random sampling was used to select elements of the population at the beginning with a random start and following the sampling fraction select at every K^{th} element.

Data was collected in a two-step manner. First, firms were contacted and surveyed through a closed questionnaire method by telephone yielding 845 responses. Second, the firms were sent the same questionnaire via e-mail. Mail responses were received from 478 firms after two reminders. The response rate was 56%. This considerable response rate helped safeguard against non-response bias.

For the first phase of the study, in order to select firms with higher levels of EO, the EO instrument (operationalised in the next section) was administered to the total sample. Based on the overall scores on the EO scale, where higher scores are indicative of a more EO, while lower scores are indicative of a more conservative orientation, 52 % of the sampled firms were judged to have a higher level of EO, i.e., the average of the individual item scores was used as the scale score where this was greater than the midpoint (as measured per item on the 5-point bi-polar scale). To further verify the presence of a CE strategy in the final sample, as denoted by higher levels of EO, these firms were compared with sampling lists of firms with high rankings on industry reputational surveys regarding performance-related matters over an extended period of time. The "Top 100 Companies" survey showcases the prowess of South Africa's most successful organisations (Financial Mail 2010). Excluding cases with low levels of EO and also not featuring on these selected sampling lists, an effective sample of 203 firms was used for the main analysis.

The firm characteristics of the sample indicate that most of the firms (75%) are aged 5 years and above and only 25% were aged 42 months and below. The majority of the firms (67%) had less than 50 employees and 24% had more than 100 employees. Approximately 12% had less than 5 employees.

4.2 MEASURES

For the first phase of the study, EO was measured along the sub-dimensions of innovation, proactiveness, and risk taking (Covin & Slevin 1989:79; Lumpkin & Dess

2001:152). Based on the nine items constituting EO's three dimensions, the internal consistency of the sampling instrument, was assessed. A Cronbach's Alpha (reliability coefficient) of 0.793 was calculated indicating a high reliability for the EO construct. Statistics for each item indicated item-total correlations, and Cronbach's Alpha as high.

4.2.2 Independent Variables

Several instruments were scanned for relevance to this study, and an instrument designed by Brown, Davidsson and Wiklund (2001:961) to empirically gauge Stevenson's (1983:397) conceptualisation of entrepreneurship as opportunity-based firm behaviour, was used to measure the elements of organisational architecture. This instrument has been previously tested full scale on a very large (1200+ cases) stratified random sample of firms with different size, governance structure, and industry affiliation. Results identified six sub-dimensions with high discriminant validity and moderate to high reliability. These dimensions have been operationalized with a 20-item instrument from which a global index with satisfactory reliability was then computed. This multidimensional measure reflects the earlier conceptual discussion on pro-entrepreneurship architecture with six sub-dimensions, which Brown, Davidsson and Wiklund (2001:961) labelled as strategic orientation, resource orientation, management structure, reward philosophy, growth orientation, and entrepreneurial culture.

A bi-polar 5-point scale was used to obtain responses on these sub-dimensions of pro-entrepreneurship architecture, measuring strategic orientation (3 items), resource orientation (4 items), management structure (5 items), reward philosophy (3 items), growth orientation (2 items), and entrepreneurial culture (3 items). A high score indicates a more pro-entrepreneurial element of organisational architecture. To avoid response set contamination, questions were arranged so that entrepreneurial and non-entrepreneurial statements appeared on both the right and left sides of the scale (Cronbach's α = 0.862 for the overall scale indicating high reliability, which is above Nunnally's (1978) recommended level). Additionally this measure has been shown to only partly overlap with the EO instrument; the 20-items gauge different and distinct aspects of entrepreneurship (Brown, Davidsson & Wiklund 2001:961).

4.2.3 Dependant Variables

Organisational-level outcomes of the CE strategy were measured in terms of: capability development, strategic repositioning, and absolute growth indicators. Enhanced competitive capability, in particular, often results from exploiting entrepreneurial opportunities. Competitive capability is the capacity of firms to create and sustain economically viable industry positions (Teece, Pisano & Shuen 1997). Competitive capability is created as organisations use entrepreneurial initiatives to explore new technologies or product-market domains or exploit existing technologies or product-market domains. Regarding strategic repositioning, the very act of implementing CE strategy through entrepreneurial behaviours can place the firm (or portions thereof) in a new position within its pre-existing product-market domain(s), alter the attributes of that domain(s), and/or position the firm within a new product-market domain(s). Seven items were used to measure these two CE outcomes, where respondents were asked to what extent they agree or disagree (1= strongly agree to 5 = strongly disagree), with statements indicating levels of attaining capability and positioning (an overall Cronbach's Alpha of 0.779 was obtained for these two sets of CE outcomes).

Following the literature review, three common growth indicators were used: growth in sales, employees and equity. Although there is no consensus on the appropriate measure of firm growth, entrepreneurship researchers have pointed to multi-dimensional nature of growth as the crucial indicator of entrepreneurial success (Covin & Slevin 1997:119; Low & MacMillan 1998:149). Self-reported measures of sales, number of employees, and total equity, were obtained. Five-point scales were used for all the growth measures, anchored by 'much less than' and 'much more than'. Absolute growth was simply computed as the size at one year minus the size of the previous year. Following Wiklund and Shepherd (2003:1310), the growth measures were standardised and then combined to reflect a global performance index (Cronbach's Alpha obtained was 0.697).

5 RESULTS

Table 1 displays the descriptive statistics and correlations between the study variables. Based on the results, the level of correlations is generally high and all

correlations are statistically significant, which offers preliminary support for the hypotheses. As anticipated in the instrument design, the results reveal that variables are vulnerable to multicollinearity (correlations at 0.80 or more) (Cooper & Emory 1995:65). This is further addressed in the next section when interpreting the regression analysis results.

Table 1: Descriptive statistics and correlations of study variables

	1	2	3	4	5	6	7	8	9	10
Strategic orientation	1									
Resource orientation	0.50**	1								
Structure orientation	0.48**	0.57**	1							
Reward orientation	0.38**	0.49**	0.53**	1						
Growth orientation	0.33**	0.38**	0.36**	0.37	1					
Culture	0.38**	0.37**	0.28**	0.32	0.71**	1				
Competitive capability	0.01	0.17**	0.35**	0.27	0.12	-0.00	1			
Strategic repositioning	-0.06	-0.22**	0.00	0.04	-0.03**	-0.10	0.39	1		
Firm size	-0.09	-0.09	-0.15*	-0.17*	-0.05	-0.06	-0.01	0.08	1	
Firm age	-0.03	-0.03	-0.12	-0.04	0.08	0.06	0.02	-0.01	0.61	1
Growth composite	0.03	0.02	-0.18**	0.02	0.09	0.25	-0.27**	-0.23**	0.19**	0.32**
Mean	3.34	3.09	2.76	3.18	3.25	3.44	2.35	2.50	3.09	3.34
Standard deviation	1.18	1.33	1.00	1.09	1.03	0.86	0.87	0.87	1.33	1.18

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

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

To test the hypotheses, all the control variables were initially added (base model), followed by the independent variables (model 2), then the two-way interaction terms (model 3), and then the three-way interaction terms (model 4).

Table 2 represents Model 1: Regression Equation: Section 7 = 0.311 (section 3) + 0.127 (section 4) – 0.178 (section 1) – 0.171 (section 6) + 1.868. The equation shows that section 7 (questions 21 – 24) is positively related to Section 3 (structure) and section 4 (reward philosophy), but negatively related to section 1 (strategic orientation) and section 6 (culture). The strength of this relationship is denoted by R = 0.433. This means the strength of the relationship between Section 7 and Sections (1-6) is moderate and positive overall. The R^2 = 0.188. This means about 18.8% of the total variation of section 7 is explained by the regression equation. A significant value of 0.000 (less than 0.005) for this regression equation indicates that the regression equation is explaining a significant portion of the variability in the dependent variable (section 7) from variability in the independent variables (sections 1, 3, 4 and 6).

Table 2: Model 1

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of Estimate**
1	0.433(a)	0.187	0.162	0.80
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5				

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	28.838	6	4.806	7.531	0.000(a)
	Residual	125.092	196	0.638		
	Total	153.930	202			
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5						
b Dependent Variable: Q7						

Model		**Unstandardized Coefficients**		**Standardised Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	1.868	0.267		7.001	0.000

	Q1	-.178	0.068	-0.209	-2.618	0.010
	Q2	2.692E-02	0.077	0.030	0.348	0.728
	Q3	0.311	0.078	0.356	4.000	0.000
	Q4	0.127	0.064	0.158	1.991	0.048
	Q5	9.947E-02	0.081	0.117	1.232	0.220
	Q6	-0.171	0.096	-0.169	-1.781	0.076
a Dependent Variable: Q7						

Table 3 represents Model 2: Regression Equation: Section 8 = 0.319 (section 2) + 0.122 (section 3) - 0.118 (section 6) + 2.915. The equation shows that section 8 (questions 25 – 27) is positively related to Section 2 (resource orientation) and section 3 (structure), but negatively related to section 6 (culture). The strength of this relationship is denoted by R = 0.305. This means the strength of the relationship between Section 8 and Sections (1-6) is moderate and positive overall. The R^2 = 0.093. This means about 9.3% of the total variation of section 8 is explained by the regression equation. A significant value of 0.004 (less than 0.005) for this regression equation indicates that the regression equation is explaining a significant portion of the variability in the dependent variable (section 8) from variability in the independent variables (sections 2, 3 and 6).

Table 3: Model 2

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of Estimate**
2	0.305(a)	0.093	0.066	0.84
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5				

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
2	**Regression**	14.104	6	2.351	3.361	0.004(a)
	Residual	137.087	196	0.699		
	Total	151.191	202			
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5						
b Dependent Variable: Q8						

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
2	(Constant)	2.915	0.279		10.438	0.000
	Q1	2.275E-02	0.071	0.027	0.320	0.749
	Q2	-0.319	0.081	-0.354	-3.942	0.000
	Q3	0.122	0.081	0.140	1.493	0.137
	Q4	8.437E-02	0.067	0.106	1.267	0.207
	Q5	7.172E-02	0.085	0.085	0.848	0.397
	Q6	-0.118	0.101	-0.118	-1.177	0.241
a Dependent Variable: Q8						

Table 4 represents Model 3: Regression Equation: Section 9 = 0.126 (section 3) - 0.162 (section 4) + 3.874. The equation shows that section 9 (question 28) is positively related to Section 3 (structure), but negatively related to section 4 (reward philosophy). The strength of this relationship is denoted by R = 0.189. This means the strength of the relationship between Section 9 and Sections (1-6) is weak and positive overall. The R^2 =0.036. This means about 3.6% of the total variation of section 9 is explained by the regression equation. A significant value of 0.312 (more than 0.005) for this regression equation indicates that the regression equation is not explaining a significant portion of the variability in the independent variable (section 9) from variability in the independent variables (sections 3 and 4). This relationship is not statistically significant, i.e. it is invalid (p = 0.312 > 0.05).

Table 4: Model 3

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
3	0.189(a)	0.036	0.006	1.33
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5				

Model	Sum of Squares	df	Mean Square	F	Sig.

3	**Regression**	12.560	6	2.093	1.192	0.312(a)
	Residual	340.644	194	1.756		
	Total	353.204	200			
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5						
b Dependent Variable: Q9						

Model		**Unstandardized Coefficients**		**Standardised Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
3	**(Constant)**	3.874	0.445		8.702	0.000
	Q1	-1.818E-03	0.114	-0.001	-0.016	0.987
	Q2	1.429E-02	0.129	0.010	0.111	0.912
	Q3	-0.126	0.129	-0.095	-0.973	0.332
	Q4	-0.162	0.106	-0.133	-1.532	0.127
	Q5	8.255E-02	0.134	0.064	0.616	0.538
	Q6	-6.378E-02	0.159	-0.041	-0.400	0.690
a Dependent Variable: Q9						

Table 5 represents Model 4: Regression Equation: Section 10 = 0.143 (section 5) – 0.222 (section 3) + 3.317. The equation shows that section 10 (question 29) is positively related to Section 5 (growth orientation) but negatively related to section 3 (structure). The strength of this relationship is denoted by R = 0.185. This means the strength of the relationship between Section 10 and Sections (3 and 5) is weak and positive overall. The R^2 = 0.034. This means about 3.4% of the total variation of section 10 is explained by the regression equation. A significant value of 0.339 (more than 0.005) for this regression equation indicates that the regression equation is not explaining a significant portion of the variability in the independent variable (section 10) from variability in the independent variables (sections 3 and 5). This relationship is not statistically significant, p = 0.339 > 0.05).

Table 5: Model 4

Model		R	R Square	Adjusted R Square	Std. Error of Estimate	
4		0.185(a)	0.034	0.004	1.17	
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
4	**Regression**	9.453	6	1.576	1.142	0.339(a)
	Residual	267.542	194	1.379		
	Total	276.995	200			
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5						
b Dependent Variable: Q10						
Model		**Unstandardized Coefficients**		**Standardised Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
4	**(Constant)**	3.317	0.393		8.438	0.000
	Q1	5.944E-03	0.101	0.005	0.059	0.953
	Q2	1.819E-02	0.114	0.015	0.160	0.873
	Q3	-0.222	0.115	-0.188	-1.932	0.055
	Q4	7.236E-04	0.094	0.001	0.008	0.994
	Q5	0.143	0.119	0.126	1.203	0.231
	Q6	2.710E-02	0.142	0.020	0.191	0.849
a Dependent Variable: Q10						

Table 6 represents Model 5: Regression Equation: Section 11 = 0.276 (section 6) – 0.248 (section 3) +2.705. The equation shows that section 11 (questions 30 – 36) are positively related to Section 6 (culture) but negatively related to section 3 (structure). The strength of this relationship is denoted by R = 0.392. This means the

strength of the relationship between Section 11 and Sections 3 and 6 is moderate and positive overall. The R^2 = 0.154. This means about 15.4% of the total variation of section 11 is explained by the regression equation. A significant value of 0.000 (less than 0.005) for this regression equation indicates that the regression equation is explaining a significant portion of the variability in the dependent variable (section 11) from variability in the independent variables (sections 3 and 6).

Table 6: Model 5

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
5	0.392(a)	0.153	0.128	0.63
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5				

Model		Sum of Squares	df	Mean Square	F	Sig.
5	Regression	13.937	6	2.323	5.921	0.000(a)
	Residual	76.893	196	0.392		
	Total	90.830	202			
a Predictors: (Constant), Q6, Q3, Q1, Q4, Q2, Q5						
b Dependent Variable: Q11						

Model		Unstandardized Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
5	(Constant)	2.705	0.209		12.933	0.000
	Q1	1.335E-02	0.053	0.020	0.251	0.802
	Q2	6.618E-02	0.061	0.095	1.093	0.276
	Q3	-0.248	0.061	-0.369	-4.064	0.000
	Q4	6.609E-02	0.050	0.107	1.326	0.187
	Q5	-7.304E-02	0.063	-0.112	-1.154	0.250
	Q6	0.276	0.075	0.355	3.667	0.000
a Dependent Variable: Q11						

The ANOVA section in each table calculates an F Value with several statistically significant scores. Collinearity diagnostics (not shown) reveal relatively high variance proportions (e.g. model 2, dimension 3 = 0.75 and 0.95). Such diagnostics should be read in conjunction with collinearity statistics (not shown) where the variable inflation factor (VIF) values of 1.000 for model 1 and 2.225 for model 2 are diagnosed as acceptable for model 1. However for model 2, the large values, suggest multicollinearity. When the values are 10.0 or more the regression coefficients can fluctuate widely from sample to sample, making it risky to interpret the coefficients as indicators of the predictors (Cooper & Emory 1995:65).

6 CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to empirically test elements of the pro-entrepreneurship organisational architecture in terms of the principal outcomes of capability development and strategic repositioning. In line with the view that CE can be regarded as a specific type of strategy (Ireland, Covin & Kuratko 2009:29), where firms must significantly display the elements of an entrepreneurial strategic vision (manifested through an EO as formulated for the present study), it was hypothesized that various elements of pro-entrepreneurship architecture will be positively associated with CE outcomes. Contributing to literature by building on, and complementing existing CE models and studies this paper selected firms exhibiting a higher level of EO to denote an entrepreneurial strategic vision and as such, EO was subsumed within the CE strategy model.

The study's findings in terms of several significant and positive correlations between elements of pro-entrepreneurship architecture and capability development, strategic repositioning, and growth indicators provide partial support for hypothesis 1 and 2. Given that the results are modest in terms of the explanatory power obtained in the regression models, means the strength of the relationships between various elements of pro-entrepreneurship architecture and outcomes are generally weak although positive. A limited amount of total variation is explained by the regression equations, which indicates that the regression equations are not explaining a significant portion of the variability in the independent variables as hypothesised.

Previous studies of similar nature (Ireland, Covin & Kuratko 2009:27) have established that strategic thinking influences the formulation of an entrepreneurial strategic vision as well as the making of decisions regarding the nature of a firm's pro-entrepreneurship organisational architecture. This is so because CE strategy requires more than a decision, act or event. It requires congruence between the entrepreneurial vision of the organisation's leaders and the entrepreneurial actions of those at all levels of the organisation, as facilitated through the existence of a pro-entrepreneurship organisational architecture (Antoncic & Hisrich 2004:511).

By focusing on CE as a strategic necessity, firms are now able to identify and distinguish between different elements of pro-entrepreneurship architecture that impact different firm outcomes. These firms will be able to understand how resources and internal structures contribute towards entrepreneurial outcomes (Ireland, Hitt & Sirmon 2009:978).

The results of the present study resonate with established findings. While many structural attributes have been empirically linked to innovation activity in organisations (Mintzberg 1987:15), perhaps the single aspect of structure that best defines entrepreneurial organizations is structural organicity. This present study confirms these linkages where significant coefficients were detected on competitive capability outcomes. Greater organicity implies a proclivity toward such qualities as decentralized decision making, low formality, wide spans of control, expertise based power, process flexibility, free-flowing information networks, and loose adherence to rules and policies. Another significant finding was the entrepreneurial growth/resource factor and its effect on outcomes. Once an opportunity is identified, resources are needed to exploit it (Huy 2001:76). The accumulation of resources and the capabilities to exploit an opportunity reflect an entrepreneurial strategic vision.

Another factor playing a role in influencing outcomes is reward philosophy. In particular, whether or not the reward system encourages risk taking and innovation seems to have a direct effect on tendencies to behave in an entrepreneurial manner. Whether formal or informal, reward systems will likely be influenced by the vision managers articulate for their organizations. Hence, consistent with the observations

of Collins and Porras (1996:70), entrepreneurial visions are likely to lead to reward systems that encourage entrepreneurial behaviours.

The strategic implications of this study suggest that firms resourcing and rewarding policies, as well as cultural and structural orientations, derived from a CE strategy, play an important role in realising firm outcomes. Managers will be able to use these findings to better understand how resources and internal structure contribute towards entrepreneurial outcomes. Appreciating the importance of resource configurations may provide an indication of the firm's entrepreneurial posture. Employing strategic CE will allow firms to gain a competitive advantage by encouraging innovation at all levels in the organisation. Intrapreneurial organisations are increasingly judged according to how a firm uses technology and innovation to achieve its objectives, such as maximising profits, gaining market share, creating niche markets or adding value for stakeholders (Bosma, Stam & Wennekers 2010:36; Morris, Kuratko and Covin 2008:85).

A limitation of the article is that a cross-sectional study loses the dynamic aspects of CE, which prevents conclusions about causal relationships to be drawn. Modest findings to support the hypotheses may also be related to the influence of other contingencies not incorporated or to measurement issues. A deep and thorough understanding of CE is important not only for academic purposes but also because the subject has salience for practitioners and policy makers. These implications relate to the profitability and competitiveness of the firm as well as to the overall economic performance of the national economy. Overall the strategic implications of this study suggest that firms resourcing and rewarding policies, as well as cultural and structural orientations, derived from a CE strategy, play an important role in realising firm outcomes.

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