ENTREPRENEURIAL ORIENTATION AS ONE CONSTRUCT AND THE MODERATING EFFECT OF INTERNAL CONTROL MEASURES

Abstract

Firstly this paper explores and seeks to confirm if Entrepreneurial Orientation (EO) should be used as five separate dimensions or as one construct. Secondly this paper used the Balanced Scorecard adopted to measure Firm Performance (FP) as currently literature differ in what is used when the relationship between EO and FP is tested. Thirdly, this paper reports and seeks to confirm the relationship between EO (dimensions) and FP (dimensions). Principle result: A sample size of N = 500 companies was used. Results indicated that EO should be measured as one construct and that tighter Internal Control Efficiency steered towards lower EO and this will impact negatively on FP.

Key words: entrepreneurial orientation, firm performance, internal processes, balanced scorecard

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Introduction

The importance of entrepreneurship in economic development is hardly disputed since entrepreneurs launch successful businesses, which create employment, expand markets, and increase production and services, which can revitalize social and productive networks to bring vigour into communities (Luiz, 2007). Recently, empirical studies were conducted that provided evidence that supports the common understanding that Entrepreneurial Orientation (EO) leads to superior Firm Performance (FP) (Covin & Zahra, 1995). EO as a topic in the entrepreneurship literature is much debated and deliberated. A plea has been made to explore the antecedents External Environment (EE), Internal Organisation (IO), firm demographics, and founder/owner/manager biographical data of EO. The author reports on phase one of the study that was conducted. First the author set out to confirm existing research published on the EO and FP relationship as it forms the basis of the aforementioned antecedents of EO.

Literature Review

Firm Performance

Exploring the literature (Casillas & Moreno, 2008) postulated that the entrepreneurial literature assumes that there is a positive relationship between a firm's growth and its entrepreneurial activity, even though growth and profitability do not

always show a positive correlation. Researchers believe growth to be the most important FP measure and associate it with a firm's EO (Brown, Davidson, & Wiklund, 2001). Researchers such as, Barkham, Gudgin, Hart, and Hanvey (1996) and, Casillas and Moreno (2008) who maintain that entrepreneurs consider sales growth to be the most common performance indicator. Other researchers use ratios as predictor variables in models that forecast FP (Altman 1968; Altman 1984; Altman, Haldeman & Narayanan 1977). Financial ratios are most commonly used by academic researchers, accountants, financial services providers, and small business managers (Barnes, 1987).

Significant differences in average industry ratios of small private and large public firms across a large number of well-defined industry groups exist. These differences are apparent for all leverage ratios and for many of the profitability and activity ratios examined. Findings suggest that an appropriate average industry ratio for comparison purposes must be used when examining these ratios. If an appropriate industry average is not available when analysing a small firm in a particular industry, use of industry information of large firms may be useful for comparison purposes. Some ratios are the same across large and small firms. These ratios are the liquidity ratios, quick ratios, accounts receivables turnover ratios, profitability ratios, and expense ratios. As long as industry membership is correctly controlled for, these ratios can be expected to exhibit constant proportionality across differently sized firms. Bias in reported industry averages of the profitability ratios may contaminate results (Constand, Nast, & Osteryoung, 1992).

Kaplan and Norton's (1996, p. 76) Balanced Scorecard deals with four major variables. I) The *financial perspective* deals with a firm's financial attractiveness to outside investors. II) The *learning and innovation* perspective asks questions pertaining to improvement and growth. III) The *internal business processes* perspective addresses the application of resources in order to excel. IV) The *customer perspective* focuses on

customers' perceptions of the business (Kirkwood & Pangarkar, 2007). The Balanced Scorecard shows that customer satisfaction and financials are results, but the antecedents that determine these results are internal business processes, learning, and innovation. Mukherjee and Pandit, (2009) states that the Balanced Scorecard is used to project the health of the organisation. Achieving 100% is excellent, 90% to 99% indicates possible problem areas, and any area that has a score of less than 90% needs corrective action. In conclusion, previous research suggested that performance measures should consider both growth and financial performance. When growth is studied, the expansion of sales, employment, owners' achievement orientation and personal initiative, and assets all provide important and complementary information (BSCR Resources, 2010).

The literature on the dimension *FP* within the EO context showed that there is no clear consensus amongst researchers regarding what should be used to measure FP. Too few studies have been done, and most researchers mainly used the same measures as their predecessors. This researcher therefore decided to use the Balanced Scorecard as adopted by Veldsman and Roodt (2002) and its dimensions (Finance, Internal Business Processes, Customer, and Innovation and Learning) to operationalise the construct FP. Next, EO as a construct will be explored, and thereafter its relationship with FP will be discussed discussing the moderating effect of internal processes on FP.

Entrepreneurial Orientation

Becherer and Maurer (1997) acknowledged Miller's (1983) work as the earliest operationalisation of the term EO, where the definition's emphasis was placed on the terms *pro-activeness*, *innovation*, and *risk*. EO was further defined as entrepreneurship that takes place inside an organisation run by individuals, referred to as champions, to ensure a profitable return on investment (Pinchott, 1985). Zahra (1991) defined EO as any formal or informal activity that takes place within existing companies through

product and process innovation and market initiatives. He also suggested that these activities can take place at any level in an existing business. He further suggested in his definition that EO also included strategic renewal. Hornsby and Kuratko (1998) reasoned that EO requires a complete reengineering of traditional strategies and thinking, and it may possess the critical components needed for better business performance in the future. They further stated that the theoretical basis of the EO construct lies in the assumption that entrepreneurial firms differ from other types of firms, with extant organisational research providing theoretical support for the EO construct in both the fields of entrepreneurship and strategic management. Covin, Kuratko, and Morris (2008) described EO as entrepreneurial behaviour that takes place inside medium and large companies.

In literature, a firm's degree of entrepreneurship is viewed as the extent to which a firm innovates, takes risks, and acts proactively. Actions taken by the firm puts entrepreneurship in a management framework, therefore the study of EO allows the incorporation of traditional management terminology such as *strategy*, *performance*, and *organisational structure* into entrepreneurship research (Wiklund, 1999). He, further pointed out that few studies have pursued the long-term effect of EO strategies on the firm, and that managers and owners should first benefit from knowing the performance implications as it is both time and resource consuming to embark on changing the EO of a firm.

A model developed by Covin and Slevin (1989a), based on research conducted by Khandwalla (1977) and Miller and Friesen (1982), further operationalised the EO construct, and is the most widely used measuring instrument in both the entrepreneurship and strategic management literature (Kreiser, Marino, & Weaver, 2002a). Essentially, EO refers to how entrepreneurship is undertaken, i.e. a process-orientated perspective –

the methods, practices, and decision-making styles that managers draw on to act entrepreneurial (Dess & Lumpkin, 2005; Dess, Lumpkin, & McGee, 1999; Zahra, 1993a). The entrepreneurial process can be described as the total process whereby established enterprises act in an innovative, risk-taking, and pro-active manner (Bouchard, 2001).

These evident dimensions (innovation, risk-taking, and pro-activeness) of EO have been derived from a review and integration of the strategy development process, and are used continuously in the literature. The literature suggests that two additional dimensions must be added, namely competitive aggressiveness and autonomy (Frese, Lumpkin, Rauch, & Dess, 2009; Lumpkin & Dess, 1996). A discussion follows to explore and operationalise the dimensions *innovation*, *risk*, *competitive aggressiveness*, *pro-activeness,* and *autonomy*. First, innovation will be explored.

Innovation

The literature shows that Schumpeter (1934) cited in Lumpkin and Dess (1996), was one of the first researchers to highlight the importance of innovativeness in entrepreneurship. Innovativeness addresses the extent to which companies are engaged in developing new, or improving on, aspects related to their products and services (Covin et al., 2008). Many definitions of innovation have been formulated. It remains an important part of EO as it reflects the means by which businesses tails new opportunities in terms of their products, markets, and available technology (Lumpkin & Dess, 1996). To assess innovation, the number of new products and services introduced and the frequency of changes in products and services can be used as a yardstick. Research studies have found innovation and entrepreneurship to be positively correlated, complementary, and vital to business success in today's dynamic environment. It is further stated that innovation can be moderated by organisational culture and the management style practiced (Zhao, 2005). Covin *et al.* (2008) allocated a vast portion of

their research to innovation as a dimension and its relationship with risk as the other dimension. Innovation is further defined by them in terms asking what a firm is doing that is new and unique. It is postulated that innovation can take on various forms, as it applies to products and services. What is new to the world, new to the existing markets, new to the existing company, new to the existing lines within the company, revisions to existing products and services, new applications of existing products and services, the repositioning of existing products and services, and the cost reduction of existing products and services can all be considered innovation. The accomplishment of a task or function in order to create a competitive edge is considered to be innovative. Covin *et al.* (2008) argued that the pressure to be innovative is mainly caused by pressures from the EE. Innovation is, however, also driven by internal pressure to attract and retain high quality employees and they further made the statement that far too many companies only innovate in response to external forces.

A further distinction is drawn between less innovative firms and highly innovative firms. Less innovative firms will naturally foster a great deal of causal understanding as there is a high level of experience and expertise within the firm. As a result, a larger and more diverse team with a huge pool of past experience in new venture management can quickly be built to facilitate rapid expansion and market acceptance. Some liabilities will remain, as there are uncertainties associated with managing the new firm. However, because of the low novelty setting, information about these uncertainties will be available and accessible to an experienced team proficient in environmental scanning. Therefore, a large, diverse, and experienced team should add the greatest value to the implementation of less innovative new ventures and, in the process, minimise uncertainties that may arise. In contrast, in highly innovative firms, the lack of causal understanding implies that a smaller and less diverse team may actually be better equipped to execute the task (Carton,

2004). Moreover, teams should not rely too heavily on prior experience, as they might set an inappropriate precedent and schema in the novel situation. Innovativeness necessitates the development and sharing of new perspectives, which may not exist at the time. Teams without the baggage of previously accepted "solutions" are more likely to struggle with and discuss possible new ways of dealing with the problems at hand. They are also likely to be better at generating new, innovative knowledge (Carton, 2004).

Customer-centred firms take the entire business concept or the value-creating package as the starting point for innovation. Employees of these firms tend to have a clear focus on the key issues they are trying to accomplish with their innovation efforts (Covin et al., 2008). There is a strong focus on research and development activities that lead to the development of new products, services, and production and administrative processes. If firms favour activities that lead to the development of new products and/or services, the focus of employees is important when engaged in innovation activities. The literature agrees that innovation goes hand in hand with the introduction of new products and services, and that a large team may result in higher levels of innovation. It is argued by Bloom, Hough, and Scheepers (2007) that, in South Africa, the innovation imperative is emphasised by fierce competition, national policies, and the rapid growth of e-business innovations. Too many companies still offer the same products with little emphasis on differentiation. Most South African companies also fail to use the latest technology to gain a sustainable competitive advantage over their competitors (Autio, Bygrave, & Minniti, 2005; Scheepers, 2005). However, it is pointed out that a firm's internal organisation can have a moderating effect on its innovation (Lumpkin & Dess, 1996). Next, risk will be discussed.

Risk-taking

Risk-taking is defined as the act of taking bold actions by venturing into new markets, accepting the unknown, or accepting that results might differ from expectations. Risks are normally moderate and calculated (Covin et al., 2008; Dess & Lumpkin, 2001; Frese et al., 2009). The emphasis is not on uncontrolled, uncalculated risk, but rather on a moderate, calculated risk. Entrepreneurship risk does not imply reckless decision-making (Covin et al., 2008; Kuratko, 2009). Pro-activeness will be discussed next.

Pro-Activeness

Pro-activeness is defined as seeking future opportunities whereby companies will introduce new products and/or eliminate products and processes that are obsolete or in their mature or declining cycles (Lumpkin & Dess, 1996). Pro-activeness is also viewed as changing the environment by introducing new products and technologies (Miller & Friesen, 1983). It is also characterized by the showing of initiative and the pursuit of new opportunities, thereby entering into new markets. Lumpkin and Dess (1996) supported the definition suggested by Ventkatraman (1989) that pro-activeness is the seeking of new opportunities not necessarily directly related to existing products and or services, and introducing them to the market first, and also eliminating outdated operations. It is a forward-looking perspective of anticipating and pursuing new opportunities (Lumpkin & Dess, 1996).

Pro-activeness can be revealed in three key ways: seeking new opportunities that may or may not be related to the present line of products or services, introducing new products and brands ahead of the opposition, and strategically eliminating operations that are in the mature or declining stages of their life cycle (Venkatraman, 1989). Pro-

activeness also relies heavily on the development of structural capital resources (Dess & Lumpkin, 2001). Competitive aggressiveness will now be discussed.

Competitive Aggressiveness

Competitive aggressiveness refers to a firm's drive to outperform individual competition, and is characterized by aggressive responses to competitive threats (Frese et al., 2009). Competitive aggressiveness is further characterized by unconventional behaviour that would lead directly to a firm obtaining a competitive advantage. The importance of this dimension as a salient dimension of EO was emphasized in research conducted by Dean (1993) and Lumpkin and Dess (1996). The last of the five dimensions, autonomy, is discussed next.

Autonomy

Autonomy refers to an independent action by an individual or section to implement and carry through a business concept. This is also viewed as the catalyst driving the entrepreneurial spirit, and the freedom required to create new products or service resulting in new ventures. This dimension is viewed as a crucial part of EO (Dess & Lumpkin, 2001). It is emphasized that for this dimension to be strong, the prospective entrepreneur must operate within a culture that enables individuals to act independently (Lee & Peterson, 2000). In the next section, the dependence and independence of the five dimensions will be deliberated.

Dependence and independence of the five dimensions of EO

Five dimensions, namely innovativeness, risk taking, pro-activeness, competitive aggressiveness, and autonomy are used to describe EO. All five dimensions are central to understanding the entrepreneurial process, although they may occur in different combinations, depending on type of entrepreneurial opportunity the firm pursues. The

extent to which each of these dimensions is useful for predicting the success of a business may be dependent on the industry environment and or organisational characteristics (Lumpkin & Dess, 1996). The multi-dimensionality of EO must be recognised. An entrepreneurial activity process may at any time lead to a favourable outcome on any one of the EO sub–dimensions, which in turn leads to improved FP (Cameron, 1978; Chakravarthy, 1986).

Only 13 studies showed how the individual dimensions of EO were related to FP, and the idea that they were all of equal importance when explaining FP was challenged by Frese et al. (2009). Dess, et al. (1999) found that the five dimensions of EO correlated differently with FP. Four of the five dimensions of EO, namely innovativeness, pro-activeness, risk taking, and autonomy showed consistently larger correlations with FP than competitive aggressiveness. They suggested the use of five separate variables and not the customary one summative index when explaining FP.

Studies by Knight (1997) and Muller and Thomas (2001) indicated that certain dimensions may differ across countries. A truly entrepreneurial firm would show high levels of each of these dimensions (Kreiser et al., 2002a). In the above literature, the dimensions of EO, namely autonomy, risk taking, pro-activeness, innovation, and competitive aggressiveness suggested that a configurational approach, as suggested by Lumpkin and Dess (1996), allowed some of the dimensions to be more relevant than others under certain environmental and internal conditions. They may also vary independently of each other.

Covin and Slevin (1989a) theorised that three of these dimensions, namely innovativeness, risk taking, and pro-activeness should be aggregated together when research on entrepreneurship is conducted. This has shown high levels of reliability and

validity in numerous studies. A study conducted by Kreiser, Marino, and Weaver (2002b) utilized data from 1 067 firms across six countries to clarify what constitutes EO. Their results, of confirmatory factor analysis, in LISREL, supported modeling EO with the three sub-dimensions *innovation*, *pro-activeness*, and *risk taking*. Correlation analysis also confirmed that the three sub-dimensions of EO can vary independently of one another in many situations. The study also showed strong support for the cross-cultural measuring scale of EO developed and used by Covin and Slevin (1989b).

Recent research, however, suggested that, by aggregating these dimensions into a single measure, researchers may be ignoring the independent contribution of each of the dimensions and that they might not be adequately controlling for type I errors (Dess & Lumpkin, 1997).

In conclusion, the EO construct is accepted as being made up of five dimensions: risk taking, innovation, pro-activeness, competitive aggressiveness, and autonomy. The relationship between EO and FP, as illustrated in the literature, will now be analysed in order to draw a conclusion. Against this background the following research hypothesis is set: *H1.1$_A$: The construct* EO *can be reliably and validly measured.*

The relationship between EO and FP

Various studies explored the relationship between EO-FP. Moreno and Casillas (2008) divided these studies into two categories: those studies that explored general models and described the nature of the EO – FP relationship by identifying moderating and mediating variables and attempting to establish wide-reaching propositions (Covin & Slevin, 1991b; Dess, Lumpkin, & McGee, 1999; Lumpkin & Dess, 1996), and those that attempted to empirically verify partial models of these relationships. Partial models incorporate, in an isolated and independent manner, some of the moderating variables

related either to the environment (Dess & Lumpkin, 2001) or to the firm's internal dimensions (Wiklund & Shepherd, 2005).

Few studies explored the longitudinal relationship between EO and FP. A study conducted over two years suggested that there was a positive relationship between EO sustainability and FP, and that EO - FP would increase if EO were sustained over a period of time (Wiklund, 1999). In South Africa, evidence was found of a positive relationship between EO and its components with FP, with the most important being owners' achievement orientation and personal initiative (Frese, Friedrich, Krauss, & Unger, 2005). These research findings were supported by studies done in Europe, East Africa, and studies conducted in South Africa (Frank, Korunka, Lueger, & Mugler, 2003; Ventkatrama, 1989).

Past research confirmed a positive relationship between EO and FP (Lumpkin & Dess, 1996; Wiklund, 1999; Todorovic & Schlosser, 2007). A meta-analysis conducted on 37 studies found great variances in the magnitude of the correlation between EO and FP beyond what can be explained by sampling error. EO is not an individual activity, but rather an on-going process. Companies actively support entrepreneurial behaviour by including it in its vision and mission from the start. This filters through to their strategies, structures, operations, and culture throughout the organisation. Therefore, EO has a direct impact on FP as suggested by Covin et al. (2008) who also argues that the firm's mission and vision, strategies, structure, objectives, operations, and culture are aligned with EO. Against this background the following research hypothesis was formulated:

Hypothesis $H2_A$: There is a relationship between EO (independent variable) and FP (dependent variable).

Research Methodology

The research approach chosen to investigate the hypothesis was a cross-sectional field survey. At the time the total South African population consisted of 1.5 million small and medium businesses of which one million are micro businesses with less than five employees, with 200 employees as the upper limit (Munshi, 2009). This research aimed to obtain a heterogeneous set of non-diversified, non-affiliated firms in order to allow for more accurate analysis and to increase the generalisability of the findings. A final sample size of $N = 500$ organisations was sought and obtained. The sample size was statistically tested to ensure that it was large enough to allow the data to be generalised. The results were studied for missing data and the effects it might have had on the study. The internal consistency of the measuring instrument was tested using Cronbach's Alpha coefficient (Pallant, 2007).

Measuring Instrument

A self-administered questionnaire was developed. An existing instrument developed by Miller (1983) and refined by Lumpkin and Dess (1996) was used in part to serve as a basis to develop the current measuring instrument. The internal consistency of the scale, as well as its predictive validity, has been demonstrated in many studies (Becherer & Mauer, 1999; Kemelgor, 2002). Most studies measured EO as a single construct (Auer, Ritter, & Walter, 2005; Chadwick, Barnett, Brown, & Dwyer 1999; Covin & Slevin 1991b; Covin, Slevin, & Schultz, 2004; Frese et al., 2009; Lee, Lee, & Penning, 2001; Wiklund & Shepherd 2003; Wiklund, 1998). The EO section of the questionnaire was supplemented with items by the researcher and developed to capture more in-depth aspects of the five dimensions, (innovation, risk, competitive aggressiveness, pro-activeness, and autonomy) not previously included in the scales. This

was suggested by Covin and Slevin (1989a); Dess and Lumpkin (2001); Frese et al. (2009); Khandwalla (1977); Kreiser et al. (2002); Wiklund and Shepherd (2005); Miller and Friesen (1983); Wiklund (1999) to increase understanding of the entrepreneurial process. The researcher also added to and altered some of the existing items. In some instances, they were reworded to gain more clarity on specific aspects, for example the word "and" was avoided to give items a singular focus.

EO, nineteen (19) items in total was developed to measure EO as a construct. Respondents rated their orientation on a 7-point numerical scale. Items for the EO construct were developed using the theoretical dimensions innovativeness, risk taking, pro-activeness, competitive aggressiveness and autonomy as a basis, as suggested by Covin and Slevin (1989a); Dess and Lumpkin (2001); and Miller (1983).

Innovation was measured using four items. Risk was measured using four items. Pro-activeness was measured using five items. Dess and Lumpkin (2001) used two items developed by Covin and Slevin (1989b) that asked about the firm's tendency to lead rather than follow. They added a third item to ask about a firm's tendency to act in anticipation of future changes and needs. These items were differently worded by the researcher and supplemented with two more items to ask about the firm's willingness to work with competitors and to ask about a firm's emphasis on the reduction of internal conflict. Competitive aggressiveness was measured with three items. Lumpkin and Dess (1996) identified competitive aggressiveness as an additional dimension of the EO construct. Items were set individually and not as a group as in the previous instrument. Autonomy was measured using three items that were developed to ask about how the firm views individuals/sections acting independently (Dess & Lumpkin 2001), the firm's willingness

to allocate new resources, and to establish if there was tolerance for employees bending the rules in an attempt to seek autonomy.

FP, this section was aimed at measuring FP in terms of shareholder satisfaction, internal process efficiencies, growth and innovation, and financial performance. The instrument as a composite indicator of organisational performance was developed by Veldsman and Roodt (2002), based on the Balanced Scorecard of Kaplan and Norton (1996). Based on the data generated in their study, Veldsman and Roodt (2002) could effectively distinguish between successful and less successful companies. However, no reliability coefficients were calculated for the instrument, owing to incomparable variations in item content. FP was divided into four key constructs, namely stakeholder satisfaction, internal process efficiencies, growth and innovation, and financial performance. Respondents were requested to respond in terms of percentages. The four dimensions of the Kaplan and Norton (1996) Balanced Scorecard provided the theoretical framework for generating the content of the measuring instrument FP. This approach ensured that the questionnaire had face and content validity.

Statistical Analysis

The approached followed in this research was to first conduct descriptive statistical analysis, and thereafter an exploratory factorial analysis where every level of every variable was paired with every level of every other variable. This allowed for greater generalisability of results. For the purpose of this research, Principal Component Analysis (CPA) was used. In the discussion that follows the key construct EO and FP are presented. First, EO, and then FP. The research hypothesis set earlier applies: *$H1_A$: The construct* EO *can be reliably and validly measured.*

Descriptive Statistics Results - EO

Detailed analysis indicated that the highest mean response for the item statistics was for item B15: *How much emphasis is placed on reducing conflict in the workplace?* (M = 5.45). Item 9 showed the lowest mean (M = 4.58): *How often does your firm terminate products/services during their mature stage?* The mean item scores here indicated that firms emphasised reducing conflict in the workplace. Products and services in their mature phase were not easily terminated as this could lead to loss of work opportunities and cause conflict in the workplace. From the item analysis, it is clear that firms did emphasise innovation as important. However, they were hesitant to follow competitors' actions or cooperate with them, i.e. their pro-activeness (to act) on innovating methods and products were low. There was also an indication that firms valued innovative ideas and actions from their employees but did not condone project champions bending the rules to gain autonomy to see their projects through.

The average mean for the scale EO as a whole was 4.96, which can be considered a medium score, and indicated that South Africa's SMEs' EO was generally risk-averse.

Descriptive Statistics Results - FP

This part of the questionnaire was divided into four constructs: Stakeholder Satisfaction, Internal Process Proficiencies, Growth and Innovation, and Financial Performance. This part of the questionnaire was not completed by all respondents (n = 385) due to the sensitive information required. Although only percentages were requested and not monetary values, respondents still showed an unwillingness to disclose financial information. However, the sample size, as shown below, still far exceeded 200, which was acceptable and may be considered large (Pallant, 2007). This section also incorporated the firm's society/community involvement, employee and shareholder

satisfaction, and customer relationships. Respondents provided their answers in percentage format. From item (F1.1) it was concluded that firms spent 1.37% of their revenue on donations and sponsorships (e.g., National Government Organisations, schools, universities, and sports events) and 2.59 percent on community development (item F1.2). Unscheduled leave (Item F1.3) was high at 16.63 percent. This type of leave included compassionate leave, industrial action, and unauthorized leave. Staff turnover came to 1.5 percent, which is low. Shareholders reported a 6.89% earning per share. A ratio of 2.42 percent complaints to number of employees was reported. The number of complaints per R100 000 annual revenue was quite high at 11.25 percent.

On *Internal Process Efficiencies*, three items were measured (F2.1 to F2.3). The analysis review confirmed the firms' average cost to income ratio at 37.07 percent. Their average cycle time was (M = 5.28 days to execute an order for the products or service they are offering. Firms further reported that it took an average of 3.85 months to break even after introducing a new product.

On the firm's overall people investment (the total cost associated with the provision of training and development for all employees as a percentage of the total cost-to-company bill). This analysis (F3.1 to F3.5) showed that firms on average spent 4.29 percent of their total salary bill on training and development. With regard to investing in people by job grouping, analysis revealed the following: 32.19 percent was spent on managers, 25.34 percentage administrative and support staff, 10.77% on professional staff, 7.96 percent on supervisors, and 3.93 percent on operators and shop floor employees. A 6.23 percent increase in market share was reported over the 2008/2009 financial year. On average, low revenue (4.66 percent as a percentage of total revenue) was generated by introducing new products. Only 3.17 percent of total revenue was spent on strategic change intervention.

Next, the last construct *Financial Performance* (F4.1 to F4.5), is discussed. This section measured the profit-revenue ratio, profit after tax but before extra-ordinary items, return on equity, percentage sales growth, and asset value.

Firms reported an average of 38.07 percent profit to revenue. Only 18 percent retention of profit once taxes were paid but before extra-ordinary items were bought was indicated. An average mean of 8.24 percent return on equity was reported. A 5.81 percent point of growth in sales was reported, compared with the previous year. A 29.92 percent average asset base was reported in firm balance sheets. Next Exploratory Factor Analysis is reported on.

Exploratory Factor Analysis

Due to space limitations, only the final results of the exploratory factor analysis are summarized and presented in this section. The results of the factor analysis of the EO scale are summarized and presented in Table 1.

Table 1

Summary of the Exploratory Factor Analysis – EO (Section B)

Key= I= Innovation; R=Risk; PA=Pro-Activeness; CA=Competitive Aggressiveness; A=Autonomy

Theoretical Dimensions				**First Level Factor Analysis**				**Second Level Factor Analysis**			
Item per dimension	**Item Total Correlation**	**Item Reliability**	**Dimension Reliability**	**Item**	**Item Total Correlation**	**Item Reliability**	**Factor Reliability**	**Item**	**Corrected Item-Total Correlation**	**Item Reliability**	**Construct Reliability**
B1I	.612	.738		B18	.641	.800		B1	.649	.901	
B2I	.598	.744	**α =.793**	B15	.536	.814		B2	.555	.904	
B3I	.612	.737		B13	.640	.799		B3	.633	.902	
B4I	.595	.748		B10	.535	.814	**α =.831**	B4	.522	.905	
B5R	.402	.625		B17	.564	.810		B5	.454	.907	
B6R	.374	.642	**α =.664**	B11	.579	.808		B6	.515	.905	
B7R	.496	.562		B14	.481	.821		B7	.560	.904	
B8R	.510	.551		B6	.480	.821		B8	.577	.904	**α =.909**
B9PA	.428	.727		B5	.514	.777		B9	.509	.905	
B10PA	.561	.677	**α =.742**	B8	.577	.766		B10	.558	.904	
B11PA	.504	.700		B12	.550	.770	**α =.799**	B11	.629	.902	
B12PA	.495	.704		B9	.509	.778		B12	.551	.904	
B13PA	.559	.677		B19	.562	.767		B13	.600	.903	
B14CA	.437	.411	**α =.582**	B16	.513	.777		B14	.490	.906	
B15CA	.348	.546		B7	.495	.780		B15	.449	.907	
B16CA	.404	.471		B4	.595	.748		B16	.565	.904	
B17A	.582	.592		B2	.598	.744	**α =.793**	B17	.594	.903	
B18A	.577	.608	**α =.724**	B3	.612	.737		B18	.620	.902	
B19AU	.491	.715		B1	.612	.738		B19	.578	.904	

In Table 1, the first column lists the items per the underlying theoretical dimensions as they emanated from the literature on EO (Section B). The five underlying theoretical dimensions are: innovation, risk, pro-activeness, competitive aggressiveness, and autonomy. For each dimension, the item-total correlation and dimension reliability are shown. Innovation

(Items B1 to B4) yielded a Cronbach Alpha coefficient of .793. This was well beyond the acceptable norm of .70. Risk (Items B5 to B8) reported a Cronbach Alpha coefficient of .664, which is an indication of a moderate internal consistency. For pro-activeness (Items B9 to B13), a Cronbach Alpha coefficient of .742 was reflected. Competitive Aggressiveness (Items B14 to B16) yielded a Cronbach Alpha coefficient of .582, which is low, but can possibility be ascribed to the small number of items included in this dimension. Autonomy (Items B18 to B19) had an acceptable Cronbach Alpha coefficient of .724. Overall, the theoretical sub-constructs showed acceptable internal consistency reliabilities.

The second column depicts the results of the first-level factor analysis where scores on all the 19 items were inter-correlated and three factors were extracted. Note that the internal consistency reliabilities (Cronbach Alpha) of the three factors were close to .80 or higher. Item reliabilities of these three factors ranged between .737 and .821. These three factors were well determined since more than three items loaded on each factor.

The third column reflects the results of the second-level factor analysis where the sub-scores of the three factors obtained in the second column were inter-correlated and the three factors were postulated based on the obtained Eigenvalues larger than unity. In this case, a single factor with a concomitant internal consistency reliability (Cronbach Alpha) of .909 was extracted.

An iterative item reliability analysis of all the items of the scale yielded acceptable item-total score coefficients and internal consistency reliabilities. All items correlated with the total score of the scale (> .449), and item internal consistency reliabilities ranged between .901 and .907. The overall Cronbach Alpha for the EP scale (19 items) was .909.

The total score distribution was slightly negatively skewed. Results of the Kolmogorov-Smirnov test [$_{df}$ = 437; = .104; p = .000] indicated that the total score distribution deviated from a normal distribution and did not meet normality requirements. The Kolmogorov-Smirnov test is, however, a highly sensitive test that will register very small deviations from normality. The possible negative skewness effects will, however, be negated by the use of a larger sample size (> 200) (Fidell & Tabachnick, 2007). It was therefore concluded that the EO scale was suitable for use in further inferential statistical analyses. The results of the inter-correlation of the constructs EO and FP are discussed next.

Inter-correlation of the constructs EO and FP

In this section, the results of the inter-correlation of the constructs EO and FP are discussed. Pearson product-moment coefficient correlations were calculated between EO and *FP* used in the study. The following hypothesis, formulated earlier, was tested:

$H2_A$: There is a relationship between EO (dependent variable) and FP (independent variable).

The Pearson product-moment correlation in Table 2 indicated the following:

Table 2:

Pearson Product-Moment Correlations Coefficient between EO and FP

Firm Performance		Entrepreneurial Orientation
Firm Performance	Pearson Correlation	-.065
	Sig. (2-tailed)	.196

n = 399; $p \leq .05$

No significant correlation was found between EO and the FP score [r (388) = -.065; p = .196].

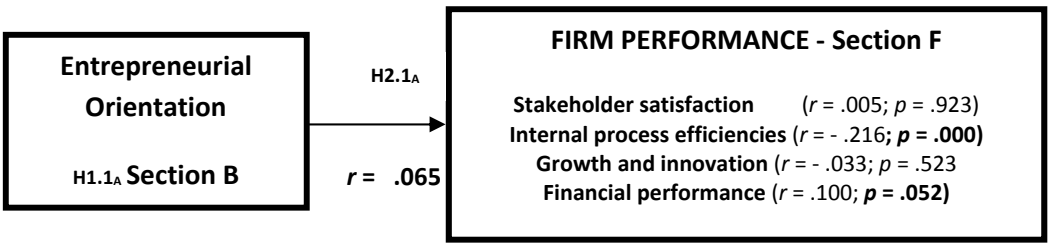

Figure 1 **Results of the Inter-correlation of Constructs FP and EO**

However, for the sake of clarity, further analysis indicated that the *Internal Process Efficiencies* score showed a small but significant, negative correlation with the EO score [r (388) = -.216; p = .000]. A small increase in the *Internal Process Efficiencies* score can therefore be associated with a small decrease in the EO score.

The Financial Performance score showed a small but significant ($p < .06$) positive correlation with the EO score [r (388) = .100; p = .052]. An increase in the EO score therefore related to an increase in the Financial Performance score. No correlation was found between EO and Stakeholder Satisfaction, or between EO and Growth and Innovation. The second empirical objective of the study was achieved in that the relationship between EO and FP was tested.

Discussions

Lumpkin and Dess (1996) and, Wiklund and Shepherd (2005) stated that an important message from past findings was that an incomplete picture of FP is provided when only the direct EO - FP relationship is examined. They advised that future research should control internal and external dependent factors when examining the EO – FP

relationship (Auer, Ritter, & Walter, 2005; Covin et al., 2006; Frese et al., 2009, Wiklund, 1999; Wiklund & Shepherd, 2003). This research however, first focuses on if EO should be measured as one construct or are the dimensions independent. It further investigated FP and the relationship between EO and FP was addressed.

The key concepts FP, EO, were operationalised, and various underlying dimensions were identified according to the current literature. Relationships between the key constructs EO and FP were explained according to the current literature, and research hypotheses were formulated. EO as a construct could be reliably and validly measured as one construct. Using the Balanced Scorecard developed by Veldsman and Roodt (2002) to test FP provided useful insight into the EO - FP relationship. Closer analysis revealed that when the Financial Performance score was higher, it was related to an increase in EO scores, thereby confirming previous research findings that there was a positive relationship between EO and FP. However, further analysis indicated that internal process efficiency whereby organisation exercise more control over the internal organisations moderates the EO – FP relationships. Thus the more formal an organisation becomes the less entrepreneurial the more negatively it will impact on their Firm Performace.

A sample size of (N = 500) was obtained, which provided a large enough sample with diverse characteristics. Random sampling was used to allow the researcher to draw inferences on the wider South African population.

It is strongly recommended a uniformed base amongst researchers to test EO - FP relationship, must be develop. Researchers should avoid dividing constructs into unnecessary dimensions. This causes complications in analysis, and the question should be asked if it really adds value.

Structural Equation Modelling (SEM) could have been used, however the data in future will be subjected to more robust statistics such as SEM to verify if observed variables load onto the latent variables as well as suggested in this study.

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