

**Corporate Entrepreneurship:**  
**An Investigation into Factors which Contribute to**  
**Entrepreneurial Activities within the Financial Services Industry**

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**Corporate Entrepreneurship:  
An Investigation into Factors which Contribute to Entrepreneurial  
Activities within the Financial Services Industry**

**Catherine McGlone**

The objective of this dissertation is to contribute to a better understanding of the existence and practice of corporate entrepreneurship within a traditional, and mature financial institution. By analyzing specific dimensions identified in existing literature which promote and support corporate entrepreneurship, this study aims to establish if an internal environment conducive to entrepreneurial activity exists, and examine associations between the contributing factors.

This dissertation examines antecedents of corporate entrepreneurship captured through a quantitative data collection method. The Corporate Entrepreneurship Climate Instrument, a survey which uses a Likert-style rating scale was administered to employees within a multinational financial services organization. Results have been independently tested for reliability using Cronbach's Alpha. Associations between variables have been identified through Pearson's correlation coefficient. Each factor has been assessed to determine if it is positively contributing to corporate entrepreneurship, or if it is perceived as a barrier to entrepreneurial activity.

The research findings indicate associations between the antecedents of corporate entrepreneurship: management support, work discretion rewards/reinforcement, time availability and organizational boundaries. This suggests support structures and mindsets exist within the financial institution, which promote innovation and corporate entrepreneurship. However there are opportunities for improvement in some of the dimensions investigated in this study to further increase the level of entrepreneurship and innovation within the organization. Recommendations for changes to organizational policies have been outlined as a means of promoting an increased level of entrepreneurial activity within the firm. As well as this, a new framework is proposed to interpret the transition phase of the organization with regards to implementing CE activities.

This study complements existing research on the corporate entrepreneurship phenomenon by analyzing its existence within the setting of a financial institution. Current research fails to address corporate entrepreneurship within the rigidly controlled and traditionally conservative environment of a multinational financial institution.

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## **LIST OF ABBREVIATIONS**

CE	Corporate Entrepreneurship
CECI	Corporate Entrepreneurship Climate Instrument
CV	Climate Variables
MS	Management Support
OB	Organizational Boundaries
TA	Time Availability
RR	Rewards Reinforcement
ROI	Return on Investment
WD	Work Discretion

# Chapter One: Introduction

## 1.1 Background to Dissertation

The precise definition of corporate entrepreneurship is widely debated despite volumes of literature published on the subject there seems to be no single accepted definition for this phenomenon (Zimmerman 2010). The term is used to describe entrepreneurial behaviors existing within the confines of established organizations (Morris & Kuratko 2002). It is a broad concept at the center of which is the process of organizational renewal (Belousova *et al.*, 2010), which can be achieved through the 'creation, development, and implementation of new ideas or behaviors' (Morris & Kuratko 2002 pg 31).

Corporate entrepreneurship is accepted by academics and practitioners as a legitimate route towards increased levels of organizational performance (Hornsbury *et al.*, 2009). Current research suggests the scope of corporate entrepreneurship is widening as organizations not traditionally recognized as being entrepreneurial now are required to become oriented towards CE in order to survive (Phan *et al.*, 2009). This is a direct result of changing conditions within the global business environment (Ireland *et al.*, 2009) which require organizations to become more innovative in the ways that they revitalize the business. Corporate entrepreneurship therefore is a potential source of a firm's competitive advantage, whereby established firms continuously and deliberately develop and leverage entrepreneurial activities integral to their perpetuated success (Ireland *et al.*, 2009). To do this successfully the firm must have the ability to innovate faster than its competitors (Teng 2007) in such a way that cannot be perfectly imitated, substituted, or traded (Barney 1991).

Corporate entrepreneurship is a key area of focus for both managers and academics alike, as it seeks to rejuvenate the traditional and well established organization, improving both competitiveness and viability by harnessing the benefits of innovative initiatives, and transforming the organization through 'renewal of the key ideas on which

they are built' (Sharma & Chrisman pp. 18 1999). It draws upon insights and nuances from a wide variety of perspectives, on how organizations may best respond to entrepreneurial opportunities, and how best to predict and measure outcomes, given a key set of variables (Phan *et al.*, 2009, Corbett *et al.*, 2013). Thornberry (pp. 526 2001) suggests 'corporate entrepreneurship can be a powerful antidote to large company staleness, lack of innovation, stagnated top line growth, and the inertia that often overtakes the large mature companies of the world'.

This phenomenon impacts both the individual as well as the firm. To fully understand the concept it is important to review both aspects as the entrepreneurial orientation of the organization relies on both (Lau *et al.*, 2012). From the individual perspective it involves recognizing opportunities for innovation, and perusing entrepreneurial activities from within the firm, often without any formal support from the organization (Ireland *et al.*, 2006 a). From the firm's perspective it is used as a tool to solve a variety of strategic issues such as maintaining a competitive advantage, and improving financial performance (Zimmerman 2010) particularly in rapidly changing industries (Bhardwaj *et al.*, 2011). In each instance there are common traits of conventional entrepreneurship such as the need for innovation, growth, calculated risk taking, and flexibility (Stevenson & Jarillo 1990). Corporate entrepreneurship therefore creates the framework for continuous improvement and innovation from within an established organization (Sebora & Theerapatvong 2010). However it is unlikely that CE always has a positive effect on a firm, instead entrepreneurship works well in certain conditions but not others (Teng 2007).

Key players in the realm of corporate entrepreneurship have diverging views on the phenomenon. Some models suggest CE exists solely at the individual level, driven by internal entrepreneurial behaviors and motivators (Hornsby *et al.*, 2009) existing within the firm. Ireland *et al.*, (2009) outline the existence of corporate entrepreneurship as a strategic construct driven by environmental conditions, organizational architecture and firm behaviors, whereby it is the strategic intent of the organization to purposefully

exploit entrepreneurial opportunities. While others such as Guth & Ginsberg (1990) describe the subject as a set of phenomena that exists outside the realm of corporate strategy, with strategy identified as a driver of CE. However bridging all models on the subject is the absolute that entrepreneurship is based on innovation and creativity (Phan *et al.*, 2009). When applied within the confines of an institution entrepreneurship is centered on leveraging existing capital and resources to gain additional resources (Ireland *et al.*, 2009). This involves altering the pattern of resource deployment and utilization and creating added value, generated by the creation of new capabilities (Teng 2007).

Existing literature on this phenomenon fails to address the existence of corporate entrepreneurship within the rigidly controlled environment of a multinational financial institution. Research available on the subject, suggests that firms competing in both domestic and international markets experience difficulties in implementing the behaviors and culture necessary to facilitate corporate entrepreneurship (Sebora & Theerapatvong 2010).

## **1.2 Research Aims**

The aim of this research is to establish if an internal environment conducive to entrepreneurial activity exists within a traditional financial institution, by applying the use of the Corporate Entrepreneurship Climate Instrument, and analyzing the specific dimensions which promote and support corporate entrepreneurship.

The research method employed in this study is the Corporate Entrepreneurship Climate Instrument survey. This survey was selected as it offers critical insight and scope necessary to draw connections and generate findings across five major factors which contribute towards the existence of corporate entrepreneurship. The use of a pre-existing questionnaire ensures the data collection tool is credible, as it has been tested for both reliability and validity. Existing literature does not detail the use of this instrument specifically in an organization which is part of the financial industry.

## **Chapter Two: Literature Review**

### **2.1 Introduction**

The following literature review attempts to examine five key organizational dimensions that influence entrepreneurial behavior within a corporation. First, an appraisal of organizational architecture and the support structures which promote as well as hinder the development of CE. This is followed by the role of management support in establishing and nurturing CE. Next motivating factors are covered; this includes rewarding and incentivizing behaviors associated with CE. An overview of the learning organization and the importance of relationship building within the boundaries of the organization will follow. And finally the impact of organizational culture and mindsets is discussed.

### **2.2 Organizational Architecture**

At the time of inception all organizations must carry out some type of entrepreneurship, as these startups transition to large established firms there is often a need to implement strict controls, policies, and procedures (Zimmerman 2010). This bureaucratic red tape and rigid structure is used to manage growth (Jansen *et al.*, 2006). However, it can often also inhibit the entrepreneurial activities which originally created the competitive advantage (Ireland *et al.*, 2006 a). The dilemma for a growing organization is in finding a balance between its operational procedures and the need to sustain a degree of corporate entrepreneurship (Zimmerman 2010).

As the organization grows in size Burns (2008) suggests that structure is needed to create order. It is important to note that it is not size alone that acts as an obstacle to creativity and innovation, instead it is the traditionally conservative and bureaucratic architecture of large firms that stifle entrepreneurship (Sebora & Theerapatvong 2010). To manage size, formal hierarchies are put in place, reporting lines developed, and managerial levels established (Eesley & Longenecker 2006). It is formalization, along

with rigid specialization, and limited autonomy that has the potential to negatively affect entrepreneurial performance within the firm (Demirci 2013).

The applicability of models, structures and processes developed and employed by traditional organizations no longer constitute a source of sustainable competitive advantage in the new context of business strategy (Phan *et al.*, 2009). Formalized routines take the place of innovative solutions and result in institutionalized repetitive behaviors and uniform processes and results (Russell 1989) which allow for scalability of operations, at the expense of creativity. To mitigate risk and exercise control managers implement bureaucratic procedures (Jones & Butler 1992). Research highlights this process of increased formalization is associated with a decline in a firm's ability to propose innovative solutions and adapt to market changes (Russell 1989) causing the organization to resist new ideas and creative people (Jones & Butler 1992). Instead new mechanisms for organizational renewal by way of corporate entrepreneurship are needed in order to adapt to the changing landscape which is creating an 'increasingly competitive and financially constrained environment' (Phan *et al.*, p 197 2009). Yet few guidelines exist for successful implementation (Thornberry 2001).

Most organizations recognize the importance of creativity in particular entrepreneurship and its close relationship with sustaining a competitive advantage (Ferdousi 2012). As such some firms take steps to adopt a less formal operating model. One possible framework which can be employed is the organic structure, characterized by extensive decentralized decision making and an unabated flow of communication both laterally and vertically (Pitta *et al.*, 2008). Morris & Kuratko (2002) suggest that major innovative breakthroughs are more likely to occur within structures that are closely aligned to the organic structure. The informal nature of its design encourages collaboration and employees are empowered to make key decisions (Burns 2008). However, an informal system conducive to corporate entrepreneurship also has the potential to cause anarchy (Burns 2008). Other potential risks which can arise through

the organic framework include the potential for confusion, duplication, and misinterpretation (Demirci 2013).

Firms may find a multidimensional approach to strategy offers the balance needed to manage corporate entrepreneurship effectively (Stevenson & Jarillo 1990). Ireland & Webb (2007) suggest that some degree of formalization and standardization can contribute positively towards achieving entrepreneurship. Demirci (2013) outlines a positive correlation between semi formalization and entrepreneurship. He suggests that a lack of clearly defined tasks and objectives can result in role ambiguity, whereby employees seek out support and direction rather than focusing efforts on creativity and process innovation and improvements. Demirci is supported by Jansen *et al.*, (2006) this literature details a positive relationship between formalization and exploratory innovation and suggests that rules and procedures are created to improve operational processes and increase positive outputs. Architecture in this way allows for the exchange of knowledge and routines and provides organizations with the ability to respond and adapt to changing circumstances and environments (Burns 2008).

Large organizations also use formalized structure to focus on core principals, with the view that efforts should be concentrated on achieving the maximum result from a proven success factor such as a core product or service (Morris & Kuratko 2002). This approach has the ability to manage immediate threats from the competition. However, entrepreneurship and innovation focus on the future and developing a 'non routine response to a uniquely perceived problem' (Russell pp. 9 1989). Large organizations often create initiatives to quietly carry out developments once an opportunity has been identified (Birkinshaw 1997). Committees and cross functional teams support both the formalized structure required to perform core activities and the organic flexibility needed for innovation (Ferdousi 2012). By operating on the periphery rather than from within the core a specialized team has the opportunity to become decentralized, autonomous, and rules and procedures become less formal (Tzeng 2009). Peter Chemin (cited in Burns 2008 p137), supports the use of teams to pursue innovation and



overcome organizational boundaries suggesting 'in the management of creativity, size is your enemy.' However, these small autonomous groups can also become a source of conflict as feelings of envy and mistrust can emerge from their counterparts in more traditional operational roles (Bouchard 2001).

Authors such as Pitta *et al.*, (2008) suggest that not all organizational areas should engage in the same degree of innovation and creativity, instead stability, uniformity and control is to be revered in areas such as accounting and manufacturing. While others support the premise that employees at all levels of the organization should maintain an entrepreneurial attitude (Montoro-Sanchez & Soriano 2011), Burgess (2013) warns that failure of corporate entrepreneurship may have negative and even disastrous consequences for organizational performance and overall success. Particularly in 'hostile and technologically sophisticated environments' where the rate of firm failure, price cutting strategies, and aggressive competition exists (Kuratko *et al.*, 2014)

Corbett *et al.*, (2013) stress the importance of continuous renewal, insofar as the notion of a sustainable competitive advantage is no longer an absolute, it has instead been replaced by the concept that a competitive advantage must be renewed, even in the case of long established superiority; else risk erosion, caused by changes and improvements in technology and hyper-competition. While companies cannot plan for an unpredictable future, they can prepare by building an organization that is opportunity focused and can react with speed with flexibility (Thornberry 2001).

The literature outlines organizational architecture as key component of corporate entrepreneurship, and may be used to measure a firm's entrepreneurial orientation. However, the literature fails to address the impact organizational architecture has on corporate entrepreneurship in a traditional financial setting. The data collection method selected for this study will aim to measure the organizational boundaries within a financial institution. This will be used to analyze whether the firm's architecture enables or obstructs entrepreneurial activities within the financial institution

## 2.3 Management Support

The role of management is to provide encouragement, support, and resources needed for employees to seek out, develop, and pursue creative and entrepreneurial initiatives within the organization (Bhardwaj *et al.*, 2011) while at the same time mitigating the risks associated with it (Bouchard 2001). Senior management cultivate the strategy and vision for the organization, in doing so they provide a roadmap for the firm's future direction and to achieve its objectives (Ireland *et al.*, 2006 a). A firm's ability to improve its entrepreneurial character is hinged on the compatibility of management practice and the organization's entrepreneurial intent (Barringer & Bluedorn 1999).

Corporate entrepreneurship from the corporate strategy perspective has potential for both positive and negative implications (Bouchard 2001). Management should seek to create an environment in which entrepreneurial behavior is valued and encouraged as an organization wide directive (Ireland *et al.*, 2006 a). While also establishing the appropriate boundaries designed to protect the corporation's reputation, resources, and identity (Belousova *et al.*, 2010). As earlier outlined large organizations have structural impediments in place which can hinder corporate entrepreneurship. To overcome structural barriers to entrepreneurship the management team should foster entrepreneurial behaviors as a pathway to improving overall firm performance (Ireland *et al.*, 2006 b). The support of management also helps to provide legitimacy to the venture (Belousova *et al.*, 2010).

Management support is measured by the willingness of managers to promote and enable entrepreneurial activity (Bhardwaj *et al.*, 2007) it is a critical component of corporate entrepreneurship; however, he/she cannot simply dictate an innovative culture by demanding its existence (Russell 1989). Instead it is the role of management at all levels to provide a degree of autonomy or work discretion, and opportunities for unstructured interaction amongst team members and departments. Designed to facilitate idea generation, knowledge exchange, and strategic problem solving, while simultaneously motivating and encouraging creative individuals to take initiative (Russell 1989).

Manager's acceptance of new initiatives is essential as all initiatives face some degree of survival risk (Dess *et al.*, 2003).

The objective of management support is to encourage employees to not only see the desired result but also to determine what is needed to achieve this outcome (Pitta *et al.*, 2008). However, according to Zahra *et al.*, (2009) managers often perceive CE activities as expensive, complicated and time consuming. If there is no clear link between reward and senior management support to CE activities it is unlikely that middle managers will engage in or promote innovation (Ireland *et al.*, 2009). When this is the case lower level managers and operational supervisors generally perceive the need to focus on procedures and thereby do not engage in entrepreneurial behaviors (Hornsby *et al.*, 2009). Potential for conflict may arise when differences exist in manager's perceptions of the need for change, particularly at different levels of the hierarchy. This may result in confusion at operational level as to what is expected, (Burgess 2013) this tension may result in derailment of CE initiatives, particularly when operational level employees and managers fail to adopt an experimentation role (Dess *et al.*, 2003).

Jones & Butler (1992) pose the question, how will managers respond when they begin to feel the effects of loss of control? A proposed response may be to increase monitoring, set high or unachievable performance standards and objectives, or to simply implement rigorous controls and procedures to mitigate risk and reduce spare capacity (Russell 1989). In most large companies managers are rewarded for minimizing risk, adhering to policy, and performing a functional role, which directly contribute to the bottom line (Thornberry 2001). Excessive monitoring has been shown to stifle explorative behaviors (De Jong & Den Hartog 2007). To successfully explore innovative opportunity and continuous improvement initiatives, policies and procedures must change simultaneously; this will ease the conflict and inevitable tensions that innovation causes for management (Dess *et al.*, 2003). Zahra *et al.*, (2009) propose further education may also assist to reducing rigidity of a firm's management practices.

Transformational and Participative leadership styles have been identified as potential antecedents of individual innovation and collective corporate entrepreneurship (De Jong & Den Hartog 2007). This is similar to the Japanese 'kaizen' structure which features collective decision making along with a focus on continuous improvement, and aversion to conflict (Pitta *et al.*, 2008). Managers exercising a collective or participative style of leadership provide authority to subordinates and instill a sense of responsibility; this high quality leader member exchange provides employees with challenging tasks, along with psychological support in times of risk and failure (Russell 1989) , and deploys the resources needed for innovation to take place (De Jong & Den Hartog 2007). To be perceived by employees as authentic, management must not only be enthusiastic about ideas and innovation, they must also provide the resources needed to develop it (Montoro-Sanchez & Soriano 2011). The existence of slack resources, particularly time availability (Hornsby *et al.*, 2009) is directly correlated with innovative cultures; part time innovation in addition to daily activities results in failed or longer development lead times (De Jong & Den Hartog 2007). Therefore the role of managers is not only to direct, but also to influence processes and oversee effective resource deployment (Bhardwaj *et al.*, 2007).

Corporate entrepreneurship has been described as a paradox of both 'top down' and 'bottom up' processes (Demirci 2013). 'Top down' in the sense that it should be supported by the organization and lead by the various management levels. 'Bottom up' as corporate entrepreneurship can often occur with the employee as the catalyst taking the initiative and driving forward the process without any formal support from the organization (Bouchard 2001).

From the 'bottom up', employees at operational level are expected to venture into something new, potentially without being asked, and without the approval of senior management to do so (Stevenson & Jarillo 1990). Activities carried out by employees in pursuit of their own self-interest, or in the form of pet projects do not add value to the firm and cannot be economically justified by the firm (Manne 2011). This behavior

exposes the company to liabilities associated with 'unrelated diversification' which includes wasteful use of resources, loss of identity, and increased risk of failure (Bouchard 2001). Concerns also exist around the tendency for these types of employee driven initiatives to 'go underground' and operate without direct management oversight. A corporate entrepreneurship strategy must be carefully designed to promote entrepreneurial behaviors closely linked to the goals of the organization (Ireland *et al.*, 2006 a). This will ensure that the entrepreneurial activities taking place are in line with the goals of the business and can also be monitored from risk perspective. (Bouchard 2001)

From the 'top down' management can create a supportive framework for entrepreneurship within the firm; emphasizing the need for creativity and shared knowledge (Ireland *et al.*, 2006 a) at all levels of the organization to maximize competitive advantage, while also limiting the range of potential behavior from within the firm by creating structural boundaries and controlling the use of resources (Belousova *et al.*, 2010). Management therefore promote creativity under careful supervision (Burns 2008) to mitigate the strategic risks associate with corporate entrepreneurship (Bouchard 2001).

Existing research on this phenomenon has identified challenges facing mature and traditionally structured organizations in developing capabilities required to foster and maintain CE activities which rejuvenate operations and improve the firm's performance (Zahra *et al.*, 2009, Barringer & Bluedorn 1999). Effective management of existing resources is found to be conducive to perpetuating an existing competitive advantage, particularly in the context of the contemporary business environment, where financial constraints, hyper-competition and market cannibalization are quick to break down a tried and true business model. As such innovation has become an essential tool in the repertoire of successful managers (Corbett *et al.*, 2013). In this study management support will be measured using the Corporate Entrepreneurship Climate Instrument

survey, and will be identified as either a potential barrier or enabler of CE within the financial institution surveyed.

## **2.4 Rewards & Incentives for CE**

Reward systems and other motivational tools are key drivers of corporate entrepreneurship designed by organizations to influence behavior and encourage employees to take on specific roles and responsibilities (Bhardwaj *et al.*, 2011). Rewards take on many different forms such as financial, status and power, career and personal development, as well as the psychological motivators; self-actualization, esteem, and social rewards such as friendships and a sense of belonging (Morris & Kuratko 2002). A firm's incentive structure influences employees perceptions and may encourage employees to display supra-normal levels of entrepreneurial behavior (Jones & Butler 1992)

Employee behaviors are influenced by various organizational factors (Lau *et al.*, 2012). Employees motivations towards particular behaviors can be explained through the expectancy theory. This theory is based on the assumption that an individual's effort is determined by the individual's belief that accomplishing a goal or task will result in a reward (Sebora & Theerapvong 2010). Employees have less motivation to undertake uncertain ventures, if they will only receive blame for failure or a predetermined salary for success (Jones & Butler 1992). Morris & Kuratko (2002) outline the need for the reward systems to be clearly identifiable and linked to specific behaviors. For example rewards must be considered to be fair from the employees perspective insofar as the perceive benefit or size of the reward is in line with the effort required to achieve the award. The rewards must also be consistent, and not used to bribe (De Jong & Den Hartog 2007). Management should not demand one type of behavior while rewarding another (Belousova *et al.*,2010).

Types of rewards include non-cash incentives such as recognition and praise (De Jong & Den Hartog 2007), reputational gains, favorable working conditions, access to valuable

knowledge, and the opportunity to take on greater responsibility (Burns 2008). While traditionally these benefits are not detailed explicitly in the employment contract they are considered to be compensation offered in exchange for performance quality and effort (Manne 2011). These types of motivations are typically used to empower employees to pursue creativity and their ideas within the company (Rule & Irwin 1988). Rewards, recognition and appreciation communicate a culture that values creative talent (Pitta *et al.*, 2008).

Monetary rewards are another form of motivation. Cash based incentives include raises, commissions, and bonuses have been proven to effectively encourage in role behavior, but can also have the potentially undesirable side effect of depressing extraordinary behaviors which are not specifically linked to rewards (Sebora & Theerapatvong 2010). The value of innovation and contributions made by entrepreneurial activities are difficult to recognize until long after it occurs (Manne 2011). Even then it is not until the innovation shows on the bottom line with a calculated value that efforts are fully appreciated. Within a large institution innovations may be packaged in with other activities, and a value or ROI may be difficult to specify. Research by Jones & Butler (1992) suggests firms are adverse to paying high rewards to lower level employees and agents as they believe this will destroy the parity of the internal reward structure. However, monetary awards should still remain a part of the reward system to prevent the most productive and influential innovators from leaving the company (Bhardwaj *et al.*, 2011).

Research findings suggest the type of compensation rather than the amount of compensation has a greater effect on competitiveness within the firm (Bhardwaj *et al.*, 2011). A combination of both financial and non-financial rewards can provide incentive for entrepreneurial activities. This is supported by a *Fortune* survey of CEOs revealed that in large organizations the compensation of employees pursuing new ventures is often different to the compensation of their counterparts in working in other areas of the firm (Bhardwaj *et al.*, 2011). These customized incentive mechanisms help to cut

down on the loss of entrepreneurial talent from within the firm, referred to as the 'downside of individualization' (Bouchard 2001 p18) which over time can erode the firm's most valuable asset, human capital.

Rewards have been identified as an antecedent of corporate entrepreneurship; as such the existence of reward structures has been identified as a key component in the CE climate instrument, utilized in this study. Employee's perceptions of rewards will be measured as a contributing factor to the existence of CE within the setting of an established financial institution.

## **2.5 Relationships & Knowledge Based Resources**

Building relationships is a critical success factor for entrepreneurs (Burns 2008). Relationships allow entrepreneurs to create a rapport of trust and credibility through informal networks, (Belousova *et al.*, 2010) which can then be leveraged to influence others. As leaders, entrepreneurs are adept in sharing their vision, motivating others to help implement changes, and managing for the future (Lau *et al.*, 2012). An effective leader is both 'learner and teacher, a doer and a visionary' (Timmons, cited in Burns 2008 pp. 105). In the context of corporate entrepreneurship these characteristics can be used to build a supportive network and influence change (Zimmerman2010) within the organizations boundaries. Knowledge and skills transferred throughout the organization springs forth renewal from within encouraging teamwork, active problem solving, and learning from both past experience and creating best practices (Demirci 2013). Knowledge also acts as a vehicle through which CE is able to travel (Dess *et al.*, 2003).

Knowledge creation and exploitation are important objectives which can be achieved through effective CE (Kuratko *et al.*, 2005). Internal, or firm specific knowledge is information supported by past experiences, or experiments, and is intuitive in nature, laden with judgment, and as such is valuable, rare, imperfectly imitable (Dess *et al.*,2003). This along with social exchanges among employees connects the



entrepreneurial activities of the individual to the organization's strategy and agenda (Dess *et al.*, 2003).

Jones & Butler (1992) suggest traditional and mature organizations are inflexible and fail to take notice or act on opportunities which are entrepreneurial in nature; therefore they are unable to anticipate advances which may be brought about through creative people and productive change. Others such as Dess *et al.*, (pp. 357 2003) suggest that large organizations are 'hostile environments for creative ideas.' In order for traditional firm's to excel in the 21<sup>st</sup> century, there must be a paradigm shift from innovations limited to product and service improvement towards pioneering and front running innovation in value chains, business models, and market development (Kuratko *et al.*, 2014), which can be achieved by harnessing the firms most valuable intangible asset, intellectual capital (Curado 2008). This is echoed by Zahra *et al.*, (2009) who outline the shift from tangible resources, to knowledge based resources.

An organization's conventional physical assets are prone to depreciation, mechanical failure and breakdown; however an organization's knowledge assets are not consumed or written off once applied, instead this asset is more likely to be enhanced through application (Curado 2008). De Jong & Den Hartog (2007) suggest that knowledge intensive services, such as banking, IT, and engineering sectors are prone to the liabilities associated with the perishable nature of knowledge based assets. As such the innovative behavior of employees within service based organizations is critical, in order to realize a continuous flow of innovation employees must be both willing and able to innovate (De Jong & Den Hartog 2007). In an environment void of knowledge sharing and employee participation fewer opportunities by way of corporate entrepreneurship will be generated (Foss *et al.*, 2013).

In determining the effectiveness of employee's participation in corporate entrepreneurship it is essential to identify the difference between creativity and innovation. De Jong & Den Hartog (2007) differentiate the two insofar as innovation will produce a defined output, it is clear, targeted, measurable, and intended to produce a

benefit; innovation therefore captures not only idea generation, but also implementation. These useful ideas, processes, and products are designed to add value to the firm. The existence of corporate entrepreneurship not only provides financial benefits, it has also been shown to increase job satisfaction among employees, and improve relationships with key stakeholders such as customers suppliers and distributors (Ireland *et al.*, 2009). When employees understand that idea generation and entrepreneurial activities are important they are more likely to display this type of behavior (De Jong & Den Hartog 2007).

The extent of an employee's innovative behavior depends on the level of personal interaction with others in the workplace (De Jong & Den Hartog 2007). A firm's HRM practices should be designed to encourage relationships among employees and provide channels through which the flow of information and knowledge is enabled and directed towards innovation and entrepreneurial activities (Montoro-Sanchez & Soriano 2011). HRM practices that stimulate corporate entrepreneurship support attitudes, culture, mindsets, and behaviors thereby creating and sustaining sources of competitive advantage through intangible human capital and knowledge based resources (Zahra *et al.*, 2009).

'Organizational knowledge is the basis of business today' (Montoro-Sanchez & Soriano pp. 11 2011) human intellectual capital is a key resource, and having the capacity to process and absorb knowledge continuously allows the organization to explore new opportunities by leveraging on existing skillsets and reducing the cognitive and structural rigidity within the firm (Zahra *et al.*, 2009). Curado (2008) argues the management of service orientated firms is drastically different to managing others, because knowledge is the key element used to differentiate against the competition, as such it is more relevant than money even in the case of a bank. To stimulate CE companies must be able to acquire and manage new knowledge, otherwise detailed as 'intelligence generation and intelligence dissemination' (Bhardwaj *et al.*, pp. 133 2007) in a way that allows the firm exploit opportunities as they emerge. To facilitate this a

firm must be willing to identify, accept, and support multiple sources of knowledge (Montoro-Sanchez & Soriano 2011). Sources of knowledge can be both internal and external and achieved by hiring key personnel or by changing the composition of groups responsible for key decision making within the firm (Curado 2008).

Knowledge, ideas, and continuous improvement are important resources in creating and sustaining a competitive advantage (Ireland *et al.*, 2006 a). Through continuous exchange of knowledge a learning organization is created (Burns 2008). Chang & Wang (2013) discuss the use of a resource bank whereby integrated resources facilitate innovation, as well as improve performance. Sharing problems and solutions ensures that knowledge is spread throughout the organization. Bhardwaj *et al.*, (2011) outline the 'expert locator' as a tool for the learning organization; employees use this tool to announce their area of expertise for others to use as a resource. Through the use of informal networks social relationships are at the heart of innovation (Tzeng 2009).

Relationships and knowledge based resources are of prominent importance in the services industry. Managing, deploying, and continuously increasing knowledge helps to perpetuate CE activities.

## **2.6 Organizational Culture, Mindsets & Behaviors**

Organizational culture is often times felt more than articulated (Hamilton 2008). Firms with a high level of entrepreneurial intensity (measured by degree and frequency) (Morris & Kuratko 2002) emphasize the value of uncertainty and change as it generates opportunities for innovation and improvement (Ireland *et al.*, 2006 a). As outlined earlier firms place value on certain aspects of uncertainty i.e. those which are in line with the organizations strategy and identity (Bouchard 2001).

Previous research by Pitta *et al.*, (2008) identified corporate culture can either act as a support or impediment to creativity and innovation. Aspects of organizational culture include employee empowerment and shared decision making (Pitta *et al.*, 2008), decentralized management and oversight, rewarding specific behaviors, as well as

allowing scope for calculated risk taking (Hamilton 2008). However, a propensity for risk taking is not an absolute function of entrepreneurship (Manne 2011). In corporate entrepreneurship risk taking occurs after careful calculation, whereby cost benefit analysis is carried out. (Ireland *et al.*, 2006 b) An entrepreneurial manager will balance risk with reward (Morris & Kuratko 2002).

Barriers to entrepreneurship arise when the organizational culture is one that punishes risk taking and mistakes associated with creativity (Eesley & Longenecker 2006). Dysfunctional behaviors may arise as a coping mechanism for the uncertainty which CE brings about, these behaviors have the potential to disrupt CE, and have a negative impact on trust (Dess *et al.*, 2003). 'Segmentalism' is a term for the cultural phenomenon which may quickly derail entrepreneurial activities and initiatives within an organization, as it creates a 'culture and an attitude that make it unattractive and difficult for people in the organization to take initiative to solve problems and develop innovative solutions' (Pitta *et al.*, pp. 142 2008). This can be caused by strategy overtly focused on numbers and statistics as opposed to an investigation of progress, as well as lack of supervisor support, and focus on control of actions whereby high level managers are concerned with preparation and dissemination of goals and objectives (Montoro-Sanchez & Soriano 2011). Along with this, well intentioned behaviors can be interpreted as opportunistic by those opposed to CE, as such differences in perceptions may have a significant impact on the success of corporate entrepreneurship (Dess *et al.*, 2003) within an established, mature organization.

Large organizations face innumerable challenges in seeking to mainstream and institutionalize the culture of corporate entrepreneurship across all business units. (Ferdousi 2012) To be successful corporate entrepreneurship requires Unitarism, defined as 'a belief that the interest of the organization and the individual are the same' (Burns 2008 pp. 70). A successful entrepreneurial leader can persuade others to overcome their own self-interest to achieve the goals of the organization (Tansky *et al.*, 2010). Those employees who cannot identify with the culture or direction of the firm

become the greatest obstacle to entrepreneurship by resisting and sabotaging change, engaging in politicking, and making uninformed judgments and assumptions (Morris & Kuratko 2002).

To become more entrepreneurial some companies take many routes at the same time, including culture change, de-layering, re-engineering, and downsizing, with the aim that this will lead to substantial growth opportunities and increased innovation and entrepreneurial behavior (Thornberry 2001). Other times external talent is brought in to infect the organization with a new attitude (Foss *et al.*, 2013). Changes to traditional reward structures and organizational values may also foster the spirit of innovation (Russell 1989). The end goal is to institutionalize the right amount of innovation, and instill the entrepreneurial spirit (Pitta *et al.*, 2008).

The institutional environment, defined as 'the stable rules, social standards and cognitive structures in society that guide, favor or restrict business activity' (Gomez-Haro *et al.*, pp. 1680 2011) may strongly influence organizational behavior and entrepreneurship. This study aims to draw parallels and identify variances in employee attitudes towards entrepreneurship within the organization, through the analysis of specific climate variables, measured through the Corporate Entrepreneurship Climate Instrument survey.

## **2.7 Conclusion**

Organizational change is discontinuous, abrupt, and seditious, and failure to recognize and 'anticipate change results in organizational fossilization' (Bhardwaj *et al.*, pp. 131 2007). It is imperative for organizations to consider how entrepreneurial activities carried out within the confines of an established corporate context may become a source of achieving and perpetuating competitiveness advantage (Zahra *et al.*, 2009). This does not solely involve adding new business to the corporation; instead it may come in the form of strategic regeneration, redefined market space, organizational restructuring, a revised strategic HRM policy, and reconstructed business and operating

models, all of which can be adopted in pursuit of competitive advantage (Corbett *et al.*, 2013). Capabilities such as expertise, pro-activeness, rational risk taking, assertiveness governed by managerial support, organizational structures, reward systems and culture stimulate entrepreneurial behaviors (Bhardwaj *et al.*, 2007). In summary an organization's aim is to identify opportunities and in turn shape and develop the business to be able to secure these opportunities to pursue successful new ventures (Thornberry 2001).

Existing research identifies specific variables which contribute to the emergence of corporate entrepreneurship, and suggests CE is difficult in large organizations which are traditional and hierarchal in nature. This study aims to apply findings from existing literature within the specific context of a financial institution and to examine the factors which predispose an organization towards CE. The findings will be used to identify the existence, emergence, or rejection of CE within the organization.

## Chapter Three: Methods

### 3.1 Introduction to Research Methods

As discussed in the preceding literature review there are internal factors which contribute to the existence of corporate entrepreneurship. These factors have not been explored in the context of a financial services company. This chapter outlines the process used to assess the factors contributing to the corporate entrepreneurship phenomenon within this setting. First, the research aims and objectives are explained. Section 3.3 details the research design. In this study a quantitative method has been selected and a preexisting questionnaire has been adopted. Section 3.4 specifics research limitations, 3.5 the data collection process. In 3.6 the method of data analysis will then explain how the research findings and results in chapter four have been assessed. Finally a reflection on method choice and ethical considerations is discussed.

### 3.2 Research Aim and Objectives

In this subsection the research aim and objectives of this study are explained.

**Aim:** To establish if an internal environment conducive to entrepreneurial activity exists within a traditional financial institution, by applying the use of the Corporate Entrepreneurship Climate Instrument, and analyzing the specific dimensions which promote and support corporate entrepreneurship.

**Objective:** To identify which factors promote or hinder entrepreneurial activities within the financial institution.

**Objective:** To identify relationships between the known antecedents of corporate entrepreneurship as outlined by the literature.

**Objective:** To analyze the existence, emergence, or rejection of corporate entrepreneurship within the financial institution.

### **3.3 Research Design**

The research conducted for this dissertation is quantitative in design. The use of a pre-existing questionnaire was the key survey strategy employed. Sehora & Theerapatvong (2010) suggest firm level research on the topic of entrepreneurship is hindered by the existence of few validated measures. As such the Corporate Entrepreneurship Climate Instrument (CECI) (Ireland *et al.*, 2006) was selected as the research tool. The use of a pre-existing questionnaire ensures the data collection tool is credible. According to Kurtako *et al.*, (2014) the instrument has been shown to be psychometrically sound. They also describe eight different validity assessments of this tool between 1999 -2013. For the purposes of this study the CECI results have also been independently tested through the use of a Cronbach's Alpha reliability test in SPSS.

According to Montoro-Sanchez & Soriano (2011) there is sound evidence which supports the analysis of factors which predispose an organization towards CE activities, with the view that increasing these factors will improve employee attitudes and mindsets towards undertaking entrepreneurial initiatives. The CECI is designed to elicit information from participants through Likert-style questions. There are six dimensions which examine the following factors: Management Support, Work Discretion, Rewards/Reinforcement, Time Availability, Organizational Boundaries and Specific Climate variables. Five ordered response levels allow respondents to identify as strongly disagree, disagree, not sure, agree, strongly agree. The instrument contains 78 questions. Full detail of the survey instrument utilized can be found in Appendix 1.

### **3.4 Research Limitations**

Potential limitations with the method selected include the inability of participants to respond, failure to comprehend the question, and refusal to participate (Saunders *et al.*, 2007). This method is also restricted by closed ended questions which by design limit feedback, and some employees may purposely avoid using extreme response categories



such as strongly agree or strongly disagree. Time constraints for this research as well as the potential for statistical error should also be considered as limiting.

### **3.5 Data Collection**

The questionnaire was administered using purposive sampling to employees across various professional levels within a well-known international financial services company located in Dublin, Ireland. This method has been selected as it offers the ability to collect data across a range of personnel and departments. This approach was used to capture employee viewpoints across a variety of management and employee grades, as well as across different teams and departments. This offered the critical insight and scope necessary to draw connections and generate findings from across many levels of the organization as it exists within this sample set. By design quantitative research yields data which can be projected to the larger population. Employees administered the CECI were directed to read the instructions for completion detailed at the start of the survey before responding.

The following departments are represented in the data: Operations, including cash and transaction processing, Client Service, and Projects. In total 75 potential participants were approached 51 responses were returned.

### **3.6 Method of Data Analysis**

Themes which emerged have been analyzed through the process of coding and categorization. First the data was reduced to relevant information only and then rearranged to be integrated with theory (Sekaran & Bougie 2010). Data analysis has been carried out on the survey responses using a statistics software package, SPSS to identify variables, inconsistent and bias responses, and to identify trends (Sekaran & Bougie 2010). The following tests have been conducted in order to analyze and interpret data findings.

### **3.6.1 Reliability Assessment**

A reliability assessment of each scale was carried out using Cronbach's Alpha. This coefficient of internal consistency is designed to measure the reliability of a psychometric assessment for a given sample. As the literature does not outline the application of this instrument in a financial services setting, it was imperative to the study to assess the reliability of each scale before beginning any further analysis, as the variables derived from each scale are intended to be used for subsequent predictive analysis (Santos 1999). Nunnally (1978) (cited in Santos 1999) has indicated (**0.7**) to be an acceptable reliability coefficient, and as such it is considered the benchmark for reliability assessment. The higher the score the more reliable the scale is considered. In instances where the original scale has proven to be under-reliable a reassessment of the scale was conducted by way of item removal.

### **3.6.2 Factor Distribution**

In order to conduct parametric and non-parametric tests, the distribution of factor responses has been analyzed. Detail of this assessment has been reflected graphically through the use of histograms as well as through descriptive statistics.

The data has been plotted graphically to assess the frequency distribution for responses across each scale. The data was tested for normality using the Shapiro-Wilk test. This test is designed to assess the likelihood that the effect seen in the data may have occurred by chance (Walker 2014).

$H_0$ : The distribution is normal.

$H_a$ : The distribution is not normal, it deviates from normality

The significance level or p-value is the probability of observing the data under the assumption that the null hypothesis is true. For all null hypothesis tests a significance level (Sig.) of 0.05 was chosen. Significance below 0.05 implies the data is not normally

distributed. If the p-value is greater than 0.05, we accept the null hypothesis, reject the alternative hypothesis and conclude that the data comes from a normal distribution.

### 3.6.3 Linear Relationships

The data was then analyzed to identify linear relationships which exist between variables. In this study a Pearson Correlation, or Pearson product-moment correlation coefficient has been conducted to assess the correlation between sets of data, and to measure how well they are related. The Pearson Correlation uses two letters to represent data, ( $\rho$ ) for the population and the letter “r” for a sample. Pearson's r can range from -1 to 1.

An r of -1 indicates a perfect negative linear relationship between variables, an r of 0 indicates no linear relationship between variables, and an r of 1 indicates a perfect positive linear relationship between variables, (Lane 2014) however this perfect positive linear association is unlikely to exist (Saunders *et al.*, 2007). A positive association is identified as X increases, Y too tends to increase. However, if the relationship between the variables is not linear, then the correlation coefficient will not adequately represent the strength of the relationship between the variables. The following scale can be used to interpret the correlation coefficient.

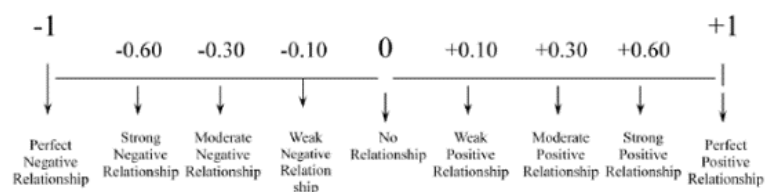


Figure 1: Pearson's Correlation Range

### 3.6.4 Effect Size Determination

The effect size of each of the associations was also analyzed. Effect size measures the degree or strength of each association. There are two families of effect size, the *d* family (Cohen) and the *r* family. The *d* family aims to assess differences between groups, this is

not applicable to this study. For the purposes of this research the  $r$  family has instead been selected as the appropriate choice as it seeks to measure the strength of relationship between two or more variables (Ellis 2010). According to Walker (2014), the correlation coefficient  $r$  is the most common effect-size measure. As outlined in Figure 1. Pearson's Correlation range  $r$  covers relationship strengths, from no relationship (zero) to a perfect relationship (1, or -1). The significance of the relationship between variables is independent of how many people have been included in the survey. When interpreting the effect size a rule of thumb, suggests an  $r$  of .1 represents a 'small' effect size, .3 represents a 'medium' effect size and .5 represents a 'large' effect size.

### **3.6.5 Skewness of Distributions**

This sub section aims to explain the process used to identify the direction of skewness for each factor distribution. Results from the assessment have been leveraged to develop the framework proposed in this study. This framework can be used to assess the transitional phases of CE within an organization.

Skewness measures the degree and direction of asymmetry and deviation from a normal distribution. The tail of a skewed distribution is used to determine the direction of the skewness.

- Skewness  $> 0$  - Right skewed distribution – the majority of values are concentrated on left of the mean, with extreme values to the right. This reflects a positive skewness.
- Skewness  $< 0$  - Left skewed distribution - the majority of values are concentrated on the right of the mean, with extreme values to the left. This reflects a negative skewness.
- Skewness = 0 - mean = median, the distribution is symmetrical, falling around the mean.

The framework proposed in this dissertation associates the skewness of each factor distribution to a specific period of transition. Based on the phase of transition identified in this proposed model, it is possible to evaluate the extent to which the firm has implemented CE initiatives.

### **3.7 Reflections on Method Choice**

As the research aims to investigate perceptions, motivations, and values a qualitative approach should also be included as a research method (Riley *et al.*, 2000). A qualitative method may have been utilized in conjunction with the quantitative method to capture data relating to the research questions outlined above. The rationale for using both qualitative and quantitative methods is that neither approach on its own can sufficiently capture the details of the complex phenomenon of corporate entrepreneurship (Morris & Kuratko 2002). If this study were to be recreated, additional insights may be drawn from a mixed method design.

### **3.8 Ethical Consideration**

Ethical consideration was granted to participants. The privacy of participants was accommodated in questionnaire responses; this includes anonymity in the data collected, as participants were not required to provide their name or details of their professional grade or management title. By nature the survey is designed to collect data on sensitive topics in the workplace. To make participants feel at ease it was requested that completed surveys be placed in a blank white envelope. Participants were also assured the data collected would be analyzed as a whole rather than on an individual basis.

## **Chapter Four: Results**

### **4.1 Introduction to Research Findings**

This chapter will present the findings of the data collected through the Corporate Entrepreneurship Climate Instrument. The following major themes of analysis will be discussed; first the findings from the independent reliability assessment of the instrument are outlined. Next the frequency distribution of responses is set out; this includes details of the Shapiro-Wilk test of normality. Finally correlations between factors of entrepreneurship are addressed graphically through the use of scatter plots, and descriptively through Pearson's product-moment correlation coefficient.

### **4.2 Reliability Assessment of the Corporate Entrepreneurship Climate Instrument as Applied to this Sample**

In this sub section the results of the independent reliability assessment are outlined. Each scale measured by the CECI has been evaluated to ensure an adequate reliability result is achieved.

Figures 2-6 below depict the Cronbach's Alpha value for each scale as measured by the Corporate Entrepreneurship Climate Instrument. The Management Support scale, Work Discretion scale and Rewards reinforcement scale have achieved Cronbach's Alpha values (**>0.7**) which verify the scales reliability.

However, the Time Availability scale, Organizational Boundaries scale and Climate Variables scale, each present a Cronbach's Alpha value which reports the scale to under-reliable in this sample.

**Reliability Statistics  
Management Support**

Cronbach's Alpha	N of Items
.887	19

Figure 2: Management Support Reliability Assessment

**Reliability Statistics  
Work Discretion**

Cronbach's Alpha	N of Items
.864	10

Figure 3: Work Discretion Reliability Assessment

**Reliability Statistics  
Rewards Reinforcement**

Cronbach's Alpha	N of Items
.762	6

Figure 4: Rewards Reinforcement Reliability Assessment

**Reliability Statistics  
Time Availability**

Cronbach's Alpha	N of Items
.264	6

Figure 5: Time Availability Reliability Assessment

**Reliability Statistics  
Organizational Boundaries**

Cronbach's Alpha	N of Items
.599	7

Figure 6: Organizational Boundaries Reliability Assessment

**Reliability Statistics  
Climate Variables**

Cronbach's Alpha	N of Items
.629	30

Figure 7: Climate Variables Reliability Assessment

In the instances where scales were reported to be under-reliable, an item by item assessment of each question contained within the scale was carried out. The reassessment of the scale caused an increase in the Cronbach's Alpha value to (>0.7).

**Reliability Statistics  
Time Availability Rescaled**

Cronbach's Alpha	N of Items
.699	5

Figure 8: Time Availability Reliability Assessment Rescaled

**Reliability Statistics  
Organizational Boundaries Rescaled**

Cronbach's Alpha	N of Items
.774	6

Figure 9: Organizational Boundaries Reliability Assessment Rescaled

**Reliability Statistics  
Climate Variables Rescaled**

Cronbach's Alpha	N of Items
.794	25

Figure 10: Climate Variables Reliability Assessment Rescaled

Items identified as having a negative impact on the scales Cronbach's Alpha value are highlighted in red in figures 11 and 12. The 'Cronbach's Alpha if Item Deleted' column reports that removal of these questions will result in increased internal consistency. Therefore, in order for this scale to be considered reliable in this sample, these items have been eliminated.

Time Availability Item-Total Statistics					Time Availability Rescaled Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TA1	12.35	11.633	-.558	.699	TA2	10.14	7.201	.595	.586
TA2	13.75	5.434	.401	-.019 <sup>a</sup>	TA3	9.57	7.490	.533	.615
TA3	13.18	5.268	.441	-.059 <sup>a</sup>	TA4	9.80	8.401	.340	.699
TA4	13.41	6.087	.240	.125	TA5	9.94	8.496	.427	.662
TA5	13.55	6.213	.309	.090	TA6	9.96	8.438	.391	.675
TA6	13.57	5.890	.341	.051					

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Figure 11: Time Availability Reliability Scale if Item Deleted

Organizational Boundaries Item-Total Statistics					Organizational Boundaries Rescaled Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
OB1	15.57	11.690	.411	.535	OB1	12.25	13.194	.421	.763
OB2	15.63	11.238	.434	.523	OB2	12.31	12.220	.529	.738
OB3	15.27	10.843	.464	.509	OB3	11.96	12.318	.470	.753
OB4	14.76	10.784	.471	.506	OB4	11.45	12.333	.464	.754
OB5	14.27	16.563	-.324	.774	OB6	11.45	10.453	.649	.703
OB6	14.76	9.504	.572	.453	OB7	11.94	11.616	.585	.723
OB7	15.25	10.834	.463	.510					

Figure 12: Organizational Boundaries Reliability Scale if Item Deleted

The figure on the left of each table represents the original Cronbach's Alpha value, with all variables included. The figure to the right reflects the revalidated scale with appropriate questions removed, and increased internal consistency. Appendix 2 contains full detail of the questions removed from each scale, along with figure 13 which details the increase in Climate Variables reliability scale if item is deleted.

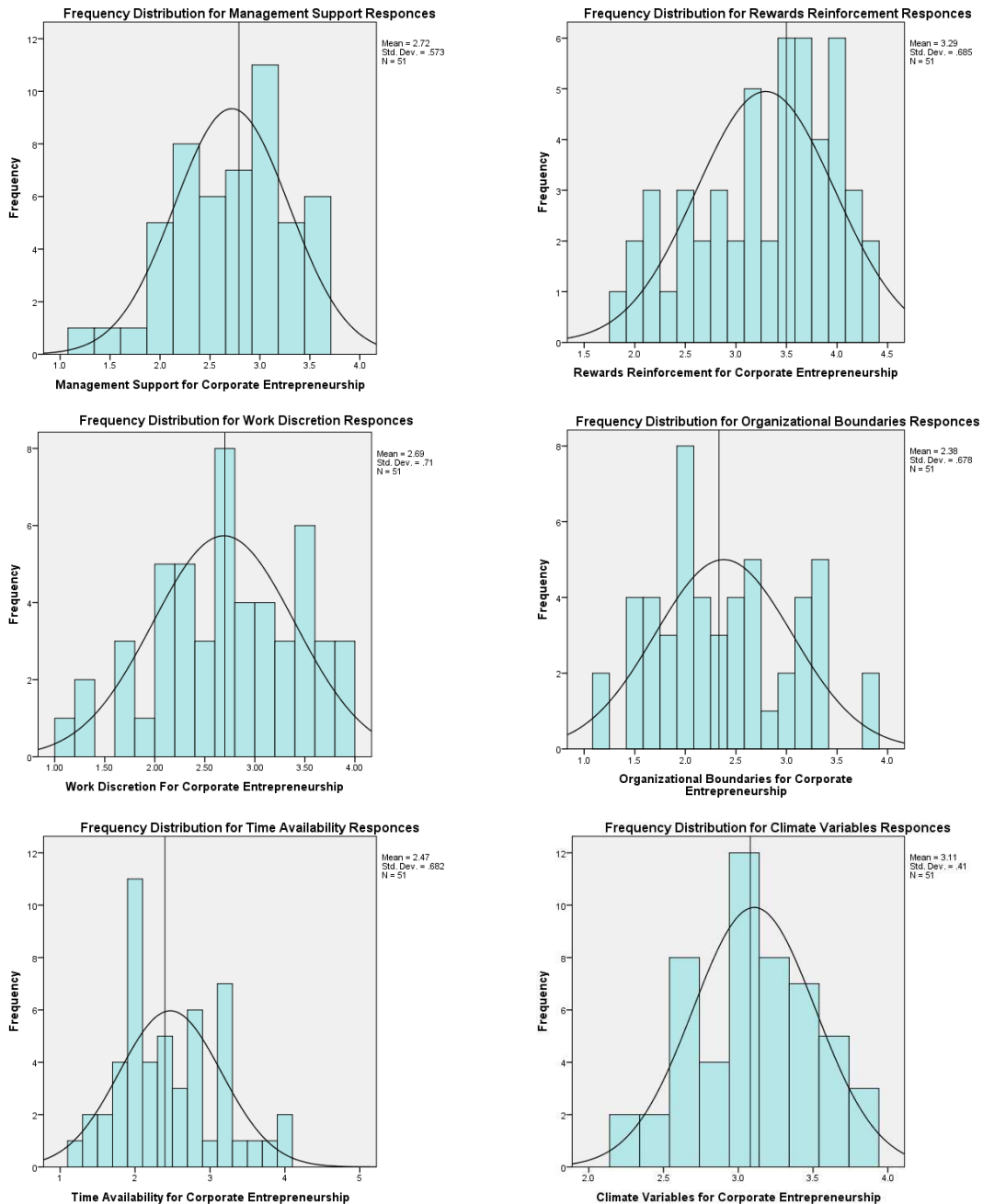
### 4.3 Distribution Analysis: Response Frequency across All Factors

This subsection will analyze the distribution of response frequency across all factors. First the data will be presented graphically through histograms, as seen in table 1, the data is also observed through a summary of the descriptive statistics for each factor found in figure 13.

To understand this sample it is important to analyze the distribution of values. Table 1 below graphically depicts the frequency distribution of participant responses relating to each of the six dimensions assessed in the CECl. Each histogram represents the response rate for one dimension. Larger values indicate a stronger agreement with respect to



each factor. A normal distribution curve has been applied to each factor along with a reference line which denotes the median response.



**Table 1: Frequency Distribution for Factors Contributing to Corporate Entrepreneurship**

The Rewards Reinforcement for corporate entrepreneurship and the Time Availability for corporate entrepreneurship each report median values of interest. With regard to the Reward Reinforcement for corporate entrepreneurship the median value is 3.5. This

value implies half of respondents reported scores greater than 3.5. Large values suggest strong agreement with respect to this factor. As the median value is greater than the mean (3.29), the majority of values are concentrated on the right of the mean reflecting a negative skewness.

Time availability for corporate entrepreneurship highlights a median value of 2.4. The histogram depicts the majority of responses fall to the left of the mean (2.47), reflecting lower values which indicate disagreement with this factor. The histogram reflects a positive skewness.

For all other factors the median and the mean are in close proximity and responses appear to be normally distributed with the majority of responses falling under the 'not sure category'. Figure 13 below provides details of the descriptive statistics for each factor measured by the CECI. The table should be interpreted as follows, for instance, Management Support for corporate entrepreneurship has a total number of 51 responses; the minimum value reported through this scale was 1.21. The maximum value reported is 3.58. The mean is reflected as 2.7183, with a standard deviation of .57335.

**Descriptive Statistics Factors Contributing to Corporate Entrepreneurship**

	N	Minimum	Maximum	Mean	Std. Deviation
Management Support	51	1.21	3.58	2.7183	.57335
Work Discretion	51	1.10	3.80	2.6902	.70972
Rewards Reinforcement	51	1.83	4.33	3.2941	.68523
Organizational Boundaries	51	1.17	3.83	2.3791	.67830
Time Availability	51	1.20	4.00	2.4706	.68214
Climate Variables	51	2.24	3.92	3.1067	.41048

**Figure 13: Descriptive Statics for Factors Measured by the CECI**

Whilst four of the six factors, appear to fall under a normal distribution based on the data presented in table 1, it is imperative to statistically determine which of the factors fall under a normal distribution. As such the Shapiro-Wilk test was performed. Figure 14 below details the results of the Tests for Normality Across Factors of Corporate Entrepreneurship.

**Tests of Normality Across Factors of Corporate Entrepreneurship**

	Shapiro-Wilk		
	Statistic	df	Sig.
Management Support	.965	51	.139
Work Discretion	.967	51	.171
Rewards Reinforcement	.943	51	.017
Organizational Boundaries	.963	51	.112
Time Availability	.958	51	.072
Climate Variables	.981	51	.600

Figure 14: Test of Normality - Factors of Corporate Entrepreneurship

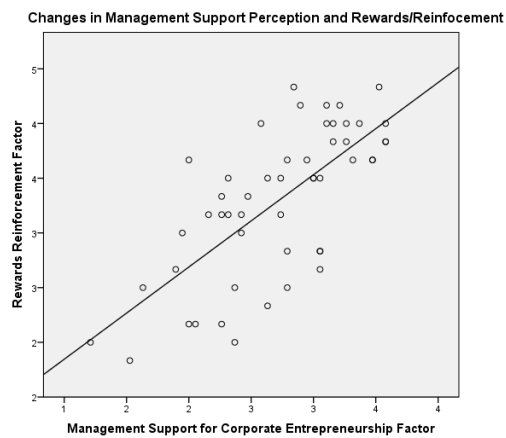
As is evident from figure 14, Rewards Reinforcement for corporate entrepreneurship and Time Availability for corporate entrepreneurship reject the null hypothesis as the significance is below 0.05; for all other factors there was no statistical evidence to support deviation, which confirms the results are normally distributed.

#### 4.4 Reporting the Results for Associations between Variables

This section explores the association between variables of interest as measured by the CECl. As outlined in the literature, management support is a critical component of corporate entrepreneurship and is measured by the willingness of managers to promote and enable entrepreneurial activity. Evidence suggests management support is linked to factors such as work discretion also referred to as employee autonomy, time availability and the effective allocation of resources, rewards reinforcement and other incentives which promote CE. Organizational boundaries allow for the exchange of knowledge, and provide scope for innovation. Finally climate variables, which seek to measure aspects of the organization’s culture, mindsets and behaviors. The following graphs depict the observed relationships between management support and each of these factors as it exists in this sample; a Pearson product-moment correlation coefficient test identifies the strength of the relationships observed.

The scatterplot in figure 15 below illustrates the relationship between employee’s opinion of management support and availability of rewards reinforcement. The

horizontal axis depicts an employee score as measured through the CECI for the Management Support for Corporate Entrepreneurship factor. Larger values indicate a strong agreement with this factor. The vertical axis depicts an employee score in relation to Rewards Reinforcement for Corporate Entrepreneurship factor; again larger values indicate a strong agreement with this factor.



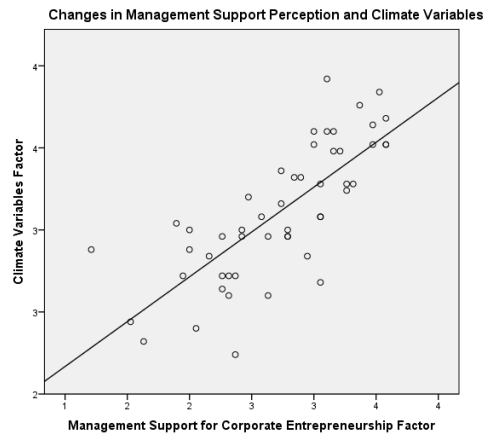
**Figure 15: Relationship between Management Support Perceptions and Rewards Reinforcement Availability as Measured by the CECI**

The Pearson Correlation test detailed in figure 16 identifies there is strong positive correlation between Management Support for Corporate Entrepreneurship and Rewards Reinforcement for Corporate Entrepreneurship. **( $r=0.705$ ,  $n=51$ ,  $p<0.05$ )** As perceptions of management support increase so too does the perceived availability of rewards reinforcement.

**Correlations Between Factors for Corporate Entrepreneurship**

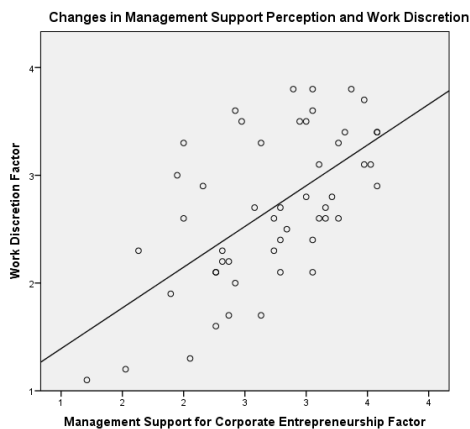
		Work Discretion	Rewards Reinforcement	Organizational Boundaries	Time Availability	Climate Variables
Management Support	Pearson Correlation	.611	.705	-.337	.284	.763
	Sig. (2-tailed)	.000	.000	.016	.044	.000
	N	51	51	51	51	51

**Figure 16 Associations between Factors for Corporate Entrepreneurship**

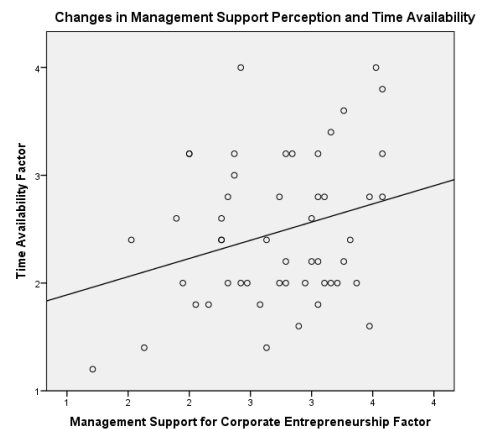


**Figure 17: Relationship between Management Support Perceptions and Climate Variables as Measured by the CECI**

The relationship between Management Support for CE and Climate Variables is illustrated in figure 17. Again the horizontal axis reflects the independent variable, Management Support. The dependent variable in this test is the Climate Variables factor. The Pearson correlation test has again identified a strong positive correlation between these factors ( $r=0.763$ ,  $n=51$ ,  $p<0.05$ ) as observed in this sample.



**Figure 18: Relationship between Management Support Perceptions and Work Discretion Opportunities as Measured by the CECI**



**Figure 19: Relationship between Management Support Perceptions and Time Availability as Measured by the CECI**

The scatterplot in Figure 18 above graphically represents a moderate positive association between Management Support for CE and Work Discretion opportunities for CE as measured by the CECI. ( $r=0.611$ ,  $n=51$ ,  $p<0.05$ ) The moderate positive association

between these variables indicates that Work Discretion is positively influenced by Management Support, however the association is modest.

Figure 19 illustrates the weak positive association between Management Support for CE and Time Availability for CE as measured by the CECI. ( $r=0.284$ ,  $n=51$ ,  $p<0.05$ ) This suggests as Management Support increases, the level of Time Availability for CE increases, however the association is minimal. From this is it possible to conclude Time Availability is not significantly dependent on Management Support.

Finally figure 20 below reflects a moderate negative association between Management Support for CE and Organization Boundaries as measured by the CECI. ( $r= -0.337$ ,  $n=51$ ,  $p<0.05$ ) This suggests that as Management Support increases the cross boarder interaction and exchange of knowledge between employee's decreases, in this instance a moderate decline is reported.

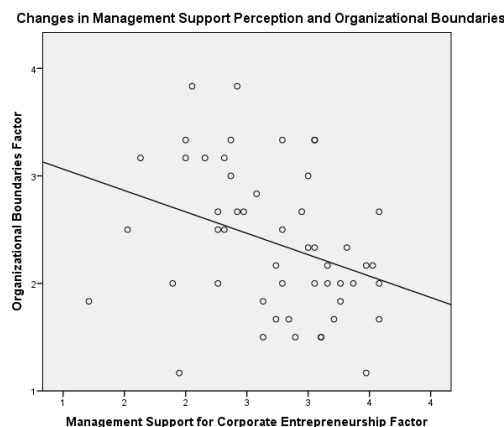


Figure 20: Relationship between Management Support Perceptions and Organizational Boundaries as Measured by the CECI

The effect size of each correlation was also analyzed to determine the strength of each association. Again Pearson's Correlation assessment in figure 20 has been applied, this time to interpret the degree of association. The following results have been determined.

- For the relationship identified between Management Support and Climate Variables the effect size is large (0.763 >.5).
- For the relationship identified between Management Support and Rewards Reinforcement the effect size is large (0.705>.5).
- For the relationship identified between Management Support and Work Discretion the effect size is large (0.611>.5)
- For the relationship identified between Management Support and Time Availability the effect size is small (0.284 >.1)
- For the relationship identified between Management Support Organizational Boundaries the effect size is medium (-0.337>.3)

This confirms that for three of the relationships identified (Climate Variables, Rewards Reinforcement and Work Discretion) the intervention of Management Support on each is grossly perceptible, and shown to cause a substantial improvement in the independent variable.

The strength of the relationship between Management support and Time Availability has a small practical significance; while the negative relationship between Management Support and Organizational Boundaries indicates that a detectable barrier to cross team interaction develops as Management Support increases.

## **Chapter Five: Discussion**

### **5.1 Introduction to Discussion**

This chapter aims to interpret the findings presented in the previous chapter and apply this data to the research objectives of this study. First a discussion and reflection of the survey method employed will be set out. Next data findings will be applied to each research objective. The aim is to understand which factors promote entrepreneurial activities within the firm, and identify those which thwart innovation and entrepreneurship.

### **5.2 Assessment of the Corporate Entrepreneurship Climate Instrument**

This study adopted the use of the CECI as the primary data collection tool. The Corporate Entrepreneurship Climate instrument has been developed based on the research of Kuratko, Ireland, & Morris. Literature has validated this is a reliable instrument (Cronbach's Alpha > 0.7) designed to assess perceptions of the major dimensions classed as critical to creating an innovative environment. However, when applied in the context of this sample, the internal consistency measure or Cronbach's Alpha indicated a result below the 0.7 minimum in three dimensions; Time Availability, Organizational Boundaries, and Climate Variables.

As outlined previously a gap in the literature exists, whereby this instrument has not been applied to a financial institution in existing research. Based on the results of the reliability analysis, it was necessary to revalidate the scale for these three dimensions, which suggests in this new setting, the CECI may not be the most accurate diagnostic tool to measure employee's perception of corporate entrepreneurship. This echoes Sebra & Theerapatvong (2010) suggestion that firm level research on the topic of entrepreneurship is hindered by the existence of few validated measures. As such in order to draw conclusions from this representative sample and to make inferences relating to the larger population it was necessary to remove certain questions from the scales and recalculate variables based on this sample population.



Once the scale was revalidated inferential tests were conducted to interpret and draw conclusions from the data derived. In total seven questions were removed from the CECI, in order for it to be applicable to the financial services company in which it was applied.

Future studies on the CE phenomenon within this setting may also require modifications to this instrument in order to ensure its reliability. If this study were to be re-conducted, with a different sample population within the same industry, additional findings may be generated through a comparison of the items eliminated from each scale for this population and the items (if any) removed from the new sample population.

### **5.3 Interpretation of Data and Applicability to Research Objectives**

This subsection aims to apply the data findings to understand and where possible resolve the research aims and objectives. Objective one aims to identify which factors promote or hinder entrepreneurial activities within the financial institution. A discussion of the distribution frequency for each factor's response will be outlined to satisfy this research goal. Objective two seeks to identify relationships between variables. As such the associations between the internal dimensions impacting CE activities will be discussed along with the strength of each relationship identified. Finally objective three seeks to analyze the existence, emergence, or rejection of corporate entrepreneurship within the financial institution. Findings from the survey data will be applied to debate this objective.

#### **5.3.1 Analysis of Factors Contributing to CE within the Firm**

**Objective One:** To identify which factors promote or hinder entrepreneurial activities within the financial institution.

Literature suggests low scores in any one area indicate the need for development activities to enhance the firm's readiness for entrepreneurial behavior. In short, higher scores point toward an organization more prepared to implement a CE strategy. The

following analysis reflects on the data presented in Table 1: Frequency Distribution for Factors Contributing to CE.

**Management Support:** According to Hornsby *et al.*, (pp. 245 2009) ‘managers within large organizations develop role schemas that can make it difficult to carry out entrepreneurial action’ However, the empirical evidence from this study suggests this is not the case. Management support for CE appears to be largely positive within this organization. Managers are seen to promote and enable entrepreneurial activity (Bhardwaj *et al.*, 2007).

**Work Discretion:** Results indicate a positive response towards work discretion. It is known that large organizations use formal structures to focus on core principals, and set clearly defined tasks. In this study a degree of both formalization and standardization alongside innovation contribute positively towards achieving entrepreneurship. Additional research may provide insight into the circumstances which promote this factor.

**Organizational Boundaries:** While this dimension appears relatively positive, additional focus should be drawn to its impact on CE initiatives. Literature suggests the extent of an employee’s innovative behavior depends on the level of personal interaction with others in the workplace (De Jong & Den Hartog 2007). Resources such as a knowledge management system may allow members to access information which facilitates and maintains CE initiatives. Resource planning, including succession planning are integral to effective implementation of CE.

**Rewards Reinforcement:** Results suggest employees perceive activities associated with entrepreneurship as valued, and directly linked to rewards. This factor achieved the highest maximum score reported (4.33). Incentives are used to empower employees to pursue creativity and their ideas within the company (Rule & Irwin 1988). This research is restricted as the type of reward system including any combination of monetary and non-monetary incentives was not captured through this questionnaire. In future the

CECI may be modified to capture details of rewards and incentives schemes within the organization.

The literature suggests aligning evaluation and reward systems with entrepreneurial objectives will enhance behaviors at individual and organizational level (Ireland *et al.*, 2009). A recommendation to this firm is to adopt this approach. Objectives for line managers and employees concentrated on generating operational efficiencies will increase time availability. Middle managers should focus on enabling cross team interaction and knowledge sharing within the boundaries of the organization, as well as deploying CE initiatives across departments and reporting lines. Finally senior managers should focus on incorporating innovation alongside the organizations core capabilities to create a sustainable competitive advantage.

**Time Availability:** This factor is barrier to CE activities within the organization. The majority of responses reflected moderate to strong disagreement with this factor which suggests it is difficult for employees to carve out time to participate in innovative activities.

Managers may fail to encourage time away from operational processes dedicated to innovation, because of scarcity of resources, or the fear of losing control as outlined previously in the literature. Because of this employees may focus on tasks directly associated with rewards and incentives. Favoring processes and procedures over entrepreneurial activity and uncertain ventures (Hornsby *et al.*, 2009).

**Climate Variables:** Corporate culture in this sample promotes creativity and innovation. The internal environment influences perceived costs and benefits associated with taking personal risks, devoting time to unproven approaches, and enduring uncertainty and stress.

To conclude, MS, WD, OB, RR, and CV promote CE within this sample. TA acts as a barrier. All employees have an important role to play in the successful execution of corporate entrepreneurship. According to Ireland *et al.*, (2009) minimal responses to

these essentials indicate superficial commitments to entrepreneurial activity within the firm. This study rejects the suggestion that low scores indicate false commitment, and instead proposes the response rates differ based on the internal organizational circumstances.

### **5.3.2 Associations between Antecedents of Corporate Entrepreneurship**

**Objective Two:** To identify relationships between the known antecedents of corporate entrepreneurship as outlined by the literature.

The Pearson's product-moment correlation coefficient was used to identify relationships between variables in the study. As detailed in chapter four, the association between each factor and management support for CE was examined, along with the strength of each association identified.

Management support is measured by aspects such as encouragement, financial support, receptivity to ideas, championing innovative ideas and helping to institutionalize the entrepreneurial spirit alongside systems and processes (Bhardwaj *et al.*, 2007). As such, it has the ability to become a key driver of CE activities within the organization, by shaping the internal context in ways which promote effective exchange throughout (Dess *et al.*, 2003).

To determine the impact of management support on the other variables measured by the CECL tests of association were conducted. The findings detail a strong positive correlation between factors of management support and climate variables. The climate variables scale measures aspects of the internal culture of the organization. This includes pride and faith in talent, the degree of emphasis on teamwork, experimentation with new ideas, and propensity for risk taking. As evidenced through the strength of this association which through effect size has been identified as large, it is clear that as management support for CE increases positively so too does the internal culture of the organization in its view towards innovation, teamwork, and experimentation.

The second most significant correlation was identified between management support and rewards reinforcement. This suggests a pro-entrepreneurship architecture exists in terms of the organizations reward systems, and as the perceived degree of management support for an employee increases so too does the availability of rewards. Management recognizes and reward activities associated with CE. This helps to reinforce favorable and innovative behaviors within the organization.

A moderate positive association was identified between management support and work discretion. A higher degree of delegation, autonomy and self-governance was reported. Allowing 'people to be innovative, creative and responsible for the decisions they make' (Ireland *et al.*, 2009) as the perceived support received from management increased.

A weak positive association between Management Support for CE and Time Availability for CE. If management support increases, time availability for innovation increases marginally. This suggests that the firm needs to do more to mobilize complementary assets in order to fully exploit innovative opportunities i.e. if innovation and creativity are valued highly, it is imperative that resources are allocated in such a way that provides time for these activities to take place.

A significant negative correlation has been identified between management support and organizational boundaries. Organizational boundaries, is measured by the extent to which employees perceive flexibility exists within the organizations limits (Kuratko *et al.*, 2014) Interaction between groups is facilitated and sustained by the internal network and organizational design. From these findings attention should be drawn to the organization's structure to establish if the organization's setup allows for the right knowledge to reach the right people at the right time. Findings from this sample suggest that as management support increases, employees may become pigeon holed or ring-fenced whereby their activities are restricted by the degree of support received from their manager.

In summary the literature argues that precise combination of variables required to successfully deploy CE is firm specific. There is no prescription for fail proof corporate entrepreneurship, instead each firm must implement a ‘best fit’ approach; tailored to the business to specifically leverage existing capabilities and strategic initiatives to create a source of sustainable competitive advantage. Firms should seek to simultaneously emphasize innovation and coordinate resources, rewards, knowledge sharing and culture.

### 5.3.3 Assessment of the Firm’s Transition to CE Activities

**Objective Three:** To analyze the existence, emergence, or rejection of corporate entrepreneurship within the financial institution.

Ireland *et al.*, (2009) suggest the absence or weakness of any of the elements measured by the CEI indicates that CE does not exist within the firm. However the empirical research suggests that corporate entrepreneurship is an emerging initiative within this organization. The following framework is proposed to assess the transitional phases of CE within an organization.

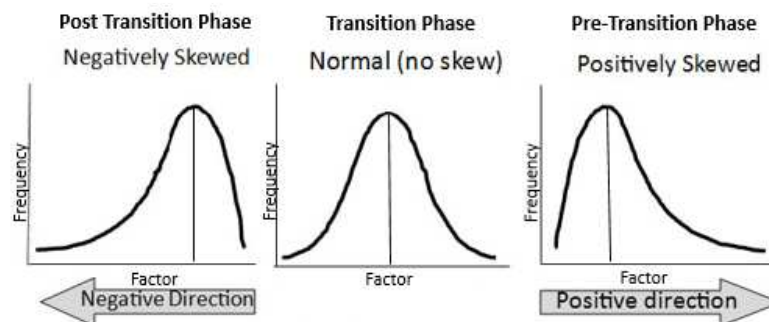


Table 2: Transition Phases of CE Implementation

Results from the six dimensions measured by the CEI suggest the following distribution of responses. Four factors fall proportionately around the mean reflecting a normal distribution: Management Support for CE, Work Discretion for CE, Climate Variables for CE, and Organizational Boundaries for CE. This distribution curve as outlined in table 2

highlights the transition phase, whereby the firm is transitioning from a period of zero CE initiatives to one which is in the process of adopting an entrepreneurial outlook.

The results from the Rewards Reinforcement for CE suggest a negative skewness, whereby the majority of the results reflect a moderate to strong agreement with regards to this factor. Table 2 suggests a negative skewness reflects the post transition phase, whereby the organization has successfully implemented policies to support CE through this factor.

On the other hand, results of the frequency distribution for Time Availability for CE reflect a positive skewness. The majority of responses reflect moderate to strong disagreement with this factor which is associated with the pre-transition phase. This suggests the organization has failed to adopt support mechanisms linked with this factor which would guarantee the survival of innovative activities.

By way of this proposed methodology CE initiatives appear to be emerging from within the organization. In order to increase Time Availability results from the pre- transition phase to the transition phase the allocation of resources should be reassessed within the organization. More effective capacity planning, including planned succession, as well as improved technology, decreased manual intervention, and higher degree of management support for creativity would aid in achieving this objective.

#### **5.4 Limitations & Recommendations for Further Research**

This study aimed to address employee's perceptions of the factors contributing to corporate entrepreneurship within a financial services company. As the research concludes, there is endless opportunity for further exploration of this phenomenon within this previously un-researched sector. The results seem to indicate financial services organizations are awakening to the benefits of CE but it has not been successfully deployed as yet. The topic appears to be in the development stage, inconsistent in practice.

Whilst the phenomenon appears to be in the process of infiltrating the banking sector, a reassessment of the phenomenon within this setting should be conducted in the next 3-5 years in order to identify if this trend has become a more distinct and identifiable aspect of the organization's overall strategy.

Future research may be undertaken to quantify the frequency of innovations; time spent on idea generation; and the willingness of employees to break or circumvent organizational boundaries in order to carryout innovative activity. Future research should also seek to collect data in relation to participant's management or employee grade. From this additional information insights may be drawn to detect the point of breakdown in CE initiatives.

## **5.5 Conclusions**

CE is a relatively new and emerging topic particularly its existence within traditional organizations. To understand the phenomenon fully it is important to move from isolated examples of successful CE, which are overt and magnificent in nature, towards understanding the more subtle and nuanced innovative endeavors of an organization (Corbett *et al.*, 2013). Examining the fragile and emerging instances of CE will help to provide better understanding of the boundary conditions of when it should and should not be attempted.

As outlined by Dess *et al.*, (2003) CE often times fails in large organizations because the internal environment proves hostile to entrepreneurial undertakings. Innovation is defeated by strict financial control systems and other formalities typical of traditional organizations rife with bureaucracy. The fundamental challenge in CE is balancing the conflict that emerges between the uncertainty of new initiatives and the old tried and true methods.

Therefore CE depends not only on the skills and abilities of a single individual but on the quality of interaction across the organization, including an exchange of knowledge and development of capabilities. The effective management of resources and the



appropriate method of rewarding and incentivizing behaviors and mindsets perpetuate the value of creativity and innovation within the organization.

In this study, each of these dimensions has been analyzed, and the evidence suggests the emergence of corporate entrepreneurship within the organization. While some factors highlight areas of opportunity for improvement, others clearly present the successful implementation of support structures for CE. The literature tends to be one direction as it relates to CE initiatives, suggesting innovation must be at the forefront of the organization's overall strategy. In this organization there is evidence that innovation and creativity are valued, however it must occur parallel to the day to day objectives of each individual.

The future state of this organization may look very different in the next three to five years; the type of innovation taking place may result in market re-definition. However it is more likely based on the responses from the population sampled that changes will result in innovative improvements to operational and process level activities (Hornsby 2009).

In the context of this organization, recommendations for an enhanced HRM policy have been made in order to leverage the already strong positive perception employees have of rewards and incentives, to increase innovation, creativity and entrepreneurial activities. This can be achieved by aligning evaluation and reward systems with entrepreneurial objectives.

Suggestions for future research have been outlined, the overall research aim of this study has been satisfied, and a new methodology has been proposed to interpret the existence of CE within a traditional well established financial organization. Future research on this phenomenon may lead to the development of a new theory for innovation management in which CE plays a critical role, or even a methodology which can be used to predict how successful entrepreneurial activities are likely to be given certain circumstances and organizational structures (Corbett *et al.*, 2013). Therefore the potential for further exploration of corporate entrepreneurship is infinite.

## APPENDIX 1: THE CORPORATE ENTREPRENEURSHIP CLIMATE INSTRUMENT

**Figure 3** Corporate Entrepreneurship Climate Instrument (CECI)

We are interested in learning about how you perceive your workplace and organization. Please read the following items. Using the scale below please indicate how much you agree or disagree with each of the statements. If you strongly agree, write the "5." If you strongly disagree write the "1." There are no right or wrong answers to these questions so please be as honest and thoughtful as possible in your responses. All responses will be kept strictly confidential. Thank you for your cooperation!

Strongly Disagree 1	Disagree 2	Not Sure 3	Agree 4	Strongly Agree 5
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**Section 1: Management Support for Corporate Entrepreneurship**

\_\_\_\_\_ 1. My organization is quick to use improved work methods.

\_\_\_\_\_ 2. My organization is quick to use improved work methods that are developed by workers.

\_\_\_\_\_ 3. In my organization, developing one's own ideas is encouraged for the improvement of the corporation.

\_\_\_\_\_ 4. Upper management is aware and very receptive to my ideas and suggestions.

\_\_\_\_\_ 5. A promotion usually follows from the development of new and innovative ideas.

\_\_\_\_\_ 6. Those employees who come up with innovative ideas on their own often receive management encouragement for their activities.

\_\_\_\_\_ 7. The "doers on projects" are allowed to make decisions without going through elaborate justification and approval procedures.

\_\_\_\_\_ 8. Senior managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track.

\_\_\_\_\_ 9. Many top managers have been known for their experience with the innovation process.

\_\_\_\_\_ 10. Money is often available to get new project ideas off the ground.

\_\_\_\_\_ 11. Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system for their ideas and efforts.

\_\_\_\_\_ 12. There are several options within the organization for individuals to get financial support for their innovative projects and ideas.

\_\_\_\_\_ 13. People are often encouraged to take calculated risks with ideas around here.

\_\_\_\_\_ 14. Individuals risk takers are often recognized for their willingness to champion new projects, whether eventually successful or not.

\_\_\_\_\_ 15. The term "risk taker" is considered a positive attribute for people in my work area.

\_\_\_\_\_ 16. This organization supports many small and experimental projects realizing that some will undoubtedly fail.

\_\_\_\_\_ 17. An employee with a good idea is often given free time to develop that idea.

\_\_\_\_\_ 18. There is considerable desire among people in the organization for generating new ideas without regard for crossing departmental or functional boundaries.

\_\_\_\_\_ 19. People are encouraged to talk to employees in other departments of this organization about ideas for new projects.

**Section 2: Work Discretion**

\_\_\_\_\_ 20. I feel that I am my own boss and do not have to double check all of my decisions with someone else.

\_\_\_\_\_ 21. Harsh criticism and punishment result from mistakes made on the job.

\_\_\_\_\_ 22. This organization provides the chance to be creative and try my own methods of doing the job.

\_\_\_\_\_ 23. This organization provides the freedom to use my own judgment.

\_\_\_\_\_ 24. This organization provides the chance to do something that makes use of my abilities.

\_\_\_\_\_ 25. I have the freedom to decide what I do on my job.

\_\_\_\_\_ 26. It is basically my own responsibility to decide how my job gets done.

\_\_\_\_\_ 27. I almost always get to decide what I do on my job.

\_\_\_\_\_ 28. I have much autonomy on my job and am left on my own to do my own work.

\_\_\_\_\_ 29. I seldom have to follow the same work methods or steps for doing my major tasks from day to day.

*(continued)*

**Figure 3**

Strongly Disagree 1	Disagree 2	Not Sure 3	Agree 4	Strongly Agree 5
---------------------------	---------------	------------------	------------	------------------------

**Section 3: Rewards/Reinforcement**

- \_\_\_\_\_ 30. My manager helps me get my work done by removing obstacles and roadblocks.
- \_\_\_\_\_ 31. The rewards I receive are dependent upon my innovation on the job.
- \_\_\_\_\_ 32. My supervisor will increase my job responsibilities if I am performing well in my job.
- \_\_\_\_\_ 33. My supervisor will give me special recognition if my work performance is especially good.
- \_\_\_\_\_ 34. My manager would tell his/her boss if my work was outstanding.
- \_\_\_\_\_ 35. There is a lot of challenge in my job.

**Section 4: Time Availability**

- \_\_\_\_\_ 36. During the past three months, my work load kept me from spending time on developing new ideas.
- \_\_\_\_\_ 37. I always seem to have plenty of time to get everything done.
- \_\_\_\_\_ 38. I have just the right amount of time and work load to do everything well.
- \_\_\_\_\_ 39. My job is structured so that I have very little time to think about wider organizational problems.
- \_\_\_\_\_ 40. I feel that I am always working with time constraints on my job.
- \_\_\_\_\_ 41. My co-workers and I always find time for long-term problem solving.

**Section 5: Organizational Boundaries**

- \_\_\_\_\_ 42. In the past three months, I have always followed standard operating procedures or practices to do my major tasks.
- \_\_\_\_\_ 43. There are many written rules and procedures that exist for doing my major tasks.
- \_\_\_\_\_ 44. On my job I have do doubt of what is expected of me.
- \_\_\_\_\_ 45. There is little uncertainty in my job.
- \_\_\_\_\_ 46. During the past year, my immediate supervisor discussed my work performance with me frequently.
- \_\_\_\_\_ 47. My job description clearly specifies that standards of performance on which my job is evaluated.
- \_\_\_\_\_ 48. I clearly know what level of work performance is expected from me in terms of amount, quality and timelines of output.

**Section 6: Specific Climate Variables**

- \_\_\_\_\_ 49. This company definitely rewards employees who take calculated risks and innovate.
- \_\_\_\_\_ 50. Jobs in this company tend to be broadly defined with considerable discretion in how tasks are performed.
- \_\_\_\_\_ 51. In this company, employees can pursue multiple career paths.
- \_\_\_\_\_ 52. This company tries hard to develop the creative potential of employees.
- \_\_\_\_\_ 53. Annual performance appraisals in this company include an evaluation of employee innovativeness.
- \_\_\_\_\_ 54. Around here, it seems like there is more concern with process than with performance.
- \_\_\_\_\_ 55. This company does a good job of balancing incentives for individual initiative with incentives for team collaboration.
- \_\_\_\_\_ 56. If you are not innovating on the job, you cannot get ahead in this company.
- \_\_\_\_\_ 57. An overly bureaucratic structure takes away from our ability to be entrepreneurial in this company.

*(continued)*

**Figure 3**

	Strongly Disagree 1	Disagree 2	Not Sure 3	Agree 4	Strongly Agree 5
_____ 58.					
_____ 59.					
_____ 60.					
_____ 61.					
_____ 62.					
_____ 63.					
_____ 64.					
_____ 65.					
_____ 66.					
_____ 67.					
_____ 68.					
_____ 69.					
_____ 70.					
_____ 71.					
_____ 72.					
_____ 73.					
_____ 74.					
_____ 75.					
_____ 76.					
_____ 77.					
_____ 78.					

\_\_\_\_\_ 58. Our company is organized in a way that encourages managers to “micromanage” employees and projects.

\_\_\_\_\_ 59. We have too many levels of management in this company.

\_\_\_\_\_ 60. I would characterize the company structure as being highly flexible.

\_\_\_\_\_ 61. A rigid chain of command limits our ability to experiment with new ideas.

\_\_\_\_\_ 62. Red-tape and slow approval cycles are problems in this company.

\_\_\_\_\_ 63. Managers in this company strongly believe in delegating decision-making responsibility.

\_\_\_\_\_ 64. Controls are very tight in this company; we tend to count every dollar and every hour.

\_\_\_\_\_ 65. Senior management focuses on eliminating any slack within budgets.

\_\_\_\_\_ 66. Once budgets are finalized and accepted, they are difficult to revise.

\_\_\_\_\_ 67. The lines of command clearly allocate authority and responsibility to each business unit/department.

\_\_\_\_\_ 68. The organizational structure is very clearly defined and delineated.

\_\_\_\_\_ 69. In this company, employees have a lot of say in how things are done.

\_\_\_\_\_ 70. Ours is a culture that rewards the tried and the true.

\_\_\_\_\_ 71. This is a company that celebrates innovative achievements.

\_\_\_\_\_ 72. We have a culture that strongly discourages failure.

\_\_\_\_\_ 73. There is a sense of urgency in this company regarding the importance of change and innovation.

\_\_\_\_\_ 74. This company subscribes to the motto “if it ain’t broke, don’t fix it”.

\_\_\_\_\_ 75. Innovation and risk-taking are core values in this company.

\_\_\_\_\_ 76. Lines of command clearly allocate authority and responsibility to each business unit/department.

\_\_\_\_\_ 77. New ideas tend to receive quick go/no go decisions from management in this company.

\_\_\_\_\_ 78. The company’s environment encourages people to talk openly with others about ways to improve the firm’s operations?

**Source:** CECL is adapted from original work done by Hornsby *et al.* (2002, pp. 49-63)

Source: (Ireland,R., Kuratko,D., & Morris, M. 2006) (b)

## APPENDIX 2: TABLE OF DATA FINDINGS

### 4.1 Reliability Assessment

As outlined in section 4.1 the following questions have been removed from the original scales in order to increase Cronbach's Alpha Value:

**Time Availability:** From the Time Availability section the following question has been removed

*TA 1 - Question 36. During the past three months, my workload kept me from spending time on developing new ideas.*

**Organizational Boundaries:** From the Organizational Boundaries section the following question has been removed

*OB 5- Question 46. During the past year, my immediate supervisory discussed my work performance with me frequently.*

**Climate Variables:** A significant number of questions were required to be removed from the Specific Climate Variables section in order to increase the Cronbach's Alpha above 0.7.

Item-Total Statistics					Climate Variables Rescaled Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CV1	91.96	66.478	.596	.577	CV1	75.10	88.650	.776	.762
CV2	91.71	71.852	.364	.606	CV2	74.84	97.575	.409	.784
CV3	91.29	73.812	.157	.623	CV3	74.43	98.410	.265	.791
CV4	91.57	68.250	.469	.590	CV4	74.71	91.932	.580	.773
CV5	91.47	71.814	.283	.610	CV5	74.61	97.483	.325	.787
CV6	91.20	79.321	-.134	.649	CV7	74.84	93.815	.559	.776
CV7	91.71	69.492	.462	.594	CV8	74.69	101.660	.144	.796
CV8	91.55	74.373	.163	.622	CV9	74.06	109.936	-.272	.815
CV9	90.92	78.794	-.105	.646	CV10	74.37	107.198	-.139	.810
CV10	91.24	76.584	.019	.636	CV12	75.20	94.441	.516	.778
CV11	91.08	80.474	-.187	.659	CV15	74.25	94.714	.479	.779
CV12	92.06	72.016	.295	.610	CV16	74.14	110.041	-.255	.818
CV13	91.16	83.215	-.344	.667	CV17	74.18	105.828	-.071	.804
CV14	90.88	79.586	-.147	.652	CV18	74.18	109.028	-.241	.812
CV15	91.12	69.346	.442	.595	CV19	74.18	98.988	.352	.787
CV16	91.00	77.720	-.053	.645	CV20	74.10	97.850	.398	.784
CV17	91.04	77.238	.000	.635	CV21	75.04	91.198	.544	.774
CV18	91.04	79.118	-.124	.646	CV22	74.86	93.401	.516	.777
CV19	91.04	73.358	.283	.613	CV23	74.61	88.083	.685	.765
CV20	90.96	72.038	.356	.606	CV24	74.22	101.213	.168	.795
CV21	91.90	69.210	.358	.600	CV25	74.78	94.733	.509	.778
CV22	91.73	67.883	.501	.587	CV27	75.18	95.948	.483	.780
CV23	91.47	66.094	.520	.580	CV28	74.31	97.620	.404	.784
CV24	91.08	72.954	.253	.614	CV29	74.92	97.474	.357	.786
CV25	91.65	71.713	.320	.608	CV30	74.22	89.853	.696	.767
CV26	91.47	85.374	-.435	.678					
CV27	92.04	72.318	.313	.609					
CV28	91.18	73.148	.272	.613					
CV29	91.78	71.213	.350	.605					
CV30	91.08	67.954	.493	.587					

Figure 21: Climate Variables Reliability Scale if Item Deleted

As detailed in figure 20, an item by item assessment of the internal reliability of this scale was conducted. Results from the 'Cronbach's Alpha if Item Deleted' column indicated that by removing the following questions the reliability of the assessment tool would be improved.

*CV 6 - Question 54. Around here, it seems like there is more concern with process than with performance*

*CV 11- Question 59. We have too many levels of management in this company*

*CV 13- Question 61. A rigid chain of command limits our ability to experiment with new ideas*

*CV 14 - Question 62. Red-tape and slow approval cycles are problems in this company*

*CV 26 - Question 74. This company subscribes to the motto 'if it ain't broke, don't fix it'*

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