

THE INFLUENCE OF ENTREPRENEURIAL LEADERSHIP ON  
INTRAPRENEURIAL OPPORTUNITY: A STUDY OF UK TECHNOLOGY-  
INNOVATIVE SMES



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INNOVATIVE SMES

A Dissertation Presented to  
The Institute of Knowledge and Innovation Southeast Asia (IKI-SEA)  
Business School of Bangkok University

In partial fulfillment of the requirements for the degree of  
Doctor of Philosophy Knowledge Management and Innovation Management

Sharn Hyatt Orchard

2017



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This dissertation has been approved by

The Institute of Knowledge and Innovation Southeast Asia (IKI-SEA)

Business School of Bangkok University

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of UK technology-innovative SMEs

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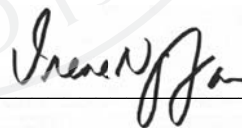
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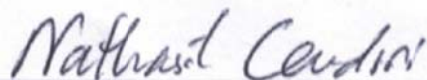
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## DECLARATION

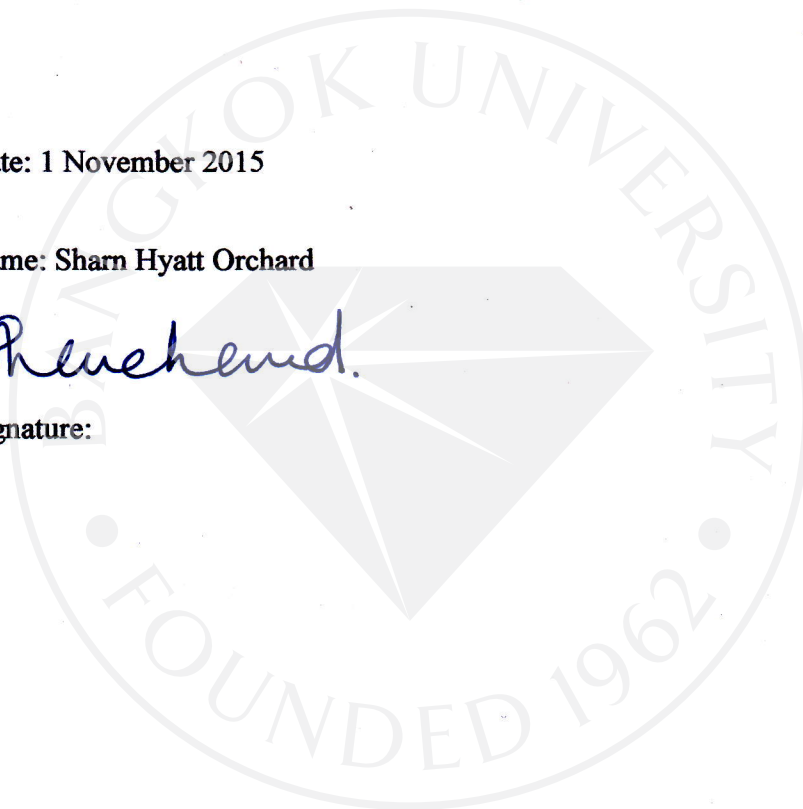
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Orchard, S. Ph.D. (Knowledge and Innovation Management), November 2016. The Institute for Knowledge and Innovation Southeast Asia (IKI-SEA), Business School Bangkok University, Thailand

The Influence of Entrepreneurial Leadership on Intrapreneurial Opportunity: A Study of UK Technology-innovative SMEs (522 pp.)

Advisor of dissertation: Assoc. Prof. Vincent Ribiere, Ph.D., David Achtzehn, Ph.D.

## ABSTRACT

This dissertation investigates the role and influence of entrepreneurial leadership as a potentially significant factor affecting employee intrapreneurial opportunities in SMEs. More specifically, the employee perception of how they may contribute to process, service or product innovation within companies operating in highly competitive business sectors consistent with innovation being a critical success factor for their future development and potentially, their survival. As such, the employee perception becomes the opportunities that may exist for them to become intrapreneurial within the confines of paid employment status.

The research aims were to build upon what had already been explored and documented about intrapreneurs as individuals, and, to establish a common denominator in their success or failure as innovators and creative motivators dependent upon the impact of the leadership and work place climate prevalent in an entrepreneur-led business

culture. This also embraced the strategic orientation of companies as directed by the owner/manager.

Through a critical analysis of the extant literature it became evident that there were a number of serious issues for consideration in SME businesses where a quest for growth and how it is managed has to be balanced against innovation and creativity. A study by Carrier (1997) became significant to this research study when it became evident that no further noteworthy attempts had been made to explain the phenomenon of intrapreneurship outside of the large corporation environment. From this, an unexplored area of research was identified leading to a conceptual model incorporating six constructs; entrepreneur owner support for innovation, organizational boundaries, work discretion, time availability, SME strategic type, and intrapreneurial opportunity levels. Subsequently consideration was given to operationalizing each variable of the model through measurement tools that diversified from the work of Carrier by employing a post-positivist quantitative research approach, rather than that of interpretivist.

An employee survey, an employer questionnaire and an employer interview formed the basis of the data collection within a case study framework of nine SMEs. Confirmatory Factor Analysis (CFA) was used as the test method to prove the conceptual model, a technique adopted from Byrne (2001) in that our aim was to test six hypotheses derived from the conceptual model, and our research questions were the subject of theoretical assumptions. Testing of the conceptual model was positive with a CFI of .966.

We are intrigued and excited by the realization that contrary to everything previous written in the field, we were unable to demonstrate a clear association at hypothesis 2 between organizational boundaries and intrapreneur opportunity levels. As such, we accepted the null hypothesis. This established a potential lack of clarity in previously published work whilst providing extensive opportunities for further research.

Through the research questions, with the dynamic of the methodology applied and the subsequent research findings we have addressed a literature gap exposed in the field of intrapreneurship in UK SMEs. This constitutes the author's original contribution to knowledge.

*Keywords: Innovation, Intrapreneurship, Intrapreneur, Entrepreneur, Leadership, SME, United Kingdom*



## ACKNOWLEDGEMENT

I would like to express my very sincere and profound gratitude to my advisor Prof. Vincent Ribière for making me laugh. For making me laugh when things were going well; for making me laugh when things were not going so well. Also for his motivation, immense knowledge and huge amount of patience. I cannot imagine having had a better mentor for my Ph.D. research and the memories of how we started and where we finished and all the highs and lows in-between will stay with me forever.

A very special thank you to Dr. David Achtzehn who supported me so much with his insightful comments and encouragement along with a permanently positive attitude and disposition. Finally, I would like to thank the members of my Panel for taking the time to read my work, guide my vision and for being part of my education.

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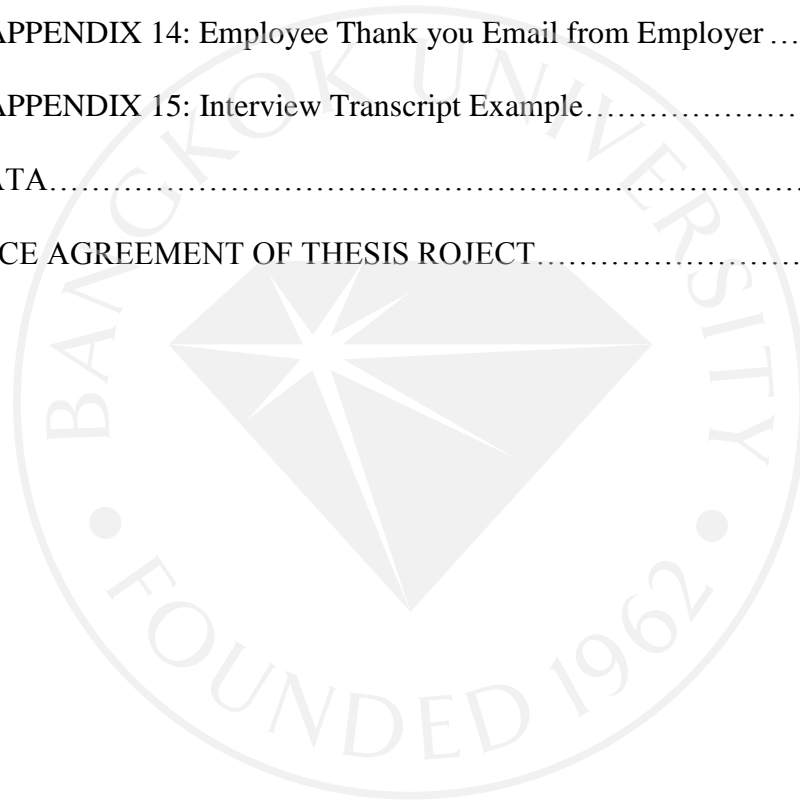
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## CHAPTER 1

### INTRODUCTION

This research dissertation serves to investigate the role and impact of entrepreneurial leadership as a potential enabler for significant corporate success in UK technology-innovative SMEs (small/medium size enterprises) which we define as having fewer than 250 employees. The research supports a concept that the value of intrapreneurship does not confine to large organizations or bespoke R&D (research and design) centers but can become the output of entrepreneurial influence in the SME business. It is, therefore, a study of the concept of Innovation Management, in the context of entrepreneurial leadership and the resultant outcomes specifically in terms of company strategic positioning and employee “need satisfaction fulfilment” leading to intrapreneurial opportunity. It is important to document at this point that employee need satisfaction could comprise numerous variables, all of which cannot be tested in the scope of one study. In this research investigation we confine this “umbrella heading” to three constructs; organizational boundaries, work discretion and time availability. In doing so, we are also setting a boundary of need satisfaction fulfilment within the workplace environment alone and not satisfaction that could extend in a broader sense to all aspects of life. However, we do evaluate any impact of external influences on the propensity for intrapreneurship later in the dissertation within the critical analysis of literature. The definition of “entrepreneurial” in the context of leadership is presented through a central framework of skills and attributes clarified later in this research introduction. Furthermore, within the SME business, we find that the leader may be referred to as Founder, Owner, Chairman, Managing Director or Director. For consistency and to avoid confusion, we have adopted a title

of PDM which we define as the Primary Decision Maker where necessary, and specifically, to align the terms found in the extant literature. For the companies collaborating in our research study, when surveying the employees, we retain the title that is most familiar to them within their business.

This introductory section commences with our reflections on innovation as a strategy and catalyst for intrapreneurship in a market place that has become driven by a requirement for increasingly creative approaches to solving the more complex issues businesses face today. They no longer confine to knowledge, understanding, and capitalizing on the journey of the past, but scrutinizing, seizing, connecting and acting. Acting for change, acting for novelty, acting for differentiation and acting for business sustainability and survival.

Knight & Cavusgil (2004, p.1155) advocate that innovation is “the elixir of life for firms, regardless of their size or other attributes”. They argue that business growth, success and ultimately survival is contingent upon their ability to innovate on a continual basis, and that “knowledge is understood as the main ingredient in the concoction of innovation”. The pre-requisite of every innovation is either the generation of new knowledge or, alternatively, and more typically, the combination of existing pieces of knowledge in novel, “entrepreneurial ways”. As expressed by Zahra, Nielsen & Bogner (1999, p.171) such knowledge builds competitive advantage and “idiosyncratic skills” necessary for organizational survival. The specific setting for the dissertation is the opportunities for intrapreneurs to contribute to process and product innovation in companies operating in a highly competitive business environment consistent with innovation being a critical success factor for their future development and growth, and potentially, existence. As proposed infamously by

Drucker (1999), *innovate or die*, and Ortt & Van Der Duin (2008, p.522) “when innovation is an almost obligatory survival strategy, that at the same time is risky because it may lead to the demise of the company”. This is a view shared by Bingham (2003), McAdam & McClelland (2002), Miller & Friesen (1982) and expanded upon by Amabile (1998, p.11); “when creativity is killed, an organization loses a potent competitive weapon: new ideas”. Furthermore, from Bystead (2013, p.268), “innovation is key to competitive advantage and strategic renewal” and powerfully from Maier & Pop Zenovia (2011, p.975) “the value created yesterday can mean nothing today, therefore only a sustainable company, who recognizes the difference between an entrepreneur and intrapreneur, can turn ideas and creativity into successful new values for tomorrow”. It becomes evident from the outset therefore, that there are a number of serious issues requiring consideration in businesses where innovation and creativity, and how they are managed has to be judiciously balanced.

It also became clear from a critical analysis of the extant body of literature that there were substantial links between innovation management in SMEs and the strategic decisions made by a PDM who is still instrumental in the running of the business and may impact upon intrapreneurial opportunity levels (Poutziouris, 2003). As stated by Urbano, Alvarez & Turro (2013, p.855), whilst research has been relatively prolific in many aspects of resource utilization and intrapreneurship, “it is noteworthy that few articles use empirical data or a specific theoretical framework”. Martiarena (2013, p.28) concurs suggesting “little empirical work exists on the determinants of intrapreneurship”. Equally, comparatively little has been documented about the relationship between the SME entrepreneurial PDM strategic positioning and the development of individual innovative resourcefulness (Kuratko & LaFollette,

1986, Hannon 2003 and Anderson & AL-Mubarak, 2012). Bonet, Armengot & Martin (2011, p.69) propose “few validated measures of firm-level entrepreneurship exist today” in their review of how entrepreneurs manage human resources, and Sijde, Veenker & During (2013, p.25) suggest that “little is known of intrapreneurship in smaller organizations”. Laforet (2011, p.381) proposes that whilst there have been extensive studies into innovation in SMEs the diversity of focus has been vast, concluding that “much remains unknown about the ingredients for successful innovation... its inputs and outputs”. From Srivastava & Agrawal (2010, p.164) we learn that in respect of intrapreneurship “very limited studies have explored the factors as perceived by the employee”.

The value of this research study is therefore, to further contribute to both academic and practitioner knowledge, by addressing some evident research gaps detailed above and provide analysis from the data collected to identify opportunities for intrapreneurial activities in UK technology-innovative SMEs. This includes the contributing factors of entrepreneurial leadership approach and strategic type to intrapreneurial opportunity; therefore the conscious or unconscious formation of an intrapreneurial incubator environment in which creative opportunities and activities become sustainable. The study also contributes to the extant literature by exploring the extent to which the differences in entrepreneurial leadership approaches influence the need satisfaction fulfilment for intrapreneurial opportunity. The exploration of intrapreneurship remains scant within the current literature compared to that found within entrepreneurship. Kantur and Iseri-Say (2013, p.306) suggest that a “lack of consensus on how to characterize firm-level entrepreneurship leads to deficiencies in theory development and inhibits proper theory building and testing”. In addition, due



to the uniqueness of SMEs, Simpson, Padmore & Newman (2012, p.278) posit this is “an area very difficult to research” and, as a result “theoretical advancement in this area has been slow if not completely stagnant over the last 30 years”. Furthermore, as comparatively little has been documented about the creation of intrapreneurial opportunity within SMEs outside of bespoke research and design centers, it is this gap in the literature that the author will make a significant contribution to.

Within this introduction chapter, the dissertation commences by providing a theoretical framework for the research study and an introduction to the terminology of “entrepreneur”, “intrapreneur” and “intrapreneurship”. Additionally, we have reflected two further considerations in the development of the theoretical framework; the influence of managing innovation on intrapreneurship and the value of innovation in SMEs. Following this the research structure is explained, and the research background and further considerations are communicated. Lastly in this chapter, we commence the construction of the research questions, their rationale, aims and objectives for the ensuing research study.

The dissertation comprises a further 6 chapters. The critical analysis of the literature found at chapter 2 delivers an in-depth evaluation of the components of the research study including the antecedents that underpin each bespoke body of knowledge. The setting for the research investigation, SME’s, and the theories that exist within the current body of literature are also explored in detail in this chapter. Finally, we take what has been learnt from previously published works, the theoretical framework and research questions to construct our hypotheses and conceptual model at chapter 3.

Chapter 4 addresses the methodology of this dissertation, commencing with the research paradigm and design, leading to the methods and tools employed and then to the operationalization of the conceptual model constructs through survey and interview instruments. At chapter 5 we commence the data collection and analysis, starting with our pilot study and resultant lessons learnt before we introduce the companies collaborating in this research investigation. For each company we have undertaken a detailed descriptive analysis of the data gathered through three research instruments whilst reflecting upon the material presented in our analysis of the literature to aid our understanding. We continue at chapter 5 by turning to the validity and reliability of our research structure and assess the model fit before presenting our interpretations and findings at chapter 6. Within the dissertation's final chapter 7 we present our conclusions and discussion. In this closing chapter we assess how our research findings can be compared to previous studies in the field of intrapreneurship, the methodological limitations to be considered, the practical implications of the research within UK SMESs and directions for further research. This chapter also provides an account of our original contribution to the body of knowledge.

Before progressing chapter 1 we have summarized a "Statement of the Problem" which forms the basis of everything that follows.

### **1.1 Statement of the Problem**

*"When you hire a pair of hands you get a free brain"* Anon

The ever-increasing consumer demand for improved products and services over the decades has called for a dramatic increase in the speed of innovation. This is widely felt in the field of technology innovation where competition levels are extremely high, often leading to the demise of companies that are slow to respond to

market pressure or fail to actively seek innovative opportunities to ensure their continuation. This has a most dramatic effect for the SME business profile where the risk associated with innovative activities versus the assessment of the potential rewards becomes a critical consideration for the primary decision maker (PDM); the right choices leading to new business avenues, the wrong choices leading to closure. This raises the question of how entrepreneurial leadership can materially influence employees to champion innovation or ignore it. The champions of innovation are addressed within the extant literature as intrapreneurs. It can be argued that the continued success of SMEs is due to their contribution within the business and that it is not wise for creative thinking to be the sole domain of the PDM. Indeed, Carrier (1997; p12) suggests there may be a need for the PDM “to be supported or even accompanied in his or her role as visionary”.

## **1.2 Innovation in SMEs**

*“The real voyage of discovery consists not in seeking new landscapes, but in having new eyes”.* Marcel Proust; 1871 to 1922

By introduction of this sub-section, we may consider a statement from Bonet, Armengot & Martin (2011, p.69) that whilst entrepreneurship is vital to economic development “the creation of small firms is considered essential for the establishment of a solid industrial base”. A very positive aspect of global SME resourcing is that in deflated economic climates, they do provide a valuable source of alternative employment for those made redundant by large firms (Hashi & Krasniqi 2011, Hynes & Richardson 2007, Szerb 2003 and Poutziouris, 2003) In 2008, more than 50% of the UK work-force was employed by SMEs (Eurostat, 2011) Furthermore, that across Europe, “entrepreneurship and rapidly growing SMEs are often cited as drivers of job

creation” (Poutziouris, 2003, p.10) and from Bonet, Armengot & Martin (2011, p.69), “SMEs are the fundamental business segment (for the generation of employment, wealth distribution, economy appraisal and economic growth) that makes up the economy in Europe”. We learn from and Hynes & Richardson (2007) that the education sector needs to plan and prepare graduates to become entrepreneurs or intrapreneurs to meet ongoing employment growth needs. Lastly, from Pascoe & Mortimer (2014, p.183) entrepreneurship “is now commonly recognized as a source of innovation, creativity and new knowledge, which ultimately leads to job creation, wealth and overall economic growth”.

Within our investigation the role of innovation in SMEs can be referenced from two perspectives; firstly, from prior research investigations and secondly, from a statistical perspective in terms of R&D analysis. It is proposed by Heimonen (2012, p.123) that whilst innovation was showing a very positive growth rate, 82% from 2000 to 2011, (ONS, 2011), “the relationship between size, innovation and performance has long been debated”. Brown, Nasarwanji & Catulli (2010) and Dobbs & Hamilton (2007) suggest the lack of longitudinal studies exacerbated the need for firm conclusions in terms of the tenets of small business growth. Additionally, there have been relatively fewer studies of growth through innovation in SMEs, with the historical investigative and research focus being primarily concerned with large firms.

One such longitudinal research study was sourced, conducted by Humphreys, McAdam & Leckey (2005, p.288) It is a case study of a UK SME with 50 employees and takes place over a 6 year period. The objective was twofold; to establish how innovation is implemented in SMEs and whether innovation progresses longitudinally. The company was created in 1988, but was in crisis by 1996 “having

changed little in either structure or form in the preceding ten (sic) years”. This necessitated a complete restructuring, part of which was the devolution of authority enabling employees to be an integral part of the decision making process, enjoy a share of company profits for their contribution, but more strikingly, “positive encouragement was given to idea generation”. The company had acknowledged innovation as key to its future success and sustainability and was actively promoting a culture of intrapreneurship. Critically, it was the size of the company that was considered to be the greatest enabler in creating this new environment of change and improvement. The accessibility of the workforce and the paucity of hierarchical reporting lines being essential components. Within the literature there is also general endorsement that a mechanical structure is sufficiently rigid to hinder a culture of innovation, whereas the perceived flexibility of an organic structure achieves the opposite (Shein 2010, Jones 2003, Ahmed 1998, Ross 1987 and Miller & Friesen, 1982).

In Europe, more than 95% of companies have less than 50 employees, and 50% of the workforce is employed by them (Forsman & Rantanen, 2011). This demonstrates how substantial they could be in economic terms, and, therefore, the complete relevance of research investigations to ascertain their current business strategy and the potential importance of innovation in future business growth strategies as a vital part of a strong financial economy. This view is shared by Poutziouris (2003), Ates, Garengo, Cocca & Bitici (2013), Antoncic & Hisrich (2004) and Szerb (2003) in terms of wealth creation but, all acknowledge a typical limitation inherent in many SMEs, the weakness of their managerial practices and formally planned sustainability. Furthermore, it is suggested that in the US small businesses

“employ about half of the nation’s 144 million private sector workers”, and, “that they create 60 to 80 percent of new private sector jobs” (figures current at 2009; source, Intuit).

The value of SMEs within the economy was further highlighted in June 2008 when a communication titled the Small Business Act (SBA) for Europe was introduced. “This recognised ‘the central role of SMEs in the EU economy’ and aimed to strengthen the role played by SMEs and to promote their growth and job creating potential through alleviating a number of problems which are thought to hamper the development of SMEs” (Eurostat, p.10). These included administrative burdens, access to finance; access to new markets; ensuring fair competition; promoting education and skills for entrepreneurship; protecting intellectual property; encouraging research and development; or supporting SMEs in a regional and environmental context. This “mainstreaming” of SME policy is based upon a premise to “think small first”.

Woodcock, Mosey & Wood (2000, p.212) suggest that whilst the desire for new product development was high amongst managers in British SMEs it was “consistently deprioritized when faced with other short-term pressures”. Management deficiencies were found to be considerable in terms of information available and information sharing, combined with a lack of any formal measurement of processes, progress and competitor activity. Equally, that the records kept were limited in their usefulness to ensure performance improvement and product enhancement, delivery and competitiveness (Woodcock, Mosey & Wood 2000, and Forsman & Rantanen, 2011). In a study of 37 European SMEs, Ates, Garengo, Cocca & Bitici (2013) found communication to be substantially lacking with only one business that engaged in

communication with its competitors, five that communicated change to the employees and seven that communicated their strategic objectives. The highest ranking managerial activity was found to be short term planning which was the priority for 28 of the businesses. The study results show an interesting insight into the culture and predominant activities of SMEs.

This extends to another vital area of SME sustainability; training. This was found to be a considerable flaw in a study of UK automotive SMEs (Bevis, 2011), in a study of multi-sector UK SMEs (Gray, 2006) and in a study of SME manufacturing plants across Europe (Ates, Garengo, Cocca & Bitici, 2013). All identified a high percentage of unmeasured training activities, untargeted training activities and a tendency for SMEs to avoid formal or external training. The reasons most commonly cited throughout the literature is the lack of managerial time to deal with the everyday business pressures and focus on the future in any meaningful way, even though it is widely acknowledged that employee personal development will play a key role in the sustainability of the business including resource attrition. The result is an ever-increasing skills-gap and a detrimental impact on knowledge transfer and business growth. Hunter & Kazakoff (2012, p.149) posit that SMEs are challenged by their lack of resources combined with “knowledge limitations” whilst Chanal (2004, p.57) asserts that the ability for employees to “both draw on the firm’s knowledge and contribute to the firm’s knowledge” has been proven within the existing body of literature to be fundamental in terms of innovation practices, a view supported by Davison & Blackman (2005) and Jimenez-Jimenez, Valle & Hernandez-Espallardo (2008).

A study by Choueke & Armstrong (1998, p.132) conducted in the UK amongst SME primary decision makers and consultants found that most drew on “past experience” and “colleagues” to lead their businesses through current and future operational challenges as shown in Table 1.

Table 1: “Significant Learning Media”: SME respondents

	Percentage
Past experience	95
Colleagues	61
Self-learning	54
Mentor	43
Higher education	41
Note: Respondents could identify and select any number of learning media from the range suggested	

Source: Choueke, R., & Armstrong, R. (1998). The learning organisation in small and medium-sized enterprises: A destination or a journey?. *International Journal of Entrepreneurial Behaviour & Research*, 4(2), 129-140.

Klein, Astrachan & Kossek (1996) add that many in leadership and managerial roles feel that having reached such levels of seniority, they neither need, nor desire, additional formal learning. Kalling (2007) indicates that a similar complacency can exist at any managerial level and Ates, Garengo, Cocca & Bitici (2013) that the outlay for management development is under- invested. The above authors’ findings may explain, in some small way, why formal or external training is not seen as a major development factor for their employees. Finally, in a UK SME research study



compiled by Pickernell (2001) defined in this case as having fewer than 100 employees, survey instruments were used to elicit the value of certain business and personal objectives from the primary decision maker (PDM). Eighty percent of respondents designated the retention of their independence as most important to them, second only to increasing the profitability of the business at eighty seven percent. Further results documented how risk-averse many of the enterprises were with only eighteen percent prepared to consider raising funds for expansion, and eleven percent prepared to consider the purchase of another business as a vehicle for expansion. In summary, the study, albeit relatively small, does substantiate a considerable amount of documented conjecture concerning SMEs, entrepreneurship and innovation. The complete findings are shown at appendix 1.

This sub-section of the introduction chapter served to broadly assess the current paradigm of innovation management in SMEs and sought to determine patterns of similarity or divergence from the large organization given their unique size constraints and challenges. The following sub sections comprise an overview of the actors who combined with a SME business profile will ultimately determine the constituents that provide each business with a defined uniqueness in their market sector. We commence by introducing the entrepreneur and intrapreneur leading to a broad overview of intrapreneurship as a concept. We will revert to a more detailed critical analysis of the SME environment and actors bounded by this investigative study within a comprehensive literature analysis found at chapter 2 of the dissertation.

### **The entrepreneur**

*“People can be divided into three groups: Those who make things happen, those who watch things happen, and those who wonder what happened”.*

Nicholas Murray Butler; 1862 to 1947

The word entrepreneur was introduced into the English language from the French in 1828, “derived from the French verb ‘entreprendre’ meaning “to undertake, to attempt, to try” (Painoli, 2012, p.208, Solomon & Winslow, 1988, p.163). Gundogdu (2012) and Zimmerman (2009, p.298) offer the first published interpretation from Cantillon dating back to 1755 (there is some dispute amongst authors as to whether this should be 1734, the year in which it is suggested he died), when an entrepreneur was defined as “a specialist in taking risk”, and, more substantively quoted by Painoli (2012, p.208) as “a person who pays a certain price for a product to resell it at an uncertain price, thereby making decisions about obtaining and using resources while consequently assuming the risk of enterprise”. This is a very powerful and descriptive observation. Finally, and more subjectively it is posited by Bonet, Armengot & Martin (2011, p.70) that the entrepreneur enables the business to “function properly”, which has been the subject of some debate since the notion was proposed by Harvard Professor McClelland five decades ago. There is also what are known as “social entrepreneurs”, who exhibit the same traits and desire for achievement as a business entrepreneur but operate in a community or voluntary setting (Thompson, 2002).

Additionally, there is considered to be levels of entrepreneur; “low- level” implying individuals who flood the market by “offering the customers those goods and services which were in short supply”; “high-level”, implying individuals who were “more than simple traders and aimed to engage in long term economic activity” (Hashi & Krasniqi, 2011, p. 457). Furthermore, categories of entrepreneurs as proposed by Matlay (2005, p. 671), shown at table 2.

Table 2 : Categories of Entrepreneurs

Novice entrepreneurs:	Inexperienced individuals with no prior business ownership interests, and who currently own an equity stake in an economically active firm
Serial entrepreneurs:	Currently own an equity stake in a single economically active firm, and had previously sold or closed down similarly owned businesses
Portfolio entrepreneurs:	Simultaneously own equity stakes in two or more economically active firms

Finally, an additional category, “nascent” entrepreneurs meaning employees who seek to transition from traditional paid employment to start their own enterprises (Matlay 2005, and Delmar & Davidsson, 2000). These potential intrapreneurs are further defined by Parker (2011, p.23) as satisfying four fundamental criteria; they consider themselves to be involved in the firm creation process; they have engaged in a new business venture in the preceding year; they presume to own all or part of the business; the business is still in its infancy which can be expressed as not fully operational.

Within these levels and categories of entrepreneur we find classifications of entrepreneurial approach and strategy. Following the work of Miles & Snow (1978) it is proposed that there are four; defenders, prospectors, analyzers and reactors (Conant, Mokwa & Varadarajan 1990, p.365-366, Dyer & Song 1997, p.469, Desarbo, Benedetto, Song & Sinha 2005, p.47 and Brown, Nasarwanji & Catulli 2010, p.4).

This concept will be elaborated upon, including the authors' interpretations as part of the investigation into leadership approaches provided within the critical analysis of the literature chapter of this dissertation. Furthermore the theories of entrepreneurs and entrepreneurship are covered in depth but even from this brief introductory exploration there is much to consider and reflect upon about the entrepreneur as an individual, a leader and a decision maker.

### **The Intrapreneur**

*"Intrapreneurs ride to the discovery of successful ventures on the strength of their vision".* Gifford Pinchot III; 1985

Whilst Vora, Vora & Polley (2012) propose that studies of entrepreneurship have been prolific since their origins in the 1930s, it is not until relatively recently in academic and business literature that we find the expression "intrapreneur" documented. Two names are commonly linked to its first usage; Gifford Pinchot III and Norman Macrae. Throughout the literature it is suggested that the term was credited to Pinchot by Macrae in 1982, and whilst this may be the case, the researcher's literature review efforts discovered a paper written in 1978 by Pinchot, co-authored with his wife Elizabeth. The paper explicitly recounts the commercial factors and personal attributes that would support intra-corporate entrepreneuring which is subsequently addressed as intrapreneurship. Kneale (2003), Kuratko, Montagno & Hornsby (1990), Franco & Haase (2009) and Bouchard & Basso (2011) among enumerate other authors concur that intrapreneurship can be described as entrepreneurship inside the corporation and these individuals will act as champions for new ideas progressing them from inception to actuality. The infamous quote found in most references to Pinchot's writings is that "intrapreneurs are dreamers who do"

(Cottam 1989, p.522). Pinchot (1985, p.9) explains: “The intrapreneur may be the creator or inventor but it is always the dreamer who figures out how to turn an idea into a profitable reality”. A view shared by Morris, Kuratko & Covin (2008, p.150) in suggesting that to turn a vision into an idea a process of a “daydreaming phase” is likely to be undertaken by the entrepreneurial employee.

Haller is credited with publishing the first formal academic case study of corporate intrapreneurship in 1982, focusing on the intrapreneurial creation of PR1ME Leasing within PR1ME Computer Inc. in the United States. In terms of social media recognition, Time Magazine’s “Here Come the Intrapreneurs” is considered to reflect its first popular usage. Demott & Brynes (1985) catalogue several accounts of intrapreneurship, focusing on individuals who have left organisations due to lack of innovative thinking opportunities, for example, Stephen Wozniak, a 25 year old design engineer with Hewlett-Packard. Wozniak was rebuffed by the company when requesting research opportunities to prototype a microcomputer that would be used in conjunction with a television set. Determined to expand his conceptual thinking he founded a new company with a friend, Steven Jobs, a design engineer working for Atari. The company name and brand is now infamous; Apple. Rogers (1985, p.1) interviewed Jobs. Jobs referred to the Apple Macintosh team as espousing what had become commonly known as intrapreneurship with his description, “a group of people going, in essence, back to the garage, but in a large company,”. This expression is also found in the work of Menzel, Aaltio & Uljin (2007, p.737), who describe a “garage-like atmosphere where people can rapidly and frequently test their ideas without fear of failure”. Apple is generally acknowledged as an exceptional example of innovation through entrepreneurial and intrapreneurial vision substantiated by their

diversification from the IT sector to music, video, communications and the electronic book publishing industry (Rufat-Latre, Muller & Jones, 2010).

Other widely used terms are internal entrepreneur, administrative entrepreneur (Gundogdu 2012, p.298), intra-corporate entrepreneur (Antoncic & Hisrich 2004, p.520) and corporate entrepreneur; the latter being attributed to the work of Drucker (1994). Kenney (2010) introduces an advanced term “globalpreneurship” to define the process of intrapreneurship in large multi-national companies, introducing a further employee profile “globalpreneurs”, capturing the specific challenges for intrapreneurship in corporate environments where stakeholder and stockholder requirements put considerable external pressures on operational performance metrics. Additionally, Chang (1998) proposes “exopreneur”, to capture intrapreneurship in studies where innovation is delivered by external entrepreneurial resources known as exopreneurs. This gives us rather a confusing mix of definitions in that it is difficult to view a profile as “administrative” in the same way as one might envision “innovative”. For example, for the terminology “corporate entrepreneur” Kantur and Iseri-Say (2013) propose there is no commonly acknowledged definition. It would seem justified that within this dissertation we dispense with so many diverse alternative titles and remain true to the employee profile “intrapreneur” when referring to employees who seek innovative opportunities.

### **Distinguishing the Intrapreneur from the Entrepreneur**

*“Only the guy who isn't rowing has time to rock the boat”.* Jean-Paul Sartre; 1905 to 1980

The fundamental distinctions between an “entrepreneur” and an “intrapreneur” necessitate further definition by reviewing the types and characteristics of each. The

literature is often inclined to generalize the term entrepreneur as a business founder, but many have become what is considered entrepreneurial through working their way through the tiers of a business they now run or own, therefore, demonstrating that opportunities can exist for intrapreneurs to be re-categorized as entrepreneurs.

Pinchot (1985, p.126) advocates that entrepreneurs create enterprises; intrapreneurs create “intraprisers”. Again, such entrepreneurs are highly likely to have been intrapreneurs in the past, creating an overlap between these titles. Koh (1996, p.13) offers five defining schools of thought, shown at figure 2 below, which categorizes entrepreneurs and intrapreneurs by drawing on the work of Cunningham & Lischeron (1991). Given this work was produced almost two decades ago it is clearly dated in that it does not acknowledge any entrepreneurial traits as indicative of those of an intrapreneur, simply that the intrapreneur is a “skillful manager”. This typifies how, within the literature, the interpretation of the characteristics of the intrapreneur have moved from a basic to a more complex dimension and in later years have become more aligned to those of the entrepreneur.

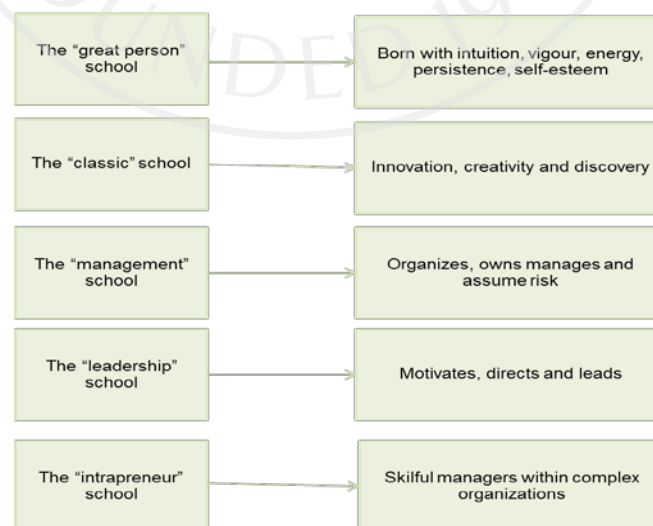


Figure 1: Categorization of Entrepreneurs and Intrapreneurs

Source: Koh, H. C. (1996). Testing hypotheses of entrepreneurial characteristics: A study of Hong Kong MBA students. *Journal of Managerial Psychology*, 11(3), 12–25.

Sayed & Gazdar (2003, p.78) add that in terms of personal characteristics “what is critically relevant for entrepreneurship is also required for intrapreneurship”. The exceptions being that due to the nature of their respective roles in a business, the entrepreneur is most commonly a generalist whilst the intrapreneur is a specialist, and, whereas the entrepreneur can choose how and if to collaborate and communicate, for the intrapreneur it is vital that he/she does so.

Jennings, Cox & Cooper (1994, p.3) introduce the term “elite independent intrapreneurs” which adds another dimension to this research in respect of how each type of entrepreneur interacts with potential intrapreneurs within their business. Specifically, that within much of the literature the background of the entrepreneur being studied is often not considered material and is therefore, not divulged. This is a great weakness in terms of the value of assessing the entrepreneur’s disposition to intrapreneurship and innovation as the reader is unaware of the factors that have driven their past successes or failures. For example, were they taking personal or corporate financial risks? How was their innovative outlook rewarded? The answers may be very different depending on whether the entrepreneur was a stakeholder or intrapreneurial employee. Additionally, there are fundamental differences in whether elite independent intrapreneurs became the business leader in an environment that was family owned or a company in which there was no prior family involvement or occupation. Jennings, Cox & Cooper (1994, p.4) provide a succinct definition for the elite entrepreneur and elite intrapreneur types. Ronson, Shah and Oyston, referred to



in figure 3 founded their own companies with no prior family or relevant business experience.

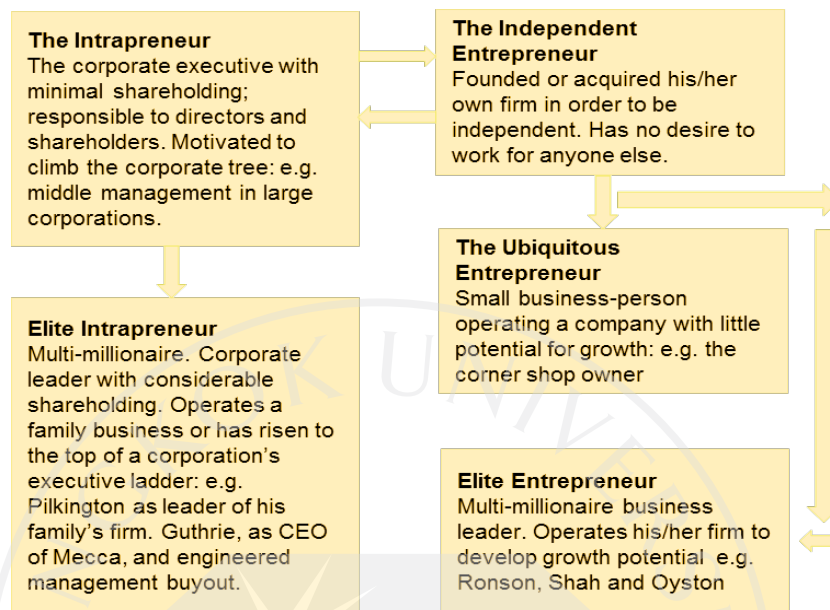


Figure 2: Entrepreneur and Elite Entrepreneur types

Source: Jansen, P. G. W., & Wees, L. L. G. M. (1994). Conditions for Internal Entrepreneurship. *Journal of Management Development*, 13(9), 34–51.

This is significant in that various aspects of an individual's upbringing and life can be considered relevant to which of the above categories they may adopt in their career choices and their chosen work culture, including whether they choose to be a leader, or a follower as defined by Vanderslice (1988), Gardner et al (2005), and Barringer, Jones & Neubaum (2005). Influencing factors range from levels of education, their personalities being more or less extrovert, their approach to work and work ethics, and critically, their ambitions for the future. Additionally, we may query the inclusion of the intrapreneur in terms of a share-holder, or an individual who has a vested financial stake in the business as this is not deemed significant, or even exist in much of the extant literature.

Lastly, we may consider that entrepreneurs position themselves with innovative thinking and actions determined by them, founding businesses based on personal acumen. Intrapreneurs may be selected or impose themselves within the working environment but have no ultimate control over it. Over three decades ago Kirton (1980, p.214) was setting the scene for intrapreneurship by categorizing adaptors as individuals who do things better, and innovators as individuals who do things differently.

### **Intrapreneurship**

*“Innovations just do not happen unless someone takes on the intrapreneurial role”*. Pinchot & Pellman (1999).

There is a consistency among definitions of intrapreneurship commonly found within the body of literature which is best encapsulated as shown below at table 3:

Table 3: Defining the Intrapreneur

Employees demonstrating a spirit of entrepreneurship	Kantur and Iseri-Say (2013), Gundogdu (2012), Camelo-Ordaz, Fernandez-Alles & Ruiz-Navarro (2012), Desouza (2011), Maier & Pop Zenovia (2011), de Villiers-Scheepers (2011), Blanchard K (2008), Morris, Kuratko & Covin (2008), Menzel et al (2006), Szerb (2003), Sayeed & Gazdar (2003), Hisrich & Peters (1998), Abraham (1997), Koh (1996), Shatzer & Schwartz (1991), Cottam (1989), Pinchot (1985), Pinchot & Pinchot (1978)
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(Continued)

Table 3 (Continued): Defining the Intrapreneur

<p>The initiation of innovation within an organization by employees</p>	<p>Kassa &amp; Raju (2015), Turner &amp; Bryant (2014), Sijde, Veenker &amp; During (2013), Hurmerinta &amp; Zettining (2013), Vora, Vora &amp; Polley (2012), Burgers &amp; Van De Vrande (2011), Parker (2011), Maier &amp; Pop Zenovia (2011), Todd (2010), Zimmerman (2009), Heinonen &amp; Toivonen (2008), Menzel, Aaltio &amp; Uljin (2007), Altinay (2004), Kneale (2003), McAdam &amp; McClelland (2002), Antoncic &amp; Hisrich (2001), Sharma &amp; Chrisman (1999), Risker (1998), Carrier (1997), Shatzer &amp; Schwartz (1991)</p>
<p>Employees with a unique vision gaining managerial confidence to pursue innovative opportunities</p>	<p>Urbano, Alvarez &amp; Turro (2013), Filion &amp; Chirita (2012), De Villiers-Scheepers (2012), Wakkee Elfring &amp; Monaghan (2010), Phan et al (2009), Morris, Kuratko &amp; Covin (2008), Teltumbde (2006), Willison (2006), Shaw, O'Loughlin &amp; McFadzean (2005), Antoncic &amp; Hisrich (2004), Rodriguez-Pomeda et al (2003), Pinchot &amp; Pellman (1999), Koh (1996), Meng &amp; Roberts (1996), Hornsby et al (1993), Stevenson &amp; Jarillo (1990), Pinchot &amp; Pinchot (1978)</p>

(Continued)

Table 3 (Continued): Defining the Intrapreneur

The enabling of employees to communicate and realise their ideas	Marzban, Moghimi & Ramezan (2013), Bhardwaj & Sushil (2012), Cardon (2008) Sim, Griffin, Price & Vojak (2007), Menzel, Aaltio & Uljin (2007), Brunaker & Kurvinen (2006), Christensen (2005), Thompson (2004), Jones (2003), Davenport, Prusak & Wilson (2003), Jones (2003), Coulson-Thomas (1999), Amabile (1998), Carrier (1997), Kuratko & Montagno (1989)
Employees who think differently and seek opportunities outside the given business framework	Guillen & Saris (2013), Kantur and Iseri-Say (2013), Bonet, Armengot & Martin (2011), Burgers & Van De Vrande (2011), Wakkee Elfring & Monaghan (2010), Wang & Poutziouris (2010), Manimala, Jose & Thomas (2006), Blanchard K (2008), Holt, Rutherford & Clohessy (2007), Teltumbde (2006), Florida & Goodnight (2005), Rodriguez-Pomeda et al (2003), Steiner (1998), Carrier (1994), Shatzer & Schwartz (1991), Vesper (1990), Pinchot (1985), Pinchot & Pinchot (1978)

(Continued)

Table 3 (Continued): Defining the Intrapreneur

Employees who are comfortable with and seek risk-taking challenges	Turner & Bryant (2014), Pascoe & Mortimer (2014), Hurmerinta & Zettining (2013), Guillen & Saris (2013), Desouza (2011), Alpan et al (2010), Aygun, Suleyman & Kiziloglu (2010), Scheepers Hough & Bloom (2008), Menzel et al (2006), Willison (2006), Altinay (2004), Antoncic & Hisrich (2003), Brenner & Brenner (1988), Szerb (2003), Davis (1999)
Extrovert, self-motivated, highly driven employees	Parker (2011), Wang & Horng (2010), Li & Zhang (2010), Kuratko, Morris & Covin (2008), Goffee & Jones (2007), Pech & Cameron (2006), Wunderer (2001), Petroni (1999), Meng & Roberts (1996), Rogers (1995), Shatzer & Schwartz (1991)

Abraham (1997, p.179) for example, describes intrapreneurship as “organizational entrepreneurship, in which teams of employees band to develop new technology and produce new products” further submitting “it appears to combine the individualistic trait of being able to work independently to generate creative ideas with the collectivist ability to collaborate in teams or in-group for new product development”. From a business perspective this is descriptively captured by Sharma & Chrisman (1999, p.16) from the writings of Guth & Ginsberg (1990) as the birth of a business within a business, which in turn can be through an internal or external mechanism (Phan et al, 2009). The former being the creation of a new product or

service offering within the core business; the latter being the absorption of the same from an outside source.

At chapter 2, the literature analysis, we provide a comprehensive evaluation of intrapreneurship, its facets, the actors, and the theories that comprise its core components and qualities. Firstly, we address the necessary considerations for constructing the research framework.

### **1.3 Development of the research theoretical framework**

The model presented at figure 4 below provides an overview of the main groups of literature that formed the basis of this research study. The theoretical concepts necessary to substantiate the resultant research hypotheses were examined. Firstly the theory of Innovation Management and how this research study fits in this body of literature and more specifically, innovation management within the context of leader and leadership characteristics. Secondly, a more detailed investigation into the leadership approach and traits of the entrepreneur and thirdly, the origins, concept and progression of intrapreneurship as a vehicle for innovation were critically analysed as a precursor to clarifying the PhD argument. Finally, intrapreneurs as individuals were comprehensively reviewed in terms of personal character traits, their motivation to think and act innovatively and a perceived value that the concept of intrapreneurship may bring to an entrepreneur led SME.

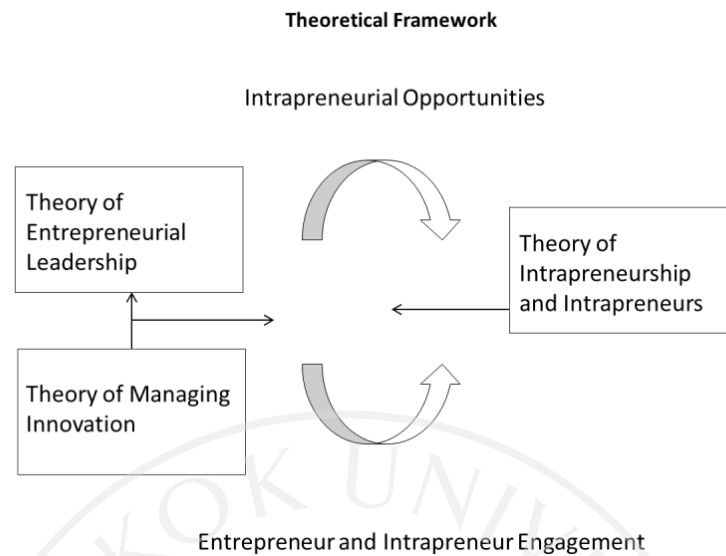


Figure 3: Research Theoretical Framework

### 1.3.1. Existing field of knowledge and theoretical assumptions

It is useful when examining the existing field of knowledge to commence by understanding the origins and definitions of “innovation”. Innovation derives from the Latin word *innovatus*, the noun form of *innovare*, therefore, “to renew or change”. The writings of some relatively recent authors, Gundogdu (2012), Painoli (2012), Quintane et al (2011) and Crossan & Apaydins (2010) consider Schumpeter as the most prominent seminal author on innovation, arising from his publication “the theory of economic development”. Within the extant literature it has been cited thousands of times since publication in 1934 which in the language of Poutziouris (2003, p.188) makes him the “godfather of entrepreneurship”. Schumpeter distinguishes between “invention” as the discovery of knowledge and its practical application and “innovation” as the introduction of new methods, products or processes. This definition recognizes that innovation can be both a process and an outcome (Salavou 2004, Brazeal & Herbert, 1999 & Johne 1999). Darling, Gabrielsson & Seristo (2007,

p.5) add a further contribution from Schumpeter to the literature; that successful innovation “requires an act of will, not of intellect”. Innovation described as an outcome becomes a tangible entity that can be transferred within teams (knowledge would be a good example of this) or, a resulting product or service offering (Ford, 1996 & Ojasalo, 2008). In terms of knowledge-sharing and knowledge-gain as an innovation outcome, there is some debate as to its achievability in many corporate hierarchical structures. Kalling (2007, p.82) proposes that knowledge and experience “do not travel” within an organization that has a decentralized structure.

Schumpeter expressed innovation as “the critical dimension of economic change” (Sayem, 2012, p.4) and believed that entrepreneurial activities and business growth are driven by innovation and the necessity for companies to develop new products, services and processes. His central theories are commonly known as Mark I and Mark II. In the former he introduced the word “Unternehmergeist”, German for entrepreneur-spirit, as indicative that the technological challenges faced by industry would be progressed or resolved by them. Furthermore, in Mark II, that innovation can only function successfully with the support of large organizations which have the human and financial resources to invest in research and development activities. Boyett (1997) writes that Schumpeter was concerned only with completely unique innovations; incremental change or imitation of activities in other markets was not regarded as entrepreneurial or intrapreneurial achievement. Risker (1998) concurs that Schumpeter’s definitions of entrepreneurship and innovation were limited, imprecise and are often no longer materially relevant.

In respect of innovation research, Katz (2006) submits it dates back to the 19th century when researcher Gabriel Tarde provided an S-shaped diffusion curve to



capture the innovation process in his work “The Laws of Imitation” published in 1880. The S-curve comprised of a series of steps predicting the path from innovative intention, to innovation implementation which later became known as diffusion theory; first knowledge and ideas, leading to the formation of an attitude and opinions; leading to a decision to adopt or reject the innovation; leading to a proposed use; leading to actual implementation; leading to a confirmation of the decision-making process and outcomes. The literature generally confirms that Tarde’s diffusion theory has had a practical application in progressing innovation in many sectors over the decades since it was published. Surry (1997) endorses it as a “process by which an innovation is adopted and gains acceptance by members of a certain community” (AECT). Professionals in a number of disciplines, from agriculture to marketing, have used the theory of innovation diffusion to increase the adoption of innovative products and practices. Crystal, Sambamoorthi & Merzel (1995) acknowledge its usage in treating AIDS patients with new to market drugs, Kebritchi (2010) in education and Shortridge et al (2005) in Health Sciences. Conversely, Lyytinen & Damsgaard (1995) caution against the over-simplicity of innovation diffusion practices in fields of complex technology, stating that their observations deduce it is not realistic or practical. They identify information technology as typifying a field in which the time-span of diffusion is particularly unpredictable. Additionally, they propose that the percentage of individuals in this sector who are considered to adopt rather than rebuff innovative approaches is significantly above those observed in other industries.

### **1.3.2. The influence of managing intrapreneurship on innovation**

*“It is not the strongest of the species that survives, nor the most intelligent, but rather the one most adaptable to change”*. Charles Darwin; 1809 to 1882

As posited at the commencement of this dissertation, we argue that innovation is a crucial element of intrapreneurship. How innovation is managed is now considered. Within the literature a structured and sustained approach to managing innovation is often referred to as necessary in achieving a continuum of effective change whether incremental, radical or ground-breaking. The objective being to increase the capability of the business on an ongoing basis, not, as a series of discrete activities that may be incoherent in their objectives, purpose or outcomes (Forsman & Rantanen 2011, Salavou 2004, and Johne 1999). McMillan (2011, p.11) provides a constructive distinction between invention and innovation; invention being “the discovery of an idea”, innovation being “the exploitation of ideas into organizational practice”.

Ortt & Van Der Duin (2008, p.527) caution that there is no one right way to manage innovation and that very successful companies may adopt vastly different approaches even when developing similar innovations. Furthermore that “the most successful innovative companies do not succeed merely by using one innovation approach”. Van Den Elst, Tol & Smits (2006) concur that different innovation methods can successfully co-exist within the same organization and catalogue this within their study of Philips Applied Technologies by reflecting that their different business units required different innovation approaches and strategies to meet their individual characteristics. Cummings (1998) acknowledges that apart from how new ideas are managed there is a considerable advantage found by increased technical

awareness over the decades. What may be considered new ideas now could have been conceptualized many years ago but the technology did not exist to enable their success. The first helicopter became operational in 1936 but engineer Leonardo da Vinci was designing and developing the same flight concept in the 15<sup>th</sup> century. Managing innovation becomes increasingly more achievable as technology advances in terms of vision, scientific skills and advancements in Company 8 materials all broaden the spectrum for R&D activity. Growth in the R&D sector is vital to stimulate innovation and achieve sustainability and enhancement of existing technologies (Griffith, 2000).

Empirical research conducted over many decades shows that managing innovation may take place in an open or closed context and that both have their place due to influencing factors within the organization including individual and business competencies and PDM preferences (Miller & Blais, 1993). Pinchot & Pellman (1999, p.15) elaborate by identifying five key roles deemed to be crucial for positive management of innovation; climate makers, idea people, intrapreneurs, sponsors and the intrapreneurial team, but more specifically that each of the roles are strategically aligned to each other.

An essential issue for an innovation management structure will be the decision-making procedure that is required to review ideas put forward to establish those which could merit financial and resource investment. Factors vital to this dissemination will typically include a perceived alignment between the potential innovation and the business strategy; the extent to which it may enhance or disrupt existing profit centers and customer service value; the impact of the new innovation on the removal or creation of barriers to competition and the investment time-line and

generation of an acceptable financial outcome. The tenets of managing innovation that will typically be used to assess these questions are presented at figure 5.



Figure 4: The Tenets of Managing Innovation

Source: Edana Commissioned Arthur. (n.d.). *Innovation tool*. Retrieved from <http://www.edana.org/industry-initiatives/innovation-and-r-d/innovation-tool>.

Having identified the innovation opportunities that are deemed fundamentally sound within the overall business strategy, the challenge for the leader is to guide the development of the original idea to commercial fruition, or, as expressed by Phan et al (2009, p.204) the time/life-cycle dimension. Muller, Hutchins & Pinto (2012, p.36) stress the importance of recognizing the potential stage at which new ventures typically stall and propose that “understanding where failure repeatedly occurs as new ventures progress is the first step to identifying how open innovation can best support new growth initiatives”. Within some business cultures it may be at the idea-generation phase, in others at the idea-development phase, and in others, at the commercialization phase. Innovative progression is still considered key to business growth through competitive advantage, and a further challenge for the business leader is gaining and retaining resources with the capability to think creatively. Denton

(1999, p.84) advocates “competitiveness comes from innovative minds”. A view supported by Jimenez-Jimenez, Valle & Hernandez-Espallardo (2008).

To achieve long-term competitive advantage through innovation Govindarajan (2006, p.1-6), advocates “thinking inside the box”, and indicates that corporate leaders should follow the 3-Box Strategy process shown at figure 6. It is emphasized that box 1 confines to improving current business, whilst boxes 2 and 3 are concerned with exceptional performance and growth. Furthermore, that many organizations restrict their strategic thinking to box 1. This tendency has been particularly acute in the recent recession years when many leaders placed emphasis on reducing costs and improving margins in their businesses.

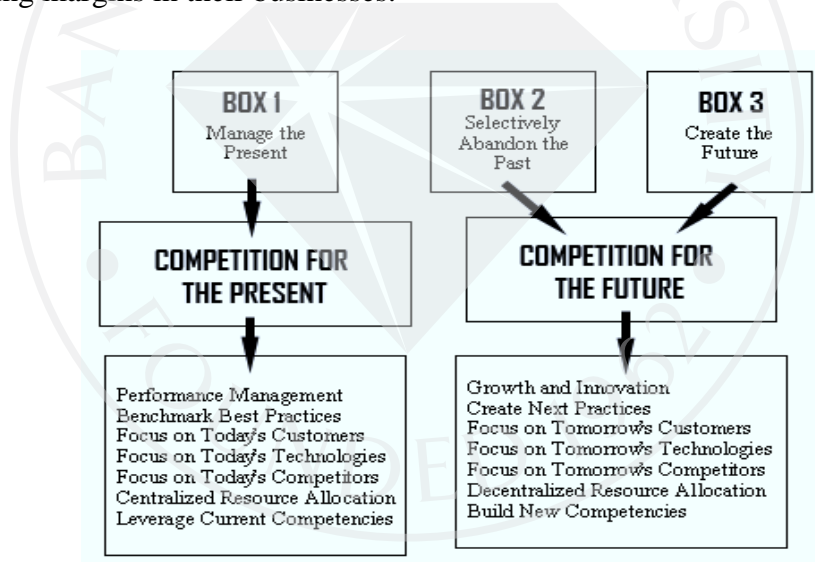


Figure 5: Thinking Inside the Box

Source: Govindarajan, V. (2006). *Strategy as Transformation*, Tuck School of Business at Dartmouth. Retrieved from [http://mba.tuck.dartmouth.edu/pages/faculty/vg.govindarajan/downloads/VG\\_Essays/ThinkingInsideTheBoxes.pdf](http://mba.tuck.dartmouth.edu/pages/faculty/vg.govindarajan/downloads/VG_Essays/ThinkingInsideTheBoxes.pdf).

Govindarajan writes: “strategy cannot be just about what an organization needs to do to secure profits for the next year. Strategy must encompass Box 2 and Box 3. It must be about what a company needs to do to sustain leadership for the next ten years. In fact, the central task of an organization’s leaders is to balance managing the present with creating the future” (p1), citing companies such as Dell, Wal-Mart, Apple and Southwest Airlines as case study examples of successful implementation of all three boxes. A further initiative advocated is that businesses determine their financial investment in each box, for example, 75%, 15%, 10% may be a sensible range and balance. When we reflect upon our stance set out in the introduction of this dissertation, we may consider this equally relevant for the SME business in that we are advocating conducting the transition from the past to the future through a process of scrutiny, connection and creation. The focus, as documented at figure 6 being tomorrow’s customers, technologies and competitors as central to the business and employee journey. Within the journey process there may necessarily co-exist the tenets of experimentation with the potential risk of failure.

### **1.3.3. Innovation and the Intrapreneur**

Innovation is difficult to conceptualize without experimentation. Experimentation is difficult to envisage as always being successful. Ojasalo (2008, p.51) expresses it negatively in suggesting that “management of innovation is called controlled chaos”. Suomala & Jokioinen (2003, p.225) venture that “project management success, technical success and financial success seldom go hand in hand, as unwelcome as this may be from the management point of view”. If potential intrapreneurs have doubts that their careers will be limited, or potentially terminated if degrees of failure, or what appears to be chaotic behavior culminate in an

environment of what is commonly known in the business environment as blame culture, or as Amabile (1998, p.7) posits, “a climate of fear”, it may make it unacceptable to them to do anything other than comply strictly to a job description and their company will have lost the opportunity to hire a brain, not just a pair of hands. Morris, Kuratko & Covin (2008, p.35) concur that the major risk of intrapreneurial activities by an employee, rather than concentrating on job-description related activities, may be career related and such corporate venturing may “jeopardize future pay increases, career advancement, and even his or her job”. As Krueger (2005, p.6) pertinently adds “organizations do not see opportunities, individuals do” and from Lumpkin & Lichtenstein (2005) that opportunity recognition is key to value generation.

Pinchot (1985, p.263) controversially suggests that some employees may try to conceal what becomes an unjustified project in order to save face and the potential political outcome of a failure, implying that “successful risk-taking is inadequately rewarded and failure over-punished”. Depaul (2008) and Menzel et al (2006) both stress the huge extent to which self-esteem is diminished under these circumstances. Ultimately, in such an environment, the intrapreneur, true to his or her characteristics and goals in life will walk away and seek a workplace culture that is more conducive. Employees always have that choice, and Carrier (1994) proposes that such frustrations may cause today’s intrapreneurs to become tomorrow’s entrepreneurs by engaging in their own business ventures. Goffee & Jones (2007) suggest that whilst innovative activities are a gamble and may lead to setbacks, it is within the power of business leaders to help creative employees manage situations of failure. Darling, Gabriellson & Seristo (2007, p.16) propose that entrepreneurial leaders should have the courage to

allow for failures and in doing so create an environment of “safe/fail” rather than “fail/safe”.

Brennan & Brennan (1988, p.8-9) provide some thought-provoking insights from industry leaders on their perspective of innovation success and failure, for example, from 3M; “people don’t stumble unless they are in motion and as long as they are in motion you must allow them to fall” and, that at Johnson & Johnson the head of the new-products division (which had developed a costly new product that failed) was summoned to the Board to hear “I just want to congratulate you. Making mistakes means that you are making decisions and taking risks. And we won’t grow unless you take risks.” From Darling, Gabrielsson & Seristo (2007, p.12) we learn of the Southwest Airlines policy of “ready, fire, aim, because in our business if you don’t fire you’ll never get the chance to aim. We tell our people to go ahead and do something; we’ll perfect it later”. Pinchot (1985, p.226) adds that “at Hewlett Packard it is understood that when you try something you will sometimes fail”, and Wunderer (2001, p.193) presents further evidence of intrapreneurship in action in large corporations. At IBM “everyone behaves in an intrapreneurial, non-bureaucratic and productive manner“; At Siemens “we ask our employees to be "entrepreneurs" in their own affairs, to recognize the precise strengths and competitive advantages of their business, to believe in themselves and in success” ; at Ciba “we build on independence; we promote and reward intrapreneurial behaviour and the willingness to take a risk” and at UBS Swiss Bank Corporation; we think, decide, and behave in an intrapreneurial way.” Finally, from Goffee & Jones (2007, p.4) at Roche “globally today we spend \$4 billion on R&D every year. In research there aren’t economies of scale, there are economies of ideas”.



A further example of innovative resourcefulness exists at Unilever where managers are initiated into the “Unilever Club”. Personal relationships and informal contacts are considered to be of greater benefit than formal systems and structures (Prasad 1993). This is a very impressive intrapreneurial approach which is correspondingly espoused by Zahra (1993), who indicates that this tactic has been broadly overlooked in many innovation management models. This observation is furthered by Zahra, Nielsen & Bogner (1999) when they reflect upon the knowledge sharing possibilities through informal corporate entrepreneurship activities which may also go unrecognized.

The above companies are all what we might consider corporate giants who believe they have found a way to espouse and manage intrapreneurialism within their organizations, whereas in 1986, Morse concluded incorrectly, that large companies were highly bureaucratic rendering them incapable of creating the climate, culture and rewards necessary for innovation through intrapreneurship. The literature in subsequent years has demonstrated this is not the case.

#### **1.3.4. Background considerations**

Central to progressing the theoretical framework was gaining an understanding of the entrepreneur and intrapreneur and how they differ. Whilst the term entrepreneurship has a substantial history in every day usage, intrapreneurship does not. As such, a précis of these elements has already been provided and will be critically examined later at chapter 2 of the dissertation.

To aid our theoretical framework, we needed to acknowledge the background considerations relevant to our chosen field of study from three contextual perspectives; those of social psychology; strategic management and organizational or

workplace culture; all of which constitute the foundations of the literature that we rely upon to develop our research position. As such, before present our analysis of the literature we commence with an overview of these contributing factors.

### **1.3.5.Social psychology**

Within the framework of the science of psychology, social psychology is considered to be a reflection of how an individual's conscious awareness and behavioural patterns are influenced by their observations of how others perceive them, whether in a family, social or work setting. Such observations may be real or imaginary but lead the individual to behave and interact in a certain way in the presence of others, often determined by their interpretation of behavioural normalities and expectations. "What is important is the person's perception of systems, rather than what is generally said to be true" (Woodd 2000; p271). Social psychologists therefore aim to identify the factors driving these feelings and beliefs (Hall & Lindzey, 1957). Further literature contributions that incorporate the psychological perspective that span almost three decades are shown at table 3.

Table 4: Overview: The Psychological Perspective

Author(s)	Year	Contribution
Martiarena	2013	Intrapreneurial competencies and traits
Desouza	2011	Managing the intrapreneur
Shaw, O'Loughlin & McFadzean	2005	Intrapreneurial innovation roles
Dewett	2004	Employee creativity

(Continued)

Table 4(Continued): Overview: The Psychological Perspective

Author(s)	Year	Contribution
Amar	2004	Motivating knowledge workers to innovate
Antonicic & Hisrich	2003	The concept of intrapreneurship
Mitchell et al	2002	Entrepreneurial cognition
Wiley	1997	What motivates employees
Weaver	1988	Entrepreneurial cultures
Brenner & Brenner	1988	Intrapreneurship and compensation

The social psychology of the intrapreneur and the mind-set of intrapreneurship are highly relevant within this study. The relevance of basic personal characteristics and human behavior has been documented as central to innovative predisposition (Brenner & Brenner, 1988). Amar (2004, p.91) concurs, citing the “psychological driver” as playing a very significant role in “how motivation works in organizations”. Social psychology becomes therefore, a noteworthy factor in that it serves to recognise attributes of both entrepreneurs and intrapreneurs that are central to the research context.

### **1.3.6.Strategic Management**

Strategic Management labels the approach taken by senior management within an organization which underpins its business orientation (Van Doorn, Jansen, Van den Bosch & Volberda 2013). A strategic approach is multi-faceted, considering shareholder and stakeholder expectations. Typically, this will involve establishing the core vision, mission and objectives; market positioning and the environment; the service or product offering; the implementation of policies, processes and plans;

organizational resourcing and structure; financial and non-financial measurement and reporting systems used to evaluate the overall performance of the business and its progress towards pre-determined and agreed objectives. Mintzberg (1994) writes disparagingly in terms of what he views as “deliberate strategy” as opposed to “emergent strategy”, implying that a top-down process of strategic reviews, concepts and dissemination is flawed.

Strategic management will necessarily vary depending upon the size of an organization. Large organizations may adopt a very structured approach, due to the requirement to fulfil stakeholder expectations and espouse corporate governance. The SME can generally be more flexible with fewer reporting lines and the ability for the PDM and management to communicate their vision and expectations more directly with their workforce (Molina & Callahan, 2009). Gundogdu (2012) concurs aligning their size to a greater capacity for adaptation and responsiveness. Within the SME extant literature no single strategic managerial definition dominates so it remains a subjective and context-dependent process. Wunderer (2001; p202) proposes four dimensions and levels of structural leadership as conceptualised in figure 7 below.



Figure 6: Dimensions and levels of structural leadership

Source: Wunderer, R. (2001). Employees as "co-intrapreneurs" - a transformation

Concept. *Leadership & Organization Development Journal*, 22(5), 193–211.

Within this model, sixteen fields of leadership influence are identified as facets of strategic management whereas a common weakness is indicated to be that businesses view the company dynamics as the sole source of leadership influence. A summary model of the elements of strategic management will typically commence with strategic analysis, strategic choice and strategic implementation. Further literature contributions, again spanning almost three decades that incorporate this perspective can be found at table 5.

Table 5: Overview: Intrapreneurship and Strategic Management

Author(s)	Year	Contribution
Heinonen & Toivonen	2008	Measuring intrapreneurship
Kraus, Harms & Schwarz	2006	Strategic planning in small enterprises
Lindman	2002	Open and closed strategy
Entrialgo, Fernandez & Vasquez	2000	Characteristics of the SME entrepreneur
Russell	1999	Intrapreneurial systems
Amabile	1998	Sustaining creativity
Merz & Sauber	1995	Managerial activities in SMEs
Covin & Slevin	1989	Strategic management of small firms
Johnson & Scholes	1988	Exploring corporate strategy
MacMillan, Block & Narasimha	1986	The experiences of corporate venturing

An understanding of magnitude of the function of strategic management in the context of strategic orientation is important to this study in terms of the potential impact of the PDM leadership attributes upon intrapreneurial acceptance and opportunities within their business. Before turning to our research structure we provide an overview of the context of culture within the workplace as relevant to the research field.

### **1.3.7.Organizational/Workplace Culture**

The working environment is a vast subject matter that has been covered by countless academics and practitioners in innumerable contexts and frameworks that

are not deemed relevant to this study. Its importance within this dissertation has very specific boundaries as workplace culture that is the product of company leadership which provides a setting that fosters, or fails to foster intrapreneurial behaviors and innovative resourcefulness through the need satisfaction fulfilment of its employees. Ross (1987, p.23) reflects upon the difficulties organizations encounter by lacking the ability to adapt in terms of viewing employees as innovators through a preference for rigid structures and systems “for the purpose of minimizing and controlling risk and ensuring that organization members perform according to a plan of action”.

Painoli (2012), Desouza (2011), Amabile (1998) and Kanter (1983) amongst numerous authors are all prominent in extolling the value of employee empowerment in innovative freedom. Demott & Brynes (1985) highlight the success of such adoption in General Motors by reforming the corporate giant’s historical configuration into divisions that could stand alone in terms of product technology and innovation, without the constraints that existed in curbing financial and operational risk of intrapreneurial development of its employees in previous organizational structures. It is generally accepted that companies constitute physical, infrastructure, behavioural and cultural attributes as can be found from several contributing authors at table 6.

Table 6: Overview: Organizational/Workplace Culture

Author(s)	Year	Contribution
Marzban, Moghimi & Ramezan	2013	Effective factors in organizational entrepreneurship climate
Kantur and Iseri-Say	2013	Firm level entrepreneurship
Bhardwaj & Sushil	2012	Internal environment for corporate entrepreneurship
Srivastava & Agrawal	2010	Factors supporting corporate entrepreneurship
Rauch, Wiklund, Lumpkin & Frese	2009	Entrepreneurial orientation and business performance
Scheepers, Hough & Bloom	2008	Nurturing corporate entrepreneurship capabilities
Cardon	2008	Transferring entrepreneurial passion to employees
Humphreys, McAdam & Leckey	2005	Innovation implementation in SMEs
Zhao	2005	The synergy between entrepreneurship and innovation

Finally, Schein (1992), Senge (1990), Slevin & Covin (1990), and Glickman et al (2007) all write that culture might be the most desired organizational attribute to change, but is also the most difficult. Additionally, that the most important component in workplace culture is communication, through which the identity of leadership style is perceived (Heinonen & Toivonen 2008, Holmes, Schnurr & Marra 2007, Menzel et



al 2006 and Christensen, 2005). Menzel, Aaltio & Uljin (2007, p.733) assert that “even the physical working conditions should be supportive for intrapreneurship, because they can encourage as well as hinder it” citing increased levels of creativity can be derived from the architecture and physical dynamics of the office layout. Amabile (1998) concurs, naming physical space as an asset that is desired for creativity but often overlooked by company management. Culture, communication and the work environment are considered significant for intrapreneurship and are fully explored at chapter 2.

#### 1.4 Research structure

The research was guided by a critical analysis of the literature in the fields of managing innovation, innovation in SMEs, entrepreneurs and entrepreneurial leadership, intrapreneurs and intrapreneurship, seeking a gap in the existing bodies of work, which led to the researcher’s contribution to the field of extant knowledge. This was structured as depicted at figure 7.

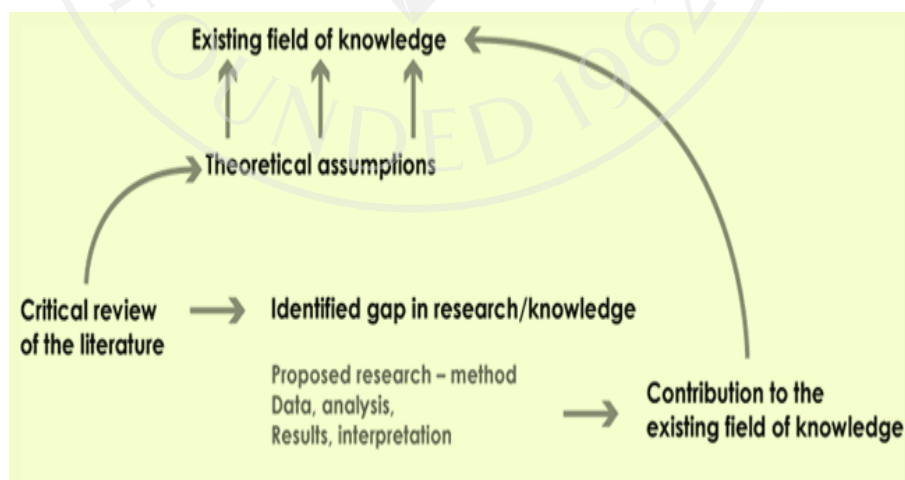


Figure 7: Research Structure

#### **1.4.1. The development of the Research Questions**

As stated within this dissertation title, this document serves to investigate the concept of Innovation Management, in the context of SME entrepreneurial leadership and the resultant outcomes specifically in terms of primary decision maker (PDM) strategic type and employee need satisfaction fulfilment and, the impact of both on the level of intrapreneurial opportunity that is likely to be achieved. The study confined to a specific perspective of the term “intrapreneur” in the context of the workplace setting as defined above, where the intrapreneur may or may not be encouraged in creativity and innovative thinking and actions. The background for our study was focussed towards a specific company size and the leadership attributes of a PDM who is actively involved in the business on a day-to-day basis (Todd, 2010; Govindarajan, 2006; Armstrong, 2000; Johnson & Scholes, 1988 & Hazel & Reid, 1973). Furthermore that the conception, growth, current and future strategy for the company have been determined, and will continue to be determined by a PDM who is characterized as an entrepreneur and has demonstrated significant “entrepreneurship” and “innovative spirit” (Wunderer, 2001; Brazeal & Herbert, 1999; Rogers 1995 & Stevenson & Jarillo, 1990).

The concept of entrepreneurship and innovative spirit are defined as enterprising individuals who have founded or are leading companies through personal risk, initiative and inventiveness (Hisrich & Kearney, 2012; Morris, Kuratko & Covin, 2008, Heinonen & Toivonen 2008; Christopoulos, 2006; Choi & Shepherd, 2004; Steiner 1998 & Stevenson & Jarillo, 1990). Additional contributions are individual pro-activeness (Miller & Friesen, 1982) and product and process innovators (Miller, 1983). Clargo & Tunstall (2011) stress the importance of

understanding entrepreneurship in order to facilitate leading entrepreneurially minded employees. It is evident that generating new business ventures is necessary for a buoyant economy and this is difficult to achieve within an entrepreneurial business culture where innovation and creativeness begins and ends with the PDM. Kuratko, Hornsby & Goldsby (2004, p.764) also propose that a greater understanding of entrepreneurship is necessary if its characteristics are to be extended to the whole work-force and we need to determine the factors required “to influence and encourage all organizational members to develop and sustain entrepreneurial activities”. A position shared by Kantur & Iseri-Say (2013). It is further suggested from a study conducted by van der Sijde, Veenker & During (2013, p.29) that there is a “significant difference between organizations in which the management shows an interest in intrapreneurship and those who do not”. More powerfully, that intrapreneurial opportunity is unlikely to be generated and sustained through financial resources made available for R&D, but that it requires propagation by the PDM. In return for this behavioral investment, Felicio, Rodrigues & Caldeirinha (2012, p.1729) submit that “intrapreneurship influences the performance of firms”, and furthermore, it contributes to “a deeper understanding of the importance of intrapreneurship in the context of entrepreneurship”. Finally, Antoncic & Hisrich (2003, p.8) propose that “the main contributions of the intrapreneurship sub-field have been in: raising awareness and understanding of the role of entrepreneurship in existing organizations for the revitalization and performance of those organizations, improving understanding of successful intrapreneurs and new corporate ventures in their context, and improving an understanding of entrepreneurial organizations. While a great deal

of understanding has been obtained in the past two decades, integrative efforts are still rare”.

#### **1.4.2 Research aims**

The research aims of this dissertation were to build upon what has already been explored and written about intrapreneurs as individuals, and to establish a common denominator in their success or failure dependent upon the impact of both the level of support for intrapreneurship vested by the entrepreneur primary decision maker (PDM) and the SME strategic type. As stated previously the research was in many respects an extension of an exploratory study conducted by Carrier (1997), supported by Bouchard & Basso (2011). Carrier’s work focused on a paucity of literature concerning intrapreneurship in small to medium size companies in that the emphasis had historically been directed towards large organizations. Of particular relevance to constructing the research questions for this investigative study were the factors influencing the attainment of the entrepreneur PDM corporate goals and intrapreneurship in his/her business. The exploration, having been carried out in 1996 dates the study as almost 20 years old and provides therefore a research opportunity for a renewed investigation in the field. A précis of the original investigation is presented below, but prior to that, a further contributing factor is evaluated; the findings of Bouchard & Basso (2011) who propose that there have been no further similar noteworthy research efforts in the ensuing years. For example, a sizeable study carried out by Rodriguez-Pomeda et al (2003) consisted of interviews with 50 intrapreneurs but their employers were all major Spanish corporations, therefore not SMEs and may be subject to some potential cultural differences to the UK business from a comparative perspective.

Bouchard & Basso's conceptual paper is significant to this dissertation in that it was written comparatively recently, and serves to review historical publications in the field of SMEs and intrapreneurship. They present the term "Entrepreneurial Orientation" (EO) to describe the SME business state which has the best fit for longevity. EO is defined quite generally by Rauch, Wiklund, Lumpkin & Frese (2009) and Wiklund & Shepherd (2003) as the way in which a company positions and organizes itself, and more distinctively by Bouchard & Basso in quoting Miller (1993, p.222) as a combination of innovativeness, pro-activeness and risk taking, a position shared by Scheepers Hough & Bloom (2008). As such, Bouchard & Basso consider the contextual factors for sustainable intrapreneurship as a potential survival strategy in difficult trading conditions or in a quest for growth. They submit that "a number of studies have brushed the subject but none have really explored the matter further", (p. 219), from which they assert that the "main available contribution is that of Carrier", (p. 224). The underlying purpose of their work was to discover, through the literature, any connection between intrapreneurship and EO, and propose that the basic question of the relationship between the two "has remained unasked and consequently unexplored". Furthermore, that "corporate entrepreneurship (or intrapreneurship) as an intra-firm process in SMEs has received little attention" (p.224). This is a further fundamental reason for a present-day study to be undertaken. In citing Carrier (1994) as the main contributor in the field Bouchard and Basso (2011, p.224) deduce from her work that: "Manager- owners of SMEs have a major impact on intrapreneurship, which they can readily encourage or inhibit depending on their assessment of the level of convergence of their employees' initiatives and their personal attitude towards their employees".

Next we looked to the work of Carrier (1997) to rationalize the development of the research questions as a restructured furtherance of her work. Carrier's study was conducted in Canada with a sample size of 5 SMEs, defined in this instance as fewer than 200 employees rather than the generally accepted definition of fewer than 250 employees. The methodology was an interpretative approach typified by conducting in-depth interviews with the five PDMs and five employees already designated and operational as intrapreneurs within the organization. In common with other published definitions, "intrapreneurialism" within Carrier's work is deemed to be generated in one of three ways; through an active strategy by the business PDM; through collaboration between the PDM and employee; through employee initiative and vision. The PDMs were classified as "defending and prospecting" with those identified as defenders being concerned with innovation that would improve their performance in existing markets and with existing products, as opposed to prospectors being driven by the desire to broaden their market and product offering. This is consistent with the definitions proposed by Miles & Snow (1978), Conant, Mokwa & Varadarajan (1990), Dyer & Song (1997) and Desarbo, Benedetto, Song & Sinha (2005) introduced earlier in this dissertation in providing a characterization of strategic orientations. Brown, Nasarwanji & Catulli (2010, p.15) suggest that firms can have either deliberate or emergent intrapreneurship strategies with the outcome that the "intrapreneur's strategic behavioral profile is as a direct result of the PDM's strategy whether deliberate or emergent."

The five case studies forming the basis of this previous research study were selected through a marketing campaign with the criteria that company size was less than 200 employees; it had been in existence for at least 10 years and that an

innovation could be demonstrated as being initiated and implemented by an employee. In contrast to our research study no specific industry sector or company profile was nominated. The resulting company activities were the manufacture of bicycles (70 employees); a “high technology” manufacturer (100 employees); the manufacture of massage baths (30 employees); the sale of office equipment and supplies (30 employees) and the manufacture of traditional wood furniture (53 employees). The type of innovations ranged from new technology, product differentiation, new management methods and production process improvement. All were focused on a business growth strategy but what is unclear is if performance was measured in terms of revenue, or other factors, and if so, whether that translated into increased profits. Equally unclear is that although growth expectations were the key driver for the entrepreneur PDM, whether such growth was critical for the company’s continuation and the degree of risk involved. For example, Carrier provides strong evidence that strengthening the company’s competitive standing is critical if the innovation is to meet with entrepreneurial support. This does not appear to allow for experimentation and ultimately, potential failure. The literature demonstrates that these considerations are fundamental to intrapreneurial inclination in the greater sense. Menzel, Aaltio & Uljin (2007) offer tolerances that range from zero to full sanction to describe a company’s responsiveness to innovation through risk.

In furthering the concepts introduced through Carrier’s work, and constructing some specific aspects of the research questions, an original study was undertaken, differing in the following pertinent and significant aspects:

Firstly, Carrier’s businesses were targeted using a market research campaign and the companies willing to participate were subsequently very diverse in nature.

This research investigation targeted a specific sector of SMEs who operated in a highly competitive technology-innovative discipline consistent with innovation being a critical success factor within their business metrics and, where innovation was seen as key to their growth and potentially their continuance.

Secondly, Carrier's selection criteria sought businesses within which intrapreneurship had already been adopted with corporate entrepreneurs identified and operational. This research investigation was extended to businesses regardless of the current status of intrapreneurial awareness and adoption. It was essentially viewing the entire workforce as prospective intrapreneurs. Whilst it is highly unlikely that every employee could be directly involved in the development and progression of innovation, they could contribute to innovation in the sense of incremental change and improvement in whatever role they had been employed to undertake. This is dependent upon how businesses and academics define innovation. We would suggest that it is not confined to fairly sizeable initiatives on a relatively infrequent basis but also embraces minor operational modifications on a recurrent basis for example, weekly or monthly that improve the operational efficiency of the business and add value through innovative thinking.

Thirdly, Carrier's methodology was confined to an interview process with the PDM and the nominated corporate entrepreneur. The methodology applied in this research study sought every employee's perspective to examine their assessment of the working environment as potentially creating intrapreneurial opportunities along with an evaluation of the leadership characteristics of the entrepreneur PDM. To summarize, an analysis of the work of Carrier (1997) and Bouchard & Basso (2011) provided a reference point for continued research in the field of entrepreneurial



leadership and intrapreneurial opportunity particularly when the age of the study and lack of investigations in subsequent years postulated an evident gap within this domain.

The rationale behind the research questions can therefore be addressed through research gaps evident from previously published material. Firstly it is noted that entrepreneurial leadership has a direct impact, either positive or negative, on intrapreneurial initiatives (amongst many contributing authors Sijde, Veenker & During, 2013; Bystead, 2013; Darling, Gabrielsson & Seristo, 2007; Suomala & Jokioinen, 2003; & Amabile, 1998).

Secondly other studies have judged that a positive intrapreneurial climate is likely to lead to business growth, and therefore, successfully contribute to the survival of the company through continued opportunity for creative activities (Pinchot, 1985; Poutziouris, 2003; Jones-Evans, 1995; Cardon, 2008; Collison & Parcell, 2001; Churchill & Lewis, 1993; & O’Gorman, 2001). Such a climate and culture are created through the strategic orientation adopted by the entrepreneur PDM (Miles & Snow, 1978; Conant, Mokwa & Varadarajan, 1990; Dyer & Song, 1997; Desarbo, Benedetto, Song & Sinha, 2005; & Brown, Nasarwanji & Catulli, 2010).

Thirdly, whilst there is some documented evidence of studies that have reviewed entrepreneurial leadership attitudes that impact upon intrapreneurial opportunity in SMEs, most are focused towards business objectives rather than their managerial approach (McMillan, 2010; Irwin & Scott, 2010; Barringer, Jones & Neubaum, 2005; & Bates, 1990).

Finally, there is scant evidence that other studies of this type have been conducted within UK technology-innovative SMEs. This is an important sector for the

British economy comprising thousands of businesses that are actively contesting the technology of yesterday and providing innovative solutions to the technology challenges of tomorrow. Furthermore, the debate over the value of intrapreneurship within SMEs as opposed to corporations remains unresolved within the extant literature. Brown, Nasarwanji & Catulli (2010) Dobbs & Hamilton (2007), Sauser (2001) and Brenner & Brenner (1988) are just an illustration of the many contributing authors on this topic.

It is the above arguments that led the author to the following research questions which aim to investigate the relationship between entrepreneurial leadership and the resulting outcome in terms of innovative initiative opportunities from individuals operating at employee level. This is corroborated within the literature analysis section of the dissertation at chapter 2.

RQ1: To what extent does the level of entrepreneurial PDM support for innovation influence levels of employee organizational boundaries, work discretion and time availability within UK technology-innovative SMEs?

RQ2: To what extent does the level of employee organizational boundaries, work discretion and time availability influence levels of intrapreneurial opportunity within UK technology-innovative SMEs?

RQ3: To what extent does the SME strategic type of the entrepreneur PDM led UK technology-innovative business impact upon intrapreneurial opportunity levels?

Within the research questions, the word choice “opportunity” is considered with the significance offered by the earliest known writing on Intrapreneurship from Pinchot & Pinchot (1978, p.152)

“The greatest opportunity in the world today is the opportunity to help form the social inventions which will allow people to lead lives which more fully express their potential. People have enormous potential for goodness, for insight, for creativity, for intimacy, and for work. Much of this potential is trapped within the constraints of today’s huge hierarchical organizations. The development of the entrepreneur is a step toward freeing individuals, our organizations, and our society to use our potential for building fuller, more meaningful, richer and more productive lives for us all”. Furthermore, from Lumpkin & Lichtenstein (2005, p.457) that “opportunity recognition is one of the central ideas of entrepreneurship”.

The next chapter of this dissertation serves to impart and consolidate the body of extant literature introduced within the theoretical framework for the research study. It also serves to continue and expand upon the themes briefly introduced for familiarization purposes within the introduction. As such, we now submit an in-depth evaluation of the relevant theories. In respect of SMEs we turn to their distinctive size and growth challenges and how those factors may impact upon entrepreneurial leadership and ultimately a propensity, or not, for intrapreneurial opportunities to exist. In respect of the intrapreneur, we specifically focus upon their positioning in the SME context, and the impact of their individualistic work style and demands.

## CHAPTER 2

### CRITICAL ANALYSIS OF THE LITERATURE

#### 2.1 Introduction

Within the current body of literature there is a theme that “innovation” can refer solely to the result of the innovation process and “innovation management” to the leadership activities that attempt to control the innovation process. Crossan & Apaydin (2010, p. 1168) raise an important distinguishing point, “process as a form of innovation outcome should not be confused with innovation viewed as a process”. The proposition of the degrees of primary decision maker (PDM) control and intervention within the innovation process is fundamental in identifying certain restrictions that may disadvantage intrapreneurship. Defining and evaluating literature exploring the concept of innovation, the innovation process and innovation management are a necessary preface within this analysis of the literature as they create the necessary boundaries within which the research is positioned.

Cumming (1998, p. 21) details the findings of a research study showing six perceived definitions considered to explain “innovation”; the introduction of a new idea 36%; a new idea 16%; the introduction of an invention 14%; an idea different from existing ideas 14%; the introduction of an idea disrupting prevailing behavior 11%, and an invention 9%. Wonglimpiyarat (2004) submits that the act of starting a new business can also be a definition of innovation and Dobni (2008), suggests it can be summarized by creativity and change. McAdam & McClelland (2002, p.87) offer an interesting classification to distinguish creativity from innovation, proposing that creativity is the synthesis of new ideas, innovation being the result of creativity. Salavou (2004) and Johne (1999) distinguish innovation in three categories: product

innovation, process innovation, and market innovation. Product innovation provides the most obvious means for generating revenues. Process innovation provides the means for safeguarding and improving quality and for saving costs. Market innovation is directly concerned with improving the mix of target markets and how chosen markets are best served. Drucker (1994) is cited by many authors for the controversially bold statement that because a business' survival is contingent upon its purpose to generate and retain customers, the business has only two meaningful revenue-generating operational functions, those of marketing and innovation; all other business occupations and activities can be considered costs. Within the body of literature this statement causes a great deal of reflection and disputed views as to its current relevance, in part, or as a whole.

A substantial amount of the literature refers to the risk(s) associated with innovative activities citing ubiquitous corporate giants who have the ability to absorb risk with relatively immaterial consequences. Temporal & Alder (1998) and Handy (1994) for example focus their observations primarily on well-established corporate giants who tend to have permanent financial reserves available for innovative progression. This is not the case for the entrepreneur PDM managed SME which becomes an important factor for exploration.

The following review of published works will, therefore, commence by setting the scene through the context of business growth through innovation within the UK. Following this, we turn to the constraining factors within, or encountered by small businesses which will ultimately impact upon their strategic type and the decisions required of the PDM. Next, we introduce the theories of entrepreneurship and entrepreneurial leadership, embracing leadership qualities, an assessment of business

leaders in an entrepreneurial context and their motivational antecedents. This is followed by an evaluation of intrapreneurs, intrapreneurship and the influencing components that constitute success or failure for this business concept. Finally, having reflected upon the approaches that are likely to impact upon intrapreneurship from a leadership and strategic perspective we look to the issues that would generate intrapreneurial opportunities for motivated employees within the SME setting. This substantive investigation of the extant literature will lead to the development of the research hypotheses culminating in the construction of the conceptual model.

## **2.2 Research context; business growth through innovation**

Research and Design (R&D), is inextricably linked with innovation (Zhao, 2005) and its status in the UK is an important aspect within this research dissertation. The collaborating companies will necessarily involve businesses that are entrepreneurial in their origins and outlook, and, innovation will have been critical to their growth and competitive advantage. Suomala & Jokioinen (2003, p. 213) assert that “R&D can be seen as an activity that is expected to improve a company’s competitive advantage and future success in terms, for example of profitability and market share”. Chiesa et al (2009, p. 46) provide other objectives for consideration; improving the performance of product development activities; stimulating organizational learning; motivating innovative-thinking employees, creating new career paths and, significantly “ foresee the outcomes of research projects and reduce their inherent risk”.

There are generally two schools of thought within the literature relating to R&D and company size. Firstly, big firms have an advantage over SMEs in terms of financial capabilities, greater managerial capability, efficiency and economies of scale

(Wang, Wang & Horng, 2010) Secondly, big firms are in fact disadvantaged as innovation is hampered by bureaucracy, control and tiers of management intervention that are not conducive to innovative activities. Ates, Garengo, Cocca & Bititci (2013) quite pointedly suggest that entrepreneurs may consider planning activities as akin to “bureaucratization” and would therefore become an impediment to a necessary agility for SMEs, whilst Antoncic & Hisrich (2004, p. 526) suggest that formal controls “can be strongly conducive to corporate entrepreneurship”(intrapreneurship). Morse (1986); Ross (1987) and Arias-Aranda et al (2001, p. 134) conclude that “there is no common agreement on this topic”, in terms of firm size, headcount and service delivery. A further consideration of “fit” is proposed by Cottam, Ensor & Band (2001, p. 88) They cite studies that demonstrate a significant worth is attributed to R&D activities within many British companies who are unsure of the fit from a business strategy and operational perspective. This alone can be enough to allow focus to be driven towards the everyday business pressures and away from new initiatives.

The UK Government’s Science and innovation investment framework for 2004 to 2014 was built on the premise that investment in business R&D, whether funded privately or by government subsidies would generate significant returns, stating that “a review of the literature reports that estimates of the private return to R&D cluster around 10-15 per cent, although they can be as high as 30 per cent”. Furthermore that “when one takes into account that benefits from the R&D also accrue to other firms or industries, then rates of return can reach 100 per cent” (p. 53). They document that the greatest contribution is made within the science, engineering and technology sectors in terms of economic growth and resource development, quoting that collectively, in 2002, these industries generated £252

billion of value added and accounted for 27 per cent of UK gross domestic product at current (2011) prices (p. 55) In terms of technological intensity within the manufacturing sector, 65% pertains to high-technology companies, 35% to medium-high technology companies and 10% to medium low/low technology companies (Hughes & Mina, 2008, p. 28)

The UK Office for National Statistics (ONS; p. 2) provides year-on-year comparisons of R&D growth with cross-sectional analysis of its constituents. It is proposed that R&D falls into several categories and is not solely the domain of “high-tech firms that are on the cutting edge of new technology”; its primary function can be to develop new products, new services or new processes through enabling the discovery and creation of new knowledge. Suomala & Jokioinen (2003, p.214) submit that the process can be illustrated by a series of questions. Is it possible? Can we do it? Is it practical? Is it desirable? How do we do it?

A further interpretation from Wonglimpiyarat (2004, p.231) draws on the work of Utterback and Abernathy (1975) The “innovation life cycle model”, presents “the concept of innovation in terms of a process of commercialization”. Thus, product innovation declines in favour of process innovation as shown at figure 8.



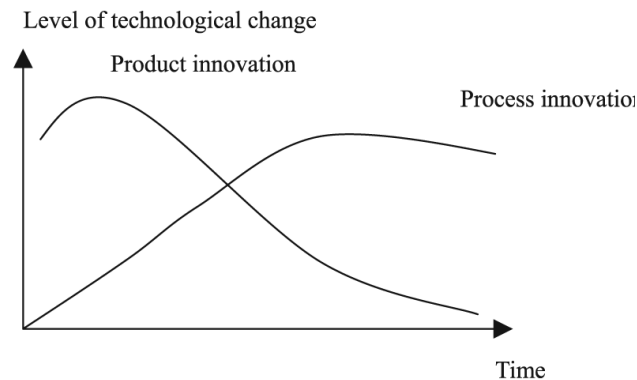


Figure 8 : The innovation life cycle model

Source: Wonglimpiyarat, J, (2004). The use of strategies in managing technological innovation, *European Journal of Innovation Management*, 7(3), 229-250.

These findings are highly debatable today as the desire and necessity for product development and enhancement has advanced immeasurably over the decades since this theory was constructed. Specifically, in terms of customer expectations, the competitive advantage sought through technology innovation, and the perceived importance of being “first to market”, or from Malewicki & Sivakumar (2004) a “first-mover” and from Forsman & Rantanen (2011), adopting a “quick mover” strategy. Furthermore, that companies focusing on product enhancement rather than new products may perceive that they are gaining and retaining loyalty from their existing revenue streams but may ultimately be usurped, and their market disrupted by the introduction of entrepreneurial innovation which is considered to be novel (Dew, Sarasvathy, Read & Wiltbank, 2008) Within the automotive industry, for example, “new” has been dispensed in favour of “unique”; such are the challenges of competitive advantage within a sector with an ever increasing demand for distinctive products, delivered in a shorter R&D phase time-span, with a reduced cost factor (Kohn, 2006)

Griffith (2000, p.5) adds a further dimension of innovation imitation in the role of R&D, stressing that this element is often considered to be relatively immaterial in terms of financial outlay. He asserts that there can be a significant cost to imitation that should not be overlooked; “knowledge is tacit in nature: it takes time and effort to explain new ideas to others and to codify inventions in manuals and textbooks”. The expense associated with innovation imitation will not however be as great as that of innovative invention or product/service originality and can prove expedient for countries that are less technologically advanced, with fewer financial and human resources to deliver R&D concepts. Mansfield, Schwartz & Wagner (1981) caution that given the relative cost reduction by adopting imitation methods, some may venture that there is little incentive for primary R&D innovation creating an adverse impact on the future of innovative aspirations.

A greater understanding of how companies position innovation within their business strategy, and their innovation process can be gained by reviewing the concept in terms of research and design (typically closed innovation) and, an alternative approach, “open innovation”. Furthermore, it is helpful to recognize the historical and current status of innovation activities from a multi-faceted measurement perspective (Verbano & Nosella, 2010; Suomala & Jokioinen, 2003; Griffin & Page, 1996) This can be defined in terms of their success or failure financially, technically, competitively, customer demand or whether they have created value. Menzel et al (2006, p.13) concur, specifically when considering innovation in technology-innovative firms. They posit that many engineering businesses, which are highly likely to be owned/managed by engineers, are “too technically driven” resulting in a lack of market and consumer awareness. It seems likely that such failure of vision will

cause the decline of companies striving to be innovative but focusing on substantial inventiveness or incremental engineering within their existing product range rather than listening to their market. Furthermore, this lack of vision can extend to continuing to pursue previously unsuccessful strategies in product development, aiming to avoid the cost and uncertainty of new product cultivation.

The case of Rolls-Royce provides a very relevant example of a UK highly technical engineering company with a history of ground-breaking innovative initiatives including the first air cooled turbine blades, turbo fan engines and the vertical take-off engine, but, they were totally driven by engineering excellence and prone to lose sight of the realism of such engineering feats. When they found themselves sole supplier for the engine contract for Lockheed's Tristar, it soon became apparent that their over-engineered product would be totally uneconomical in terms of manufacture and implementation. In summary, dedicated, enthusiastic engineers (including virtually all of the company's senior executives) were passionately focussed on invention at the cost of operational and financial reality.

Whilst R&D has traditionally been considered to be an "in-house" activity the emergence of "open innovation" (Chesbrough, 2003) has in more recent years brought about a transformation of progressive innovative endeavors challenging previous policies and principles for example, the inherent fear of sharing knowledge and ideas with competitors, or in collaboration with professional bodies or universities (Wonglimpiyarat, 2004), or in internationalization of a SME (Fink & Kraus, 2007). This has become known as the "Not Sold Here Syndrome" (Muller, Hutchins & Pinto, 2012), the basis of which is that "organizations are concerned to give away ideas or innovations which could be valuable for someone else, because if the company is not

able to generate money then no one should, especially not competitors” Schroll & Mild (2011, p. 489) and Rufat-Latre, Muller & Jones (2010) cite many internal prejudices that engender this mind set within business leaders, ranging from a resistance to change, to a disruption of their historical incentive structures and rewards. Pasanen & Laukkanen (2006); Wang, Wang & Horng (2010) and Gundogdu (2012) extend this to the units of individuals working for an entrepreneur PDM, implying that even at an internal level there is a reluctance to see the value of team or partner input. This ranges from a disinclination to have to reach agreement or conflict on financial and resource considerations, to feeling threatened by their leadership being diluted. It is frequently the fear of the unknown that causes many firms to continue to be led and managed by a solo entrepreneur PDM. In addition, there remains a great intolerance for both knowledge sharing and resource sharing further compounding any acceptability of external collaboration (Bogers, 2011) Wang, Wang & Horng (2010) are critical of this stance, frequently observed in SMEs, as it discounts the value of organizational learning in respect of augmenting product or process innovation through actively seeking knowledge, which is applicable to their service or product offering, from external sources. Brown, Nasarwanji & Catulli (2010) advocate a combination of two solutions; firstly the business PDM needs to be entirely convinced that he/she is now operating in a market which has changed dynamically; secondly, for the business to remain sustainable it will require a shift to an enterprise-driven entity that is prepared to engage in collaborations.

A case study of 13 practitioner entrepreneurs conducted by Zimmerman (2009) demonstrated that a reluctance to utilize external collaboration is not always the case, with his participants proposing universities as vital for product and service

opportunities through developing technologies that were difficult to undertake without external participation.

Porter's infamous "five forces model", published in 1979, has since been generally determined as unhelpful as it has a substantial bias for competitive strategies rather than collaborative strategies, the former being unsustainable within the growth cycle of many companies, specifically highly technology-innovative enterprises wherein operational and financial constraints are very significant and product development can only be achieved through external support mechanisms. Apple and IBM can be considered as indicative of companies who overlooked collaboration in favour of competitiveness in their early years; Apple in respect of failing to utilize other PC manufacturers' market distribution channels; IBM in that its operating platform was not compatible with other brand personal computers. The management of both firms were accused by Ahmed (1998, p.213) as focusing heavily on the next new product/brand and failing to see the importance of directing their energy towards creating a culture of innovation, and a climate for intrapreneurship which would have resulted in perpetual innovative efforts throughout the workforce. Subsequently IBM were found to adopt a more collaborative approach, including the introduction of internal "Independent Business Units" run by "an independent entrepreneur" or what could also be viewed as a method of intrapreneurship. Szerb (2003) adds that in order for business units to be successful, the intrapreneur must be granted freedom and independence if it is to remain true to its definition and purpose. A view shared by Menzel, Aaltio & Uljin (2007) but considered to be less attainable in large companies where the corporate culture may simply not be able to provide the necessary flexibility.

There are several potential positives to be gained from external collaboration within open innovation, known as “distributed co-creation”. Not only are businesses actively innovating on a shared risk and reward basis but are encouraging customers to be an integral part of the future product or service proposition (Bughin, Chui & Johnson 2008) and Florida & Goodnight (2005) cite the company SAS, a global business analytics software and service provider, as an exemplary example of creativity and innovation through customer collaboration by positively and consistently seeking consumer feedback and involving them directly in the research and design process. As a result, customer loyalty is exceptionally high, allowing the business to divert money that might ordinarily be spent on advertising and marketing to research and design. Their annual research budget is 26% compared to a high-tech industry average of 10%. Risk versus reward in this context is not confined solely to initial financial losses/gains but can be broadened to include “three key components: technical success, commercial or market success and economic success” (Verbano & Nosella, 2010, p. 365)

Muller, Hutchins & Pinto (2012, p.41) summarize the perceived usage and benefits of open innovation from idea generation through to realization as documented at figure 9.

## Exhibit Where to aim open innovation

	Idea-generation	Idea-development	Commercialization
You need to	Ideas arise from a	A large proportion of	Commercialization
consider open	very limited	innovations are	costs often exceed
innovation if . . .	number of novel	abandoned	forecasts
	insights	New innovations	Commercialization
	Ideas come only	fail to attain	takes too long and
	from a small	sustainable	often misses the
	number of	competitive	market window

Figure 9 : Where to aim open innovation

Source: Muller, A, Hutchins, N., & Pinto, M, C. (2012). Applying open innovation where your company needs it most. *Strategy & Leadership*, 40(2), 35-42.

Menzel et al (2006, p.17) provide a thought-provoking summary of what they believe open innovation means; “it is about the coexistence of internal and external factors and sources of innovation along the whole value chain: funding of innovation, idea generation, sourcing and sharing of knowledge, joint development, marketing and distribution”.

The following sub-sections set out the characteristics of R&D innovation in the UK, providing a more detailed analysis of spend, regionalism and construction in terms of industry and manpower resourcing. No comparative data is available for open innovation.

### 2.2.1 R&D innovation in the UK

When this research study commenced in 2011, total business R&D expenditure in the UK, in cash terms, is estimated to have increased by 8% to £17.4 billion, from 2010. This compares to £11.5 billion in 2000 and £5 billion in 1985. In real terms, R&D expenditure between 2010 and 2011 equated to 6%. In this context, a cash term is defined as current; a real term is defined as constant. Constant spend estimates have been adjusted for inflation between years allowing the volume of R&D expenditures to be examined more consistently over time.

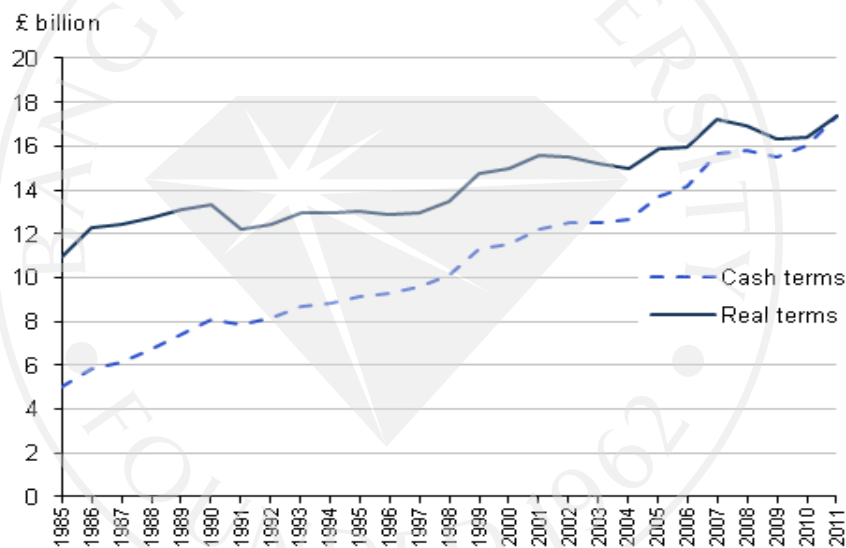


Figure 10 : R&D expenditure by businesses in the UK 1985 – 2011

The pharmaceutical industry accounted for 28% of the total expenditure for R&D performed in UK businesses in 2011, equating to £4.9 billion. The ONS published a further five significant contributors as computer programming and information service activities, motor vehicles and parts, aerospace, telecommunications, and machinery and equipment. These six product groups accounted for 67% of the total UK business R&D expenditure. The greatest increases found in expenditure by product group are attributed as 23% automotive (£288m);



19% information technology (£293m) and 4% pharmaceuticals (£169m). When this is regionalized across the country, two regions, the South East and East of England make the greatest contribution to R&D spend in the UK, accounting for 47% of business R&D expenditure in 2011 (p.10)

The ONS estimates resources employed in R&D by combining the hours of part-time employees into a full-time equivalent (FTE) role to provide a more accurate indication of total labor input than a basic headcount. They estimate that the number of FTE staff employed on R&D increased by 4,000 to 158,000 between 2010 and 2011. The number of scientists and engineers increased from 87,000 to 89,000 and accounted for 56% of all staff employed on R&D in UK businesses. The number of technicians increased by 2,000 to 43,000, while administrative staff numbers remained the same at 27,000 in 2011 (p. 8) Scientists and engineers are defined as being engaged in the conception or creation of new knowledge, products, methods and systems. Technicians, laboratory assistants and designers are defined as performing scientific and technical tasks normally under the supervision of a scientist/engineer. Then we have support staff participating in R&D projects and include skilled and unskilled labor, secretarial and clerical administration. Following the trend for R&D spend, UK R&D employee resources are populated with 43% based in businesses in the South East and East of England.

The definition of SMEs used by the ONS is that published by the European Commission Recommendation (96/280/EC) of 3 April 1996, in which SMEs are defined as enterprises with fewer than 250 employees. In addition, that within their statistical analysis, “a criterion of independence is used to exclude enterprises that are part of a larger enterprise group, so that only true SMEs are evaluated” (p.17) This

provides for the exclusion of small businesses which are in reality part of a large or multi-national organization and are therefore not expressly representative of a business that meets the SME criteria. Hughes & Mina (2012, p.30) emphasize the importance of making this distinction in proposing that “the vast majority of SME R&D is carried out by the subsidiaries of UK and overseas firms and not by independent SMEs”. In reality they only provide approximately 3.5% of total UK R&D spend.

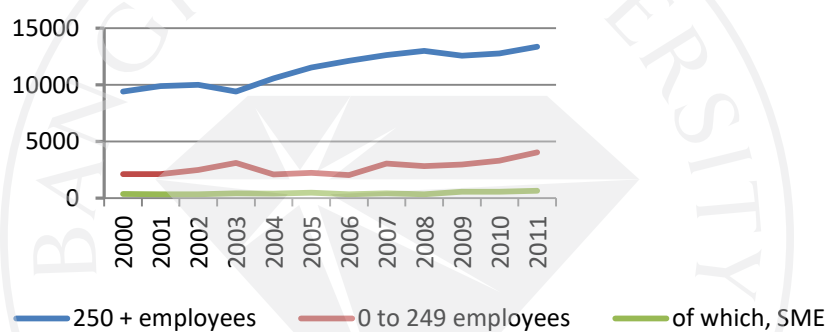


Figure 11: UK Business R&D Spend

The ONS findings illustrate that out of the total R&D spend of £17.4 billion in UK businesses in 2011, £13.3 billion had greater than 250 employees, £4 billion had fewer than 250 employees but were not SMEs as defined above, and £6 million was contributed by SMEs. In the case of SMEs, this is an increase of 82% over the period since 2000 but remains a very small consideration, the factors for which are cited by Heimonen (2012) as not having been fully addressed within the current body of literature. This academic work specifically emphasizes the essential role that public funding for R&D activity plays within SMEs demonstrating it to be very significant statistically in generating and sustaining innovation by substantially

reducing funding constraint issues and the management time and expertise involved in this function of the business. Further research conducted by Woodcock, Mosey & Wood (2000, p.216) highlighted a very fragmented approach to creativity in regard to process within six British SMEs studied, all citing a lack of time as the main barrier to better structured innovation, although several new product opportunities were identified for progression showing some inclination towards a strategy for growth through new idea generation

Table 7: New product development in British SMEs - Products

Table II New product details of six UK SMEs

	Products launched	Products planned			
Housing	9 Derivatives	6 Derivatives	Building materials	High	
Machinery	1 New <sup>a</sup> ;	1 New;	oftware controlled	Very low	New function
Electrical	1 New;	1 New;	Complex electronic	Medium	New functions;
Electrical	5 Derivatives	1 New;	Complex electronic	Medium	New functions;
Electrical	2 Derivatives	2 Derivatives	Complex electronic	Medium	
Industrial	0	1 New;	Industrial	Medium	New function

Notes: <sup>a</sup>In this table a product is defined as new if it is targeted into a market segment not currently served by the company and it offers functionality not offered by current products

Source: Woodcock, D. J., Mosey, S. P., & Wood, T. B. W. (2000), New product

development in British SMEs. *European Journal of Innovation Management*, 3(4), 212 – 221.

Interestingly, some PDMs felt their intuition alone was key and satisfactory in measuring new product development progress, often leading to an “over-optimistic view of their own performance”, (Woodcock, Mosey & Wood, 2000, p.221) The

impact of such shortcomings on the employees' perception of R&D is not discussed, but can only be concluded as unconstructive. Kraus, Harms & Schwarz (2006, p.335) found a similar trend in strategic planning in SMEs, with 70% stating they planned between one and three years ahead, and 92% reporting planning more than 3 years ahead. However, it is acknowledged that in smaller enterprises this activity "is rarely supported by planning instruments since most of the respondents reported they planned intuitively" although, markedly, their research could not support a theory that the absence of strategic planning instruments was detrimental to business performance. Likewise, Ates, Garengo, Cocca & Bitici (2013, p.36) cite SMEs as commonly paying scant attention to long-term planning in favour of internal issues and short-term goals, known as "internal orientation" versus "external orientation". Additionally, that management tools for strategy building are frequently deemed unnecessary, with technical excellence cited as the perceived key driver for competitive success. Depending on the degree of preoccupation with the here and now, the writings above suggest short-sightedness, or crisis management, or both.

Gundogdu (2012, p.297) refers to SMEs as "the potential stars" of the growing world economy, due primarily to their nimbleness when faced with ever-changing customer demands and external environmental advance. Moreover, that the success of SMEs is a critical factor in addressing economic downturn which has become a global problem over the last decade. Ates, Garengo, Cocca & Bitici (2013) similarly refer to such flexibility as a positive characteristic of the SME in respect of their ability to embrace change.

Scozzi, Garavelli & Crowson (2005, pp.124-125) state previous studies have shown that "SMEs contributed to the main innovations of the twentieth century".

They argue however, that there are so many prospective barriers to innovation success in SMEs that many businesses fail to adopt any innovative practices. They cite “lack of financial resources, inadequacy of management and marketing, lack of skilled workers, weakness in external information and linkages and difficulty in coping with government regulations” as some of the factors that limit their capabilities and ultimately competitiveness. But, from a financial perspective Sijde, Veenker & During (2013) purport that additional spend on R&D activities does not impact upon intrapreneurial behavior even though it provides enhanced working conditions and in theory a more conducive environment; it is the view and behavior of management that is important. We will discuss later in the dissertation the successful motivators for intrapreneurship and the balance between those that are intrinsic or extrinsic.

A further consideration is the ability of PDMs to evolve from “performance measurement” to “performance management”, (Ates, Garengo, Cocca & Bitici, 2013, p.29) thereby translating current reported results into future actions through strategic goal-setting and developing a vision for the company’s future and the objectives that will achieve it. Their model for SME managerial practice is shown at appendix 2. To counter the inherent lack of internal skills and resources, Lindman (2002, p.230) posits that inter-firm cooperation is crucial for many SMEs. This furthers the proposition argued above that open innovation is likely to be a fundamentally more sound strategy than closed innovation for small business growth and progression, not measured solely by revenue or profits generated, but by the adoption of the necessary internal processes and measurement systems.

### 2.2.2 SME size and demographic considerations

To enable the researcher to understand further potential issues for the collaborating SMEs within this research study, it became necessary to reflect upon the demographic challenges faced. This was specifically relevant to an expressed desire for growth by all the PDMs interviewed and their perceived barriers to achieving their goals.

One of the most commonly cited unique external barriers to SME growth is finance, which is commonly categorized into three types; personal investment from the PDM, family or associates; private external finance from banks, leasing or hired-purchase companies, and public investment from enterprise grants, subsidized loans or public equity finance (Rouse & Jayawarna, 2006, p.390 and Hashi & Krasniqi, 2011, p.462) Of material interest at the time, Simpson, Padmore & Newman (2012, p. 272) identified cash flow issues as being responsible for the failure of six out of ten SMEs during 1998, The ability or inability to borrow funds as a barrier to SME growth has many different connotations throughout the literature from previous research studies causing Pickernell et al (2011, p.188), to propose an alternative strategy to relieve the constraints of external borrowings through public procurement. “Governments can assist SMEs; simultaneously reducing the need for direct financial support and improving the delivery of government services”. Hashi & Krasniqi (2011) expand on the financial barriers to SME growth to include the country’s economic status, which will necessarily affect the inclination of banks to lend to small businesses, consumer demand for new products and factors such as market pricing stability. Hunter & Kazakoff (2012) add that for family succession within the SME the implications of funding at all stages of the business’s development are heightened

and, from Watson (2003) that a discontinuance of ownership can be a significant factor for SME failure.

Further issues arise through a lack of tangible assets or the geographic location of the business (Lu & Beamish, 2001) By strategically positioning the company within similar businesses, social networking and knowledge sharing becomes much more accessible and is often desired amongst competitors. Additionally, it provides practical implications for specialist suppliers to be in close proximity to their customers and the potential for economies of scale in purchasing and resourcing (Barringer & Greening, 1998 and Reynolds, 1997) Demographic considerations, specifically company age and size are well documented within the literature as important in growth strategy (Simpson, Padmore & Newman, 2012; Hunter & Kazakoff, 2012; Hashi & Krasniqi, 2011; Delmar, Davidsson & Gartner, 2003; Fink & Kraus, 2007 and Gibb & Davies, 1990) but what remains confused is the measurement of growth. Within some studies it is reflected by financial turnover, in others by sales volumes, increased head-count, profits, return on capital employed, net worth or market share. It becomes evident from the extant literature that the entrepreneur-led business will, initially, be most inclined to acknowledge growth purely in terms of sales revenue which accords with the accepted business principle that until you make a sale, you cannot make a profit from the product or service, therefore, the margin becomes a secondary consideration. Interestingly Kraus, Harms & Schwarz (2006, p.341) add a further subjective dimension, which is powerful, “the personal satisfaction of the owner”. This may take many forms, including, as proposed by Pinchot (1985) company growth in terms of the legacy of the entrepreneur PDM to future generations of his/her family, a position shared by

Poutziouris (2003) who similarly includes the enabling of the PDM to create job opportunities for family members. Additionally, we can identify that over a third of the entrepreneurs contacted in the 2001 study by Pickernell felt it important to be able to pass a business, or shares in the business to their children.

Whilst being born into a family SME can be considered to develop entrepreneurialism there are two schools of thought as to its outcome. The first is concerned with the levels of support, encouragement, shared values and familiarity as a positive attribute contributing to heightened entrepreneurial inclination and greater business growth success. The second views this environment as potentially restrictive and capable of having an adverse effect on expansion (Kansikas, Laakkonen, Sarpo, & Kontinen, 2012, p.144) This may occur when values and progression expectations become disconnected, innovation is stifled due to previous unsuccessful attempts, and conflicts arise over the influence of individuals and their positions and roles within the business. Additionally, that “family politics can contradict economic reality”, (Poutziouris, 2003, p.189) All of these factors are potentially negative for business growth with many individuals opting to retain the status quo rather than create divisions or friction within their own families. Again, personal values and business ethos become paramount considerations in the strategy decisions reached. From a positive perspective, Hunter & Kazakoff (2012, p.109) posit that within the small family business a “strong sense of identity is created” leading to a greater commitment to each other and the business leading to promotion opportunities within this positive work environment.

Gibrat’s Law, which has been substantially debated throughout the eight decades since it was published, “constitutes the hypothesis that firms (within an



industry) draw growth rates from a distribution that is the same for all firms regardless of their current size or previous size history” (Petrunia, 2008, p.201) confirming other contributions within the literature that company size and expansion are independent variables (Lucas, 1978) Accordingly, “life-cycle” theories have been developed to “identify relationships between the age of firm and its innovation activity and growth characteristics” (Heimonen, 2012, p.123) They extend to companies of all sizes, and contain hypotheses varying from management control driving corporate growth maximization to a singular specific measurement of profit maximization (Mueller, 1972).

Brown, Nasarwanji & Catulli (2010, p.7) offer a business change cycle model for a typical SME, starting from the position of a prospector strategy and transitioning in two ways; either conservatively by defending its current market place or reacting to changes in the marketplace, or actively, by taking a more aggressive stand, continually searching for new opportunities and ways of challenging the status quo. The choice of strategy adopted may well be contingent upon the motivation of its PDM. Poutziouris (2003, p.201) generalized this to four major groups as a result of a research study of 922 small firms in the UK. He concluded that the growth oriented firms were likely to be younger, smaller and not family controlled; the survival oriented firms were likely to be older, more established, often family owned; the exit oriented firms were likely to be sizeable, established, operating in manufacturing and services; the control operated firms were likely to be smaller ventures, operating in traditional sectors and most likely to be family owned-managed as presented in figure 12.

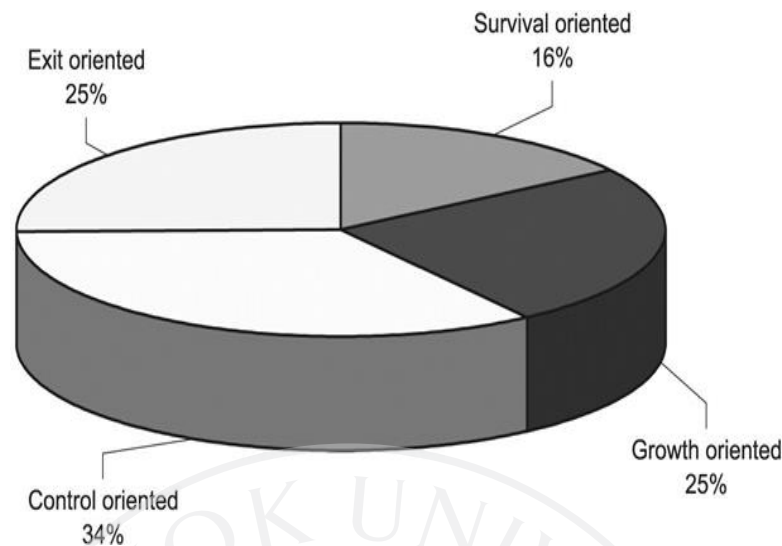


Figure 12 : The four “types” of small business owner-managers

Source: Poutziouris, P. (2003). The strategic orientation of PDMs of small ventures:

Evidence from the UK small business economy. *International Journal of Entrepreneurial Behaviour & Research*, 9(5), 185–214.

Additionally, Lewin & Massini (2003) completed studies which aimed to prove that R&D and process innovation declined with business size and age whilst Barringer, Jones & Neubaum (2005, p.674) similarly found that “rapid-growth” declined with business age. Rapid-growth is defined as a firm with a 3-year compound annual growth rate of 80% or higher and a slow-growth firm as one with a 3-year compound annual growth rate of 35% or lower. They found that the extent of growth was significantly higher in the less mature firms. Collison & Parcell (2001) demonstrate that this outcome should not be seen as representative of all established companies, by guiding the reader through the transformation of knowledge management and innovation at BP which was subsequently successfully adopted by many other firms due to its practical and achievable approach to business change.

Operationally, their strategy appears to be closely aligned to the “Model of Innovation” proposed some years later by Dobni (2008, p.541) shown at figure 13.

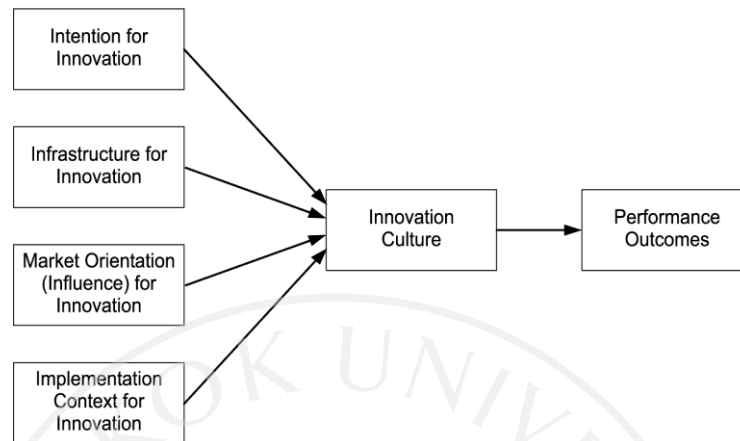


Figure 13 : Measuring Innovation Culture

Source: Dobni, C. B. (2008). Measuring innovation culture in organizations, The development of a generalized innovation culture construct using exploratory factor analysis. *European Journal of Innovation Management*, 1(4), 539–559.

The variables involved being innovation propensity (an established program of on-going innovation, including a shared vision and goals), organizational constituency (the engagement of employees in innovation and their contribution), organizational learning (innovation objectives being aligned with training and self-development objectives), creativity and empowerment (employee integration in the innovation process), market orientation (the extent to which employees understand the strategic positioning of the business in terms of demographics, customers and competitors), value orientation (how employees are focused on value creation), and implementation context (the execution of competitive value creation).

Churchill & Lewis (1993, p.3) also propose a framework of five growth phases, creativity, direction, delegation, co-ordination, and collaboration in

developing business evolution. They concluded however, that these were not transferable to small companies, primarily because the model “assumes that a company must grow and pass through all stages of development or die in the attempt”. The flaw in this assertion is that the framework does not acknowledge that small businesses may achieve incremental growth and continued success by consolidation during the charted growth phases, for example, at the growth through delegation or co-ordination phase. The further stage of growth through collaboration may offer greater progression and heightened success, but it does not seem realistic to propose the company will “die” if that phase is not reached. This view is supported through the findings of O’Gorman (2001, p.4) who offers five growth stages; existence, survival, success (disengagement and growth), take-off and resource maturity, allowing for the necessary diversities of structure and complexity found in SMEs, including, and meaningful to this dissertation, the PDM’s level of involvement in the business. This has been demonstrated above as fundamental in many aspects of the business’ evolution. Practically, within the SME environment it may fall to just one individual to address barriers to growth through financial restrictions; address family contradictions and concerns over risk versus reward along with potential rivalries; influence the geographical location of the business; make decisions based on which metrics to use to measure growth and draw conclusions as to when these measurements need to be expanded to reflect the different stages of the SME cycle.

### **2.2.3 Summary**

This dissertation sub-section reflected upon the company size and demographic considerations for SMEs. A fundamental barrier to growth, both organic and/or acquisitional was clearly found to be the ability of the SME to raise financial

capital. Although many options exist, the small/medium enterprise will not always be able to reflect the relatively strong balance sheet required to attract investment from banks or private and public venture capitalists. Those that are in a position to draw on personal or family resources may alleviate this situation in the short-term but the longer term requirements for growth will more likely be met from external sources. It is important to remember at this point that the inability to manage cash-flow within the business is a common reason for its demise. Furthermore, when we speak of growth, how that growth is measured and, how growth may be sustained.

Combined with commercial realizations, we also look to the motivation of the SME entrepreneur primary decision maker (PDM) later within the analysis of extant literature. This encompasses both the commencement of new business venture and the strategic orientation that is most akin to his/her personal desires for the business as well as inherent in their natural business profile characteristics. We argue that it is likely to be their approach and consequent actions that will shape and drive the direction of the SME business above all others.

### **2.3 The theory of entrepreneurs and entrepreneurial leadership**

“Innovation is the specific instrument of entrepreneurship.

The act that endows resources with a new capacity to create wealth”. Peter Drucker (1909 to 2005)

We commence the next sub-section of the dissertation by providing further clarity to the subject matter of how the entrepreneur and intrapreneur are defined.

#### **2.3.1. Entrepreneur or intrapreneur**

McFadzean, O’Loughlin & Shaw (2005, p.364) propose that recognizing entrepreneurial attitudes is “a critical factor in comprehending the link between the

entrepreneur and the innovation process”. Whilst many authors turn to personal attributes as defining entrepreneurial inclination, for example, Holmes, Schnurr & Marra (2007); Pech & Cameron (2006); Barringer, Jones & Neubaum (2005); Christensen (2005) and Thompson (2004, p.75) questioned this in terms of whether it is in fact “information about opportunities” that is a determining factor. Throughout the literature it is difficult to find support for this view as it is generally accepted that many individuals have access to business opportunities which they reject because their inherent characteristics are alien to commercial or personal risk. However, Wang & Poutziouris (2010, p.859) hypothesize that “it is more likely that individuals develop intrapreneurial activities when they are able to identify business opportunities” a position shared by Burgers & Van De Vrande (2011) and Heinonen & Toivonen (2008) Some individuals are considered to be naturally inclined entrepreneurs having been born into a family with owned business interests. This factor does not exist in the known definitions of an intrapreneur but is pertinent in the context of a family multi-generation led business environment. Sandberg, Hurmerinta & Zettining (2013, p.230) acknowledge a further key element in the use of the word “innovator” which can describe either the entrepreneur or intrapreneur within the body of literature. They propose that the entrepreneur is the business leader, who has control over internal resources, both financial and labor, and seeks out business opportunities to progress the firm’s current worth. The innovator is the individual who has the capacity to create or experiment with new ideas. The overlap of personal traits is clearly depicted below at figure 14, and at this point we suggest that intrapreneur and innovator can mean one and the same. Without the traits illustrated as indicative of innovators, and those shared with entrepreneurs as shown below, it is highly

improbable that an employee could be considered intrapreneurial in any workplace setting.

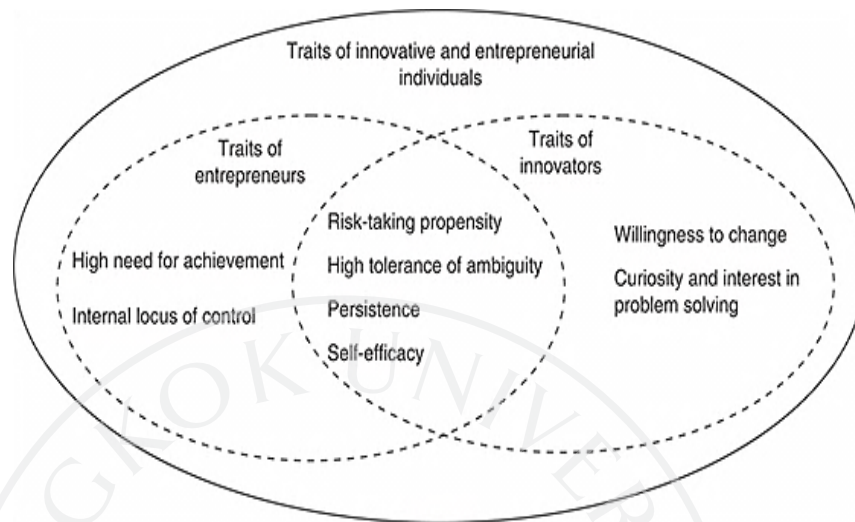


Figure 14 : Traits of innovative and entrepreneurial individuals

Source: Sandberg, B. Hurmerinta, L., & Zettinig, P. (2013). Highly innovative and extremely entrepreneurial individuals: what are these rare birds made of? *European Journal of Innovation, Management*, 16(2), 227-242.

Finally & Szerb (2003, p.91) introduces a hybrid, the “interpreneur” defining the evolution of the entrepreneur as but having some fundamental differences in their organizational role and purpose to the intrapreneur shown at figure 17, whilst Maier & Pop Zenovia (2011, p.973) highlight the advantages and disadvantages of entrepreneurship and intrapreneurship at table 8.

Table 8: The distinguished features of classic entrepreneur, intrapreneur and interpreneur

	<b>Classic Entrepreneur</b>	<b>Intrapreneur</b>	<b>Interpreneur</b>
<b>Basic role</b>	To create something new and/or to make the business grow	To launch new business in an existing organisation	Continuous development and launch of new ventures, exploiting new opportunities
<b>Basic goal</b>	Own profit maximization	Profit maximization, other goals of the company should also be considered	Profit maximization but considering other network member goals
<b>Nature of risk and responsibility</b>	Takes own risk, bears all consequences	The risk lies on the owner of the company, responsibility is limited	Shared risk and responsibility amongst network members

(Continued)



Table 8 (Continued) : The distinguished features of classic entrepreneur, intrapreneur and interpreneur

	<b>Classic Entrepreneur</b>	<b>Intrapreneur</b>	<b>Interpreneur</b>
<b>Ownership and control of resources</b>	Owens or rents and controls all of the resources necessary for the business	Does not own the resources for the business just uses them, partial control	Owens and controls only partially the resources necessary for the business
<b>Connection with the organisation and network</b>	Frequently informal and vague, authority based	Authority based, formal, largely independent from other organizational units	Mixed, within the business hierarchy amongst the associative network members
<b>Personal attribute</b>	An individual person works alone	A team person, works in a small group within a large company	A network person, works in collaboration with other network members

(Continued)

Table 8 (Continued) : The distinguished features of classic entrepreneur, intrapreneur and interpreneur

	<b>Classic Entrepreneur</b>	<b>Intrapreneur</b>	<b>Interpreneur</b>
<b>Entrepreneurial and business skills possession</b>	Should possess all entrepreneurial and business skills	Possesses basic entrepreneurial skills, should be able to fight for resources within the company	Specialised, possesses only part of the entrepreneurial and business skills, strong emphasis on social and communication skills, the ability to co-operate with other network members

Source: Szerb, L. (2003). The Changing Role of Entrepreneur and Entrepreneurship in Network Organisations, Knowledge Transfer, Small and Medium-Sized Enterprises, and Regional Development in Hungary. *JATE Press, Szeged*, 81-95.

Table 9 : Entrepreneurship and intrapreneurship: advantages and disadvantages

<b>Entrepreneurship - Advantages</b>	<b>Entrepreneurship - Disadvantages</b>
You are your own boss – independency The income increases You have the chance to be original You have part of excitement and adventure There are a lot of possibilities Salary potential – you decide upon your own salary	Money pressure – giving up on the security of a regular paycheck Less benefits as the business is new Long working hours Mistakes are magnified All decisions must be made alone
<b>Intrapreneurship - Advantages</b>	<b>Intrapreneurship - Disadvantages</b>
Ability to stay in a friendly, well known environment Practicing your skills within an organization – lower risk Using companies resources, good name, knowledge Access to customers, infrastructure	Reward may not be up to expectation Innovation may not be appreciated accordingly You can be innovative but to a certain limit – you are not your own boss

Source: Maier, V., & Pop zenovia, C. (2011), Entrepreneurship versus

Intrapreneurship. *Review of International Comparative Management*, 12(5), 971-976.

This is a good summarization of the key differentiators between the entrepreneur and intrapreneur. It highlights from a risk perspective why one course of career choice may be more favorable than the other; it identifies a classic feature of

intrapreneurial spirit in adopting innovative ideas and initiatives but, of importance to intrapreneurial sustainability, the boundaries that will necessarily exist as a salaried employee. This is expanded within the analysis of literature when we further define the concept of intrapreneurship and the typical features of intrapreneurial behavior. But, in closing, there is a significant point made by Morris, Kuratko & Covin (2008, p.35) in that intrapreneurs should not think of themselves as being “somewhat like” entrepreneurs, they should think of themselves as “being” entrepreneurs.

### **2.3.2 Entrepreneurship**

Darling, Gabrielsson & Seristo (2007, p.5) encapsulate entrepreneurship as “fundamentally, a way of thinking that bridges the gap between innovative discoveries with need fulfilment”. This is indicative of what is known as the “pull” factor, prioritizing personal development objectives, as opposed to the “push” factor that occurs through positive or negative factors and events within an individual’s life (Matlay, 2005, p.670); Risker (1998, pp.28-29) and Zhao (2005) define two distinguishing factors from the extant literature, the former asserting those who identify entrepreneurship in narrow terms, the latter proposing “a managing owner of an organization where personal capital is at risk”, and those who identify entrepreneurship in broader terms; “a cultural or sociological definition of the entrepreneur as a person who creates value of any kind”. Both authors, along with Zimmerman (2009) similarly caution against viewing entrepreneurship as trait-driven, calling upon a 1990 publication from Gartner as proposing that too much focus has been expended on this concept and too little on psychological aspects. Jansen & Wees (1994) concur with this view through evaluating the writings of Drucker on innovations and entrepreneurship.

There are generally considered to be two categories of entrepreneurial leadership; entrepreneurs who are leaders, and leaders who possess an entrepreneurial leadership approach without being entrepreneurs in the context of business PDMs. We may also consider the view point “promoters/founders of businesses are great entrepreneurs but not necessarily good leaders” (Bhattacharyya, 2006, p.110) and Drucker (1985, p.36) was prominent among those who said we should talk about the entrepreneur’s actions and behaviour and not about the psychology of the entrepreneur; “entrepreneurship cannot and must not be regarded as the privilege of the gifted few who have been blessed with exceptional personal qualities”. Gundogdu (2012, p.300) completely dismisses the notion of “born entrepreneurs” also citing Drucker (1985) in a belief that “it’s not magic, it’s not mysterious, and it has nothing to do with genes”. Zimmerman (2009, p.75) progresses with a case study of 12 practitioner entrepreneurs from which a framework for the study of entrepreneurship” was created and is shown at appendix 3.

An alternative theory is that entrepreneurs possess skills which can be learnt and followed, creating an entrepreneur/intrapreneur hybrid, the “innopreneur, (Gundogdu, 2012, p.300)”. This view is shared by Merz & Sauber (1995), is also evident in the literature of McMullen & Shepherd (2006) and in a further study by Lumpkin & Dess (1996) In addition Hynes & Richardson (2007) and Koh (1996) proposes that entrepreneurship can be taught, the latter citing that even two decades ago there were in excess of four hundred colleges in the USA providing courses in entrepreneurship, whilst Matlay (2005) reports a similarly vast expansion in entrepreneurship education in the previous two decades. Hynes & Richardson (2007, p.736) further suggest that universities will in themselves need to become

entrepreneurial institutions if they are to become “relevant and applicable to the entrepreneurial society” and Formica (2002) considers how challenging this role in education would be. What remains uncertain, and to a large degree unmeasured, is whether the value of such educational methods translate into entrepreneurial success in commerce. Furthermore, that scant empirical evidence from current research exists to support a link between formal courses in entrepreneurship leading to the foundation of a new business venture by the individuals involved. The general consensus within the literature is that the continuation of these programs are due to a disinclination to take a step backwards in educating people in entrepreneurship and that they do offer several aspects of best practice that can be applied in an employed environment. This view is considered significant by Hynes & Richardson (2007, p.733) who emphasize that this learning does provide “knowledge skills and competencies to engage in a more enterprising, innovative and flexible manner in a changing workplace environment”, but also cite some further aptitudes that exist within the extant literature; the ability to recognize opportunities; the ability to exploit opportunities and the ability to create knowledge. Szerb (2003, p.83) proposes that whilst business skills can be learnt, it is debatable whether the same can be said of entrepreneurial skills and cites the social development theory in that “entrepreneurs are mainly made not born and almost anyone can run a small business”. This view appears rather simplistic and does not reflect the research findings from the majority of academics and authors in this field. Interestingly, we learn from Koen (2000) that intense courses in intrapreneurship also exist in the United States. Specifically in this case, for employees to explore relevant opportunities within the companies they work for.

Chakravarthy & Lorange (2008, p.14) claim recognition for what they reference the “entrepreneur-manager”. They imply that this hybrid individual has both the qualities typical of an entrepreneur, for example, an external business focus and a propensity to risk, combined with the skills of an operational manager whose focus is considered to be discipline and delivery. Several case studies are cited to strengthen their argument but in essence, it only consists of traditional managers who have the ability and freedom to be more entrepreneurial than others. There is no firm substantiation that this concept provides anything fundamentally new within the field of entrepreneurship study.

Drucker (1993) and Bates (1990) both comment that after a short time new companies inevitably have to shift their attention from pure entrepreneurship to managing, therefore, to marketing, planning (especially financial requirements) and team-building. Szerb (2003) concurs, adding that as the enterprise grows the innovator-entrepreneur that launched it will frequently become a bureaucratic manager. Smith & Miner (1983) question whether a shift in leadership approach from entrepreneurial to bureaucratic is required for growth-oriented companies or whether that in some important respects entrepreneurial and bureaucratic systems are discrete. Bonet, Armengot & Martin (2011, p.70) propose that businesses need to be “simultaneously entrepreneurial and strategic”. Ross (1987, p.25) also documents that business growth will ultimately demand a combination of the diverse skills found in professionally trained managers and entrepreneurial managers; “neither by itself is enough”. This is graphically presented in figures 15 and 16 below. These charts clearly identify fundamental skills traits that would support a combination of both innovative vision and traditional business acumen as complimentary by balancing the

relative values of each. This becomes very relevant later in this section when we discuss inventor business failure and how, it is frequently due to factors under the control of the business primary decision maker (PDM), but those which they did not see as relevant or needed to prioritize, for example, following industry regulations.

**FIGURE 1: ENTREPRENEUR – MORE THAN AN OWNER/MANAGER**

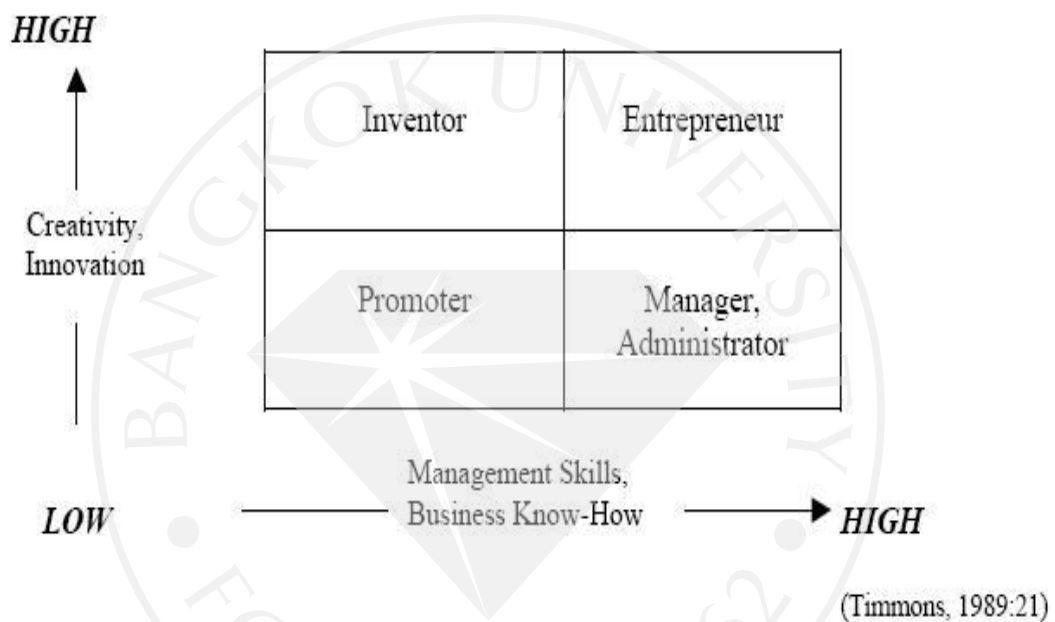


Figure 15: Entrepreneur – More than an Owner/Manager

Source: Ross, J. E. (1987). Intrapreneurship and Corporate Culture. *Industrial Management*, 29(1), 22-25.



FIGURE 2: TYPOLOGY OF AN ENTREPRENEUR

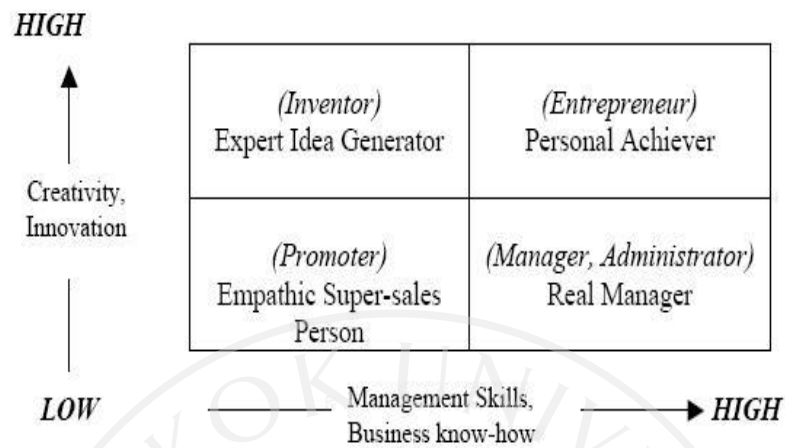


Figure 16 : Typology of an Entrepreneur

Source: Ross, J. E. (1987). Intrapreneurship and Corporate Culture. *Industrial Management*, 29(1), 22-25.

Van Doorn, Jansen, Van den Bosch & Volberda (2013) Hills, Shrader & Lumpkin (1999) and Zimmerman (2009) assert that the discovery process is critical to entrepreneurial activity, and consists of recognizing that a particular opportunity exists. Antoncic & Hisrich (2004, p.526) add that employees need to be trusted “to detect opportunities”, a position shared by Burgers & Van De Vrande (2011) and Heinonen & Toivonen (2008) Examples of discoveries have many definitions including assessing and meeting customer demands through new technology, products or product refinements and enhancements. Discovery can be also be expressed as a constituent of strategic learning, therefore, the process of discovery, the process of knowledge diffusion, and the process of informed action. Brazeal & Herbert (1999) expand by proposing entrepreneurship is enabled by: “(a) the current or potential existence of something new – innovation; (b) which may have been developed by new

ways of looking at old problems –creativity; (c) or the lessened capability of prior processes or solutions to respond effectively to new problem parameters brought on by new or emerging external conditions -environmental change; (d) which can supplant or be complementary to existing processes or solutions change; (e) when championed by one or more invested individuals”. This latter perspective highlights the central roles played by change, innovation, and creativity comprising the “innovator”. Zhao (2005, p.28) adds “new forms of organisation, new markets and the development of new skills and human capital”, a stance shared by Shatzer & Schwartz (1991) and Zahra, Nielsen & Bogner (1999)

### **2.3.3 Leadership profiles and characteristics**

“Entrepreneurial profit is the expression of the value of what the entrepreneur contributes to production”. Joseph A. Schumpeter 1883 to 1950

Having assessed the theory of entrepreneurs and entrepreneurial leadership we now turn to their attributes and behaviors as presented in the extant literature, commencing by considering their competences. For example, whilst reviewing the skills required for entrepreneurial leadership, Boyett (1997) ranks and reports them as follows:

1. Vision
2. Ability to allocate resources for quality service
3. Ability to delegate
4. Ability to organize
5. Ability to reduce individual and team stress
6. Ability to think long term
7. Accepts responsibility of leadership

8. Ability to motivate at all levels
9. Ability to select a good team
10. Ability to develop a good team

Predominantly, these particularly basic managerial qualities would seem to be essential for someone in any leadership position regardless of an entrepreneurial leadership predisposition. What is lacking from the writer's preconceptions is the attributes that set entrepreneurial leaders characteristics aside from more conventional leader characteristics as they focus on ability as well as personal traits and style. For example we learn from Bonet, Armengot & Martin (2011, p.71) that they have a fear of becoming unemployed and display a tendency to delegate duties rather than responsibilities, which is an interesting perspective. More expansively they are frequently observed and categorized as presented at table 10 below.

Table 10: Entrepreneur leadership characteristics

Aggressive	Kwong, Jones-Evans & Thompson (2012), Painoli (2012), Rauch, Wiklund, Lumpkin & Frese (2009)
Innovation hunters	Gundogdu (2012), Maier & Pop Zenovia (2001), Parker (2011), Wang & Horng (2010), Srivastava & Agrawal (2010), Darling, Gabrielsson & Seristo (2007), McMullen & Shepherd (2006), Sayeed & Gazdar (2003), Hills, Shrader & Lumpkin (1999), Brazeal & Herbert (1999), Lumpkin & Dees (1996), Merz & Sauber (1995), Jones-Evans (1995)
Displaying a need for achievement/the desire to make a difference	Hisrich & Kearney (2012), Hashi & Krasniqi (2011), Kisfalvi (2011), Aygun, Suleyman & Kiziloglu (2010), Ferri, Deakins & Whittam (2009), Barringer, Jones & Neubaum (2005), Rauch, Wiklund, Lumpkin, & Frese (2009), Meng & Roberts (1996)
Self-disciplined and accountable	Zimmerman (2009), Bhattacharyya (2006), Thompson (2004), Jansen & Wees (1994)
Coalition-builder/Team builders	Bonet, Armengot & Martin (2011), Zimmerman (2009), Barringer, Jones & Neubaum (2005), Thompson (2004), Kleyson & Dyck (1999), Boyett (1997), Drucker (1993), Bates (1990)

(Continued)

Table 10 (Continued) : Entrepreneur leadership characteristics

Flexible, approachable, tenacious, opportunistic	Brown, Nasarwanji & Catulli (2010), Christopoulos (2006)
Audacious, robust problem solvers	Darling, Gabrielsson & Seristo (2007), Pech & Cameron (2006), Ross (1987)
Exploiters	Pascoe & Mortimer (2014), Lee, Peris-Ortiz & Fernandez-Guerrero (2011), Burgers & Van De Vrande (2011), Choi & Shepherd (2004)
Ego driven, envisioning and/or influencing	Ates, Garengo, Cocca & Bitici (2013), Kuratko, Morris & Covin (2008), Thompson (2004), Poutziouris (2003), Havaleschka (1999), Drucker (1993)
Deliberate wreckers of equilibrium	Poutziouris (2003)
Creators of new and/or valuable things	Bonet, Armengot & Martin (2011) Dover & Dierk (2010), Zhao (2005), Szerb (2003), Thompson (2002), Koh (1996)

(Continued)

Table 10 (Continued) : Entrepreneur leadership characteristics

Risk-takers, voyeurs, innovators, creators, problem-solvers, champions, profit takers	Van Doorn, Jansen, Van den Bosch & Volberda (2013), Urbano, Alvarez & Turro (2013), Bonet, Armengot & Martin (2011); Burgers & Van De Vrande (2011), Yordanova & Alexandrova-Boshnakova (2011), Srivastava & Agrawal (2010), Maxfield et al (2010), Darling, Gabrielsson & Seristo (2007), Littunen (2000), Russell (1999), Zahra, Nielsen & Bogner (1999), Risker (1998), Meng & Roberts (1996), Drucker (1993), Smith & Miner (1983), Ross (1987), Pinchot (1985)
Mildly sociopathic	Solomon & Winslow (1988)
Pro-active innovators	De Villiers-Scheepers (2011), Bonet, Armengot & Martin (2011), Wang & Poutziouris (2010), Kuratko, Morris & Covin (2008), Darling, Gabrielsson & Seristö (2007), Knight (1987), Kuratko & LaFollette (1986)
Displaying a high tolerance of ambiguity, internal locus of control, tenacity and persistence	Sandberg, Hurmerinta & Zettining (2013), Srivastava & Agrawal (2010), Meng & Roberts (1996)
Self-efficient	Sandberg, Hurmerinta & Zettining (2013), Zimmerman (2009), Bhattacharyya (2006), Dewett (2004)

The notion of self-efficacy or self-awareness has been identified as a critical trait for the primary decision maker (PDM) by several authors including Sandberg, Hurmerinta & Zetting (2013); Dewett (2004) and Zimmerman (2009) It is proposed that those with high self-efficacy are more inclined to tenacity and perseverance of a failed idea, viewing it as a learning opportunity; those with low self-efficacy are likely to become more risk-adverse as a result of such an experience, (Dewett, 2004; Koh 1996) a position shared by Wakkee Elfring & Monaghan (2010). Ross (1987, p.22-24) proposes “it is the entrepreneur who energizes the economy that energizes the nation” and that it is the entrepreneur that can generate a perception of “a gutsy individual: a person who braves uncertainty”. The distinctive difference in the characteristics of a Manager, Leader and Entrepreneur as distinguished by Dover & Dierk (2010), are graphically depicted at figure 17.

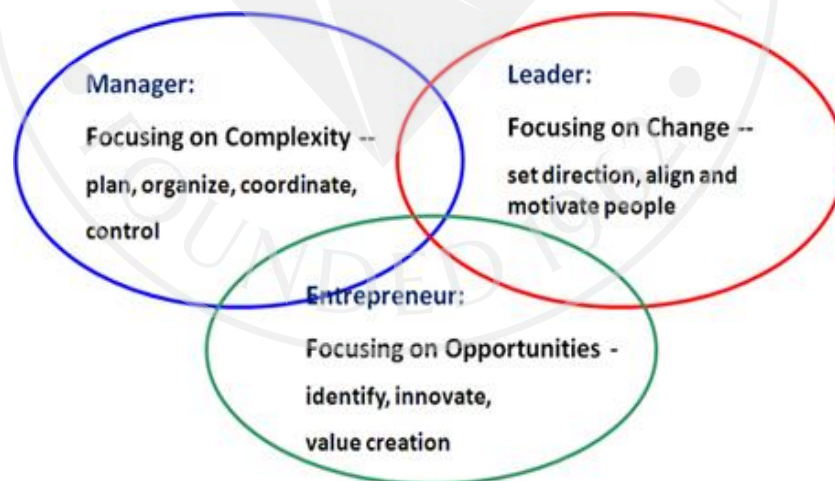


Figure 17 : The Three Archetype Model: Manager-Entrepreneur-Leader

Source: Dover, P. A., & Dierk, U. (2010). The Ambidextrous Organization:

Integrating Managers, Entrepreneurs, and Leaders. *Journal of Business Strategy*, 31(5), 49-58.

Barringer, Jones & Neubaum (2005) assert that the personal characteristics of the entrepreneur are highly relevant in respect of the extent and speed of business growth achieved, and something that they quickly identify in others, often leading to the employment of individuals with similar characteristics in their founding team. The founding team at Apple is indicative of this approach of entrepreneurs seeking out like-minded people to work with them. Amabile (1998, p.6) is skeptical, cautioning against homogeneous teams; “everyone comes to the table with a similar mindset; they leave with the same”. Darling, Gabrielsson & Seristo (2007) concur that a conflict of ideas is both helpful and desired in an entrepreneurial setting. Thompson (2004, p.250) reviews the factors that could profile and identify an entrepreneurial disposition; talent, temperament and technique. The over-riding proposition is that talent and temperament are the driving force behind entrepreneurs, but techniques have to be adopted to channel these attributes effectively for example, “gathering followers” and “empowering others”. As seen in figure 18 below, Ferri, Deakins & Whittam (2009) conclude that the critical juncture for the entrepreneur is the desire to make a difference. A position shared by Blanchard (2008).



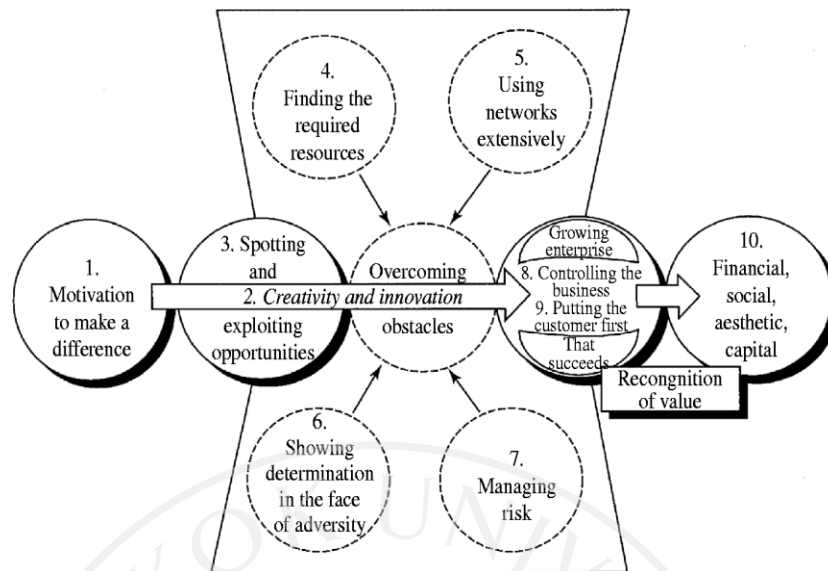


Figure 18 : The measurement of social capital in the entrepreneurial context

Source: Ferri, P. J., Deakins, D., & Whittam, G. (2009). The measurement of social capital in the entrepreneurial context. *Journal of Enterprising Communities: People and Places in the Global Economy*, 3(2), 138–151.

The structure of this model encompasses several components identified in other research studies and combines the individual's key abilities with significant contemporary leadership style attributes. Poutziouris (2003, p.189) introduces the “charisma” of the PDM as another critical success factor for growth and sustainability, whilst Havaleschka (1999) writes in terms of decision-makers who are unconcerned with their own popularity. Somewhat scathingly, Ates, Garengo, Cocca & Bitici (2013, p.37) propose that many entrepreneurial PDMs view their business as a means of enhancing their lifestyle and it is described as little more than “an extension of their own ego”. Poutziouris (2003) found similar references within the extant literature indicating a predisposition for wealth creation and optimization whilst Bonet, Armengot & Martin (2011) and Littunen (2000) add that they can be highly motivated by power, specifically the power to create.

Of great value within the current literature Barringer, Jones and Neubaum (2005, pp.9- 678) introduce a new aspect that had not previously received much attention; “the entrepreneurial story”. This variable reflects the journey of the entrepreneur from personal and financial sacrifices made to launch their business, through to the life experiences that shaped their characters towards entrepreneurship. By including these factors as additional variables within their study, the writers were able to deduce that the most successful entrepreneurs in terms of rapid growth from business start-up had “overcame significant obstacles to start their firms or had a longtime objective to become a business owner”.

#### **2.3.4. Business leaders as entrepreneurs**

In a 2011 survey conducted by Forbes Insights and Ipsos Observer 1,245 business leaders across Europe were questioned as to their entrepreneurial disposition. Ninety-seven percent of the respondents came from six countries: Italy, UK, France, Germany, Poland and Switzerland. The respondents represented a broad cross-section of personal attributes and business styles. A sizable proportion (87%) announced that they were entrepreneurial to a greater or lesser extent.

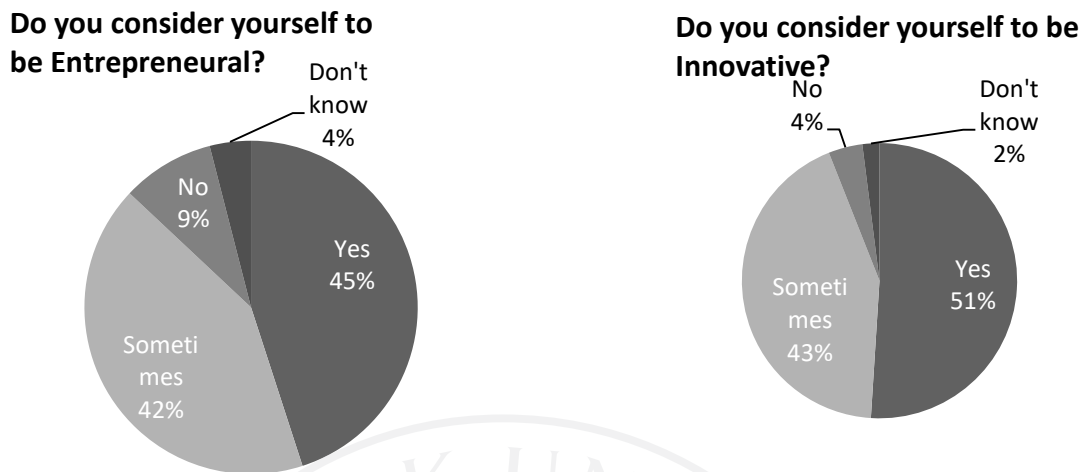


Figure 19 : Do you Consider Yourself to be Entrepreneurial and Innovative

They found a similar pattern when “innovative” was substituted for “entrepreneurial.” The outcome in respect of the high number of positive responses must be viewed with some caution given indications in further publications of “social desirability bias”. This is an important consideration for the research questions within this dissertation as the answers may be influenced by an inclination to reply in a manner which would be expected from the individual, or what they might perceive will be viewed favorably. Fisher (1993) advocates a method of structured research survey and interview questions may reduce such bias. This is supported in the literature of Grimm (2010); Kreuter, Presser & Tourangeau (2008); King & Bruner (2000); Furnham (1986) and Nederhof (1985) all of whom aim to address the issue of reliability and validity within research results. This is explored fully in the research methodology section of the dissertation at chapter 4.

The Forbes survey contains additional noteworthy findings. Whilst almost 90% of the 1,245 respondents described themselves as entrepreneurial and innovative, in reality only circa 60% had actually championed one or more innovative ideas

within their organizations over the previous 12 months. This is generally considered to be the paramount role of entrepreneurial leadership, promoting innovative endeavors within the organization whether generated by themselves or employees. The ensuing objective becomes implementation which Sniderman (2012) proposes another dynamic; the inability of creative individuals to both generate and support innovation and deliver the realization and execution. Koen (2000, p. 6) advances this thought with how critical it is to overcome the “autoimmune response” that can greet new ideas. The outcome of the respondent’s data showed surprisingly low levels of active innovation. When asked if they had championed an innovative idea during the previous year 35% said yes more than once; 35% said yes, only once; 30% said not at all. When asked if they had been successful 23% said yes easily; 60% said yes but with difficulty; 17% failed to be successful. Robbins (1986, p.16) cites Shapero 1972, and Shapero & Sokol 1982, in suggesting “re-defining the unit of interest as the "entrepreneurial event" rather than the entrepreneur”, thus circumventing the issue of whether an individual who has carried out one entrepreneurial act is or is not an entrepreneur as opposed to an individual who “habitually creates and innovates to build something of recognized value around perceived opportunities” Thompson (2004, p.244). A clear distinction is being made between an enterprising person and an entrepreneur. Furthermore, it is suggested within a research brief from Intuit (2009, p.2) that caution is also required when inviting business leaders to assess their innovativeness. Rather than apply the expression innovation, they will use language such as “tweak, adjust, improve, experiment, improvise”, any of which could be regarded as innovative thinking.

### 2.3.5 Entrepreneur motivation antecedents

A study by Steiner (1998) consists of interviews with forty two entrepreneurs and their commercial and intrinsic motivations. Some of the participants were intrapreneurs before starting their own companies and frequently showed business flair as children. Many also refer to their backgrounds as instrumental in their own career and livelihood choices: Blanc; “is driven by fear and the mediocrity that haunted his talented but unfulfilled father. He was ambitious but could not bring himself to take a risk or dare. His failure was an important lesson for me. I never wanted to be like that and fear being mediocre” (p. 44) Blanc is a world-famous, Michelin starred restaurateur and hotelier. Threlfall; “learnt about entrepreneurship at his mother’s knee. She used to sell hot dogs. For every 5 she sold she made another one by chopping off the ends and putting them together”. Profits increased by 20% (p.30) Threlfall is the owner of T&S UK, with 1,050 outlets valued at £198m. Gooley; “is driven by fear of failure. I was brought up in a very competitive environment. My phobia and terror is of failing” (p.60) Gooley is the owner of Trailfinders, with 711 staff, mostly graduates who are experienced travelers. Pearl; “I always wanted to become really wealthy, and having come from a very poor background gave me the will to succeed” (p.134) Pearl is the owner of Structadene comprising more than 1,000 commercial and residential properties in the UK. Baker; “when dad lost his job and the house I remember thinking I’ll have my own house, car and business. That would be quite something – nobody had ever owned a house before in our entire family” (p.50) Baker is the owner of Glotel Plc., currently operating in more than 50 countries as a worldwide telecoms recruitment agency.

Cohen; “did not want to do what his father had and work in a raincoat factory” (p.81)

Cohen is the owner of Glyn Webb, a chain of 18 home improvement stores.

At appendix 4 the interview data for the entrepreneur antecedents above is presented in tabular format. We note that very few individuals within this sample have followed the same line of employment as their father/mother. Almost all starting making, buying, selling items at a young age and were extremely money/profit focused children. The absence of a University degree does not appear to have disadvantaged their progress as businessmen/ women and by reviewing their parent’s occupation it is probable that many in the previous generation did not hold degrees. Urbano, Alvarez & Turro (2013, p.856) propose that individuals who wish to set up a business or have already done so are likely to have a higher level of education than those who do not. Barringer, Jones & Neubaum (2005) cite two aspects of college education that could be fundamental to entrepreneurial success, firstly that the individual is surrounded by peers that may prove useful alliances for the future; secondly that skills learnt at the higher education level could prove invaluable, especially at the creation/launch of a new venture stage, the latter opinion is endorsed in the work of Menzel, Aaltio & Uljin (2007) and Pickernell et al (2011, p.185) concur, citing that university graduates, defined as having attained a PhD, Master’s or Bachelor degree, “founded and or managed 70 per cent of all fast growth companies in 2006/07” and furthermore, are better positioned to secure resources due to relationships progressed in their graduate education. An additional benefit may be that they are also likely to have greater access to professional advice through relationships formed with their university peers.

A study by Jennings, Cox & Cooper (1994, pp.60-72) observed that 72% of their target audience of entrepreneurs had working-class origins, compared to 27% of intrapreneurs. They dissected the level of education attained by each to provide the following chart of education levels for entrepreneurs versus intrapreneurs shown at table 11.

Table 11: Entrepreneur and intrapreneur education statistics

Level	Entrepreneurs %	Intrapreneurs %	Total
Number	19	22	41
No grammar school	63%	9%	
Some grammar school	11%	9%	
Some college/university	5%	14%	
Graduate	21%	68%	

Source: Jennings, R., Cox, C., & Cooper, C.L. (1994). *Business elites : the psychology of entrepreneurs and intrapreneurs*. Routledge : London

The tenacity associated with entrepreneurship is patently fundamental to achieving their chosen business interests and pursuits, but some industry sectors, specifically the finance sector (Rouse & Jayawarna, 2006) can be skeptical in terms of the validity of entrepreneurial spirit in the absence of accomplishments in either higher education or previously demonstrated business skills and success. Bates (1990, p.551) asserts that “the level of PDM education is a major determinant of the loan amounts that commercial banks extend to small business formations”. Barringer, Jones & Neubaum (2005) and Pickernell et al (2011) concur, suggesting that the attributes of the entrepreneur are critically assessed by investors or venture capitalists in deciding whether to fund the venture. However, an interesting proposition from

Poutziouris (2003, p.189) is that family-owned SMEs have a tendency to rely on personal assets and internally generated funds rather than external injections of capital. Much as this can be considered an obstruction to growth, specifically venturesome growth, the primary concern is to “safeguard family ownership, control and financial independence”.

Hisrich & Brush (1984) make a pertinent gender observation in their study of female entrepreneurs, citing difficulties with finance and credit requirements as major obstacles to business growth, primarily due to a lack of business acumen by those studied, but not restricted to a lack of a university education. The research study by Pickernell et al (2011) into the differences between graduate and non-graduate entrepreneurs also found that there was no difference between the two in respect of access to public and private sources of funding. Further research studies from Kwong, Jones-Evans & Thompson (2012) and Carter et al (2007) accept that female business leaders are discriminated against by financial institutions, but also suggest that the perception of failure is sufficiently strong that many women do not attempt to raise capital for their companies. Also, and conversely, that these perceptions were related to levels of formal education. Matlay (2005, p.672) adds that the probability of male nascent entrepreneurs to form a new business is double that of their female counterparts, offering both education and skill differences to explain this experience. Irwin & Scott (2010, p.255) refute the proposition that women are disadvantaged when seeking business finance citing within their research that “women found it easier to raise finance than men”, and that this was largely due to them “having a better track record in repaying their loans”. They do agree however, that some woman have such a strong perception that they will be refused finance, they become what is



known as “discouraged borrowers” and avoid applications to lenders. Carter & Shaw (2006) and Marlow & McAdam (2013) propose that it may well be that women are more risk-adverse and cite negativity from potential lenders to conceal the real reasons for lack of business growth. Marlow & McAdam (2013, p.118) expand that this may be more concerned with a female propensity to “home-based firms”, which are naturally restrained in growth terms, or that, in their UK based research study it was found that they are less inclined to begin a new venture “within the higher performing sectors, such as science, engineering and technology” due to gender exclusion and discrimination. Yordanova & Alexandrova- Boshnakova (2011, p.272) provide a thought-provoking conclusion from their research into the effect of gender on risk-taking in that “female and male entrepreneurs have similar risk perceptions”, but, “female entrepreneurs are likely to have a lower risk propensity”. However, the argument that women are led risk-tolerant is disputed by Maxfield et al (2010) in terms of the business decision process in many managerial contexts.

Additional evidence gained through the Steiner (1998) interviews reveals that a high percentage of the sample group left businesses to set up their own companies due to frustration that they could not act intrapreneurially and became bored with the lack of innovation in their organisations. Furthermore, for some, it was the perceived lack of financial recognition that caused them to relinquish salaried positions. This prior experience can provide valuable though as posited by (Barringer, Jones & Neubaum, 2005, p.667) “entrepreneurs with prior entrepreneurial experience are better accustomed to the entrepreneurial process and more likely to avoid costly mistakes than entrepreneurs with no prior entrepreneurial experience”. This view is endorsed by Davis (1999) and Matlay (2005) although, and Pinchot (1985) asserts,

they may pay for their own errors of judgment, but at least they do not have to “justify them to the boss”.

There are two further interpretations from the Steiner (1998) research study that are worthy of note. Firstly, the age at which the entrepreneurs disclosed that they considered themselves to be business owners. With the exception of one, all were under the age of forty. This is significant when compared to statistical evidence in a Canadian SMEs innovation investment review in both 2004 and 2007. Innovation investment, in terms of R&D was categorized in the following way; firms that allocated more than 20% of their total investment spend were classified as “R&D-intensive”, (RDI) firms allocating less than 20% were judged as “non-R&D-intensive”. Analysis of the companies surveyed revealed a greater disposition to RDI in young entrepreneurs, using the age of 40 as the benchmark. In 2004, 28% of RDI company owners were under 40, compared with 18% of non-RDI company owners. Although this had fallen to 21%/15% in 2007, a difference of >5% was considered statistically significant. When comparing, years of industry experience as an indicator of RDI adoption, a different pattern is evident with 55% aged under 40 compared to 70% aged over 40 in 2004, and 59%/72% in 2007. (Industry Canada, 2013). This is comparable with the findings of Gray (2006, p.357) who advises “a tendency towards growth-aversion among older SME owners does affect both growth and innovation”, taken from the findings of a study of more than 1,500 SME owners in the UK.

The second commonality is that 17 of the individuals interviewed eventually started their own companies doing what they coveted when they were children. A case study of leading environmentalist Rachel Carson by Kisfalvi (2011) presented findings “that the projects of institutional entrepreneurs can be understood as

expressions of vision and passion rooted deeply in life issues and of three aspects of character forged in formative experience: independence and comfort with marginality, desire to perform, and a sense of agency and duty” (online paper). A further case study of Claude Blanchet (a primary supporter in the development of Quebec) by Filion & Chirita (2012) reveals an individual who, from early childhood met all the criteria we have discussed for entrepreneurship, and was comparatively very successful. But, recognizing his limitations, combined with a desire to make a fundamental difference in a social development setting, he made the highly unusual career decision to become an intrapreneur; seeking the opportunity to perfect his self-taught business skills and managerial expertise in a corporate environment.

Sauser (2001, p.33) reviews the lessons that can be learnt from entrepreneurial leadership failures and quotes from the 1985 writings of Graham; “of the 5 million sole proprietorships that form every year nearly 50% of them fail within 2 years”. This is supported by data obtained from the US Central Bureau of Statistics. Furthermore, that whilst the reasons for failure are mixed and varied, “the experts agree that failure is sometimes due to factors which are under the control of the entrepreneur, Hazel & Reid (1973); MacMillan, Block & Narasimha (1986) and Hashi & Krasniqi (2011) Most commonly these are considered to be undercapitalization, poor planning, the inability to change, lack of expertise and credibility, poor money management, a lack of understanding and subsequently a failure to follow legal requirements and regulations, and, a general lack of managerial skill. This is not an issue confined to SMEs, a third of Fortune 500 firms “disappear every fifteen years”, Lynn, Akgun & Keskin (2003, p.201). In assessing the value of intrapreneurship within Fortune 500 manufacturing firms Marcus, Tesolowski &

Isbell (2000) found a positive influence in technology, product design and competitive market analysis, but interestingly little influence on patent potential, the reason for which is not furnished by them. The work of Amabile (1998) and the outcome of a study by Markova & Ford (2011) suggest their tendency to either embrace or disregard intrinsic motivation within their employees as vital to their success and continuation. This factor is more easily achieved in the SME environment where there is a greater visibility of individual employee contribution.

### **2.3.6 Summary**

Within this sub-section of literature analysis our aim was to capture as many components as reasonably possible within the study of entrepreneurial leadership and the behaviors and attributes of those who could be considered entrepreneurial leaders. The significance of such a comprehensive review is reflected by the title of this dissertation in that we see this as central to exploring the dynamic of their governance in the SME environment as key to the challenges of intrapreneurial opportunity creation and recognition. This does make it a broad but very necessary topic to review. As such, we chose to look at some established views and opinions from both the academic extant literature and the practitioner perspective to provide a more rounded interpretation. This proved invaluable to our education in how many factors were actually notable and how expansive they were. Some could be considered in a generally positive light, for example creators of new or valuable things, or flexible, approachable and tenacious individuals, whilst others were more highly subject to interpretation and the degree and purpose to which the characteristic was utilized. In the latter case we find evidence of exploiters and deliberate wreckers of the equilibrium which are both powerful in a negative sense if not balanced with some

retrospection for alternative proven leadership techniques. Observations that may be deemed detrimental were found to be inflated egos, an exaggerated use of power and an overestimated value of charismatic behavioral qualities.

Additionally we have investigated any known impact of gender, age and education as factors influencing entrepreneurialism. Primarily, we find a general opinion that higher levels of education impact positively, that age is somewhat immaterial but has become younger over the decades, and a dispute reigns over the issue of whether there is a positive or negative relationship between gender and entrepreneurship. Overall, the analysis of literature provided countless examples of how the entrepreneurial business primary decision maker (PDM) can enrich the profile of companies of all sizes, operating in all sectors. Without this tenacious, energetic, and optimistic approach we recognize how much slower the pace of business growth, individual achievement and product and process innovation might be. What we find in common within the literature is that the personal characteristics of the entrepreneur employer are hard to separate from their business persona. This extends to their motivation as entrepreneurial leaders and how this is subsequently reflected in the levels of self-efficacy or self-awareness they demonstrate in business dealings. When combined we encountered an inclusive factor, that of the entrepreneurial story.

We suggest that the above considerations all feature significantly when it comes to the decision making process adopted by the entrepreneurial leader which will in turn impact upon the strategies they employ to position and drive their business venture. Their personal leadership traits appear not to be separable from their

commercial leadership behaviors which may ultimately lead to success or failure at their own hand but it is not possible to prescribe which outcome prevails.

## **2.4 Entrepreneur leadership and strategic positioning in SMEs**

### **2.4.1 Introduction**

In contrast to large organizations, the personal characteristics of the primary decision maker (PDM) are generally considered the most influencing factor in SMEs, Irwin & Scott (2010); Barringer, Jones & Neubaum (2005) and Bates (1990) These range from education, gender and ethnicity, to prior business experience, personal achievements. Their leadership approach may also be drawn from their background and previous experiences but it is useful to consider the forces that should make them not only effective PDMs, but motivational PDMs in respect of innovation, especially when the company size grows. Hynes & Richardson (2007, p.733) suggest that in its formative business years, the SME PDM necessarily assumes numerous roles within the company, but to transition to a business leader they will need to have three basic skill sets; technical skills, human skills and conceptual skills. McMillan (2010, pp.15-18) progresses this observation by providing a model of three influencing attributes that could directly affect creative employee satisfaction and retention; the capacity to listen, the capacity to motivate and the capacity to learn, all of which are rooted in the skills and competencies required of the PDM to be an innovative leader as seen at figures 20 and 21 below.

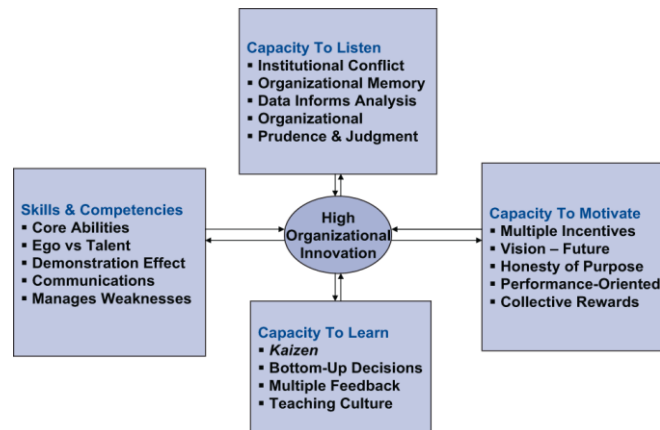


Figure 20: The five competitive forces of effective leadership – high organizational innovation

Source: Mcmillan, C. (2010). Five competitive forces of effective leadership and Innovation. *Journal of Business Strategy*, 31(1), 11-22.

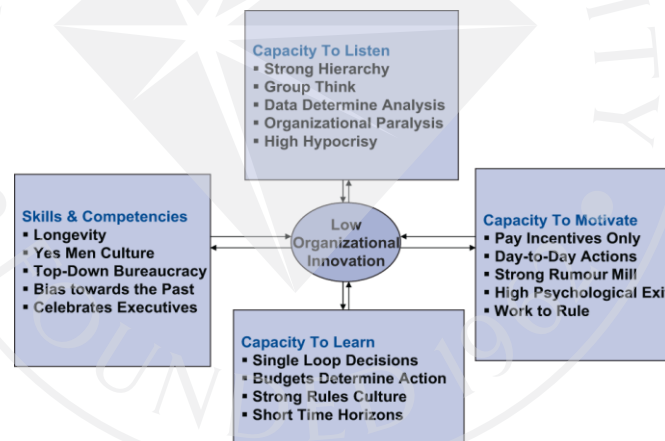


Figure 21: The five competitive forces of effective leadership – low organizational innovation

Source: Mcmillan, C. (2010). Five competitive forces of effective leadership and Innovation. *Journal of Business Strategy*, 31(1), 11-22.

From reviewing both models it becomes evident that while relevant personal traits may exist naturally within the PDM, the subsequent effect on the desired attributes of a leader can have a dramatically different effect and outcome on

prolonged innovation motivation. An additional critical factor for SME sustainability will be the strategic business decisions and choices made by the entrepreneurial PDM. A typical decision process model is shown at appendix 5. Risker (1998, p.32) quotes from the 1990 work of Gartner advocating that growth can be viewed as either “characteristic of the entrepreneur”, or as a “behavior of the entrepreneur”. A further consideration that it is important to introduce at this juncture is that not all PDMs choose to lead the company in a visible, direct manner, in its early years of trading, or in some cases, the latter years of trading. An example of this phenomenon is provided by Gore, Toledano and Wills (1994) who cite a business owned by university academics that was relatively successful even though their attendance was sparse and they relied upon frequent reporting by the employees as the main mechanism to run the business. Whilst this worked in practice for the first ten years, it was soon recognised that the company’s growth had threatened the continuance of this remote management practice which in itself was threatening the continuance of the company. The PDMs also realised that when a company reaches a certain size, the necessity exists for it to be managed and led, but not by the same individual(s) and a choice becomes essential as to which role they take and the appropriateness of their personal traits and motivation in making that decision is vital. Darling, Gabrielsson & Seristo (2007, p.9) concur stressing that the roles of manager and leader, whilst both important, are profoundly different in their nature and objectives and need to be recognised as such by the company and the individuals fulfilling them. Contemporary leaders can be viewed as “creative change agents, not masters of basic routines”.



### **2.4.2 Changing needs with maturity**

One of the biggest issues envisaged with leadership approach as a company grows is to what degree, due to its maturity, does the necessity to “unlearn” exist. This is the prime component for the many authors that consider innovative success in growing SMEs as more achievable than in large companies. Todd (2010, p.124) uses another term for unlearning; “dismantling old mental models” , by viewing management values in terms of old school and new school; the old school bosses seeking intellect, diligence and obedience; the new school bosses favoring passion, creativity and initiative. As Cardon (2008, p.77) highlights, “passion is a central element of the entrepreneurial process. These straightforward descriptions give a clear understanding of how corporate leadership style will determine the presence of innovation and the value of intrapreneurs. Painoli (2012, p.219) indicates the transition that is required to progress from an old to a new school leadership mentality control becomes consent; efficiency becomes effectiveness; regulation becomes relationships, autocracy becomes democracy; doing things right becomes doing the right things; and uncertainty becomes certainty.

Entrialgo, Fernandez & Vasquez (2000) studied 233 Spanish SMEs to dissect the influence of entrepreneurial leaders on company performance and found correlations between both the direct, and indirect, impact of an individual’s psychological characteristics within the decision-making process and overall business strategy. Poutziouris (2003, p.199) proposes that business strategy is determined by the owner(s)/director(s) orientation and offers four distinctive categories of characteristic behaviors as seen in table 12.

Table 12: Categories of Characteristic Behaviors

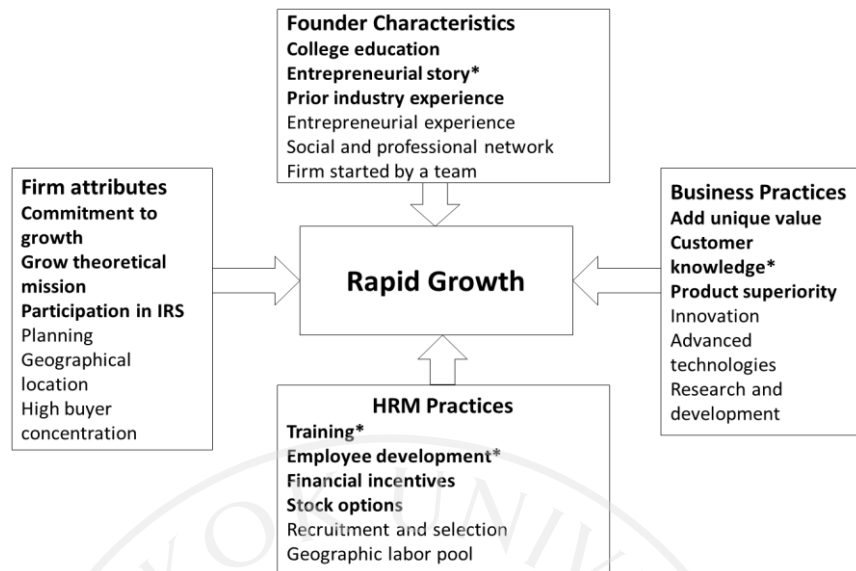
<b>Owner orientation</b>	<b>Owner characteristics</b>
Status quo-control orientated	Owner-directors that are less interested in increasing profitability, increasing leisure time, building up a pension fund, increasing personal asset base, becoming recognised as the owner of a successful business, or improving the standard of living. Rather this group is more interested in carrying on as they are now.
Growth oriented	Owner-directors who are more interested in increasing the size of the business, becoming the owners of a larger business, and being recognised as the owners of a successful business. This group of owner-directors are not happy to carry on as they are but would be willing to raise funds for expansion
Survival and lifestyle oriented	Owner-directors whose prime business objective is to survive and sustain an autonomous life style and they are less likely to consider exit-routes.
Exit-route oriented	Owner-directors that are less interested in maintaining control but are looking for an exit-route, through the sale of all or part of the business.

Source: Poutziouris, P. (2003). The strategic orientation of PDMs of small ventures:

Evidence from the UK small business economy. *International Journal of Entrepreneurial Behaviour & Research*, 9(5), 185–214.

Every entrepreneurial leader will be faced with a set of choices at many junctures in the growth cycle of a SME which may prove pivotal in its success or demise. O’Gorman (2001, p.72) proposes that the sustainability of the company will be contingent on two factors shaping growth; firstly, the strategic choices made by the entrepreneur that are within their influence and control, for example “generating resources which can be used to maintain and sustain the growth process within the venture”; secondly, the industry structure, for example, external environmental pressures, over which they have no control.

Merz & Sauber (1995); Deakins & Freel (1998) and Poutziouris (2003) all indicate a direct association between the selection of innovative activities in SMEs and the personality of the owner and his/her ethos and principles. Barringer, Jones & Neubaum (2005, p.664) cite “owner characteristics” as the most influential variable to achieve “rapid-growth” from start-up or new ventures. Furthermore, that the most successful owner’s backgrounds for sustained growth comprised a high level of education, prior industry related experience, and “a more compelling entrepreneurial story (or motivation to be an entrepreneur)” or, as expressed by Mitchell et al (2002, p.93) “the people side of entrepreneurship”. Gray (2006) concurs that SME leaders with high levels of specifically, education with a technical bias, are better positioned for growth through innovation and have a greater predisposition to employee development and training. Any science-based knowledge is considered to generate the greatest opportunities for identifying and developing innovation Jong & Hulsink (2012) and Barringer, Jones & Neubaum (2005, p.683) provide the key attributes that differentiate rapid-growth firms from slow-growth firms at figure 22



Key: Normal font – previously identified variables, but significant in the present study; Bold – variables found significant in the current study; \* New variables that emerge from content analysis

Figure 22: Key attributes that differentiate rapid-growth firms from slow-growth firms

Source: Barringer, B. R., Jones, F. F., & Neubaum, O. (2005). A quantitative content analysis of the characteristics of rapid-growth firms and their owners. *Journal of Business Venturing, Elsevier, Science Direct, 20*, 663–687.

Seven of the most significant features are directly related to the background of the entrepreneur, combined with an acknowledged importance of the employees through individual personal development, and the rewards systems designed to recognize employee commitment and achievement. Another two attributes, “commitment to growth” and “add unique value” can respectively be attributed to both the primary decision maker (PDM) and employee traits. Darling, Gabrielson & Seristo (2007, p.6) propose it is the empowerment of employees to be actively and enthusiastically involved as the greatest contributor for success, therefore, although not specifically detailed as such, intrapreneurship. Lappalainen & Niskanen (2012)

posit that ownership structure materially affects both growth and profitability in SMEs, citing that when companies involve third parties at board level, growth and profitability actually decline. Similarly, Pasanen & Laukkanen (2006) found that there was no material impact of employee team involvement as a third party in the running of SMEs. This would indicate that the risk-taker attribute of the entrepreneur PDM can become diluted by both external and internal influences. A likely cause requiring a company to be led by more than one individual may occur when funding is required during stages of business expansion and is contingent upon creating executive or non-executive positions within the firm. An exception to some of the negative insights reported from external influence to company growth above, could be the concept of mentoring for the entrepreneur as intimated by Sullivan (2000, p.172) and the value of “reflective learning”. He proposes that learning is a vital component for entrepreneurial success in SMEs and the value of mentoring in terms of a support mechanism should not be overlooked. This view is supported by Merz & Sauber (1995) who cite seeking expertise from directors of other companies as a critical resource for growth through strategic focus. Wang, Wang & Horng (2010); Deakins & Freel (1998) and Kalling (2007) cite previous research as determining that SME leaders who sought external information and knowledge outperformed those that did not. Equally, Jong & Hulsink (2012); Ates, Garengo, Cocca & Bitici (2013); Brown, Nasarwanji & Catulli (2010) and Szerb (2003, p.281-282) all emphasize a significant advantage in small businesses from external networking. “Networking” in this context extends to suppliers, customers, friends and relatives, banks, accountants, consultants, universities, and, competitors, dependent upon specific innovations requiring different insights and business acumen, for example, missing knowledge. Szerb (2003, p.88)

expands on the social networking theory in that “mutual trust, shared values and respect” have been frequently cited as the most important factor in successful networking. Jong & Hulsink (2012, p.284) add that previous research has indicated that networking has a much greater validity when applied to “new to market innovations” as opposed to those which are only new in terms of internal innovation.

The profile and judgment of the PDM leader in SMEs equally becomes a critical issue in the context of “hostile and benign environments”, Covin & Slevin (1989, pp.83-84) either of which will necessarily encompass external factors which, although outside of the leader’s control, can have a significantly detrimental effect on both the viability and growth of the business. They submit that the attributes which are most likely to have a positive influence in both scenarios are fundamentally opposed as captured below at table 13

Table 13: Hostile and Benign Environments

<b>Hostile Environment</b>	<b>Benign Environment</b>
Organic structure	Mechanical structure
Entrepreneurial strategic posture	Conservative strategic posture
Competitive profile characterized by long-term, goal-oriented approach to management	Competitive profile characterized by conservative, risk-averse financial management
High product/service prices	An emphasis on immediate profitability
Maintaining an awareness of industry trends	The development and refinement of existing products and services. A strong dependence, if necessary, on individual customers for the firm's sales revenues

Source: Covin, J. G., & Slevin, D. P. (1989). Strategic Management of Small Firms in Hostile and Benign Environments. *Strategic Management Journal*, 10(1), 75-87.

Poutziouris (2003, p.190) captures the elements of growth potential through innovation for SMEs presented previously, and summarizes them in three distinct categories: Firstly, the caliber of the PDM(s) and entrepreneurial resources; motivation; management expertise, skills, age, family history. Secondly, the business profile: age, size, sector (high-tech/low-tech, export-intensity); legal form, and ownership regime. Thirdly, the strategic planning: market positioning, research and development, exporting, external financing, human resource management and development along with succession planning.

Of primary importance remains the entrepreneur's ability to manage both the stages of growth, the barriers to growth, and, the ensuing strategic position that is employed as this is likely to be highly influential in the diffusion of intrapreneurial opportunities and intrapreneurial motivation.

### **2.4.3 Leadership strategic orientation classifications**

Within chapter 1, the introduction section of this dissertation, we touched upon the writings of Miles & Snow (1978); Conant, Mokwa & Varadarajan (1990, pp.365-366); Dyer & Song (1997, p.469); Desarbo, Benedetto, Song & Sinha (2005, p.47) and Brown, Nasarwanji & Catulli (2010, p.4) in proposing that there are four strategic positions adopted by business leaders; defenders, prospectors, analyzers and reactors. Dyer & Song (1997, p.469) posit that "prospectors and defenders are the two poles, while analyzers and reactors pursue a mixture of the two polar positions". A typical classification for each approach of leadership is presented below. The origin of these terminologies dates back to the P-A-D-R framework proposed by Miles & Snow (1978) and have been used and their definitions adapted or modified in subsequent years to measure many factors within the business environment, not limited to organizational capability, organizational efficiency, market forces, competitive strategy, organizational structure, company performance and, by Brown, Nasarwanji & Catulli (2010) in the context of entrepreneurial and intrapreneurial sensemaking. In the words of Brown Nasarwanji & Catulli (p6) the notion of defending, prospecting, analyzing or reacting "represent a natural reaction to the business entrepreneurs' thought worlds, his habits and perceived opportunities", which become significant in terms of the SME primary decision maker's propensity to champion or dismiss intrapreneurship. The classifications can be found at table 14.



Table 14: Leadership approach characteristics

	<b>Desarbo et al (2005)</b>	<b>Brown et al (2010)</b>
<b>Defenders</b>	Engineering-oriented and focus on maintaining a secure niche in relatively stable market segments	These enterprises often focused on a narrow or limited product market, creating a niche for themselves where they have subsequently developed a leading position. These enterprises fall into a strategy of trying to protect their market share and revenues/profits
<b>Prospectors</b>	Technologically innovative and seek out new markets	These enterprises often start with a single successful product, but then steadily grow their product/service portfolio by their continuous search for new market opportunities by applying their knowledge and know-how to innovate and develop superior customer-valued products and services

(Continued)

Table 14 (Continued) : Leadership approach characteristics

	<b>Desarbo et al (2005)</b>	<b>Brown et al (2010)</b>
<b>Analyzers</b>	Tend to prefer a “second but better” strategy. (This will be reworded to an enhanced new or existing product/service strategy)	These enterprises can act both defensively or prospectively depending on their analysis of the environmental challenges and the perceived innovation-resources that would be required
<b>Reactors</b>	Lack a stable strategy and are highly responsive to short-term environmental contingencies	These enterprises are characterized by perpetual instability and inconsistency in their strategies, predominantly because of their incapacity to respond effectively to environmental changes

The next section of this chapter focuses on the theory of intrapreneurs and intrapreneurship. As a precursor we may reflect on a suggestion from Teltumbde (2006, p.131) “intrapreneurship may be said to be more important than entrepreneurship because while entrepreneurship creates organizations, it is intrapreneurship that drives them to glory”. Gundogdu (2012) writes in a similar vein. There are many references within the extant literature that business failure is commonly due to dated business models, dictatorial leadership, historical visions and aspirations of entrepreneurs whilst the rest of the world has moved on, and, that it is the intrapreneurs within the company that will be its salvation. Through an investigation of the theory of intrapreneurs and intrapreneurship presented in the

following subsection we will discover that intrapreneurs can in fact create as many problems as they are deemed to be able to solve.

## **2.5 The theory of intrapreneurship**

“Companies that don’t learn to keep their best and most innovative people will be left with nothing but dead wood”. (Gifford Pinchot III, 1985)

### **2.5.1 Introduction**

The early literature, Pinchot (1985) for example, consistently refers to intrapreneurs and intrapreneurship in the sole domain of large organizations suggesting that their positioning is only relevant in sizeable corporations. More recent literature identifies and acknowledges that intrapreneurs exist in small and medium size companies and that these individuals demonstrate both personal characteristics and abilities that could contribute significantly to organizational innovation. Indicatively, that “intrapreneurs are people who dream beyond their mundane domain of something unusual” (Teltumbde, 2006, p.129). In support of this latter body of published work, it is debatable that the word intrapreneur was created to describe an individual who did not exist when an organization was in its infancy. “Small and medium-sized firms seem to provide a more fertile environment than might at first be thought for the development of rich and varied innovations under the supervision of enthusiastic employees” (Carrier, 1997, p.9) and Carrier (1994) adds that it is within the SME rather than large corporation environment that intrapreneurs can be more easily identified. Maier & Pop Zenovia (2011, p.972) concur, proposing that “the bigger the organization, the more difficult it is to have an overview of the actions of every employee”. It is the author’s opinion that many companies may not have grown

and developed to their current size without some intrapreneurial contribution at employee level combined with an entrepreneurial spirit in the business leader.

Kneale (2003, p.5) also takes a broader perspective by proposing that; “Intrapreneurs can be found in service industries, creating innovations that draw customers away from the competition, and keep a business moving forward to embrace new ideas and develop new products. They drive innovation. But intrapreneurs are also found in charities, voluntary activities and social groups. They work within systems to develop activities, products and ideas. They motivate and move groups forward. Brenner & Brenner (1988) advance this proposition with a view that “the entrepreneurial spirit, whether it is called intrapreneurship or entrepreneurship, is a phenomenon that has existed since the world began”. Equally, that intrapreneurs exist in all walks of life. The company Virgin has an enlightened approach and a distinctive expression, the “re-imageneer” (Virgin, 2015). They surmise that the re-imageneer is an intrapreneur “who sees the potential in all things, no matter how old, worn out, and seemingly useless they appear. This intrapreneur doesn’t just recognize social or environmental issues; he or she turns the issue on its head by creating a solution from the problem”.

There are two fundamental knowledge-intensive considerations that the literature proposes underpin the likelihood of intrapreneurship within an organization; Human Capital in terms of harnessing individual’s knowledge, skills, abilities and ideas, and Organizational Support, in terms of providing the appropriate setting, conditions, resources and motivation, and, the potential output of a synergy between them. Wang, Wang & Horng (2010, p.176) suggest that in terms of organization learning, human capital “has been acknowledged as the primary source of value

creation and critical innovation infrastructure”, and Zhao (2005, p.37) “people are the most important assets in today’s knowledge-based economy”. Lumpkin & Lichtenstein (2005, p.451) concur and suggest that within businesses the implementation of organizational learning practices “capitalize on knowledge gained” and “have been able to leverage this newly learned knowledge to their strategic advantage. This stance is shared by Bhardwaj & Sushil (2012) and Zahra, Nielsen & Bogner (1999) in terms of knowledge exploitation. Urbano, Alvarez & Turro (2013, p.856) equate human capital to education as highly likely to provide a “superior ability” within individuals that causes them to successfully seek and exploit opportunities, a position shared by Parker (2011) Furthermore, that highly qualified employees will be more successful as intrapreneurs and will find the creative role required from them easier to accomplish and ultimately succeed in. Lynn, Akgiun & Keskin (2013); Ates, Garengo, Cocca & Bitici (2013); Russell (1999); Amar (2004); Bhardwaj & Sushil (2012); Lee, Peris-Ortiz & Fernandez-Guerrero (2011) and Jong & Hulsink (2012) concur in respect of the value of human capital in innovation teams and the subsequent competitive advantage gained. Darling, Gabrielsson & Seristo (2007) venture that such is the importance of people within the business, successful entrepreneurs consider it vital to spend a significant degree of time with them. Coulson-Thomas (1999, p.258) also asserts value creation as opposed to “cost-cutting” and “re-engineering” as a critical aspect for developing intrapreneurship, citing the necessity for championing entrepreneurial employees and changing the traditional methods of training and personal advancement as key to lasting internal innovative thinking and activities. This view is shared by Koen (2000, p.5) who introduces the expression “key criterion”. However, as with all entrepreneurial

behaviors there will be an associated level of risk both at a personal and corporate level from intrapreneurs as individuals or in teams charged with delivering new ideas and competitive advantage.

McAdam & McClelland (2002, p.90) vouch that teams are prepared to take greater risks than individuals. Furthermore, that there is an optimum team size for the success of innovative activities. Fewer than three “suffer from a lack of diversity in idea generation”; greater than twelve are less creative due to “communication and team co-ordination”. Alpkın et al (2010) also assert that organizational support and human capital are both key drivers in achieving a climate of innovation but are independent variables and that success can be affected by the ratio of each and the interaction of the two. They are both influential aspects of organizational development and should complement each other in achieving an innovation-led culture. Alpkın et al’s (2010, p.746) empirical findings from a study conducted by questionnaires within 184 manufacturing firms in Northern Turkey concluded that both human capital and organizational support “exert significant and positive impacts on innovative performance”, especially in respect to risk-taking. However, that the interaction between these variables does not in itself produce higher innovative performance, and that further possibly subjective influences may need to be factored in. Christensen (2005, p.315) offers a prospective summary of these at table 15 below.

Table 15 : Factors Influencing Intrapreneurship

<b>Factor</b>	<b>Basic factors</b>	<b>Intrapreneurial factors</b>
Rewards	Regular pay, job security	Promotion, expanded job responsibility, autonomy, free time to work on pet projects, bonuses
(Top) management support	Sponsors	Commitment
Resources	Finance and materials	Knowledge resources
Organisational structure	Hierarchy	Corporate venturing, cross-functional teams, internationalisation, external networks
Risk	Tolerance of lower risks	No penalisation

Source: Christensen, K. S. (2005). Enabling intrapreneurship: the case of a knowledge-intensive industrial company. *European Journal of Innovation Management*, 8(3), 305-322.

Kuratko, Montagno & Hornsby (1990) explore the work of several authors in this field and offer three central suggestions; that change is required and inevitable if organizations are not going to stagnate or decline; that there are perceived weaknesses in the traditional approaches and methods used by corporate management; that employee attrition rates will be negatively impacted within organisations that discourage internal entrepreneurialism. Wunderer (2001, p.203) provides alternative terminology to support the theory that “language” within an organization is fundamental to creating a climate of innovation. Instructions and regulations become

meaning through vision; change as a threat becomes change as an opportunity; fear of mistakes becomes willingness to make mistakes and learn; committed support of ideas becomes questioning of new ideas; big-bang-innovation becomes continuous improvement; short-term self-interest becomes long-term co-operative orientation; monitoring and control becomes mutual trust and freedom; internal self-orientation becomes customer orientation.

An essential aspect of this research study is to evaluate the significance of intrapreneurship within small/medium size companies. Positive stances are evident in the writings of Camelo-Ordaz, Fernandez-Alles & Ruiz-Navarro (2012); Molina & Callahan (2009); Zahra & Pearce (1994); Shatzer & Schwartz (1991); Covin & Slevin (1991) and Antoncic (2007) suggests “intrapreneurship can have beneficial effects on the firm's growth and profitability, in both absolute and relative terms”, and Risker (1998, p.31) proposes intrapreneurship is of great importance to entrepreneurship, “specifically in its relationship to innovation”. Carrier (1997, p.7) aims to corroborate endorsement of intrapreneurship in small businesses through “six postulates supporting the need to reconcile the concepts of intrapreneurship and small business. Firstly, that intrapreneurship characteristics “are not the exclusive property of employees of large firms”; secondly that intrapreneurs can be “first-class allies for the primary decision maker (PDM) when growing small businesses”; thirdly “the fact that intrapreneurs are absent from the small business literature does not mean they have no right to be there”; fourthly that “the loss of an intrapreneur will have more serious consequences for small firms than for large firms”; fifthly that “small firms are potential incubators for intrapreneurs” and finally, “that small business provides a favorable environment for innovation”. A study undertaken by Intuit in 2009 (pp.1–



9) highlights that “small businesses are active and natural innovators” and contribute substantially to a country’s economy.

Throughout the body of literature, and within this dissertation introduction it became evident that “intrapreneur” was not the only description that is used to reference individuals who display innovative abilities which can be harnessed to enhance both individual and corporate gain and, “make some material difference” Thompson (2004, pp.245-246) and Martiarena (2013, p.28) proposes that they can be considered as employees who are “in the frontier between paid and self-employment. Other widely used terms are internal entrepreneur or corporate entrepreneur (Zahra, Nielsen & Bogner, 1999) Whichever title is used, the role and its objectives are fundamentally the same, but the expectations will generally be above those recognised in Project Champions and Project Managers (Prasad, 1993) A pertinent distinction could be that entrepreneurs innovate for themselves; intrapreneurs innovate of behalf of an organization in the capacity of employee (Carrier, 1997, p.6)

### **2.5.2 The relationship between the leader and the led**

An objective of this research is to discover how entrepreneurs view intrapreneurs within their business. Scozzi, Garavelli & Crowston (2005) conducted a study that concluded entrepreneurs felt that most innovative initiatives or original ideas came primarily from them, not the workforce or third party collaborations. Todd (2010) proposes that company owners often struggle with accepting new ideas that may threaten the foundations of the business models they invented. Meng & Roberts (1996, p.2) posit that many entrepreneurially-minded individuals leave large firms “where new technologies were created, to set up small firms to exploit the new technology that they felt constrained from pursuing”. A further example is provided

by Burgers & Van De Vrande (2011, p.483) in the case of a company whose employees recognized an opportunity for a new standard of disk drives. Their ideas were dismissed as not relevant to the company's existing market, only to discover later that the concept had been adopted by their competitors and had captured the market place. This is one instance of many whereby it is suggested that "nurturing those employees as corporate entrepreneurs might have saved several incumbent firms". As De Villiers-Scheepers (2012, p.419) posits "entrepreneurially minded firms engage in opportunity and advantage-seeking behaviors on the basis of their unique knowledge and perceptions of the emerging market environment", a position shared by Heinonen & Toivonen (2008) and Zahra, Nielsen & Bogner (1999) Seshadri (2009, p.209) provides the view of Rao, an extremely successful intrapreneur turned entrepreneur who has experienced first-hand the problems that can be evident in entrepreneurial leadership traits such as those above; "I think CEOs and senior managers have reached top positions in their organisations because they have been entrepreneurial. And that is why they stood out from the rest. But over time they get so used to being in charge and in command that they do not allow people down the line to take charge and be entrepreneurial, although they have good intentions. CEOs need to be mentors rather than controllers". Ates, Garengo, Cocca & Bitici (2013, p.37) also cite a "command & control" culture as indicative behavior, specifically in SMEs, that are dominated by the PDM's personal business style and beliefs, whilst Kets de Vries (1996) refers to previous research in citing "a need for control, a sense of distrust, and a desire for applause as behavioral observations of entrepreneurs". Aygun, Suleyman & Kiziloglu (2010) and Brown, Nasarwanji & Catulli (2010, p.2) assert that unless the control-oriented approach of the business PDM is renounced it is

extremely unlikely that any form of intrapreneurship can thrive indicating “collaborative effort between the business entrepreneur and these intrapreneurs, is potentially beset with problems, issues and conflicts”. As expressed by Heinonen & Toivonen (2008) the relationship between entrepreneur and intrapreneur, if symbiotic, generates an environment in which employees are empowered. Without empowerment the confident intrapreneur may appear to be little more than a problem in the entrepreneur business. Contextually, we should bear in mind that it could be that the entrepreneur is focused on “enterprise fulfilment” whilst the intrapreneur could be focused on “personal fulfilment” (Carrier, 1997, p.16) and Wakkee, Elfring & Monaghan (2010) introduce the importance of coaching as a management technique and the positive results that can be achieved by those who sponsor entrepreneurial behavior from their employees. From Cardon (2008) we find a very thought-provoking view on this; can, and if so how can entrepreneurs transfer their passion to employees?

Antoncic & Hisrich (2003) report that despite similarities between intrapreneurs and entrepreneurs there is a divergence in terms of risk-taking; primarily that for the entrepreneur it is financially a sole risk, for the intrapreneur it is a shared risk. From a personal perspective the risk for the intrapreneur may be the loss of their job, Szerb (2003) and Martiarena (2013, p.27) suggests that intrapreneurs are in fact “significantly more risk averse”. Degrees of risk can be mitigated if appropriate controls and regulations are in place, to ensure an employee’s activities can be closely monitored, measured and financially controlled even within the spirit of innovation. Pinchot (1985, p.262) illustrates the process of risk versus non risk for employees as shown at figure 23



Figure 23: Intrapreneurial and Management Rewards

Source: Pinchot, G. (1985). *Intrapreneuring: Why you don't have to leave the corporation to become an entrepreneur*. New York : Harper and Row.

Whilst the aim is to elaborate on the outcome of such choices, the focus is towards the achievement of promotion. Whether promotion is a desired occupational outcome for intrapreneurs will be discussed later in this dissertation as the motivations and rewards that underpin intrapreneurship are central to the research argument. The risk for the entrepreneur making a major mistake with an innovative project are likely to be much harder to recover from than those of the intrapreneur and potentially irretrievable. Consider DeLorean, the ex-CEO of General Motors, who took a significant personal gamble by developing a futuristic car, named after him, which failed as a business venture almost instantly. Corporate leaders do however need to be capable of accepting some failures if they genuinely wish to create an environment for originality and inventiveness to be taken seriously. As Goffee & Jones (2007, p.8) suggest “companies that value diversity are not afraid of failure”, and from the same positive perspective, we may view perceived failure as a learning opportunity (Kuratko & Montagno,1989)

### **2.5.3 The individual innovativeness theory**

Rogers (1995, p.284) posits that “since opinion leaders directly affect the tipping of an innovation, a powerful way for change agents to affect the diffusion of an innovation is to affect opinion leader attitudes”. This is supported by the view that intrapreneurs must be prepared for conflict, politics, tenacity and considerable persuasiveness in order to be convincing (Prasad, 1993) and, that in order to be successful, intrapreneurs must actively seek out the decision makers who will make the innovation happen or block it (Pinchot & Pellman, 1999) and Blanchard (2008, p.2) suggests that intrapreneurial employees should not only be prepared for conflict but may actually invite conflict. Senge (1990) supports conflicting of ideas within teams and amongst peers as a healthy indication of a learning organization providing opportunities for intrapreneurial prospects and respect. Ten years earlier Kirton (1980) had suggested such disagreement created a poor working and learning environment particularly in times of pressure. A further consideration introduced by Brunaker & Kurvinen (2006) is that of a “middle manager” effectively acting as a “gate keeper” who can elect to ignore or understand and remedy conflict in creative teams so they may remain unknown to the PDM and the diffusion of innovation is interrupted. Rogers (1995) further suggests that it is the diversity of individual’s personal characteristics that make the diffusion of innovation happen. Guillen & Saris (2013, p.72) categorize such personalities as having an “openness to experience”, and personal qualities of “intelligent, curious and broad minded”. It is also documented that even as children, positioning within their social network will determine a greater or lesser acceptance for adopting innovation and impact upon the speed in which they do so (Kunst & Krantzer, 2007) and that children may well follow the traits of their

parents in this respect (Langley, Pals & Ortt, 2005) Interestingly, Menzel, Aaltio & Uljin (2007, p.736) report a similar finding with respect to intrapreneurial potential; that exposing people to creativity at a very early age eliminates the fear of failure. Again from an intrapreneur perspective, Turner & Bryant (2014, p.76) propose that the intrapreneur can accept failure as it comes with “its own set of invaluable lessons”. As Morris, Kuratko & Covin (2008, p.151) report that intrapreneurial employees may fail but they will not see this as being beaten, more a temporary setback but this becomes confusing when in the same year Kuratko, Morris & Covin (2008, p.284) suggest that they do not want to have “the onus of failure” attached to their names. What cannot be overlooked is that failure, or the fear of failure, plays a key part in the mindset of entrepreneurs and intrapreneurs in respect of opportunity recognition and the paths that are consequently taken by them. Rogers (1995) provides a bell shaped distribution of individual innovativeness and the percentage of potential adapters theorized to fall into each category ranging from those who take the first acceptance stance to those who take a resisting stance, defined as laggards. The typical characteristics of these individuals are presented at figures 24 and 25.

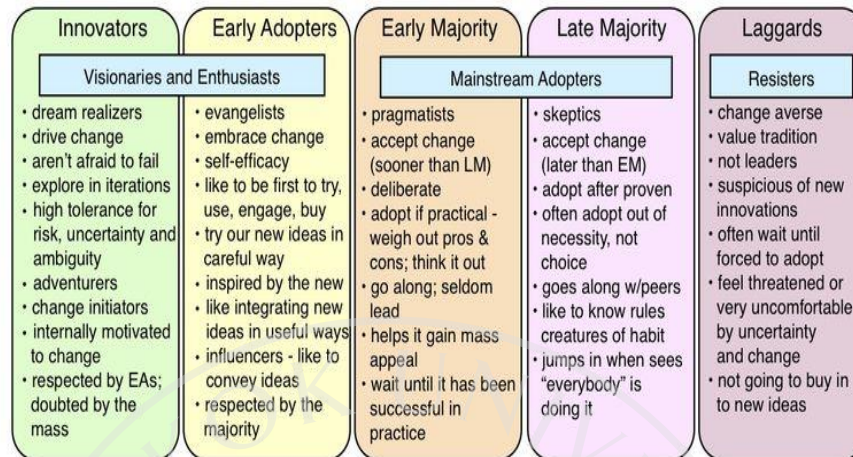


Figure 24 : Bell shaped curve showing categories of individual innovativeness

Source: Rogers, E. M. (1995). *Diffusion of innovations* (4<sup>th</sup> ed.). New York :

The Free.

## Characteristics: Innovators to Laggards



Characteristics Image by The Center for Creative Emergence 2011  
 Main Sources: Diffusion of Innovation by Everett Rogers  
 Crossing the Chasm by Geoffrey Moore

Figure 25: Characteristics: Innovators to Laggards

Atkins (2005, pp.6-7) adds that there are a variety of external or social conditions that may accelerate or slow the diffusion process citing as examples, whether the decision is made collectively, by individuals, or by a central authority; the communication channels used to acquire information about an innovation, whether mass media or interpersonal; the nature of the social system in which the potential adopters are embedded, its norms, and the degree of interconnectedness; and the extent of promotion efforts, for example the use of advertisers and development agencies. Kunst & Kratzer (2007, p.37) introduce the further dimension of “threshold theory”. Threshold theory is concerned with individual’s responsiveness to innovation based on their social confidence, creating a leader and follower condition. The greater the number of influential employees that are innovators or early adopters leads to a greater acceptance of innovation within a group setting. Whilst they acknowledge that individual thresholds necessarily vary, they do not address the mitigating

circumstances for this other than external influences particularly mass-media communication and customer integration. Internal organizational factors are not addressed, but these are central to this dissertation in dissecting the relationship between the entrepreneur and the intrapreneur in a leader and led setting.

These writings all reflect the inherent difficulties for intrapreneurs to achieve sponsorship and recognition in some organizational cultural environments; sponsorship not solely in terms of funding and approval, but vitally, in terms of physical support and experienced advice in executing innovative initiatives or projects. Three other powerful considerations emerge that require PDM sponsorship; the organizational boundaries that restrict the true concept of intrapreneurship; the level of discretion that intrapreneurs have in planning and executing their tasks and, the time that is made available to them to be innovative in developing new products or services or problem solving issues with existing ones. The following sections seek answers to how, and to what extent these organizational factors influence intrapreneurial responsiveness.

#### **2.5.4 The work environment**

In this sub-section we turn our attention to the impact of the work environment on intrapreneurship as we consider how it can be a supporting or restrictive factor. Opportunities for employee creativity are captured by Dewett (2004, p.262) in respect of the external and internal influencing factors shown at figure 26.



Problem Type	Open	<b>Expected Creativity</b> Required Solutions to Discovered Problem Example: Idea to improve process – nature of outcome not specified Modest Perceived Personal Risk	<b>Proactive Creativity</b> Volunteered Solution to Discovered Problem Example: Unprompted suggestion directly relating to one's own work High Perceived Personal Risk
	Closed	Low Perceived Personal Risk <b>Responsive Creativity</b> Required Solutions to Specified Problem Example: Idea to improve process – nature of outcome specified	Modest Perceived Personal Risk <b>Contributory Creativity</b> Volunteered Solution to Specified Problem Example: Unprompted suggestion not directly relating to one's own work
		External	Internal

**Driver for Engagement**

Figure 26 : Modified version of Unsworth's (2001) typology of creativity

Source: Dewett, T. (2004). Employee creativity and the role of risk. *European Journal of Innovation Management*, 7(4), 257-266.

It is evident that intrapreneurial efforts need structure and guidelines and should not be seen as a license to complete freedom from the usual business disciplines (Davenport, Prusak & Wilson, 2003) As such, it is not a straightforward proposition regardless of its perceived desirability. Challenges exist not only in corporate vulnerability but in the characteristics of existing management style; responsibilities to stakeholders and perception by other employees. Darling, Gabrielsson & Seristo (2007) recommend that robust financial control is essential in the innovative environment but this will not be seen as important or favorable by the creative thinkers. Amabile (1998, p.5) provides a functional approach to this dilemma, in that freedom to be innovative can have boundaries, for example, providing the employee with the opportunity to climb a mountain but not decide which mountain. This is founded in the concept that “clearly specified strategic goals often enhance

people's creativity", whilst mitigating what Pinchot & Pinchot (1978, p.151) describe as "uncontrolled energy". Sathe (2003, p.330) introduces a pertinent expression known as "moral hazard" to reflect individuals who continue to pursue uncertain activities and there has been no penalization for their actions or those of others doing the same., From a practical perspective it is necessary to ensure guidelines are agreed and adhered to; that resources both financial and physical are available; that communication and feedback strategies are defined and followed as part of a measurement program. "Communication is vital in order to create commitment and alignment" Ates, Garengo, Cocca & Bitici (2013, p.35), a position strongly shared by Heinonen & Toivonen (2008) So, at a theoretical level, a reassessment and, if necessary, realignment of the corporate vision is undertaken to monitor the environment for success in intrapreneurial activities and objectives. Menzel, Aaltio & Uljin (2007) provide an interpretation of how wide the gulf can be between the intrapreneur's operational desires and the organization's operational desires. Perhaps one of the most significant factors cited is the intrapreneur's aspiration to deflect from historical practices and the business' wish to sustain and reinforce them.

Sausser (2001, p.32) questions that intrapreneurship may simply join a long line of other management "fads"; that there is enthusiasm and popularity for the notion initially, but this dwindles and disillusionment sets in when it "does not turn out to cure all the ills of an ailing business". A viewpoint shared by Kuratko, Morris & Covin (2008) and by Morris, Kuratko & Covin (2008, p.34) who postulate that if employee intrapreneurial activities were likened more to a business start-up operation that would in itself dispel the notion that it was a fad, soon to be replaced by what takes the consultant or "popular business writer's" interest next. The expectations of

intrapreneurialism should be realistic in that not every relatively substantial new initiative will succeed despite the desire for it to do so at any or all levels within the organization. This is no different to any other internal enterprise but because it lacks the inherent structure that is associated with accredited systems e.g. Six Sigma or ISO standards, the journey and the measurement process can and will vary according to the key individuals, systems and processes already driving the organization.

Pointedly, Kenney (2010) cites 3M as a corporation that implemented Six Sigma with the aim of increasing operational efficiency, and was successful in the short term in increasing revenues and profitability. When only a short time later the effects on R&D and innovation became clear by a marked decline in new product growth, they abandoned it. We may also consider the case of Motorola, a corporation which wholly embraced a Six Sigma operational strategy without identifying the issues that could be caused by the necessity to measure innovative activities through business metrics. Such metric systems are frequently incompatible with creative activities and invariably overlook relatively small process or product enhancements whilst focusing on sustaining its brand history and market territory.

Demott & Brynes (1985) reference companies such as General Motors who launched a “subcompact” car, named Saturn in 1987 by reforming the corporate giant’s historical structure into divisions that could stand alone in terms of product engineering and innovation without the constraints that existed in curbing the financial and operational risk of intrapreneurial development in its past. They describe this initiative as Saturn becoming an entrepreneurial firm within General Motors, which in itself is representative of intrapreneurial opportunity recognition. Van Rensberg (2014) illustrates this process as depicting an “ambidextrous” organizational

profile that separates, whilst still incorporating businesses within the same operating unit. Conversely, Sykes (1986) and Pinchot (1985) condemned some of the intrapreneurial activities within another corporate giant, Exxon as being expensive, misguided and a failure as they did not lead to any material business diversification, neither did they increase profitability from new revenue streams. “They forgot to think small in order to grow big”, (Pinchot 1985, p.220), citing an over-abundance in investment for intrapreneurship that led to high risk projects and poorly constructed strategies for recovery. Neves & Eisenberg (2014, p.187) counter this argument with the epitaph “here lies a company that died risk free” to characterize businesses that do not actively seek uncertain opportunities. And, from Kuratko, Morris & Covin (2008, p.37) “the company that is not interested in developing and tapping in to the entrepreneurial potential of its employees has effectively signed its own death warrant – the question is only one of whether it will be a quick demise or a slow, lingering decline”.

### **2.5.5 Encouraging intrapreneurial attitude**

"Not all those who wander are lost"; J. R. R. Tolkien 1892 to 1973

Cox (1985, p.145) attributes Pinchot with proposing "intrapreneurs are integrators who combine the talents of both the technologists and the marketers by establishing new products, processes and services. They are not absent-minded professors who inhabit impossibly messy labs, but shrewd resource managers who know how to integrate their company's systems". The “intrapreneur” does differ though in terms of personal traits from the “employee”. Turner & Bryant (2014, p.74) posit that they need to be “strategic in their thinking, inventive in their attack and inclusive in their thoughts”. Rodriguez-Pomeda et al (2003) stress the importance of a

sustained positive attitude. Sayeed & Gazdar (2003, p.78) provide a “spectrum of personality and intrapreneurship” by classifying intrapreneurs by type, according to their personal traits as depicted at table 16 below:

Table 16 : Spectrum of Personality and Intrapreneurship

Trait	Intrapreneurial Type	Key Attributes
Imagination	Innovator	Originality, inspiration, love, transformation
Intuition	New designer/enabler	Evolution, development, symbiosis, connection
Authority	Leader	Direction, responsibility, structure, control
Will	Entrepreneur	Achievement, opportunity, risk-taker, power
Sociability	Animator	Informality, shared values, community, culture
Energy	Adventurer	Movement, work, health, activity
Flexibility	Change Agent	Adaptability, expressiveness, curiosity, intelligence

Source: Sayeed, O. B., & Gazdar, M. M. (2003). Intrapreneurship: Assessing and

Defining Attributes of Intrapreneurs. *Journal of Entrepreneurship*, 12,75- 89.

Wunderer (2001, p.195) adds that employees can be “transformed” into intrapreneurs and provides a framework to expand on the transition process as presented in figure 27.

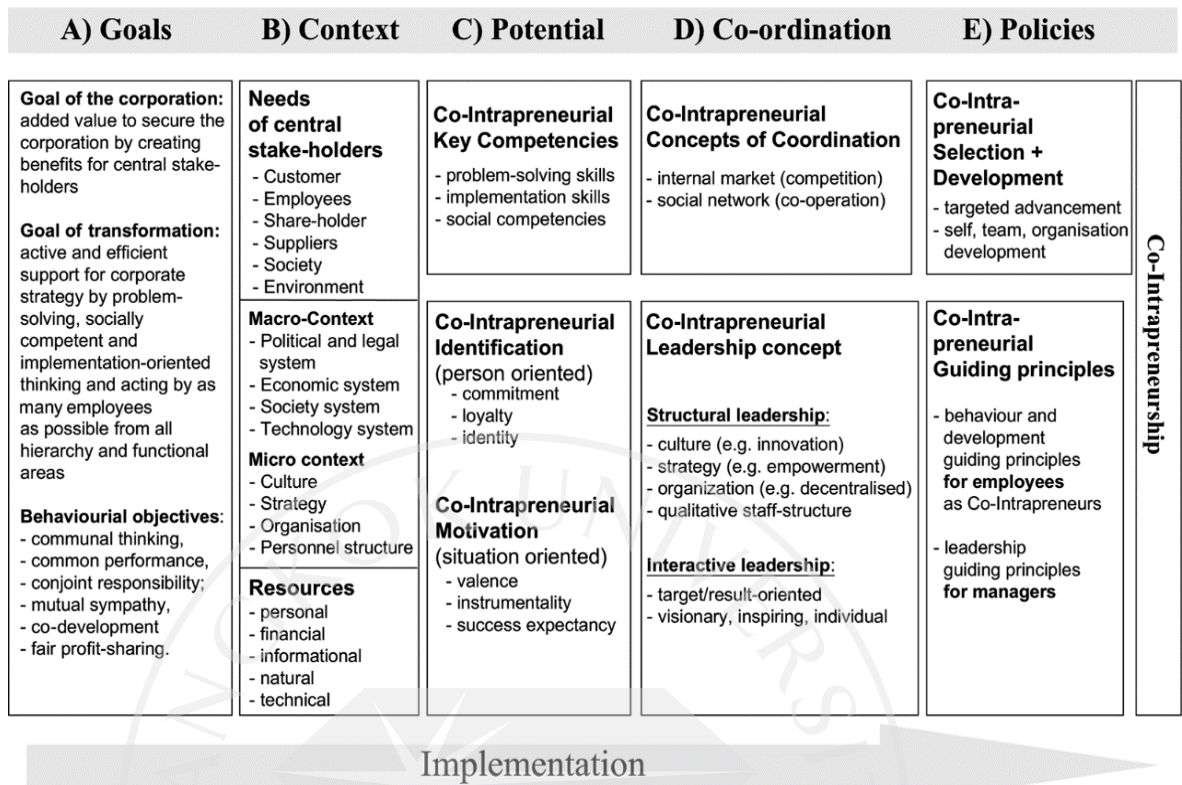


Figure 27: From employees to co-intrapreneurs – a framework for transformation

Source: Wunderer, R. (2001). Employees as "co-intrapreneurs" - a transformation

Concept. *Leadership & Organization Development Journal*, 22(5), 193–211.

Brenner & Brenner (1988) submit that intrapreneurs are creative, risk takers with innovative spirits. They also propose that the introduction of the word intrapreneur has been influential and its impact has shifted the focus of corporate attention away from planning and other conventional methods of business strategy. A further consideration will necessarily be how the intrapreneur as an individual benefits. Not everyone has the necessary profile to be innovative and many who do may not be able to take the potential risks associated with failure due to personal or family circumstances. The influence of family considerations is deemed significant by Turner & Bryant (2014); Parker (2011) and Mayrhofer, Meyer, Schiffinger &

Schmidt (2008) to which the latter submit that a negative relationship between personal and work demands frequently lead to a conflict between the two, primarily the time and energy available for both aspects of life. Therefore, the balance facing the intrapreneur is determined at three levels, career, family and individual, when one or more may become sacrificed by the other(s).

Somewhat optimistically, Pinchot (1985, p.276) provides a solution for supporting intrapreneurial ventures; “intracapital”, which is described as “a timeless discretionary budget. It is earned by the intrapreneur and used to find the creation or new intraprises and innovation for the corporation”. This is probably one of the most distinctive motivational influences that could be vested upon the intrapreneur and a true sustainer of intrapreneurial activities. However, in today’s global economic downturn this concept is unlikely to be realized, possibly with the exception of the highly technical or pharmaceutical industry sectors. Pinchot (1985, p.22) also records “Ten Commandments” for intrapreneurial success which have been widely cited by countless authors in subsequent years:

1. Come to work each day willing to be fired
2. Circumvent any orders aimed at stopping your dream
3. Do any job needed to make your project work regardless of your job description
4. Find people to help you
5. Follow your intuition about the people you choose, and work only with the best
6. Work underground for as long as you can - publicity triggers the corporate immune system

7. Never bet on a race unless you are running in it
8. Remember, it is easier to ask for forgiveness than permission
9. Be true to your goals, but realistic about ways to achieve them
10. Honor your sponsors.

Having analyzed these from both a corporate and people perspective, Sauser (2001, p.34) recommends that Pinchot's list should be expanded to include the following:

1. Analyze your needs for funding carefully and never undercapitalize
2. Plan adequately for emergencies, delays and cost increases
3. Draw upon the full resources of your organization to help you with market research, product evaluation, outlet location and other tactical decisions
4. Never disregard the advice of your firm's own experts – even if the advice may be discouraging
5. Don't get involved in areas where you have no skill, expertise, track record or credibility
6. Manage your budget carefully
7. Don't trample upon organizational policies and procedures when you can work with the system
8. Hone your managerial skills to a fine edge before you launch your internal venture

These addendums are wholly questionable in the context that Sauser (2001, p.34) has recommended adding them to Pinchot's commandments which are referred to as "inspiring and truly capture the spirit of entrepreneurship turned inward". It is justifiably argued that this list is simply a set of common-sense traditional business



practices not the less risk-adverse approach that intrapreneurs require to thrive and are better captured by Desouza (2011); Teltumbe (2006); Christensen (2005) and Wunderer (2001) In addition, Sauser's research contribution can also be considered to reflect an organizational culture of control and bureaucracy which, several years earlier, had been denounced by Ross (1987, p.22) as defunct; "corporate planners and autocratic bosses are out; intrapreneurship and corporate culture are in", a stance shared by Shatzer & Schwartz (1991) Ross along with Van Doorn, Jansen, Van den Bosch & Volberda (2013) debate whether an entrepreneurial organization has the ability to consider managers as innovators and whether the corporate culture can adapt to meet the necessary shift in thinking that would involve. The theory adopted is that in its infancy the business strategy of mission, vision and values reflect those of the primary decision maker (PDM), and with growth, these disseminate to others within the organization, critically, to a chosen few who mirror the PDM's aspirations and share a similar managerial approach. At this juncture there becomes a divergence in the writer's opinion as the suggestion emerges that for continued and sustained growth, a business culture representative of a bureaucracy does in fact become necessary, and, with a focus on structure and systems rather than people, innovation and intrapreneurship can become compromised with the company adopting a more risk-adverse operational approach. From this operational perspective, Antonic & Hisrich (2003, p.11) provide a detailed analysis of the differentials between intrapreneurship and traditional management concepts, clearly highlighting the relevance to intrapreneurialism by classification as presented in table 17

Table 17 : Differentiation of intrapreneurship from similar management concepts

<b>Concept</b>	<b>Key concern</b>	<b>Key similarity</b>	<b>Key difference</b>
Diversification strategy	Product/market relatedness of organizational businesses	Changes in diversification focus, especially in terms of entering new, product/market unfamiliar businesses	Product/market relatedness and synergy across organizational businesses not a primary focus of intrapreneurship; intrapreneurship also includes non-product/market-based emergent activities and orientations
Capabilities	Coherent combinations of resources and activities across value chains of organizational businesses	Intrapreneurship as a manifestation of organizational innovative capabilities	Search for organizational inter-business coherence and synergy not a key concern of intrapreneurship

(Continued)

Table 17 (Continued) : Differentiation of intrapreneurship from similar management concepts

Concept	Key concern	Key similarity	Key difference
Organizational learning	Knowledge acquisition and retention, and organizational routines' improvement	Intrapreneurship may create disruptions that are part of the learning process	Building knowledge base, organizational memory and routines not a main concern of intrapreneurship
Organizational innovation	New combinations from the organizational perspective (product, technological, administrative innovation)	Creation of something new in terms of new combinations in production and support activities	Predominant focus of intrapreneurship is also on creation of new ventures; this is not the focus for organizational innovativeness

Source: Antoncic, B., & Hisrich, R., D. (2003). Clarifying the intrapreneurship

concept. *Journal of Small Business and Enterprise Development*, 10(1),7–24.

Jansen & Wees (1994); Shalley (1995) and Li & Zhang (2010, p.9) take a mid-ground stance between Pinchot, Sauser and Ross in terms of a more rounded interpretation of balancing risk versus innovation, with the latter proposing a theoretical framework to illustrate that “innovativeness, pro-activeness and risk-

taking”, within an “internal entrepreneurial environment” will advance organizational performance through “sales revenue growth rate, market share growth rate and pre-tax profit growth rate”, a position shared by De Villiers-Scheepers (2012); Taylor & Taylor (2008) cite managerial intervention, the use of external consultants and an obsession with auditing as not only detrimental to the innovation process in some industry sectors, but also to knowledge building and involvement opportunities for employees. We may also reflect on the observation by Lumpkin & Lichtenstein (2005, p.457) that “opportunity recognition is one of the central ideas of entrepreneurship” and the impact that thought process could have upon organizational performance through intrapreneurship.

In summarizing, Kuratko, Montagno & Hornsby (1990, p.51) list a number of factors prerequisite to intrapreneurial success and are supported extensively within the extant literature. They include, management support, or encouragement of innovativeness through the rapid adoption of novel ideas, recognition of product champions and capital for experimental projects; autonomy/work discretion, which refers to autonomy in work design with no penalties for experimentation; rewards/reinforcement, wherein the reward system is restructured to recognize true achievement and the acceptance of increasingly challenging tasks; time availability, with work allocated in such a way that time constraints are flexible enough to permit persons to work with others on long-term problem solving; and, organizational boundaries, which represents rising above the narrow confines of day-to-day task completion to focus on producing novel solutions to broad, fundamental problems or barriers to innovation and growth.

### 2.5.6 Organizational boundaries

Antoncic & Hisrich (2003) assert that intrapreneurs anticipate the opportunity to operate outside of what would be considered customary business procedures and are self-motivated, proactive risk takers who relish the challenge of creating either product, service or process innovation, a view also posited by Turner & Bryant (2014) As such, and with a desire to seek out innovative solutions they are described by Altinay (2004, p.430) as “initiators of continuous change”. Alpkhan et al (2010, p.732) concur and add that “tolerance for trial-and-errors or failures in cases of creative undertakings or risky project implementations” is a further significant consideration in creating the organizational setting for intrapreneurship. Their 5 factor hypothesis approach is collated as; management support for idea generation becomes encouragement of entrepreneurial idea generation and development; allocation of free time becomes provision of sufficient time to work on developing novelties without any burden of routine workload; work discretion becomes decision making initiatives of the staff about their work; performance based reward system becomes availability of a performance based reward system encouraging innovativeness; tolerance for risk taking becomes recognizing risk taking intrapreneurs even if they fail and encouraging them to implement their novel proposals and projects; all in the context of the greater the level of each variable will provide an increase in innovative performance.

Likewise, Desouza (2011, p.35) advocates that intrapreneurs actively search for risk seekers in their executive/management teams with a history of encouraging, championing and developing non-traditional ideas, but propose they are “often the trouble makers or the radicals within an organization”. They question the status quo

and are likely to get into trouble with their Supervisors or peers”. Pinchot (1985, p.177) adds “selfish egotists, more concerned with their own success and power than with their subordinate’s welfare”. Teltumbde (2006) concurs, also citing a desire to change the status quo, fighting against internal company philosophies and causing friction within the organization; a view shared by McAdam & McClelland (2002) and Blanchard (2008, p.2) in assessing the characteristics of creative individuals.

Blanchard suggests that it is not necessarily the case that intrapreneurs deliberately challenge the status quo, rather than they “act on what they believe to be in the best interest of the company”. It seems probable from the above therefore, that they are also attention seekers who require a greater degree of credit and respect than employees that are not driven by the need to make a difference. McMillan (2011, p.11) submits that it is the competitive environment in business cultures that causes resource rivalry for personal attention”. Sim, Griffin, Price & Vojak (2007, p.433) note that “it may be difficult to fit them (intrapreneurs) into a particular box on the organizational chart”, and Goffee & Jones (2007, p.6) add “they ignore corporate hierarchy, they expect instant access, they have a low boredom threshold, they won’t thank you”. These observations present several potentially unfavorable issues with intrapreneurial characteristics, in respect of the boundaries of organizational hierarchy and reporting lines and the opportunities for creative individuals to operate within a “beyond boundary focus” or a “within boundary focus” (Kantur and Iseri-Say (2013, p.321) Scheepers Hough & Bloom (2008, p.56) propose a requirement for what they term “fluid” boundaries). Menzel, Aaltio & Uljin (2007, p.737) strongly recommend that organizational structures need to be “eliminated” in favour of “flatter, more flexible structures” if intrapreneurship is to thrive. Menzel et al (2006, p.20) concur

that for “entrepreneurial behavior to emerge”, a flat, decentralized corporate structure is essential, and Maier & Pop Zenovia (2011, p.972) suggest that organizational hierarchies “compel employees to ask permission for actions that fall outside their daily duties”, an environment which cannot be conducive to intrapreneurship, or as purported by Jones (2003) to innovation in SMEs. Almost three decades prior to these writings, Pinchot & Pinchot (1978) had recognized that decentralization, a common strategy adopted by companies as they grow, is not compatible with intrapreneurship.

Pantry & Griffiths (2000) and Carrier (1994) cite encouragement of risk-taking, financing, rewarding and recognizing innovation as an improved means for the dissemination of innovation and intrapreneurial encouragement at a managerial level. Christensen (2005) assesses intrapreneurship enablers in a similar way including the dynamic of organizational structure. Within organizational structure a prominent consideration is that of company size and the practicalities enabling intrapreneurship with the potential impact on financing, resourcing, short-term productivity and efficiency. Although the study confines to a division of a large company with approximately 17,000 employees, it is an interesting investigation in respect of any evident transferability of approach to SMEs and paramountly, that it specifically addresses the enablement of intrapreneurship which is core to the research aims of this dissertation. Central to the argument supporting the case study is the involvement of individuals at varying levels of authority within the organization, and, their desire to be involved which was motivated by “communication, company culture and processes to help finish a project” (p.315) Davenport, Prusak & Wilson (2003, p.27) cite examples of organizations who frequently refer to their total engagement to innovation but when the employees were asked their opinion they were met with

“blank looks”. Essentially, there was structure within the innovation process that was transparent, that people understood and, wanted to be part of. Innovation was openly sponsored by the management and reward systems were appropriately aligned to the necessary tasks and achievements. Painoli (2012); Maier & Pop Zenovia (2011) and Davenport, Prusak & Wilson (2003) support the crucial influence that convincing employees, through words and actions plays in confidence that they can achieve their goals.

It is clear that “organizational boundaries” encompasses many facets that will positively or detrimentally impact upon intrapreneurial success. Another extremely influential aspect is that of work discretion.

#### **2.5.7 Work discretion**

Jansen & Wees (1994, p.35) present what they identify to be the danger inherent in some intrapreneurial traits and the expense of business acumen; “research among 50 failed companies revealed an overabundance of self-confidence and a serious lack of critical capabilities. Successionally, they evolved risky strategies and embarked on new adventures based on their overrated self-confidence”. Or, as ventured by Pinchot (1985, p.55) “many intrapreneurs are cynical about the system, but optimistic about their ability to outwit it”. Conversely, Altinay (2004); Wunderer (2001); Davis (1999); Petroni (1999); Stevenson & Jarillo (1990) and Pinchot & Pellman (1999) propose that current thinking in management philosophy has created a demand for internal entrepreneurship, not only from PDMs, but from all employees. A view supported by Vora, Vora & Polley (2012) in a case study of entrepreneurial orientation which recognized a culture of employees taking initiative, being autonomous with the ability and approval to make decisions whilst not needing to fear



negative consequences for failure through experimentation, and, by Cardon (2008; p83) in that “when employees are passionate about their work, their organization thrives”.

Pinchot & Pellman (1999) additionally emphasize the importance of not viewing intrapreneurship as the sole domain of PDMs rather that creativity and innovation should be esteemed throughout the work-force. It may be helpful at this juncture to consider the components of “creativity” as set out in figure 28 below provided by Amabile (1998, p.8) who combines expertise, with creative-thinking skills and, of high importance motivation as the necessary constituents for individual creativity.

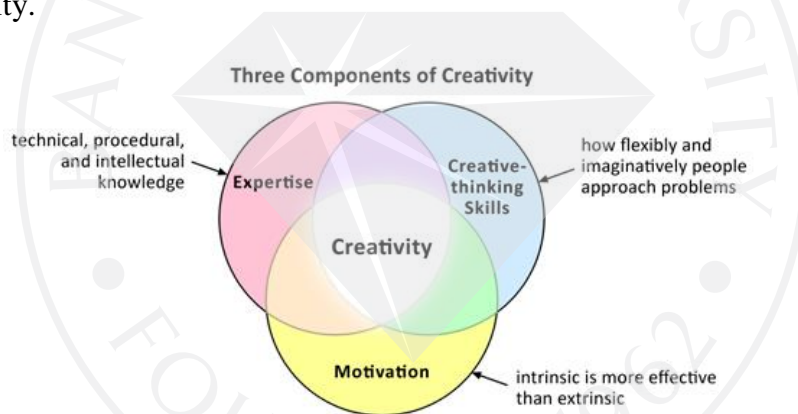


Figure 28 : The Three Components of Creativity

Source: Amabile, T. M. (1998). How to kill creativity. *Harvard Business Review*, 76(9),77-87.

A study by Bystead (2013, p.280) found a positive correlation between job autonomy and innovative work behaviour, but this had a negative impact on efficiency due to the problems of effectively and accurately monitoring performance associated with high job autonomy tasks. The writer also considered it an influential

factor in job satisfaction when combined with “mental involvement” for resourceful employees as seen in figure 29.

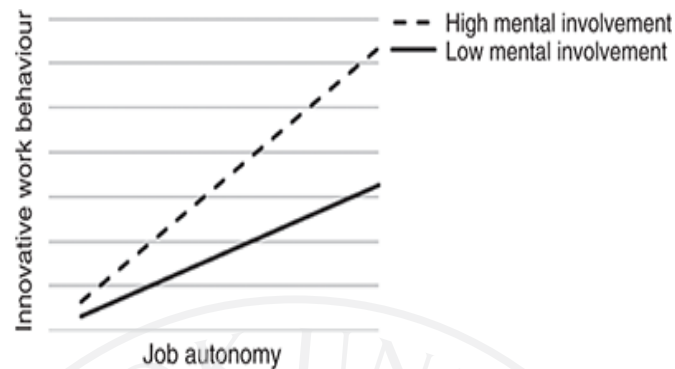


Figure 29 : Moderating effects of mental involvement

Source: Bystead, R. (2013). Innovative employee behavior; The moderating effects of mental involvement and job satisfaction on contextual variables. *European Journal of Innovation Management*, 16(3), 268-284.

There appear to be no opposing views within the extant literature as to the role work discretion plays in intrapreneurial motivation; it is of great intrinsic value to the intrapreneur as is a considered relaxation of measured productivity to permit the time to be “intrapreneurial”.

### 2.5.8 Time availability

There are many examples of the influence of corporate culture on intrapreneurialism by extending time to develop their product ranges and expand their organizations. 3M, Hewlett Packard, Texas Instruments, IBM, Post-it notes, and McDonalds are cited as notable examples by many authors in the field. 3M and Post-it notes typically have allowed their employees between 15% and 20% of their paid work hours to progress individual initiatives. Google permit their engineers “to spend up to 20% of their time on intrapreneurial projects of their own choosing, de Villiers-Scheepers (2011, p.253) Teleflex, a Philadelphia based engineering company and

Kodak, an American imaging technology company set aside a specific fund, outside of their mainstream financial statements, to provide reserves for innovation based activities. Kuratko, Morris & Covin (2008, p.283) provide an example of Nokia whose cultural goals are for the employees “to have fun, to think outside the norm, to be allowed to make mistakes”. BMW are said to have a “flop of the month” award for the most innovative idea that actually failed. What this amounts to is not only the availability of time, whether by providing additional resources or making sufficient time available to existing resources, but embraces that times does not always need to equate to success.

Time availability remains a major factor for intrapreneurs and is instrumental in achieving the realization of their ideas (Davenport, Prusak & Wilson (2003); Coulson-Thomas (1999); Christensen (2005) and Amabile (1998) Ultimately, it is considered key to intrapreneurial success. We have identified the absolute importance of organizational boundaries and work discretion but both of these will have a less positive impact on creative endeavors if the necessary time made to progress them is not provided. This extends to time for errors of judgment to occur, or for an idea not to come to fruition even though work hours have been invested in them. Apart from the desire for experimentation there is also the issue of problem-solving which is key to intrapreneurship and intrapreneurial satisfaction, Sim, Griffin, Price & Vojak (2007); Sandberg, Hurmerinta & Zettining (2013) and from Carrier (1994) the freedom to explore. Furthermore, problem-solving is central to the successful evolution of innovative products or services, Thompson (2004); Brunaker & Kurvinen (2006) and Menzel, Aaltio & Uljin (2007) The extent to which time diffuses through a creative solution based task can be likened to the journey from evaluation to

knowledge as demonstrated in Bloom's Taxonomy at figure 30 wherein every stage requires a measured degree of allotted time to be successfully moved through.

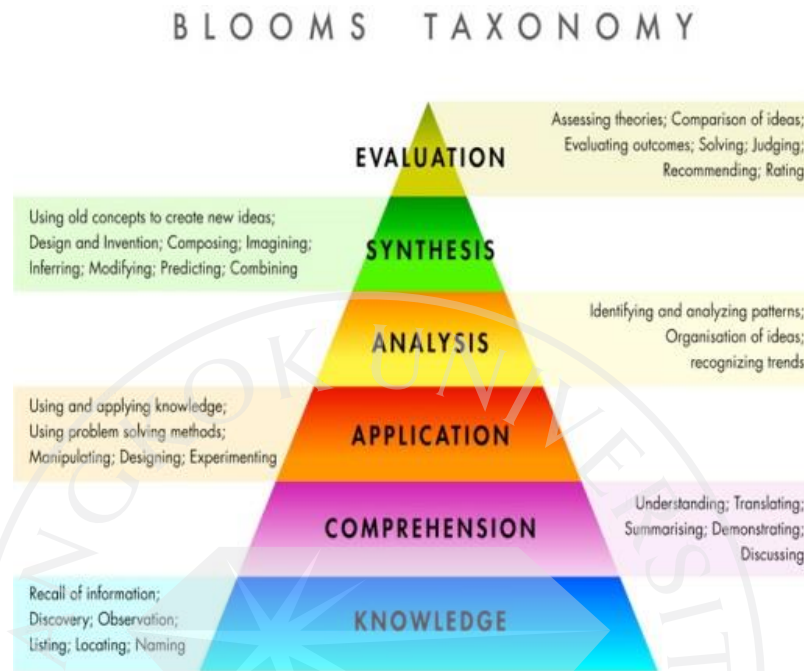


Figure 30: Bloom's Taxonomy

Source: Krathwohl, D. R. (2002). A Revision of bloom's taxonomy: An Overview. *Theory Into Practice*, 41(4), 212-218.

In conclusion, the availability of time is a cornerstone for imagination and inventiveness from a business strategy perspective, but in respect of the creative employee, it is also fundamental to their levels of intrapreneurial opportunity. As Kanter (1990) strongly advocates, an organization that purports itself to be entrepreneurial will treat seriously the time required to be allocated for innovative experimentation, and from Scheepers, Hough & Bloom (2008, p.56) individuals must be provided with time to incubate their ideas.

### **2.5.9 Intrapreneur opportunity**

Within the extant literature there are prominent seminal authors on employee motivation. In 1943 Maslow introduced the Hierarchy of Needs Theory the premise being that motivation exists and progresses through a framework of psychological factors from physiological needs to safety needs, to belonging needs, to esteem needs and, to self-actualization needs, all of which can be summarized as being needs. It is difficult to write about employee needs without acknowledging the contribution of Maslow's work in this field. However, the concepts introduced are such that within the scope of this research study they cannot be fully addressed in this dissertation. What is relevant is that a key tenet of the concept is that employee motivation is achieved through the identification of individual needs. Wiley (1997) cites this as the main strength of Maslow's work and although subsequent researchers have modified the needs hierarchy, the core feature of employees as individuals remains sound. In addition, that financial compensation cannot be separated from other needs as it is the enabler for many of them to be realised. For example monetary worth is often positively associated with levels of self-esteem. In 1959, a further seminal study by Herzberg resulted in a two factor motivation concept, generally referred to as the Motivator-Hygiene theory. Again the scope of this work is too expansive to be fully documented in this dissertation but it is of value to note that the primary hypothesis is that within the workplace we have a set of factors that stimulate motivation through job satisfaction, and separate factors that diminish motivation through job dissatisfaction. Furthermore and contentiously, that "beyond a minimum threshold, money does not motivate" (Bassett-Jones & Lloyd, 2005, p.930) a notion that has been highly criticized by ensuing researchers and authors.

Whilst it is generally agreed that Maslow's theory was not satisfactorily substantiated within his work, Herzberg does offer much more applicable data, but in the subsequent years researchers have found weaknesses in the methodology and consequently the deductions made. Both were ground-breaking theories in their day, but only partially relevant to any discourse on employee motivation today due to some significant changes evident in not just organizational structures and work practices but the changing perspective of the employee to their employment needs. As (Bassett-Jones & Lloyd, 2005, p.929) state, "a unilateral re-writing of the psychological contract by employers", referring to the emergence of practices designed to meet the ever changing business landscape and economic climate over the following decades, which were not always favorable to the employee. It is important to remember that work motivation is not a fixed state, but a dynamic one, markedly influenced by not only employment factors, but by social and personal factors too.

Historically, redressing these issues has relied upon the use of employee appraisals by interview or questionnaire. As Wiley (1997, p.266) submits, "by the 1930's, employee attitude surveys were being used frequently in business to assess employee morale". One of the first surveys to evaluate employee motivation was carried out by the Labour Relations Institute of New York in 1946. The age of this survey presents an interesting benchmark opportunity when likened to later studies; Wiley (1997, pp.267-268) used data from 1980, 1986 and 1992 for comparative research. In 1946, the most important work motivational factor was "appreciation". By 1980 and during 1986 it was considered to be "interesting work", and in 1992, "good wages". The ten factors measured are presented in table 18 below and provide

an invaluable insight into the increasingly challenging business landscape and work environment as indicated by Bassett-Jones & Lloyd (2005) above.

Table 18 : Comparison of motivational factors in 1946, 1986 and 1992

<b>Factors</b>	<b>1946</b>	<b>1980</b>	<b>1986</b>	<b>1992</b>
Full appreciation of work done	1	2	2	2
Feeling of being in on things	2	3	3	9
Sympathetic help with personal problems	3	9	10	10
Job security	4	4	4	3
Good wages	5	5	5	1
Interesting work	6	1	1	5
Personal or company loyalty to employees	8	8	8	6
Good working conditions	9	7	7	7

Source: Wiley, C. (1997). What motivates employees according to over 40 years of motivation surveys. *International Journal of Manpower, MCB University Press, 18(3)*, 263-280.

A further interesting observation from this research data is the extent to which employees no longer feel their “personal problems” are relevant as a motivating factor within the workplace (the respondents’ gender was found to be irrelevant, as were their ages). There are many ways that this can be interpreted but it is likely to be rooted in the extremes of the post-world war II climate and its impact on individuals and families compared to the relative prosperity of later years, and with that, a shift by employees to view their occupation as potentially being more than just an income. As Wiley (1997, p.271) cites, a substantive change in attitudes towards work has been observed; “from work as a means of survival to work as a means of self-development

and self-expression". Although interesting work had priority in the 1980s, the recession in the early 1990's had displaced this in favour of salary, again proving that work motivation is constantly changing to meet the demands of the current day, but, it should be noted that appreciation remains consistently high-ranking throughout the decades.

The preceding chapters of this dissertation have identified that intrapreneurs have different work motivations and career objectives than those normally found in more conventional employees. Additionally, they have an atypical attitude to both their working environment and the governing company management approach, specifically by challenging both to meet and further their own personal goals. We have also read that they can be difficult individuals to manage and motivate as they may be indifferent to the material rewards which are more widely recognized and used to engage employees and stimulate high levels of productivity or job satisfaction.

A further distinction is that it may be difficult to measure the performance of the intrapreneur by use of traditional employee appraisal methods due to the originality of their roles and objectives. Manimala, Jose & Thomas (2006, p.52) propose that innovative achievements are not "adequately linked to performance evaluation" through a lack of objectivity. Markova & Ford (2011, p.814) elaborate that some desired elements of the job function of creative employees become "hard to codify", stating "thinking" as a powerful example of this. In terms of innovative employees, we have previously explored some of the negative outcomes, loss of face; lack of credibility; vulnerability in terms of both promotion prospects and job security. A further negative impact for intrapreneurs in respect of motivation is frustration. Bassett-Jones & Lloyd (2005); Steiner (1998) and Pinchot (1985) found



that this was the primary cause for them leaving companies, the frustration in their efforts to innovate, and “the inability to act”, combined with the indecisiveness that can prevail throughout the hierarchical tiers of management in many large corporations. These were determined to be of much greater importance than any lack of material benefits in terms of de-motivational factors.

Desouza (2011) proposes that intrapreneurs want to consistently outperform themselves and a major factor in their work motivation is their contribution and acknowledgement throughout the organization. Amabile (1998) and Sim, Griffin, Price & Vojak (2007) add that innovators are driven by a need to be involved in critical problem-solving activities which becomes a significant intrinsic motivator for them. Furthermore, we learn from Todd (2010) that initiative is the core quality that defines intrapreneurs from other, often highly productive employees. Again, from an opportunity perspective Menzel et al (2006) and Sayeed & Gazdar (2003) cite the intrapreneur’s desire to change the environment to one that is more conducive to their goals, whilst Wunderer (2001, p.197) adds conceptual, social and implementation factors as highly important as shown at figure 31.

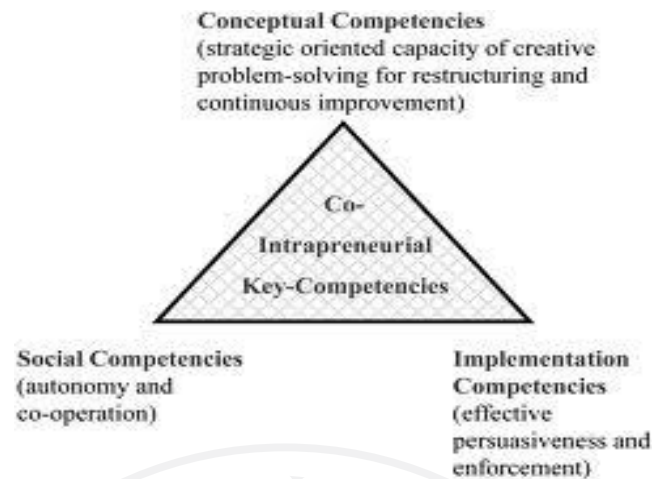


Figure 31: Co-intrapreneurial key competencies

Source: Wunderer, R. (2001). Employees as "co-intrapreneurs" - a transformation

Concept. *Leadership & Organization Development Journal*, 22(5), 193–211.

The elements depicted above could all be considered motivational constructs that are created, or fail to be created within the workplace culture and the associated assignment of tasks to innovative employees which will necessarily differ from other employees who may desire more routine duties. Amabile (1998, p.4) captures this concept quite simply with "The Creative Maze". The principle being that less innovative employees will approach a problem through the simplest and most obvious route in order to attain the tangible extrinsic reward of payment. More innovative employees will approach the same problem by seeking new insights and challenge themselves to find a more creative solution even though this will necessarily expand the timeframe in which the outcome is reached and is unlikely to reap the same financial reward. Indeed, this approach may result in failure and no reward, but as Bowen (2000) posits, for intrinsically motivated employees work can be its own reward through self-enlightenment.

Hong et al (1995) raise the importance of gender within both intrinsic and extrinsic motivation considerations; a clear example of this being the different degree of importance placed by men and women on a business culture and environment that provides flexible working arrangements. Amar (2004) discusses the working environment at length and contributes a further very significant proposal; that in order for a primary decision maker (PDM) to motivate the creative or knowledge seeking employees they must endeavor to understand the mind of the employee, not rely on historical or traditional concepts. Amabile (1998, p.3) adds managers “hold a rather narrow view of the creative process”, and overlook two key components for success, “expertise and motivation” whilst Bystead (2013) uses an alternative expression, “mental involvement”, to indicate the importance of managers relating to psychological factors as primary motivators for innovative work behaviour.

For intrapreneurs, motivational factors that cause individuals to feel they are being rewarded for exploring new horizons must be transparent and will necessarily be both intrinsic and extrinsic in nature. Cardon (2008, p.84) provides an introspective view that we may look at employee incentives as extrinsic in terms of a more transactional commitment, and intrinsic in terms of a more emotional commitment. McAdam & McClelland (2002) and Amabile (1998) posit that it is intrinsic motivation that leads to creativity and extrinsic motivation is only complimentary when the intrinsic motivation is high. This is a view also postulated by Sathe (2003) in respect of R&D departments. It is useful to question the role that personal advancement plays in the desire to be creative or innovative, for example, peer recognition, management recognition, leadership potential, financial greed or other

factors. Within the research study conducted and analyzed by Carrier (1997, p.12) the personal motivations of intrapreneurs were found to be as follows:

Extrinsic reward-related motivations:

1. Promotion, Access to capital stock
2. Innovation bonuses
3. Higher salary than elsewhere
4. Possibility of increased income

Motivations related to past experience and future career objectives:

1. Desire to work for oneself, past experience as an entrepreneur
2. Past experience as an intrapreneur
3. Attraction of going back into business in one's "native village"
4. "Plateaued" (in the restricted sense) in a previous job

Motivations related to the organizational context:

1. Management style that welcomes intrapreneurship
2. Sense of belonging
3. Shared vision with the entrepreneur
4. Mutual confidence
5. Quality of the relationship

This is a very comprehensive list, almost too much so, as it captures motivational factors that are not exclusive to the intrapreneur but to employees in general. Promotion for example, is cited by Goffee & Jones (2007) as likely to be viewed negatively by innovators as they are indifferent to the use of job titles but highly motivated by their status within the organization. Carrier (1994, p.12) concurs, specifically in respect to large firms but provides a very valuable observation within

the SME environment in that promotion can reflect an opportunity to move closer to the PDM. Amabile (1998) adds that creative thinkers may also identify money as an adverse motivator implying it can be perceived as a bribe or a method of controlling the employee. Pullins et al (2000) indicate that “control” has undeniably become a method by which companies utilize employees who approach tasks with extrinsic motivation. Amar (2004, p.100) posits there are in fact only three sources in most organizations that will motivate innovation; the job that the employee is doing; the outcome from the job; the organizational system in which the job is performed. Finally Amabile (1998, p.5) makes a powerful statement that is central to the argument of managers’ contribution to innovation motivation, therefore, the organizational system in which the job is performed; “it is important to note that creativity-killing practices are seldom the work of lone managers. Such practices usually are systemic and so widespread that they are rarely questioned”.

Lasting intrapreneurial motivation could be considered as rooted in “reinforcement theory” and “expectancy theory” the philosophies of why, regardless of their desirability to the company, some employee behaviors are repeated and some do not reoccur, de Villiers Scheepers (2011); Wiley (1997) and Daly & Kleiner (1995) Within these concepts, it is suggested that it is primarily the considered usage of rewards that will engender positive employee activity recurrence through continued motivation. Daly & Kleiner (1995, pp.5-6) provide a means to utilize the expectancy theory through a series of nine questions attributed to Newsom, a Professor at Mississippi State University shown at table 19.

Table 19: Employee expectancy theory

Capability:	Does the employee have the capability to perform the job well?
Confidence:	Does the employee believe he or she can perform the job well?
Challenge:	Does the employee have to work hard to perform the job well?
Criteria:	Does the employee know the difference between good and bad
Credibility:	Does the employee believe the manager will deliver on promises?
Consistency:	Do subordinates believe that all individuals receive similar
Compensation:	Do the outcomes associated with good performance reward the
Cost:	What does it cost an individual, in effort and outcomes forgone, to
Communication:	Does the manager communicate with the subordinate?

In summary, for the intrapreneur, rewards that are considered very influential will also necessarily include the opportunity to take risk, the opportunity to be creative, the opportunity for freedom from tiers of decision makers that frustrate the progress of innovation and the opportunity for autonomy. Davenport, Prusak & Wilson (2003) add, “intellectual stimulation and the excitement of seeing ideas transformed in action” as heavily influential to motivation, a position shared by Morris, Kuratko & Covin (2008); Manimala, Jose & Thomas (2006); Bassett-Jones & Lloyd (2005); Florida & Goodnight (2005) and Amabile (1998) who strongly assert the value of work that is not only creative but highly challenging. This is consistent with Herzberg’s Motivator-Hygiene theory which combines the importance of challenge with opportunities for achievement. These are all critical to our understanding of how intrapreneurial rewards differ from the general usage of the term “reward” to capture employee remuneration, and it is the businesses that embrace this differentiation that will create an environment and culture for continued intrapreneurial activity. This argument is supported within the research findings of de

Villiers-Scheepers (2011, p.259) the key motivators were found to be “social incentives”, (typically these might be verbal appreciation, increased work responsibilities more challenging work or personal encouragement), “formal acknowledgement” (for example organizational freedom), “support and recognition of employees” (a managerial culture consistent with removing obstacles to innovative activities) and finally, “encouragement and reinforcement of intrapreneurship”. The ability and willingness of PDMs and company management to remove obstacles within the project environment features prolifically within the literature as key to sustained learning motivation, including, as cited by Lynn, Akgun & Keskin (2003) by teachers for children and students. Cottam (1989, p.522) offers an interesting debate on this, asserting that a creative thinker will accept the obstacle and not realise their innovative potential, whereas an intrapreneur will “simply sidestep roadblocks” with the aim of achieving their personal goals”.

Davenport, Prusak & Wilson (2003); Jones (2003); Bassett-Jones & Lloyd (2005) and Milne (2007, p.30) all highlight the importance of recognition from management to employees, but critical in the case of intrapreneurs, that recognition is not solely a matter of acknowledging success but acknowledging “effort, commitment and learning, even if the outcome was not as planned”. Markova & Ford (2011) offer a very powerful but simple method of recognition; a hand-written thank you letter. Even if the recognition is in part financial, this can also be considered important if increased self-esteem is generated by public recognition through revised compensation. An additional benefit of all types of recognition as reward tools for individuals and teams is in demonstrating that the company is alert, actively seeking success stories, creative thinking or personal advancement from its employees. As

Manimala, Jose & Thomas (2006, p.52) propose “innovators are generally aggrieved about the absence of corporate level recognition”.

Lastly, Willison (2006) substantiates the view that intrapreneurs are not by nature inclined to be purely extrinsically motivated, but seek overt recognition from their peer group and management. A case study at Fairchild Semiconductors indicates that this intrinsic value could be met with an employee plaque or a similar means of obvious recognition in conjunction with more established reward practices. The combination of reward strategies they have implemented has led to over 53 new product patents being awarded to their employees which, as a company policy becomes a substantial additional reward in itself. Fairchild Semiconductors was established by eight disgruntled intrapreneurs, unable to deal with the leadership style and lack of communication between innovation teams in the owner-led company they worked for (Goffee & Jones, 2007) It is therefore, unsurprising that as intrapreneurs turned company owners/leaders they were well placed to understand the dynamics of motivation and reward for creative and innovative individuals.

#### **2.5.10 The use of rewards**

It is generally considered that, in common with employee motivation, employee rewards fall into the same two distinctive categories, extrinsic and intrinsic Kanter (1983) and de Villiers-Scheepers (2011) Throughout the literature there is historical evidence of writers who firmly espoused the power of one over the other, but it has been proven in subsequent years that both are likely to be equally as powerful motivators if used tactically. Extrinsic rewards are received in the form of remuneration packages and incentive schemes. Intrinsic rewards result from the work itself, particularly its meaningfulness to the employee Amabile (1998) and Pullins et



al (2000) Barczak & Wilemon (2001, p.35) cite team member satisfaction and characteristics along with clarity of evaluation and manageable levels of conflict and stress as indicative of employee engagement regardless of compensation in the traditional sense. Burke (1982) and Lawler (1991) propose that although both types of rewards are important, they are not necessarily interchangeable; what satisfies intrinsically is not likely to satisfy extrinsically and vice-versa. Li & Zhang (2010, p.7) advise that “while the literature offers a wide variety of intrapreneurial factors, there are a few elements that are consistent throughout the writings in this field; one is the appropriate use of rewards”. They argue that to be effective, the policy for compensation and benefits may need to be modified in companies that are serious about intrapreneurship. Pinchot (1985, p.261) assents, highlighting three fundamental reasons why the traditional usage and perspective of employee rewards do not meet the intrinsic requirements of highly innovative employees:

1. Traditional rewards for success don't match the risks of innovating or intrapreneuring,
2. The basic reward of most companies is promotion, which doesn't work well for most intrapreneurs
3. The career path of successful intrapreneurs doesn't lead to the one thing they really need to do their jobs: freedom to use their intuition, take risks, and invest the company's money in building new businesses and launching new products and services

These do, however, appear to be somewhat subjective generalizations, including usage of the term “traditional rewards”, which would necessarily include an

abundance of rewards options some of which may in fact be a motivating factor for intrapreneurs.

Much of the extant literature suggests that many companies look little further than monetary remuneration believing it is not only the employee's sole motivation, but the greater the monetary reward, the greater productivity and individual performance will be. Of equal concern, Armstrong, Brown & Reilly (2011, p.111) cite data from the Chartered Institute of Personnel and Development whose 2009 survey of 520 managers established that "only 32% of them assessed the impact of their reward practices". The main factor for this omission is cited by several authors as a perceived lack of time for managers to carry out such evaluations (Corby, White & Stanworth, 2005) or that the objectives behind the reward scheme were not easily measured in terms of success or failure (Armstrong, Brown & Reilly, 2011) This is a particularly relevant concern when using an extrinsic reward for an intrapreneurial employee and can render the enthusiasm expected from the reward to be pointless.

Kerr (1995) and Spitzer (1995) note that many organisations may unwittingly reward the type of behaviour they wish to discourage and fail to reward the type of behaviour they wish to encourage. Ultimately, any reward scheme must be targeted at retaining the most valuable employees and ensuring an alignment between their needs and the organization's aspirations for success and growth. Markova & Ford (2011); Milne (2007); Goffee & Jones (2007); Florida & Goodnight (2005) and Wood (1994) add that identifying and measuring individuals' success, and communicating it to them through frequent feedback mechanisms is essential to retain the best employees. Sathe (2003) suggests that is in fact the business culture rather than a payment mechanism that will promote intrapreneurship. Goffee & Jones (2007, p.7) expand on

this by proposing “you must make sure your culture celebrates clever ideas”. Eisenberg et al (1990, p.747) concur, stating “the employee perception of being valued and cared about by the organization is positively related to innovation on behalf of the organization in the absence of anticipated direct reward or personal recognition”. Pullins et al (2000) add a further noteworthy reflection, employee well-being, encompassing health, security and happiness.

However, throughout the extant literature we learn of large organizations that continue to rely almost solely upon monetary reward as a stimulus for innovative thinking. Johnson & Sons, a US family derived business dating back to 1886, have become a significant global manufacturer of cleaning and chemical products, operating in 72 countries with retail activities in in excess of 110 countries. The company policy is to make \$250,000 available to any employee who submits a new product idea. This vast sum of money is highly likely to encourage intrapreneurial thinking but undoubtedly this is not a viable option for many businesses, especially SMEs. This introduces the dynamic of corporation or business size on intrapreneurial opportunity and rewards. In small or family owned businesses it may take substantial collaboration between many or most of the workforce to drive innovation. In large corporations it can be a pocket of individuals who may act in isolation of the workforce as a whole. An additional problem witnessed in large organizations is the stringency with which monetary compensation is applied creating a total lack of flexibility to recognize and reward “individual experience” and “skill development”, in favor of paying the position rather than the person, (Markova & Ford, 2011, p.814)

One of the noticeable difficulties with any incentive designed to reward innovation could be the length of time that the project or initiative takes to come to

fruition, or, that a substantial period of time may be expended by certain individuals that leads to no positive outcome in terms of, for example, increased productivity or enhanced profits for the company. As Menzel et al (2006, p.28) suggest, a culture that supports and rewards intrapreneurship will also accept the value in “longer time horizons”. Beam & McFadden (1998) submit that intrapreneurs are entitled to a tangible benefit of the added value which is co-created by them, but this does not address what should be done when innovative projects lead to failure, but the necessity to sustain the intrapreneur’s motivation still exists. Determining suitable compensation for innovation is difficult due to a level of uncertainty or lack of predictability of the outcome for the effort expended, the roles of individuals within an innovation initiative project and their input to the overall cause. It is noted by Ahmed (1998) that intrinsic motivation has been documented within the extant body of literature as a primary stimulant for innovation and by Markova & Ford (2011) as necessary for creativity and the desire to exchange ideas. They cite the negative influence that can be created by extrinsic rewards which are task or goal oriented objectives and rules which are not compatible with innovation through experimentation. Barringer, Jones, & Neubaum (2005, p.673) add a further dimension in respect of the company’s investment in innovation by advocating “performance-based incentive plans also help firms share business risks with their employees and conserve cash”. Again, this would appear more likely to generate a negative rather than positive influence dependent upon what all parties determine as acceptable in terms of shared risk and the impact for all parties of innovation failure. Brenner & Brenner (1988) propose that a profit-sharing or stock option model may work, but again, this does not address the issue of failure and rather assumes that all

intrapreneurs will be, by nature, sufficiently confident and excited by the thrill of the unknown that this type of reward will be inspirational enough. Another issue that can be considered as motivational or de-motivational is patents and whether companies deem that salaried employees have any entitlement to patent acknowledgement or whether they remain the property of the company owner(s). Furthermore, that the value an employee may place upon his/her invention in patent terms may differ substantially from its market value (Malewicki & Sivakumar, 2004) potentially causing further negativity towards intrapreneurial motivation. This dimension is of particular relevance in the highly technology-innovative environment investigated in this research study as it may be a ground-breaking idea from an employee that becomes instrumental in the continued success of the business. Menzel, Aaltio & Uljin (2007, p.739) provide an interpretation of how wide the gulf can be between the intrapreneur's incentive expectations and the organization's remuneration expectations, ranging from "fair compensation" linked to venture success, and "all compensation" being independent of venture success.

In terms of intrapreneurialism it is anticipated that the intrapreneur's bespoke expectations of the rewards their activities could attain are central to a lasting commitment and will have been fully understood and challenged by them as individuals to ensure they can evaluate the levels of risk and reward they face (Aygun, Suleyman & Kiziloglu, 2010) As stated previously, "rewards" in this context are not confined to those most generally observed; salary, benefits, bonuses and profit sharing being typical interpretations, but to those that have great meaning and value to the intrapreneur.

## 2.6 Summary

This section provides a substantive reference point for continued research in the field of intrapreneurship in SMEs by addressing the research gaps evident in the extant literature. Firstly it is noted through previous research studies that SME PDM leadership strategy has a direct impact, either positive or negative, on intrapreneurial initiatives. Secondly studies have judged that a positive intrapreneurial climate is likely to lead to SME business growth, and therefore, successfully contribute to the survival of the company through continued opportunities for creative activities. Thirdly, whilst there is some documented evidence of studies that have reviewed entrepreneurial leadership attitudes that impact upon intrapreneurial opportunity in SMEs, most are focused towards business objectives rather than their managerial approach; the latter being critical for consistency and continuance of the concept. Finally, although the debate over the value of intrapreneurship within SMEs as opposed to corporations remains unresolved amongst the contributing authors, there is clear evidence that after three decades of deliberation it is an enduring proposition not a speculative one.

We will now reflect on what we have learnt from previously published works, our evaluation of the theoretical framework and research questions to construct the hypotheses and conceptual model which are presented at chapter 3.

## CHAPTER 3

### DEVELOPING THE CONCEPTUAL MODEL

#### 3.1 Introduction

The aims of the review of previously published works were to provide the author with a comprehensive understanding of the extant literature to establish the validity and originality of the proposed knowledge gap and ensuing research questions:

RQ1: To what extent does the level of entrepreneurial PDM support for innovation influence levels of employee organizational boundaries, work discretion and time availability within UK technology-innovative SMEs?

RQ2: To what extent does the level of employee organizational boundaries, work discretion and time availability influence levels of intrapreneurial opportunity within UK technology-innovative SMEs?

RQ3: To what extent does the SME strategic type of the entrepreneur PDM led UK technology-innovative business impact upon intrapreneurial opportunity levels?

It was therefore, a study of the concept of Innovation Management, in the context of entrepreneurial leadership and the resultant outcomes specifically in terms of SME strategic type and employee need satisfaction fulfilment leading to intrapreneurial opportunity.

The evaluation of the literature explored many theories and models of innovation management, the core attributes of entrepreneurs and intrapreneurs, several opposing beliefs of entrepreneurial leadership and intrapreneurialism, and, as the background setting for the subsequent research investigation, the major facets of

small and medium size enterprises in their unique business environment. The literature identified several crucial elements that influence the domain of intrapreneurship with three significant contributing factors deemed to be of primary importance and paramount in achieving innovation through corporate entrepreneurship; the diversity of styles observed in entrepreneurial leaders; the nature and extent of their governance in a business setting specifically in terms of strategic positioning; and, the need satisfaction fulfilment of the intrapreneur. These were the key components of the research questions in developing a conceptual model that captured these elements and how, within the extant literature a relationship may exist between them. We commence with the construct of entrepreneur primary decision maker (PDM) leadership as this is fundamental in most aspects of SME studies and expressed explicitly in published works.

Table 20: Aspects of entrepreneur PDM leadership

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Thompson (2004)	The facets of the entrepreneur	The temperament and talent of the entrepreneur leader is significant in developing a culture that recognizes intrapreneurial potential within the business.
Simpson, Padmore & Newman (2010)	Success and performance in SMEs	The characteristics of the PDM and the characteristics of the business are inextricably linked.

(Continued)



Table 20 (Continued): Aspects of entrepreneur PDM leadership

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Poutziouris (2003)	Strategic orientation of PDMs of small ventures	The leadership approach and behavior of the PDM will be a catalyst for all elements of business planning and communicating vision through organizational culture. The caliber of the PDM is also fundamental.
Painoli (2012)	Leadership through entrepreneurship	Entrepreneurial leadership approach and behaviors can create a culture of like-minded individuals within a conducive organizational climate.
Wunderer (2001)	Employees as “co-intrapreneurs”	Leadership style can shift the operational emphasis from an ideal culture of co-intrapreneurship to a practiced culture of co-intrapreneurship.
Humphreys, McAdam & Leckey (2005)	Innovation implementation in SMEs	Innovation driven organizations must have innovative and committed leaders.
Christensen (2005; p320)	Enabling intrapreneurship	“Managers can be the biggest obstacle to intrapreneurs, inasmuch as a single decision can kill a project before it gets started”.

(Continued)

Table 20 (Continued): Aspects of entrepreneur PDM leadership

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Antoncic & Hisrich (2003; p21)	Clarifying the intrapreneurship concept	“By analyzing, nurturing and advancing intrapreneurship dimensions managers can make significant improvements in the performance of their organization”.
Menzel, Aaltio & Uljin (2007)	Engineers as intrapreneurs in organizations	Leadership attributes and the ensuing culture is paramount in effectively promoting intrapreneurship in an engineering setting.

The entrepreneur PDM choices becomes fundamental to how, when and to what extent various business objectives, aims and goals are delivered and the organizational setting for their delivery which include operational boundaries, work discretion and the time available for employees to be creative or intrapreneurial through personal need satisfaction fulfilment. The PDM is also seen to greatly impact strategic type through choices made according to their preferred style of leadership and the desired direction through which they anticipate business growth bearing in mind their degree of tolerance for risk. The subsequent activities resulting from the chosen strategic positioning will necessarily impact upon intrapreneurial opportunity levels either in a positive or negative manner. We posit therefore, that the construct of the entrepreneur PDM level of support for innovation is central to the prospect of intrapreneurship existing in any meaningful way. Furthermore, within the literature we found a significant body of work and school of thought that directly links the “leader” and the “led”, creating a potential motivator for employee engagement as intrapreneurs.

From the path of entrepreneurial leadership, through intrapreneur need satisfaction fulfilment and commercial strategic type that guides us to intrapreneurial opportunity levels, 8 hypotheses are extracted and explored, referring again to the extant literature to clarify their inclusion, value and linkage. Each hypothesis is now detailed, including the relevant literature sources from which they evolved.

H1: The entrepreneur PDM's level of support for innovation positively influences levels of organizational boundaries

H1<sub>0</sub>: There is no relationship between the entrepreneur PDM's level of support for innovation and the level of organizational boundaries

H2: The level of organizational boundaries positively influences the level of intrapreneurial opportunity

H2<sub>0</sub>: There is no relationship between the level of organizational boundaries and the level of intrapreneurial opportunity

H3: The entrepreneur PDM's level of support for innovation positively influences levels of work discretion

H3<sub>0</sub>: There is no relationship between the entrepreneur PDM's level of support for innovation and the level of work discretion

H4: The level of work discretion positively influences the level of intrapreneurial opportunity

H4<sub>0</sub>: There is no relationship between the level of work discretion and the level of intrapreneurial opportunity

H5: The entrepreneur PDM's level of support for innovation positively influences levels of time availability

H5<sub>0</sub>: There is no relationship between the entrepreneur PDM's level of support for innovation and the level time availability

H6: The level of time availability positively influences the level of intrapreneurial opportunity

H6<sub>0</sub>: There is no relationship between the level of time availability and the level of intrapreneurial opportunity

H7: The strategic type of the entrepreneur PDM SME influences levels of intrapreneurial opportunity

H7<sub>0</sub>: There is no relationship between the strategic type of the entrepreneur PDM's and the level of intrapreneurial opportunity

H8: The entrepreneur PDM's level of support for innovation positively influences levels of intrapreneurial opportunity

H8<sub>0</sub>: There is no relationship between the entrepreneur PDM's level of support for innovation and the level of intrapreneurial opportunity

### **3.1.1 Hypothesis 1 – Level of organizational boundaries**

H1: The entrepreneur PDM's level of support for innovation positively influences levels of organizational boundaries.

At hypothesis 1, we posit that the level of organizational boundaries within the SME is primarily subject to the primary decision maker (PDM) degree of sponsorship of innovation.

Table 21: Aspects of leadership influencing organizational boundaries

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Jimenez- Jimenez, Valle & Hernandez- Espallardo (2008)	Fostering innovation	The business infrastructure and culture created by leaders can enable creativity and openness to new ideas dependent upon the degree and number of restrictions relating to employee working practices.
Lee, Peris-Ortiz & Fernandez- Guerrero (2011)	Corporate entrepreneurship and human resources management	The characteristics of the business leader can expose corporate entrepreneurship within individuals and demonstrably change technical performance through satisfying the factors that would cause employee participation.
Entrialgo, Fernandez & Vazquez (2000)	Psychological characteristics of the role of entrepreneurship in SMEs	The PDM leadership characteristics directly and indirectly influence organizational boundaries.

(Continued)

Table 21(Continued) : Aspects of leadership influencing organizational boundaries

Author	Subject	Observation
Russell (1999; p70)	Developing a Process Model of Intrapreneurial Systems: A Cognitive Mapping Approach	The innovation process cannot be managed through “outcome-based objectives or behavior regulation through procedures and rules”.

From the analysis of the literature it is evident that several internal factors within the business climate and culture can positively or negatively impact intrapreneurial opportunity levels and are mainly conscious business strategy decisions or internal process decisions influenced by the PDM. Entrepreneurial leadership can be assessed in terms of attributes (characteristics/traits) and behavior (conduct), both of which create and establish working practices and workplace boundaries defined by their preferences. Such boundaries may be deemed necessary from a controlling perspective, from a risk awareness perspective and from a measured product or service process development perspective. Key to their impact within the business is the extent to which they are employed, reviewed and revised over time.

Organizational boundaries encompass several aspects of operational strategy which regulate the business climate and culture. They include the levels of rigidity

within the business from several evaluations ranging from the degree and nature of reporting lines to constraints in the methods by which employees can be treated as individuals and contribute originality to their tasks. The organization's management structure is considered very significant in allowing breathing space for creativity to flourish and be constant. A flat structure is deemed to enhance the prospects of innovative activity progress by removing tiers of bureaucracy, delayed decision making and "obstacles", all of which are widely penned within extant academic research as an immense disincentive for repeated employee inventive behaviors. We have learnt from several writers that intrapreneurs will actively ignore or bypass tiers of management in a hierarchical organizational structure to get access to the individual(s) they feel will embrace their creative thinking, expertise and experience. Additionally, we learn that increased and lasting levels of creativity can be derived from more fundamental considerations such as the architecture and physical dynamics of the office layout in that bespoke, physical space is an asset that is highly desired for innovative activities in a team setting but is not always recognized as such by company management.

A further organizational boundary which significantly affects innovative activities is that of the PDM's propensity for risk-taking. Darling, Gabrielsson & Seristo (2007) recommend that robust financial control is essential in the innovative environment but this will not be seen as important or favorable by the creative thinkers. But, as expressed within the literature by Amabile (1998, p.5) there is a functional approach to this dilemma in that freedom to be innovative can have boundaries, for example, providing the employee with the opportunity to climb a mountain, but not decide which mountain. This is founded in the concept that "clearly

specified strategic goals often enhance people's creativity". From a business risk perspective it is necessary to ensure boundaries are adequately communicated, agreed and adhered to but they may not need to be so restrictive that the business is managed solely through uncompromising frameworks and charters. As Blanchard (2008, pp. 2-3) posits "without clear lines of authority and transparency, intrapreneurs can move too fast". This may well result in their actions "backfiring" causing customer confusion and internal turmoil due to the initiative not having prior sign-off or that the timing of it cannot be supported by the company either from a financial or resource perspective.

Lastly, there is the influence that organizational boundaries play in constricting the freedom of individuals to think imaginatively through the practice of rigorous adherence to company policy manuals and defined standard operating procedures. Whilst such structure may reflect the mindset and wishes of PDM it is considered a highly undesirable state and workplace setting for intrapreneurship.

All the elements of organizational boundaries presented above are under the direct control and influence of the PDM whose responsibility it would be to ensure the right balance for intrapreneurship to exist and, consist of continued rather than discrete activities. Hypothesis 2 serves to explore the impact of organizational boundaries on intrapreneur opportunity levels

### **3.1.2 Hypothesis 2 – Impact of organizational boundaries on intrapreneur opportunity levels**

H2: The level of organizational boundaries positively influences the level of intrapreneurial opportunity.



The behaviors we have defined as most negative within the intrapreneur are primarily caused by frustration; the frustration in their efforts to innovate, and the inability to act as cited by Pinchot (1985) both of which can be considered as generated by the workplace boundaries imposed by the primary decision maker (PDM). This second hypothesis, enveloping the need satisfaction fulfilment of the intrapreneur posits that intrapreneurial opportunity can be stimulated or suppressed simply by the extent to which organizational boundaries exist.

Table 22: Aspects of organizational boundaries

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Milne (2007)	Motivation, incentives and organizational culture	The cultural environment within the business has a greater impact on employee motivation towards creative thinking and knowledge sharing than material rewards.
Molina & Callahan (2009)	Fostering intrapreneurship	The constructs of the organizational environment are influential to intrapreneurship.
Amabile (1998)	How to Kill Creativity	Freedom from tiers of decision makers is the discretion of the PDM and lessens the boundaries within which the intrapreneur will need to operate and heighten levels of motivation.

(Continued)

Table 22 (Continued) : Aspects of organizational boundaries

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Pinchot (1985)	Intrapreneuring	Intrapreneurship is best sustained by the removal of personal frustration caused by the inability to act combined with management indecisiveness.
Bassett- Jones & Lloyd (2005)	Does Herzberg's motivation theory have staying power?	The opportunities to transfer ideas in actions are highly motivational for the intrapreneur but are dependent upon internal policy and procedural constraints.
Florida & Goodnight (2005)	Managing for Creativity	Intrapreneurial creativity and motivation is consistent with relatively relaxed organizational boundaries.

We have learnt from the literature that intrapreneurs are not straightforward individuals to contract with in the workplace and can demonstrate several personality traits that are frustrating for management to deal with. Fundamentally, most of these behaviors arise out of the frustration felt by the intrapreneur when their natural inclination to be creative is restricted which can take many forms. In terms of organizational boundaries this may well mean a structured approach to tasks following standard operating procedures and adhering to policy manuals. The intrapreneur, by nature, desires the opportunity to work independently of customary business procedures and practices. In addition, they are relatively easily bored and avoid routine tasks whilst circumventing others employees in order to attain assignments which they feel to be more challenging and offer a greater degree of flexibility and freedom than their counterparts receive. These factors alone can make

them unpopular with their peers. There is also an issue of character and personality. We have read descriptions of trouble makers, radicals, selfish egoists, attention seekers, cynics and stubbornness all evident to some degree in the attitude displayed by them. This is not solely in respect of their peers but frequently cited in their relationships with company management, verging on what could be termed insubordination along with their inability to accept any criticism of their work or conduct.

Intrapreneurs are similarly inclined to have unusually high levels of self-confidence, which any employee would require in order to constantly challenge the status quo within a business, without feeling that they were threatening their position or future by doing so. This self-assurance also manifests itself in more harmful ways. We have read that their over optimism can lead to a serious lack of critical capabilities causing a tendency to overrate their competences and embark on flawed, highly uncertain strategies even outwitting management to do things their own way. This is made harder for some entrepreneurs to tolerate as it is not the intrapreneur's business or money that is at risk, but that of the PDM, hence a desire for specific organizational boundaries. However, it is documented that due to their ultimate lack of authority in respect of finance and resources, the risk for the intrapreneur in making a major mistake is likely to be less hard to recover from than those of the entrepreneur.

In summary, for intrapreneur opportunity levels to be high there has to be an acceptance of risk-taking, of potential failure and wasted effort and reserves. These motivational factors will only exist in a structure of relaxed operational boundaries. Additionally, the inherent characteristics of the intrapreneur, as outlined above, would necessitate a further relaxation in the typical relationship between leaders and

subordinates if a hierarchical reporting system is in place as this alone is considered to materially affect intrapreneurial opportunity levels. In conclusion, we posit that the extent of working practice boundaries will positively or negatively influence intrapreneurial opportunity levels.

Hypothesis 3 explores the second element of intrapreneur need satisfaction fulfilment; the significance of work discretion.

### 3.1.3 Hypothesis 3 – Level of work discretion

H3: The entrepreneur PDM's level of support for innovation positively influences levels of work discretion.

Work discretion can be expressed as the extent to which an individual feels they have control over their tasks; the extent to which they have freedom to prioritize assignments; the extent to which they are allowed to make decisions without constant upward referral; and, in doing so, an expectation that they will not always make the right choices and that will be acceptable to the entrepreneur primary decision maker (PDM) led organization.

Table 23: Aspects of work discretion

Author	Subject	Observation
Davenport, Prusak & Wilson (2003; p30)	Who's Bringing You Hot Ideas (and How Are You Responding)?	Work discretion must allow recognition for "effort, commitment and learning, even if the outcome was not as planned".

(Continued)

Table 23 (Continued) : Aspects of work discretion

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Amabile (1998)	How to Kill Creativity	Flexibility of work design and experimentation are vital for intrapreneurship to succeed.
Szerb (2003)	The Changing Role of Entrepreneur and Entrepreneurship in Network Organisations	The intrapreneur must be granted freedom and independence by the entrepreneur in defining their work activities and objectives.
De Villiers-Scheepers (2012; p419)	Antecedents of strategic corporate entrepreneurship	Strategic corporate entrepreneurship can be supported by autonomy within the workforce.
Antoncic & Hisrich (2003)	Clarifying the intrapreneurship concept	Incubators for intrapreneurship can be created through a flexible organizational structure and climate.
Menzel, Aaltio & Uljin (2007)	Developing characteristics of an intrapreneurship-supportive culture	Flexibility of work discretion, whilst often unattainable in large corporations should be possible within the SME environment.

(Continued)

Table 23 (Continued) : Aspects of work discretion

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Lessem (1987; p171)	How to be an enterprising individual in a successful business	“The flexible person is the change agent who does not want to be held to a specific identity”.
Dewett (2004)	Employee creativity and the role of risk	Leaders need to separate the treatment of creative efforts from creative outcomes.
Painoli (2012)	Leadership through entrepreneurship	Leaders should empower employees at all levels to generate their own new ideas.

The analysis of the literature provided many beneficial outcomes of intrapreneurship and its effect on businesses growth and profitability, knowledge acquisition and retention through work discretion. Whilst this may appear to be a somewhat unsafe proposition, there are specific advantages in having employees who do not desire micro-managing and are prepared to contribute generously to the strategic goals of the PDM through their own efforts.

One of the constructive aspects of the intrapreneur’s abundance of confidence and optimism is that they are willing to take responsibility for the projects they are involved in and do not expect to blame others for unsuccessful outcomes. Furthermore, that presented with a new idea they will champion it from inception to actuality expecting the minimum of supervision and input from others. This takes away some pressure from the PDM to drive through innovative activities and as such, plays an important part in ensuring their continuity. Another consideration is the extent to which intrapreneurs volunteer new ideas and initiate new processes which

the PDM may not have thought of, meaning they are often referred to as employees with unique vision. Within the literature we found many examples of intrapreneurs that have drawn customers away from the competition by their creativity in designing and producing new products or services. Additionally, their extensive problem solving capabilities become highly desirable in technical industry sectors. Although it may seem improbable from some of the personal attributes, character traits and behaviors we have noted, the intrapreneur is in fact considered to be a very willing and fair team member providing they receive what they perceive as a proportional degree of personal acknowledgement for their efforts.

The opportunities for work discretion will generally be determined by the PDM who may readily accept the potential advantages, unwillingly consider them through internal pressures or market forces, or fail to see any benefit and consequently adopt a working structure that prohibits a large degree of progressive individual opinions, enlightened thinking and conceptual activities from the employees.

Hypothesis 4 serves to explore the impact of work discretion on intrapreneurial opportunity levels

#### **3.1.4 Hypothesis 4 – Impact of work discretion on intrapreneur opportunity levels**

H4: The level of work discretion positively influences the level of intrapreneurial opportunity.

Consistently within the existing body of published work the importance of work discretion is highlighted as essential to intrapreneurial opportunity and has substantial implications for need satisfaction fulfilment.

Table 24: Work discretion and organizational boundaries

Author	Subject	Observation
Sandberg, Hurmerinta Zettinging (2013)	Highly innovative and extremely entrepreneurial individuals: what are these rare birds made of?	Intrapreneurs are motivated by being able to set and achieve their own goals and desire to feel in charge of their work and life. This individual need satisfaction is achievable through a leadership style that supports employee creativity.
Bassett- Jones & Lloyd (2005)	Does Herzberg's motivation theory have staying power?	The opportunities to transfer ideas into actions are highly motivational for the intrapreneur but are dependent upon internal policy and procedural constraints.
Desouza (2011)	Intrapreneurship	Lasting intrapreneurial opportunity will be achieved through a combination of the contribution the employee can make and the acknowledgement they receive for it.

(Continued)



Table 24(Continued) : Work discretion and organizational boundaries

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Goffee & Jones (2007)	Leading clever people	Innovators are indifferent to the use of job titles but highly motivated by their status within the organization. They are easily bored.
Amabile (1998)	How to Kill Creativity	Flexibility of work design and experimentation are vital for sustained intrapreneurial opportunity and creativity.

For the intrapreneur to function as a creative or innovative individual within the workplace they cannot be overly constrained by highly structured work routines and close supervision in a target and deadline oriented company. This creates a challenging dilemma for the primary decision maker (PDM). A decision has to be made in how many individuals should be granted this discretion, which individuals are chosen and with productivity levels that are potentially lower than employees working in a regulated, controlled manner, how the intrapreneur's efforts are measured and ultimately rewarded.

An additional consideration is the aforementioned abundance of confidence and how this can be channeled to positive effect for both the satisfaction of the intrapreneur and the entrepreneur PDM. In this respect we can consider "confidence" from two different angles. Firstly as an intrinsic characteristic within an individual that may be susceptible to overt or extensive criticism leading to dissipated levels of self-assurance. Should this individual, through attempted intrapreneurial efforts

receive high levels of negativity due to constraining work discretion factors, they may indeed decide to adapt to a “safer” standpoint and position themselves in a less high-risk stance in how they complete their tasks. Secondly there is the alternative that a less vulnerable individual given the same constraints will simply elect to channel his/her efforts elsewhere either outside of the company or by leaving the company altogether. Both or these outcomes are clearly documented within the literature analysis high-lighting the disadvantageous aspects of work discretion on intrapreneur need satisfaction fulfilment; that they will not be inclined to offer ideas and solutions; that they will become bored and frustrated; that the company is at risk of losing some of its best brains in favor of a rigid administration of working procedures. To achieve sustainable levels of need satisfaction, consideration will have to be given to how the company can benefit competitively from intrapreneurial input, recognize intrapreneurial individuals and in valuing this contribution accept that work discretion is an essential state, not just a desired one. In doing so, there may be mistakes or errors of judgment along the path to innovative success but as we have learnt these can be mitigated by the discrete use of controlling tactics, mainly a commitment to clear communication and the ability of the PDM to listen and respond, rather than hear and react.

Hypothesis 5 explores the third element of intrapreneur need satisfaction fulfilment; the significance of time availability.

### **3.1.5 Hypothesis 5 – Level of time availability**

H5: The entrepreneur PDM’s level of support for innovation positively influences levels of time availability.

The issue of time availability (alternatively referred to as availability of resources) is potentially one of the more difficult intrapreneurial aspirations for the PDM to meet. Given the essence of intrapreneurship is the inclination and desire to experiment, to problem solve, to challenge existing approaches to process, service or product development, all require a dedication and commitment that time will be made available to do so. Furthermore, that the company will be able to accommodate both wasted productivity if ideas cannot be successfully implemented, and the time that will need to be allowed to pilot and progress ideas that have real potential. From the literature we learnt how important challenging and inquisitive work is to intrapreneurs; how important it is recognize efforts that cannot be brought to fruition and the value of being able to transfer ideas into something more tangible.

Table 25: Support for innovation and time availability

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Kanter (1990)	When Giants learn to Dance	An entrepreneurial organization will allocate time for innovative experimentation.
Sandberg, Hurmerinta Zettining (2013)	Highly innovative and extremely entrepreneurial individuals: what are these rare birds made of?	Intrapreneurs have a high need for achievement, an internal locus of control, are curious and need to be challenged through problem-solving type activities to achieve work and need satisfaction.

(Continued)

Table 25(Continued): Support for innovation and time availability

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Willison (2006)	Ways to identify intrapreneurs	Even if the ideas you are receiving are unable to be implemented continue to praise and acknowledge effort.
Bassett- Jones & Lloyd (2005)	Does Herzberg's motivation theory have staying power?	The opportunities to transfer ideas in actions are highly motivational for the intrapreneur but are dependent upon time constraints.
Scheepers. Hough & Bloom (2008; p56)	Nurturing the corporate entrepreneurship capability	Individuals must be provided with time to "incubate their ideas".

There are companies that are consistently cited for their policy of allocating time for personal creativity and experimentation, typically 3M, Google, and Post-it notes. For example 3M and Post-it notes are said to have allowed their employees between 15% and 20% of their paid work hours to progress individual initiatives. Google reportedly permit their engineers "to spend up to 20% of their time on intrapreneurial projects of their own choosing, De Villiers-Scheepers (2011, p.253) Whilst this has proven successful in such multi-billion dollar turnover enterprises it remains contentious if, and to what extent the same approach, albeit on a scaled down level, can be provided by a PDM within the SME environment. Lessem (1987, p.175) proposes that the enabling of intrapreneurship could be aligned to what is commonly known as "an apprenticeship". To further this notion, the apprentice or novice

intrapreneur could be granted time to experiment creatively based on a reduced expectation of their productivity, but again, that would have potentially negative financial implications for the PDM of a small business.

### 3.1.6 Hypothesis 6 - Impact of time availability on intrapreneur opportunity levels

H6: The level of time availability positively influences the level of intrapreneurial opportunity

Table 26: Time availability and intrapreneur opportunity

Author	Subject	Observation
de Villiers-Scheepers (2011)	Motivating intrapreneurs: the relevance of rewards	A key motivator for the intrapreneur is organizational freedom to explore more challenging avenues of their work.
Amabile (1998)	How to kill creativity	For management to motivate creative thinking employees they must aim to understand their mind-set not rely on traditional concepts of more general employee need satisfaction.

Whilst it is widely acknowledged that time availability, or lack of, can positively or negatively affect intrapreneurial opportunity there appears to be no obvious way to for this to be realised as a matter of routine. This is specifically the case in SMEs where the workforce will be small and individuals will be potentially charged with more than one role. Throughout the extant literature there were countless references for the necessity of employers to allocate sufficient time within an employee's workload for freedom to explore and research new ideas. Much of the

literature also states a company is not truly entrepreneurial unless this aspect is in place. Such concepts are sound, but are they attainable? We have already discussed the challenge this places on the entrepreneur primary decision maker (PDM) in terms of risk versus growth and however much one reads this is a highly desired state the literature appears to offer no solutions to achieving it. That said, even in the most constrained business environment we may find that employees who are passionate about intrapreneurship take responsibility for putting time into creative concepts rather than take it as given within regular working hours. Indeed, Chang (2001, p.6) proposes “passion inspires us to work harder and with greater effect”. It is not improbable that the intrapreneur may wish to work late or at the weekend to research and prove new theories. Common sense dictates that in doing so, this could become the catalyst for time being made available during the working day as the risk has been better quantified in respect of the value that could be realised. Furthermore, it could elevate the status of such individuals within the business and have a very positive impact upon their relationship with the PDM. From a negative perspective, other employees may be irritated by this but again, we have read that intrapreneurs are frequently unpopular with their peers and desire a high level of recognition from management, both of which are likely if the solution of providing their own time is considered as advancement by the intrapreneur.

Hypotheses 1 through 6 come under the umbrella of intrapreneur need satisfaction fulfilment leading to intrapreneurial opportunity within the conceptual model but its attainability is not solely subject to the PDM leadership support for innovation. We posit that the strategic type of the SME will impact upon all intrapreneurial activities, needs and opportunity levels and that the level of support for

innovation will influence intrapreneur opportunity levels. Hypotheses 7 and 8 investigate these aspects of the conceptual model.

### **3.1.7 Hypothesis 7 – SME strategic type**

H7: The strategic type of the entrepreneur PDM SME influences levels of intrapreneurial opportunity.

Conant, Mokwa & Varadarajan (1990); Dyer & Song (1997); Desarbo, Benedetto, Song & Sinha (2005) and Brown, Nasarwanji & Catulli (2010, p.5) submit that there are four approaches that influence the strategic direction of the business; “defenders”, “prospectors”, “analyzers” and “reactors”, and that each will adopt an individual attitudes to six questions central to every entrepreneur’s business model which shapes the operational goals and objectives; “how does the enterprise create value?; who does the enterprise create value for?; what is the source of competence?; how does the enterprise competitively position themselves?; how does the enterprise make money?; what are the enterprises time, scope and size ambitions?”

The origin of the strategic type terminologies date back to the P-A-D-R framework proposed by Miles & Snow (1978) and have been used and adapted in subsequent years to measure many factors within the business environment, not limited to organizational capability, organizational efficiency, market forces, competitive strategy, organizational structure, company performance and, by Brown, Nasarwanji & Catulli (2010) in the context of entrepreneurial and intrapreneurial sensemaking. In the words of Brown Nasarwanji & Catulli (2010, p.6) the notion of defending, prospecting, analyzing or reacting “represent a natural reaction to the business entrepreneurs’ thought worlds, his habits and perceived opportunities”.

Further references which enable us to assess the relevance of strategic type from a PDM and business profile perspective are cited within the extant literature.

Table 27: Strategic type and intrapreneur opportunity

Author	Subject	Observation
Gray (2006)	Knowledge Management and innovation in entrepreneurial small firms	The owners' strategic objectives are crucial in achieving sustained growth through the development and use of innovation throughout the business.
Merz & Sauber (1995)	Managerial activities in small firms	The organizational structure created by entrepreneurial orientation has implications for the firm's degree of pro-activeness in its chosen marketplace. The firm's strategic type is frequently attributed to the personality and leadership style of the CEO.
De Villiers-Scheepers (2012; p419)	Antecedents of strategic corporate entrepreneurship	Entrepreneurial strategic orientation can be accelerated by increased innovativeness and pro-activeness by focusing on opportunities and taking moderate risks.

(Continued)



Table 27(Continued): Strategic type and intrapreneur opportunity

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Conant, Mokwa & Varadarajan (1990)	Distinctive Marketing Competencies and Organizational Performance	The strategic type of a business highly impacts upon organizational performance.
Brown, Nasarwanji & Catulli (2010; p5)	Conflict over Entrepreneurial, Intrapreneurial Sensemaking of Business Model Change Initiatives	“There are three factors driving SME success and failure: the effectiveness of the existing business model; the dynamics of business entrepreneur’s and intrapreneur’s mindsets; and the strategic orientation of the enterprise.”
Kantur and Iseri-Say (2013; p306)	Organizational context and firm-level entrepreneurship: a multiple case study	“The leadership style dominant in the organization is also found to have a substantial effect on the climate within which entrepreneurship or innovation occurs.”

(Continued)

Table 27(Continued): Strategic type and intrapreneur opportunity

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Desarbo, Benedetto, Song & Sinha (2005; p51)	Revisiting the Miles and Snow Strategic Framework	“A relationship exists across business capabilities, the environment, and strategic type.”
Carrier (1997)	Intrapreneurship in small businesses	Strategic leadership is key to the sustainability of intrapreneurship.
Dyer & Song (1997)	The Impact of Strategy on Conflict	The choice of strategic type requires reasoning and explanation in order to avoid misunderstandings and conflict.

It is evident from the literature that the chosen strategic type of the SME creates an organizational climate and culture that influences intrapreneurial innovation opportunities and opportunity levels. The four categories of strategic type presented at hypothesis 7 are derived from five primary published works, those of Carrier (1997); Conant, Mokwa & Varadarajan (1990); Dyer & Song (1997); Desarbo, Benedetto, Song & Sinha (2005) and Brown, Nasarwanji & Catulli (2010) and are supported by other authors explored within this dissertation in terms of their relevance to intrapreneurship.

Table 28: Aspects of strategic type

Author	Subject	Observation
Bouchard & Basso (2011; p219)	The link between entrepreneurial orientation and intrapreneurship in SMEs	“Entrepreneurial orientation has become an increasingly important survival condition” which greatly impacts upon maintaining intrapreneurship practices and intrapreneurial opportunity.
Brown, Nasarwanji & Catulli (2010)	Conflict over Entrepreneurial, Intrapreneurial Sensemaking of Business Model Change Initiatives	Intrapreneurial opportunity is highly dependent upon the alignment of mindsets between the entrepreneur PDM and intrapreneur employee in the SME environment.

Defending PDMs, are by nature considered to be more conservative than prospecting PDMs, and are similarly described within the literature as more risk-adverse. This will commonly present a strategic orientation utilizing a narrow product and market focus but, potentially, holding a strong position in a market segment which they wish to sustain. This may require some adaptation, modification or enhancement to the existing merchandise to remain competitive but does not indicate an environment in which there will be abundant opportunities for innovative thinking and activity from the workforce. Accordingly, the workplace culture and climate are more likely to be driven and measured by factors such as productivity levels,

controlling costs and customer service delivery which are not conducive to lasting intrapreneurial opportunities.

Businesses which are led by a PDM who displays “analyzer” behaviors are considered to be neither overtly defensive or prospective but will adopt different stances based on a statistical approach to business opportunities. This will inevitably include a cost versus benefit approach which again proposes a risk-adverse culture in which there may also be a lengthy evaluation process and a fundamental disinclination to accept failure as an outcome of resource or financial investment. This strategic type can be considered as likely or unlikely to create meaningful levels of ongoing intrapreneurial opportunity dependent upon the choices taken and decisions made by the PDM.

The “reactor” entrepreneur’s behavior is characterized in stark and uncompromising terms as creating a working environment that is perpetually unstable and inconsistent “predominantly because of their incapacity to respond effectively to environmental changes”, (Brown, Nasarwanji & Catulli (2010, p4). The conclusion that can be drawn from this definition can only be a workplace of turmoil within which the workforce are unlikely to feel high levels of opportunity and potentially deliver low levels of productivity. However, there may be sporadic bursts of low and high risk ill-defined innovative activity as the PDM tries to sustain the business’ viability to meet ever changing market and consumer needs.

Lastly, we have the “prospector” entrepreneur whose behavioral profile, as presented by Carrier (1997) and Brown Nasarwanji & Catulli (2010) most closely matches the definitions of entrepreneurship offered by many authors documented in the analysis of the literature. How the prospector behavioral profile of the PDM

shapes business growth through innovation is summarized by Brown, Nasarwanji & Catulli (2010, p.4) as “these enterprises often start with a single successful product, but then steadily grow their product/service portfolio by their continuous search for new market opportunities by applying their knowledge and know-how to innovate and develop superior customer-valued products and services”. The leadership approach presented by this PDM behavior would appear to be dynamic, challenging, exciting and engaging for employees, and, the resulting organizational climate and culture will necessarily be highly innovation oriented and positioned. As such, it may be found that the highest levels of intrapreneurial opportunity exist in this workplace environment.

### **3.1.8 Hypothesis 8 – Entrepreneur PDM support for employee innovation**

H8: The entrepreneur PDM’s level of support for innovation positively influences levels of intrapreneurial opportunity.

As stated previously, intrapreneurship is extremely unlikely to flourish in the SME workplace if it does not receive visible support and recognition from the entrepreneur primary decision maker (PDM). Visible in this sense meaning it cascades through any further tiers of management in such a way that it becomes a core function within the business and evident in the predominant working practices. It is apparent within the literature that from the PDM perspective, sponsorship is generally distinguished by two factors; the extent to which this individual is assessable to the intrapreneurial employee and the extent to which the intrapreneurial employee receives both extrinsic and intrinsic reinforcement for their actions. Firstly we will evaluate the link between leadership style characteristics and the potential outcome for creative spirited employees.

Carrier (1997, p.13) submits a noteworthy viewpoint to consider from a behavioral perspective which is intrapreneurship can be a “deliberate” or “emerging” strategy on the part of the PDM. The former individuals create a climate and culture for intrapreneurship through an active and continued strategy of employee creativity; the latter are drawn to corporate entrepreneurship as their awareness emerges from a display of intrapreneurial behaviors from their employees. Either can be considered catalysts for lasting innovation and creativity providing there is a consistency of approach and employees realise it is a sustainable or lasting internal dynamic. One element of this which occurs frequently within the literature is a culture known as “open door”, whereby ideas can be proposed on a one-to-one personal basis rather than impersonal alternatives such as suggestion boxes which often receive scant attention from employees. Some on the basis that their primary purpose has become denuding company line managers, policies or other employees and they are fearful of being identified as the source, but in the case of intrapreneurs they are most likely avoided as they offer no opportunity for the creative thinker’s ideas to be “heard”.

Again we learn from the literature that a climate of free speech is most conducive to gaining innovative collaboration from employees which will necessarily include an acceptance that not all ideas put forward are going to be good ones. The priority is to create a culture where there is no such thing as a “bad” idea and individuals are recognized for contributing knowledge and suggestions in such a way as it becomes a normal and regular function of the business.

Table 29: Support for innovation and intrapreneur opportunity

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Davenport, Prusak & Wilson (2003)	Who's bringing you hot ideas (and how are you responding)?	The greatest factor for the success of continued intrapreneurship is the complete backing of the business leader.
Kantur and Iseri-Say (2013)	Organizational context and firm- level entrepreneurship: a multiple case study	Leadership as a variable is central to promoting innovation.
Zhao (2005; p25)	The synergy between entrepreneurship and innovation	“Organization culture and management style are crucial factors affecting the development of entrepreneurial and innovation behavior in organisations”.  Open and supportive leadership behavioral qualities will foster sustainable innovative activities.

(Continued)

Table 29(Continued): Support for innovation and intrapreneur opportunity

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Ahmed (1998)	Culture and climate for innovation	An open leadership approach which encourages innovation from within the workforce is conducive to continued organizational creativity. Organizations can create a physical environment to augment creative interaction between employees.
Ross (1987)	Intrapreneurship and corporate culture	Business leaders can actively release and sustain innovative potential through entrepreneurial leadership style and traits.
Willison (2006)	Identifying intrapreneurs	A culture of an open-door policy with a leadership approach that encourages and solicits ideas from employees creates an environment for intrapreneurship.
Darling, Gabrielsson & Seristo (2007; p19)	Enhancing contemporary entrepreneurship through management leadership	The leadership exhibited by successful contemporary entrepreneurs reflects constant innovation. "They saturate everything in the organization and form the foundation of its innovation-related culture".

(Continued)



Table 29(Continued): Support for innovation and intrapreneur opportunity

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Florida & Goodnight (2005)	Managing for creativity	Engage your employees intellectually and ensure managers are responsible for championing creativity.
Sathe (2003)	Corporate Entrepreneurship	Organizational culture is a key driver of innovation.
Cottam, Ensor & Band (2001)	Strategic commitment to innovation	An innovative working environment is developed and sustained through the facilitation and commitment of senior management.

A second element of primary decision maker (PDM) sponsorship of intrapreneurial behaviors can be found in the practices for remuneration and reward, as discovered in the extant literature is that both extrinsic and intrinsic recognition is very much a desired state for creativity to flourish. Both are essential support mechanisms for increased levels of intrapreneurial opportunity which to be meaningful, should also be sustainable. This component part of intrapreneurial opportunity is presented within this dissertation through several contributing publications.

Table 30: Aspects of remuneration and reward

Author	Subject	Observation
De Villiers-Scheepers (2011)	The relevance of rewards in motivating intrapreneurs	There is little empirical evidence available as guidance in rewarding and motivating intrapreneurs. Recognition, empowerment and social incentives are likely to be most relevant.
Ahmed (1998; p42)	Culture and climate for innovation	“Innovative companies appear to rely heavily on personalised intrinsic awards... less innovative companies tend to place almost exclusive emphasis on extrinsic awards”.
Bystead (2013)	Innovative employee behavior	Innovation trust is a positive and emergent aspect of job satisfaction for creative-minded employees, a focus being upon managers who create internal acceptance of innovative initiatives.

(Continued)

Table 30 (Continued): Aspects of remuneration and reward

Author	Subject	Observation
Bassett-Jones & Lloyd (2005)	Herzberg's motivation theory	Money and recognition may not be significant aspects for stimulating employees to be innovative.  Intrinsic drivers outweigh extrinsic drivers.
Markova & Ford (2011; p815)	Is money the panacea?  Rewards for knowledge workers	Intrinsic motivation mediates the relationship between non-monetary rewards, performance and innovation. "Extrinsic rewards diminish inherent interest in a task and lower intrinsic motivation".
Wiley (1997)	What motivates employees according to over 40 years of motivation surveys	Employee need and hygiene factors for the creation of work satisfaction and the ability to motivate desired behaviors have been substantially investigated over many decades and are dynamic rather than fixed states.

(Continued)

Table 30 (Continued): Aspects of remuneration and reward

<b>Author</b>	<b>Subject</b>	<b>Observation</b>
Hong et al (1995)	Impacts of employee benefits on work motivation and productivity	All work motivation stems from individual welfare which can be met by extrinsic or intrinsic factors.
McAdam & McClelland (2002)	Idea generation within innovation management	Intrinsic motivation leads to creativity; extrinsic motivation is only complimentary when intrinsic motivation is high.
Daly & Kleiner (1995)	How to motivate problem employees	Continued motivation can be created by “expectancy theory” through which the intrinsic or extrinsic reward mechanisms cause desired behaviors to be repeated.
Armstrong, Brown & Reilly (2011)	Increasing the effectiveness of reward management	Many companies do not formally evaluate the benefit to the organization or the value to the employee of their reward programmes.
Sathe (2003; p329)	Corporate Entrepreneurship	“Pure economic incentives are not always as effective as intrinsic rewards in R&D departments.

It is clear that intrapreneur opportunity levels can be met, and heightened, through both extrinsic and intrinsic recognition and rewards. As noted previously, extrinsic rewards are received in the form of remuneration packages and incentive schemes; intrinsic rewards result from the work itself, particularly its meaningfulness to the employee (Amabile, 1998 and Pullins et al, 2000) There does however, persist a debate within the literature as to the relevant value of each and how they may be combined to achieve the most powerful endorsement for valuing the qualities and business gains of intrapreneurship. Leading from the 8 hypotheses postulated above, a conceptual model is proposed comprising six constructs; entrepreneur PDM support for innovation, organizational boundaries, work discretion, time availability, SME strategic type and intrapreneurial opportunity levels. For clarity, we will firstly present our definition of each construct title adopted from Hornsby, Kuratko, Holt & Wales (2013, pp.939-942)

Table 31: Construct Definitions

<b>Title</b>	<b>Definition</b>
Level of support for innovation	The willingness of senior management to facilitate and promote entrepreneurial behavior, including the championing of innovative ideas and providing the resources people need to take entrepreneurial actions.
Organizational Boundaries	Precise explanations of outcomes expected from organizational work and development of mechanisms for evaluating, selecting and using innovations.

(Continued)

Table 31(Continued) : Construct Definitions

Title	Definition
Work Discretion	The tolerance of failure, providing decision-making latitude and freedom from excessive supervision, delegating authority and responsibility.
Time Availability	Evaluating workload to ensure that individuals and groups have the time needed to pursue innovations and that their jobs are structured to support short and long term organizational goals.
Intrapreneurial Opportunity	The extent and range of opportunities which are available to employees to be intrapreneurial as dictated and controlled by the factors above.

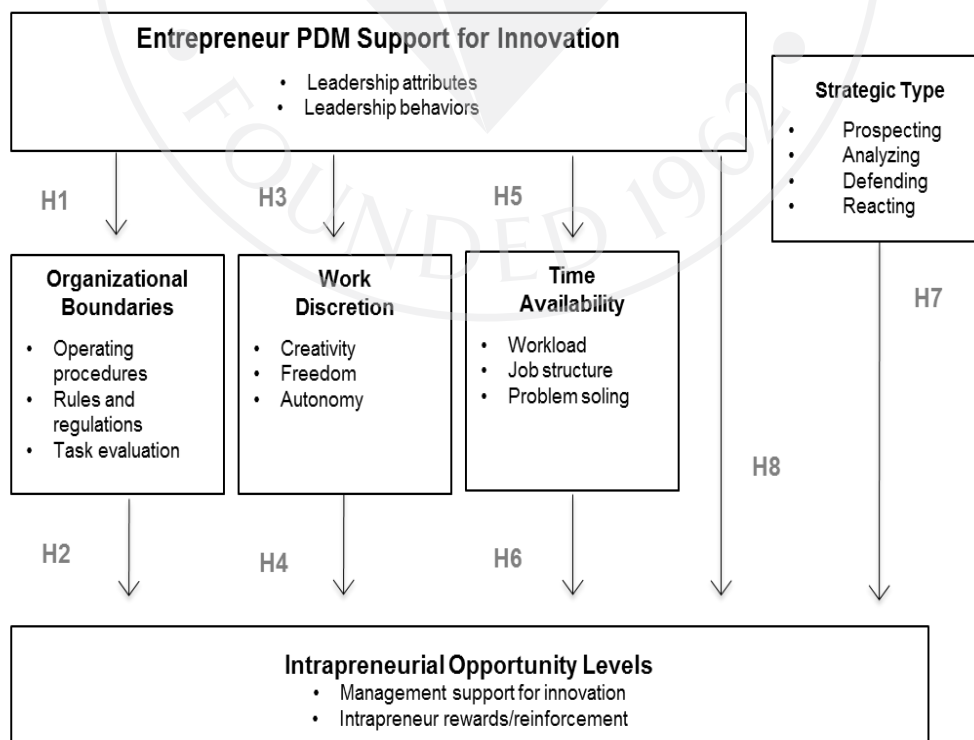


Figure 32: Conceptual Model

### 3.1.9 Summary

Drawing from the extant literature and, of value whilst constructing the conceptual model we have adopted three central considerations for intrapreneurial realization, SME strategic type, as detailed above, human capital and organizational support. Human capital confines to the knowledge, capabilities, personal attributes and creative thinking that can be harnessed from an individual or exhibited by an individual has been described as the primary source of value creation and critical innovation infrastructure. Organizational support is measured by enveloping the characteristics of the workplace environment that pertain to employee well-being, satisfaction, fulfilment and motivation. This extends to the active championing of individuals with intrapreneurial expectations including a necessary change in the traditional methods of recognizing and rewarding personal advancement to create a lasting enthusiasm for creativity and the dissemination of innovation. Specifically, in that the reward system utilizes intrinsic and extrinsic motivators within a structure that does not penalize experimentation that fails to produce an immediate benefit to the business. Instead, the focus becomes one of providing challenging tasks, including long-term problem solving initiatives combined with an understanding of the “needs” of the intrapreneur. The concept of intrapreneur need satisfaction becomes the umbrella for hypotheses one through six.

In the assessment of publications referring to two seminal authors, Maslow and Herzberg, there was agreement on the power of considering personal needs is an aspect that is key to achieving corporate goals as opposed to assuming that financial remuneration was an exclusive inducement. Furthermore that work motivation and job satisfaction are dynamic not fixed states, which are influenced by work, social and

individual factors. We have also learnt that employee recognition through overt verbal or written appreciation is an immensely influential tool and this is particularly the case for the intrapreneur whose unconventional characteristics, as detailed above, are typified by requiring attention, coupled with, acknowledgement and gratitude for their contribution. Intrapreneurs inherently dislike any sense of loss of face or suggested lack of credibility from their peers or PDM and overcoming these negative emotions is paramount to gaining their loyalty. Herzberg also captures a further dimension of leadership approach; that managers can “move” employees to be innovative, or, “motivate” employees to be innovative (Bassett-Jones & Lloyd, 2005, pp. 936-937). The motivation to generate new ideas is seen as occurring through intrinsic values such as employee achievement and recognition. The movement to generate new ideas is seen as a management trait in that it is they who are motivated to move employees towards creative thinking by the use of rewards and incentives. The “motivators” enthusiasm and drive came from a desire to overcome frustration at work, a desire to save the organization money, a desire to improve the success of the organization and personal satisfaction derived from seeing their idea implemented. The “movers” were found to be incentivized by a desire to win money or gifts, seeing a colleague receiving an award and trust that the organization would evaluate an idea fairly. Additionally, a powerful observation is presented, “that motivation is influenced by the nature of the relationship between leader and led”.

It can be argued that whilst it is the business style and strategic type of the SME that determines the culture and climate for continued innovation, it is the need fulfilment satisfaction of the employee that contributes to a desire to be innovative. Neither in isolation will create intrapreneurial opportunity. Furthermore, it is the



relationship between the PDM and the employee that ultimately sustains their motivation through personal intervention in the creativity process. It is evident that there are broadly speaking two opposing approaches found in the leadership approach of the entrepreneur towards employee innovative initiatives and activities. The first is the PDM who not only champions, encourages, and openly supports intrapreneurship but expects it within his or her workplace and from like-minded employees. The second is the PDM who is primarily interested in sustaining growth through existing innovative products or services and does not seek or inspire the workforce to be forthcoming with new initiatives and ideas. Additionally, that little value is placed upon employee creativity, with the expectation that it will continue to be the domain of the entrepreneur to suggest the necessary enhancements that are required in the product or service offering. The recruitment process becomes a serious consideration when reviewing the traits of such entrepreneurs who could be engaged in almost identical business activities but have completely juxtaposing management styles and expectations of their workforce.

In summary, we suggest that there are three categories of PDM in terms of their disposition to intrapreneurial opportunity; those who purposefully drive the concept through the business; those who more passively endorse new concepts and ideas that are presented to them by the workforce; those who do not seek or desire creative thinking from their employees. Lastly, the relationship between the entrepreneur PDM and intrapreneurial opportunity shown at hypothesis 8 is of great importance to this dissertation in providing answers to the research questions which consider the extent to which the differences in entrepreneurial PDM levels of support for innovation influence the need satisfaction fulfilment of intrapreneurs within UK

technology-innovative SMEs; the extent to which intrapreneur need satisfaction fulfilment determines the level of intrapreneurial opportunity within UK technology-innovative SMEs; and, the extent to which the SME strategic type of the entrepreneur PDM led UK technology-innovative business impacts upon intrapreneurial opportunity levels.

### 3.2 Construct variables

The tables below serve to explain the construct variables in detail, referring back to the analysis of the literature for the information sources. Subsequently, within the methodology chapter we will present the measurement tools that will be used to test each construct variable.

Table 32: Summary of variables

Construct	Variables
Entrepreneur PDM support for innovation	Leadership attributes Leadership behaviors
Organizational boundaries	Operating procedures Rules and regulations Task evaluation
Work discretion	Creativity Freedom Autonomy
Time availability	Workload Job structure Problem solving

(Continued)

Table 32(Continued): Summary of variables

Construct	Variables
SME strategic type	SME strategic type (Defending, Analyzing, Prospecting, Reacting)
Intrapreneurial opportunity	Management support for innovation Intrapreneur rewards/reinforcement

### 3.2.1. Construct 1: Entrepreneur PDM level of support for innovation

Variable 1: Leadership attributes.

The influence and relevance of the leadership style attributes of the primary decision maker (PDM) variable is supported within the literature sources through Poutziouris (2003); Menzel, Aaltio & Uljin (2007) and Painoli (2012) who propose the leadership approach and attributes of the PDM is identified as a catalyst for communicating vision through organizational culture and, that the caliber of the PDM is also fundamental. Additionally from Willison (2006) and Ahmed (1998) that a culture of an open-door policy with management directed to encourage and solicit ideas from employees creates an environment of high levels of motivation, and from Zhao (2005, p.25) that “organization culture and management style are crucial factors affecting the development of entrepreneurial and innovation behavior in organisations”. Key attributes for the PDM to foster sustained innovative activities and intrapreneurial opportunity are found to be open-mindedness, visibility and supportiveness.

Variable 2: Leadership behaviors.

The impact of primary decision maker (PDM) behavior within the workplace is supported within the literature sources through a study into the facets of the

entrepreneur which proposed that the temperament and talent of the entrepreneur leader is significant in developing a culture that recognizes intrapreneurial potential within the business (Thompson, 2004) and research that aimed to provide an understanding of the various factors that enable intrapreneurship in established firms with a critical behavioral factor for the leader was deemed to be a communicator (Heinonen & Toivonen, 2008; Christensen, 2005; Holmes, Schnurr & Marra 2007 and Menzel et al, 2006) Furthermore, from the work of Pinchot (1985) who posits that intrapreneurship is hindered through personal frustration caused by management indecisiveness and the inability of the leader to act, and from Amabile (1998) that for management to motivate creative thinking employees they must aim to understand their mind-set not rely on traditional concepts of more general employee need satisfaction. Key behaviors for PDM's is to foster sustained innovative activities and motivation are decisiveness, communication, consistency and sponsoring.

### **3.2.2. Construct 2: Organizational boundaries**

#### **Variable 1: Operating Procedures**

The relevance of operating procedures as a variable to measure organizational boundaries as imposed by the entrepreneur primary decision maker (PDM) and the resulting impact upon levels of intrapreneurial opportunity are well documented within the extant literature. For example, Antoncic & Hisrich (2003) who propose that intrapreneurs anticipate the opportunity to operate outside of what would be considered customary business procedures; by Darling, Gabrielsson & Seristo (2007) who suggest that robust financial control is essential in the innovative environment but this will not be seen as important or favorable by the creative thinkers; by Ross (1987) who posits that a rigid work structure and working practices will hinder

organizational innovation, and by Aaltio & Uljin (2007) who posit that there can be a gulf between the intrapreneur's operational desires and the organization's operational desires. One factor cited is the intrapreneur's aspiration to deflect from historical operating practices and procedures and the business' wish to sustain and reinforce them.

#### Variable 2: Rules and regulations

The adoption, usage and extent to which rules and regulations exist, and are applied, are considered to be a fundamental strategy derived from the primary decision maker (PDM) leadership approach and highly significant in terms of intrapreneur opportunity levels. Markova & Ford (2011) cite the negative influences observed through rules and regulations that are not compatible with innovation through experimentation. By definition, "rules" and "regulations" are an integral part of organizational boundaries and are necessary to ensure an overall environment of compliance. From the intrapreneur opportunity perspective such compliance may be accepted in respect of functional instructions, for example, health and safety, or attendance and workplace conduct, but if targeted towards work tasks that are dominated by policy documents and manuals they are likely to be overly constraining and demotivating from a locus of control standpoint (Zimmerman, 2009; Thompson, 2004; Hornsby, Kuratko & Zahra, 2002; Jansen & Wees, 1994 and Sandberg, Hurmerinta & Zettining 2013)

#### Variable 3: Task evaluation

The relevance of task evaluation to measure organization boundaries confines to if, and how, employee performance is measured and the targets and deliverables that may be set by the primary decision maker (PDM). The facets of task evaluation

within this research study are the extent to which employees understand what is expected of them, have regular opportunities to discuss their progress with their supervisor/manager and have clear direction and goals to there is no ambiguity in the evaluation process. An absence of these procedures may well cause the non-creative minded employees to flounder but in contradiction an abundance of them may disappoint the intrapreneurial employee (Florida & Goodnight, 2005; Desouza, 2011; Amabile, 1998; Pinchot, 1985 and Lessem, 1987)

### **3.2.3 Construct 3: Work discretion**

#### **Variable 1: Creativity**

The relevance of creativity as a variable to measure work discretion is cited profusely within the extant literature as creativity by definition may be considered the cornerstone of innovation activities and as such one of the bedrocks of intrapreneurialism. The availability of tasks that espouse creative thinking abilities greatly impact upon intrapreneurial opportunity levels (Guillen & Saris, 2013; Bonet, Armengot & Martin, 2011; Alpkan et al, 2010; Vora, Vora & Polley, 2012; Teltumbde, 2006; Florida & Goodnight, 2005; Steiner, 1998; Vesper, 1990 and Pinchot, 1985)

#### **Variable 2: Freedom**

The relevance of freedom as a variable to measure organizational boundaries promotes the viewpoint that intrapreneurs are employees who not only think differently but actively seek opportunities outside of the organizational boundaries characteristic in a highly structured business framework (Guillen & Saris, 2013; Bonet, Armengot & Martin, 2011; Teltumbde, 2006; Florida & Goodnight, 2005; Steiner, 1998; Vesper, 1990 and Pinchot, 1985) To meet the need satisfaction of this

profile of employee will necessarily involve a level of individual freedom that may be unattainable without a relaxing of the prescribed operational boundaries.

#### Variable 3: Autonomy

The relevance of autonomy as a variable to measure organizational boundaries is very much aligned to creativity and freedom. Throughout the literature intrapreneurs are frequently categorized as employees with a unique vision whose objective is to gain managerial confidence to pursue innovative opportunities (Urbano, Alvarez & Turro, 2013; De Villiers-Scheepers, 2012); Filion & Chirita, 2012; Teltumbde, 2006; Willison, 2006; Shaw, O'Loughlin & McFadzean, 2005; Antoncic & Hisrich, 2004; Pinchot & Pellman, 1999; Russell, 1999); Koh, 1996; Hornsby et al, 1993 and Stevenson & Jarillo, 1990) Autonomy within work discretion is made further compatible by the intrapreneur's disposition to taking responsibility for their tasks and actions combined with an inherent dislike of close supervision (Florida & Goodnight, 2005; Kuratko, Montagno & Hornsby, 1990; De Villiers-Scheepers, 2011; Srivastava & Agrawal, 2010; Alpkhan et al, 2010; Vora, Vora & Polley, 2012 and Bystead, 2013)

#### **3.2.4 Construct 4: Time availability**

##### Variable 1: Workload

The relevance of workload as a variable to measure time availability is supported within the literature in respect of intrapreneurial opportunity. Intrapreneurs are said to be extrovert, self-motivated, highly driven employees who require an allocation of free time, specifically to work on developing new ideas without the burden of routine workload (Alpkhan et al, 2010; Parker, 2011; Wang & Horng, 2010;

Li & Zhang, 2010; Goffee & Jones, 2007; Pech & Cameron, 2006; Wunderer, 2001; Petroni, 1999 and Rogers 1995)

#### Variable 2: Job Structure

The relevance of job structure as a variable to measure time availability is supported within the literature by evidence that intrapreneurs seek risk-taking challenges and are neither comfortable nor motivated by highly structure work tasks (Hurmerinta & Zettining, 2013; Guillen & Saris, 2013; Desouza, 2011; Alpkhan et al, 2010; Aygun, Suleyman & Kiziloglu, 2010; Menzel et al, 2006; Willison, 2006; Altinay, 2004; Antoncic & Hisrich, 2003; Brenner & Brenner, 1988; Szerb, 2003 and Davis 1999)

#### Variable 3: Problem Solving

The significance of problem solving as a variable to measure time availability becomes critical as this feature of the intrapreneur's job expectancy is central to meeting need satisfaction through analytical but also innovative thinking. Studies by Kuratko, Montagno & Hornsby (1990) identified work allocated in such a way that time constraints are flexible enough to permit persons to work alone or with others on long-term problem solving as a factor of intrapreneurial success. A positive impact on intrapreneurial opportunity levels is further cited by Sim, Griffin, Price & Vojak (2007); Desouza (2011); Lessem (1987); Brenner & Brenner (1988); Pinchot & Pinchot (1978); Alpkhan et al (2010); Wunderer (2001); Kassa & Raju (2015) and in research carried out by Amabile (1998)



### **3.2.5 Construct 5: Entrepreneur PDM strategic orientation**

Variable 1: SME Strategic type

This variable is supported within the literature sources through studies adapted from a strategic framework introduced by Miles & Snow (1978) and determined by Conant, Mokwa & Varadarajan (1990, pp.365-366); Dyer & Song (1997, p.469); Desarbo, Benedetto, Song & Sinha (2005, p.47) and Brown, Nasarwanji & Catulli (2010, p.4) to be defenders, prospectors, analyzers and reactors.

### **3.2.6 Construct 6: Intrapreneurial opportunity levels**

Variable 1: Management support for corporate entrepreneurship.

The importance of management support as an intrapreneur motivator is supported within the literature sources through the work of many authors; Entrialgo, Fernandez & Vazquez (2000) who studied the psychological characteristics of the role of entrepreneurship in SMEs which concludes that the PDM leadership characteristics directly and indirectly influence organizational climate and culture; Amabile (1998) and Amar (2004) who propose leaders that ensure creativity is seen as a top priority and a climate and culture of information sharing and collaboration is a significant organizational climate factor (Milne, 2007, p.30) who highlights the importance of recognition from management to employees but critically in the case of intrapreneurs, that recognition is not solely a matter of acknowledging success but acknowledging “effort, commitment and learning, even if the outcome was not as planned”. Bystead (2013) provides a study that aimed to examine how job satisfaction and mental involvement increase the effectiveness of innovative work behaviour, and suggests a climate and culture of open-minded atmosphere, innovation trust and the acceptance of innovative work behavior as valuable factors for supporting

intrapreneurship. Srivastava & Agrawal (2010) assert that for entrepreneurial readiness an organizational culture must be such that can support innovation transformation. Additionally we learn from Davenport, Prusak & Wilson (2003); Bassett-Jones & Lloyd (2005); Florida & Goodnight (2005) and Amabile (1998) the requirement to provide intellectual stimulation and the excitement for employees of seeing ideas transformed in action by the business leader/management. Evidence can also be found as to the impact on intrapreneurial opportunity from the perspective of the “leader” and the “led” through the work of Cottam, Ensor & Band (2001) who propose that an innovative working environment is developed and sustained through the facilitation and commitment of senior management, and by Darling, Gabrielson & Seristo (2007, p.19) who posit that the leadership exhibited by successful contemporary entrepreneurs reflects constant innovation. “They saturate everything in the organization and form the foundation of its innovation-related culture”. Furthermore, a study by Alpkhan et al (2010) into organizational support for intrapreneurship cites a tolerance by management for a degree of trial and error or failures as a significant factor in the relationship between leader and the led, and from Bassett-Jones & Lloyd (2005, p.937) “motivation is influenced by the relationship between leader and led”.

#### Variable 2: Rewards/reinforcement

The value of rewarding intrapreneurship and reinforcing its desirability within the business is considered highly influential in attaining intrapreneurial opportunity and motivation. References within the literature to support this theory can be found in the work of Amabile (1998) who concludes that employee recognition and removing obstacles are critical for lasting creative motivation.; by Desouza (2011) Manimala,

Jose & Thomas (2006) and Pinchot & Pinchot (1978) who propose that intrapreneurs want to consistently outperform themselves and a major factor in their work motivation is their contribution and acknowledgement throughout the organization and the removal of obstacles to creative thinking and activities; by Willison (2006) in a study of Fairchild Semiconductors who asserts that intrapreneurs are not by nature purely financially driven but are motivationally sustained by overt recognition from their peers and leaders, and by Kuratko, Montagno & Hornsby (1990) whilst researching the factors of intrapreneurial success who found that rewards/reinforcement when reviewing highly challenging tasks are very relevant.

The following section of this dissertation introduces the methodology that will be applied to operationalizing each variable presented at the conceptual model through measurement tools that follow the paradigm of epistemology.

## CHAPTER 4

### RESEARCH METHODOLOGY

“It is a capital mistake to theorise before one has data”.

Sir Arthur Ignatius Conan Doyle - 1859 to 1930

This dissertation has presented evidence of the unique challenges found in the leadership of technology-innovative SMEs. Additionally, within the industry context applied for the research investigation we learn the value of innovation and creativity as essential components of business growth and in particular, within small companies where innovation is integral to their continuation or survival. The review of the literature provided a pronounced insight into how this could be achieved through intrapreneurship regardless of company size, whereas the concept had for many decades been considered the province of corporations. Furthermore, the extensive assessment of entrepreneurship and entrepreneurial leader traits may be critical in understanding the facets of the pivotal role played by the primary decision maker (PDM) which will determine the likelihood of intrapreneurship, its sustainability and the actions and activities that need to be embraced by them. We will now look at an assessment of the relationship between these aspects through the research design.

#### **4.1 Philosophical Position**

Easterby-Smith, Thorpe & Lowe (1991, pp.21-23) strongly advise that failure to consider philosophical concerns “can seriously affect the quality of management research”. They cite its value as an enabler for the researcher to fully clarify their research design and methodology, not confined to the data collection and analysis but to include how evidence is interpreted. In summary, it is the “overall configuration of the piece of research”. This is a view highly supported in the writings of Creswell

(2003 and 2009) who suggests that the combination of philosophy strategies and methods “provide different frameworks for conducting research”. The choice of which framework to use can then be subjected to “the research problem, personal experiences, and the audience for whom one seeks to write”. Creswell does not define “the audience” but it would be prudent to consider it from an academic perspective and the participating companies/individuals’ perspectives. Easterby-Smith, Thorpe & Lowe (1991) concur, suggesting that knowledge of such philosophies is essential for determining the methodology that will best answer the research questions.

With an objective ontology, a study takes an epistemological postpositivist position; epistemology being the theory of knowledge embracing both the scope and nature of knowledge and, as defined by Ates (2008, p.5) as “related to the way we see the nature of reality in world” and by Creswell (2009) as “philosophical worldviews”. Creswell elaborates on the positioning of philosophical worldviews to a researcher as seen at figure 33.

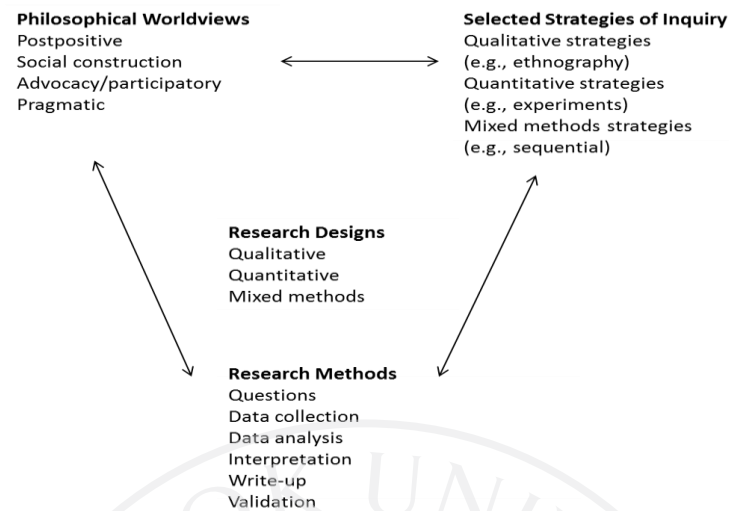


Figure 33: A Framework for Design – The Interconnection of Worldviews, Strategies of Inquiry, and Research Methods

Source: Cresswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (3<sup>rd</sup> ed). Los Angeles: SAGE.

From the conceptual model and hypotheses derived from the research questions, a postpositivist approach most closely met our requirements both from the factors presented by Creswell. An interpretivist rather than postpositivist position would not have had a better fit for our research aims as the study was not subjectively constructed or qualitative in nature. The research questions and hypotheses could be measured objectively and tested statistically without subjective observations or interpretation so equally could not be considered critical realist. Furthermore, the researcher was independent of the audience. We did not seek a leading research method which would elicit the participant's ways of, for example, knowing and seeing, through interviews or observations which could be an interpretative approach or an action research approach. The features of an action research approach as posited by Easterby-Smith, Thorpe and Lowe (1991, p.34) are akin to "learning about an

organization or social system through attempting to change it”, and, that the people who were most likely to be affected by any such changes would become involved in the research process rather than sit outside it. Whilst we did interview the SME leaders, it was through a set of structured questions, mirroring those asked of the employees, to guide us in our understanding, if necessary, of how their attitudes, behaviors, organizational structure and climate might impact upon the responses received from utilizing an employee survey methodology. Ates (2008, p.6) adds a further element which supports our approach to the research being undertaken; independence. The observer is independent of what is being observed; value-free and scientific; the choice of subject and method can be made objectively, not based on beliefs or interests.

We commenced therefore, by reverting to our research questions to consider the most suitable approach before ascertaining which stance we would adopt to investigate this research study. Our research foundation is to test our theories rather than develop theories, and, the application of primarily quantitative methods of data collection. There was no inclusion of the audiences in either the construction of the research instruments or implementation of the research instruments. We further acknowledge from a critical subjectivity viewpoint the necessity to confirm or contradict our views or beliefs whilst constructing the research questions and have sought unbiased evidence to do so. The resultant hypotheses stem from a philosophical position which in turn not only reflects our research questions but an ontological world view. We position ourselves as objective, rather than subjective utilizing the definition provided by Easterby-Smith, Thorpe and Lowe (1991, p.24) in that philosophically our stance is objectively determined not socially constructed. For

example, when surveying the employees and when asking questions of the business leader, we are seeking facts, not to “appreciate the different constructions and meanings that people place upon their experience”. We accept that the research questions could have formed to basis of an employee interview, but to do so would have given us access to fewer employees and we could not consider that those opinions represented the body of employees as a whole. Furthermore, that a selection process would have been involved in whom was interviewed and the aim of this research study is that employee role or title is irrelevant in ascertaining their opportunities to think and act in an intrapreneurial manner. We also accept that there are bodies of social scientists that are highly critical of the positivist research methodological position as lacking independence in the value of the data gathered from the participants. We discussed this principle when referring to the need satisfaction questionnaire approach developed by Porter (1961) Using this type of instrument, respondents are requested to consider several characteristics or qualities associated with each survey question. For each characteristic they are asked to give 3 ratings: (a) how much of the characteristic they felt there was currently (b) how much of the characteristic they felt should have been and (c) how important this characteristic was to them. It was decided that utilizing this approach would provide little value in respect of eradiating the inclusion of independent values and interests and would be more likely to incorporate them. We instead turned our focus to the compilation of facts gained in a natural rather than experimental setting through operationalizing the conceptual model constructs so that they could be statistically measured. Consequently, our research design was constructed according to our chosen paradigm.



## 4.2 Research Paradigm and Design

Commencing with a postpositivist stance, the methodology subsequently became hypothetico-deductive using statistical testing through survey instruments whilst in what could be considered a quantitative case study context. This research design is presented below at figure 34. As investigative research the “unit of analysis” of the study (Bhattacharjee, 2012 and Remenyi, 2013) is individuals working in an innovative business sector. The company size was small/medium, therefore, with fewer than 250 employees. This was specifically aimed at avoiding the corporate governance that will necessarily exist in large organizations and multi-national companies which will may restrict them in terms of shareholder and stakeholder obligations, and potentially dilute the opportunities for intrapreneurialism. It also provided the researcher the opportunity to gain a detailed understanding of the positioning of inventiveness within organizations with a manageable work-force size, specifically in terms of progressive creativity and their ability to more easily identify intrapreneurs. Scozzi, Garavelli & Crowston (2005) propose that smaller businesses will usually provide a high level of communication in a less complex management structure enabling greater aware and inclusion for its employees, therefore, a possible enabler for intrapreneurship.

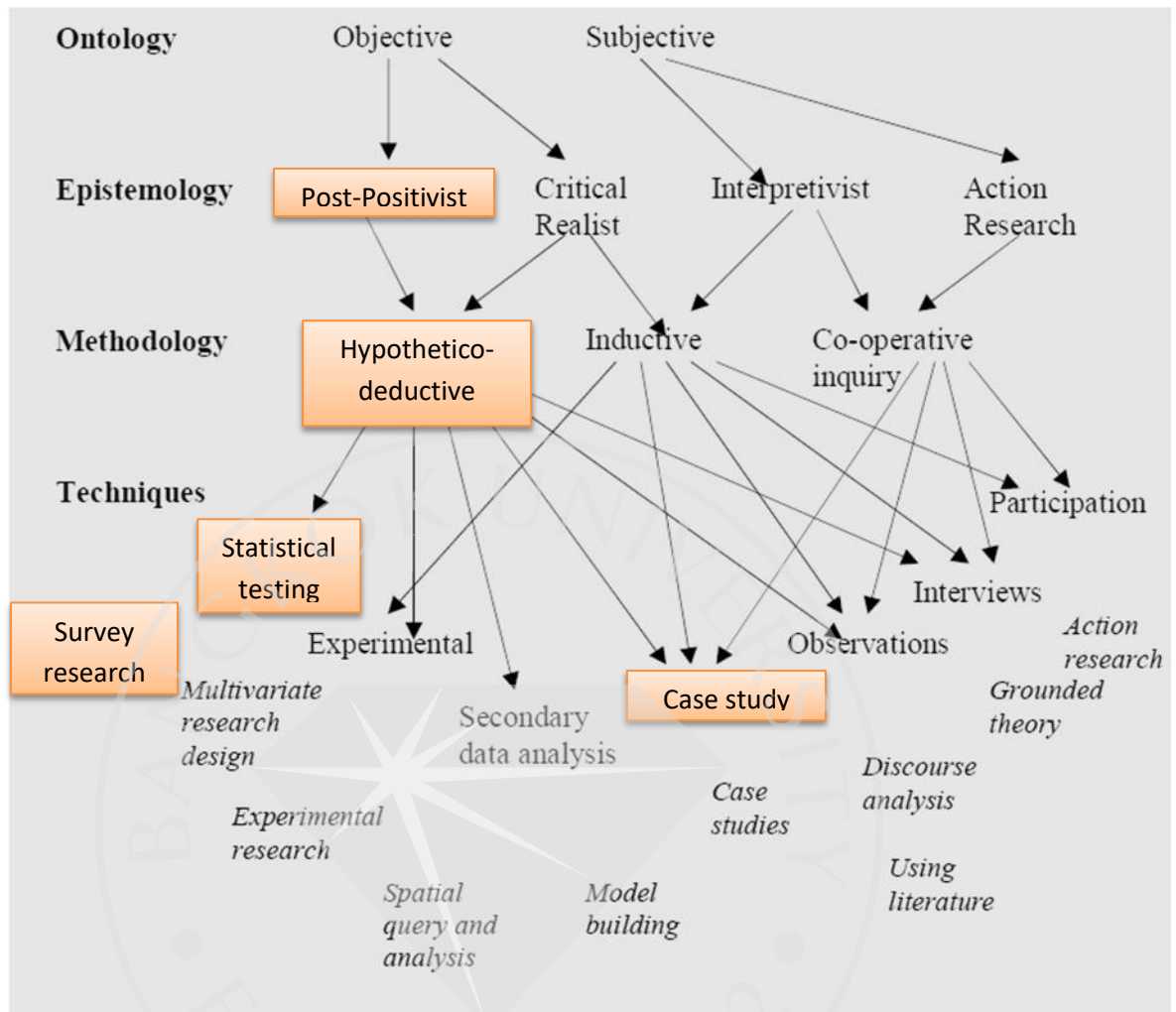


Figure 34: Research methodology design building blocks

Source: Ates, A. (2008). *Fundamental concepts in management research and ensuring research quality: focusing on case study method*. Retrieved from [https://strathprints.strath.ac.uk/32955/1/Research\\_quality\\_in\\_case\\_study\\_research\\_Ates\\_EURAM08.pdf](https://strathprints.strath.ac.uk/32955/1/Research_quality_in_case_study_research_Ates_EURAM08.pdf).

### 4.3 Testing the Hypotheses

The validity of the eight hypotheses presented within the conceptual model have been tested within the companies participating in this research study utilizing the constructs of entrepreneurial primary decision maker (PDM) level of support for

innovation; organizational boundaries, work discretion, time availability, entrepreneur PDM strategic profile and intrapreneurial opportunity levels. Within the conceptual model constructs the variables were measured through a survey instrument to be completed by all employees, a strategic orientation questionnaire for the business leader to complete, and, for additional supporting evidence should it be required, a structured interview with the business leader. Whilst this may not have been seen as necessary when the data collection commenced, it was likely to be the best opportunity open to the researcher to gain an insight into the culture that existed in the participating businesses, by making this a parallel exercise. As such, the following sub-sections of the methodology to be employed serve to review survey questionnaire usage and components, and interview choices, techniques and considerations. We commence with the concept of case study methodology to rationalize this choice of approach in a quantitative research study.

#### **4.4 Case Studies**

The rationale behind adopting a case study approach is that this was an in-depth study of the business leader and the whole SME workforce, regardless of role or position, and, as Yin (1984) proposes, case studies can be used to either test or develop theory; in this research study, to test theory. In theory testing we are seeking answers on a how and why basis. Furthermore the case study method "allows investigators to retain the holistic and meaningful characteristic of real-life events such as organisational and managerial processes" (Yin, 2009, p.4) which is what we set out to achieve.

The case studies are random samples taken from the whole population which is vast in number. For example, taking just the UK engineering sector there are over

17,000 limited companies registered as “other engineering” sector, over 8,600 limited companies registered within the “engineering related scientific and technical consulting activities” sector, and in excess of 6,000 limited companies registered within the “research and experimental development on natural sciences and engineering” sector. Although these numbers will necessarily include business sizes that are greater than our defined SME scope, and, whilst that number cannot be defined it is likely that the percentage that are SMEs would still generate a huge population that could not be studied in depth or in any meaningful way that would address the research gap previously identified or the study objectives. The case study technique is an excellent means by which to explore and evaluate the research hypotheses in a confined environment where the opportunities for further exploration and explanation of the data findings can be managed personally by the researcher. Given this is a quantitative rather than the more usual and traditional qualitative case study approach, we should look at how this is supported within the extant literature. The participating companies represent UK technology-innovative SMEs who meet the requirements of the study objectives as set out in the introduction chapter of the dissertation. Both research methods will be “concurrent procedures”, by converging the interview and survey data “in order to provide a comprehensive analysis of the research problem”, and integrating the information in the “interpretation of the overall results, (Creswell, 2003, p.16) and Bryman (2006, p.111) communicates an interesting outcome of utilizing quantitative and qualitative data analysis in that “the imaginative application of techniques can result in new understandings” and a greater probability of unexpected outcomes surfacing. Lastly, Eisenhardt (1989) proposes that case study observations can be qualitative, quantitative, or both.

A final methodological consideration is the number of collaborating companies that will constitute a robust investigation of the conceptual model using quantitative employee data enriched with knowledge gained from employer interviews. A relatively small sample size has been demonstrated as adequate in other similar research technique studies; by Suomala & Jokioinen (2003) whilst researching patterns of success in product development from 3 industrial companies; by Lindman (2002) whilst researching strategies for developing new products in SMEs from 5 companies; By Magnusson & Johansson (2008) whilst researching the management of internal technology transfer in complex product development with 3 comparative businesses; by Listyowardojo et al (2013) whilst combining survey and interview methodologies to assess safety culture in healthcare in case studies of 3 hospitals; by Bigliardi, Petroni & Dormio (2005) whilst researching status, role and satisfaction among development engineers in case studies of 11 companies in the food industry sector through employee survey instruments and interviews with six plant Directors and by Antikainen, Makipaa & Ahonen (2010) whilst researching motivation and supportive collaboration in open innovation using a methodology of questionnaires and interviews in 3 companies. Eisenhardt & Graebner (2007) corroborate that for a post-positivist epistemology a sample size of four to ten participating companies is acceptable. This dissertation will present the findings of 9 technology-innovative UK businesses, which includes an in-depth analysis of the pilot company study. An important aspect in determining the study research audience is posited by Bhattacharjee (2012, p.95) in that “site selection should not be opportunistic or based on convenience”. That principle has been adhered to in this dissertation by the nature of random sampling across the existing population of diverse SME business ventures.

#### 4.5 Survey Methodology

Easterby-Smith, Thorpe & Lowe (1991) submit that there are four main ways of gathering quantitative data: interviews, questionnaires, tests/measures, and observation. The method that is most feasible for this research study was questionnaires. Given that all employees' views were sought the numbers involved meant that, for example, to interview all employees would have been a very time consuming disruption within the business. Of great importance for a survey to succeed in providing descriptive statistics is "it must contain all the right questions asked in the right way" (Gable, 1994, p.113) This has also been adhered to. There is also the consideration that it would be unacceptable to commence the data collection only to learn that some questions were either ambiguous or not understood or that a crucial statement has been omitted from the document. We may note at this point that this proved to be the case at the pilot study company where manual completion of the surveys meant that some questions had not been answered. This was remedied as part of the lessons learnt process and an automated method was introduced, but it does serve to emphasize the value of always conducting a pilot exercise.

Easterby-Smith, Thorpe & Lowe (1991, p.120) also provide five considerations for constructing survey questions; that the question needs to be clear, that jargon or specialist language is avoided, that questions are not personal in nature, that each question only covers one item, that the questions are not "leading" by suggesting indirectly what the answer might be. A further consideration from is that when "the emphasis is placed on questionnaires most of the general issues of quantitative techniques can be illustrated with them", (p.116) James (2010) adds that the use of precise questions to seek the information required is the most obvious

strategy and as such, become one of the most widely used social research techniques. The survey questionnaire had two objectives; to determine the level of intrapreneurial opportunities amongst the employees and to identify the leadership approach that are a contributing factor to this, either positively or negatively.

The final issue arises in the structure of the survey questionnaire and its method of completion. Leedy and Ormrod (2001) observe a negative outcome of posted questionnaires in what can be a very low return rate. This will be highly likely in this internet era where writing and posting documents has limited appeal compared to any computerized activity. As stated above, manual survey completion was substituted for on-line survey completion greatly improving the quality and timeliness of their delivery.

A review of extant literature was undertaken to identify instruments that had previously been utilized for the structure of surveys questions in the field of intrapreneurship/corporate entrepreneurship. Five examples for adaption were short-listed for consideration. The first was a system titled "KEYS", introduced within the literature by Amabile (1998, p.5) as "78 questions used to assess various workplace conditions, such as the level of support for creativity from top-level managers". Very little has been documented since this publication and not enough information existed for the researcher to make an informed view of its value so it was disregarded. The second option, proposed by Sayeed & Gazdar (2003, p.86) was the Intrapreneurship Scale attributed to a publication from Lessem in 1988. This was also disregarded; it was somewhat dated with sets of seven questions that were ranked from 1 (high) to 7 (low) including a "forced choice" as no two statements within each set could have the same ranking. The third, submitted by Lau et al (2012, pp. 694-695) also failed to be

suitable as it was constructed on the basis of what decisions respondents would be most likely to make on an “incident” basis and did not meet the objectives of this dissertation. The two instruments that were selected as very suited to the research objectives originate from Bassett-Jones & Lloyd (2005) and Hornsby, Kuratko & Zahra (2002)

The survey questionnaire compiled by Bassett-Jones & Lloyd (2005, p.937) served to confirm, or otherwise, the “proposition that motivation is influenced by the nature of the relationship between leader and led”. It draws upon Herzberg’s motivation theory in predicting that the dynamic of intrinsic satisfaction is more motivational to innovative employees than compensation and rewards.

The survey questionnaire designed by Hornsby, Kuratko & Zahra (2002, pp. 253-263) the “Corporate Entrepreneur Assessment Instrument” (CEAI), is “a scale that measures the key internal organizational factors that influence middle managers to initiate corporate entrepreneurship activities”, but it did have excellent potential for adaptation to a business still managed by the PDM. The CEAI addresses the “dimensions of corporate entrepreneurship” which have been most widely acknowledged within the body of literature and “appear to fall into five distinctive areas; management support; organizational structure; risk taking; time availability and, reward and resource availability”. Rutherford & Holt (2007, p.429) concur and add that this work is unique in that “they examine the phenomenon at the individual level”.

The CEAI comprises 48 statements, which are answered with a Likert-type scale with 1 equating to strongly disagree to 5 equating to strongly agree. Some items are worded negatively to avoid response tendencies by the participants and were



accordingly reverse-scored at the analysis stage. The 48 statements were distributed between management support for corporate entrepreneurship (19), work discretion (10), rewards/reinforcement (6), time availability (6) and organizational boundaries (7). The complete list of statements that comprise the CEAI can be found at appendix 6. For this research study the Likert scale comprised of six ratings rather than five as proposed by Hornsby, Kuratko & Zahra (2002) seven as documented by Easterby-Smith, Thorpe & Lowe (1991, p.120) and nine as suggested by Remenyi (2013, p.211) all with the aim of adding a greater range, and therefore depth to the answers provided. Using a rating system of 1 to 6 removes the option of a mid-range number, therefore 3 or 5, which could be considered as “don’t know”. In keeping with customary practices a rating of 1 proposed strong disagreement with the statement moving to a rating of 6 for strong agreement.

The survey instrument ultimately used combined elements of the Bassett-Jones & Lloyd (2005) instrument with the CEAI with a specific and necessary purpose in that the former addresses the leadership attributes and behaviors with a very direct approach from an intrinsic perspective that is not attained through the CEAI. It was included solely for that purpose, the CEAI comprising the remainder of the instrument in order that there was no duplication of questions from both sources. At appendix 7, the Bassett-Jones & Lloyd (2005) instrument is clearly marked with the questions that were selected for inclusion in the final research instrument that formed the employee data collection aspect of this research study. Consequently, the instrument comprised 56 questions; 6 from Bassett-Jones & Lloyd and 48 reflecting the CEAI statements in their entirety. A further question invited employees to give their perspective of the company’s strategic type. The final question asked for the

length of time each employee had served in the company. The combined survey questions that culminated in the version presented for completion at the collaborating companies can be found at appendix 8. The validity and reliability of our survey instrument was tested in the context it was applied in this research study through feedback gained from experts in the field and the in-depth analysis provided at chapter 5. The second survey instrument was a substantive advancement of the Miles & Snow (1978) P-A-D-R concept from Conant, Mokwa & Varadarajan (1990, p.381) the “multi-item scale for measuring strategic types”. There are over 800 citations for this publication and numerous subsequent validations. Again, its usage was additionally evaluated and validated as part of the research process.

A further consideration was whether to utilize the “need satisfaction questionnaire” approach developed by Porter (1961) Using this type of instrument, respondents are requested to consider several characteristics or qualities associated with the survey question. For each characteristic they are asked to give 3 ratings: (a) how much of the characteristic they felt there was currently (b) how much of the characteristic they felt should have been and (c) how important this characteristic was to them. Each rating is made on a seven point scale ranging from 1 as a minimum to 7 as a maximum, (Poole, Mansfield, Blyton and Frost, 1981) The major drawback with this method is that whilst it adds a further dimension to the data gathered, each question essentially has to be answered three times. The findings from enquiries of companies who were prepared to be considered for collaboration, suggested that the employee time required to complete this type of survey would be unacceptable to them. This approach was finally discounted when it was deemed that the survey instrument would gain a significant understanding of employee perceptions without

requiring this extra dimension, and it would be the wrong decision to reduce the number of statements purely to obtain a greater insight of far fewer variable measurements.

Having acknowledged that survey completion was to be carried out during working hours, it was necessary and expected for the researcher to be able to provide the collaborating companies with a reasonably accurate assessment of how long it would take. To achieve this, the researcher requested that 10 random business associates complete it. The findings were between 8 and 12 minutes including those for whom English was not their native language.

#### **4.6 Measuring the Construct Variables by Survey Statements**

##### **4.6.1 Construct 1: Entrepreneur PDM level of support for innovation**

Variable 1: Leadership attributes; Variable 2: Leadership behaviors

As reported above, the survey instrument statements applied to measure these variables utilized questions taken from Bassett-Jones & Lloyd (2005) in assessing the relationship between the leader and the led. To ensure clarity for the employees when answering the questions, and to acknowledge the small size of the SME businesses collaborating in this research, the word manager was amended to reflect the term commonly used in each company for the primary decision maker (PDM). For example, in some companies they were known as a Chairman or Director. For the purpose of identifying the questions used for each construct variable in this dissertation, the phraseology “PDM” has remained in place.

Table 33: Construct 1 survey statements

		Survey Instrument Statement
Variable 1	Leadership	1. My PDM is approachable and easy to get on
Variable 2	attributes	with
	Leadership	2. My PDM treats people with dignity and respect
	behaviors	3. My PDM supports and helps me to do the best job I can
		4. My PDM does a good job of explaining decisions that affect me and my department
		5. People here are treated as adults
		6. My PDM seems to genuinely care about the welfare of employees

#### 4.6.2 Construct 2: Organizational boundaries

Variable 1: Operating procedures; Variable 2: Rules and regulations; Variable 3: Task evaluation. The survey instrument statements applied to measure these variables formed part of the corporate development assessment instrument by (Hornsby, Kuratko & Zahra, 2002)

Table 34: Construct 2 survey statements

		Survey Instrument Statement
Variable 1	Operating procedures	<ol style="list-style-type: none"> <li>1. In the past three months, I have always followed standard operating procedures or practices to do my major tasks</li> <li>2. I clearly know what level of work performance is expected from me in terms of amount, quality, and timeliness of output</li> </ol>
Variable 2	Rules and regulations	<ol style="list-style-type: none"> <li>1. There are many written rules and procedures that exist for doing my major tasks</li> </ol>
Variable 3	Task evaluation	<ol style="list-style-type: none"> <li>1. In my job I have no doubt of what is expected of me</li> <li>2. There is little uncertainty in my job tasks</li> <li>3. During the past year, my immediate supervisor discussed my work performance with me frequently</li> <li>4. My job description clearly specifies the standards of performance on which my job is evaluated</li> </ol>

#### 4.6.3 Construct 3: Work discretion

Variable 1: Creativity; Variable 2: Freedom; Variable 3: Autonomy

The survey instrument statements applied to measure these variables formed part of the corporate development assessment instrument by (Hornsby, Kuratko & Zahra, 2002)

Table 35: Construct 3 survey statements

		<b>Survey Instrument Statement</b>
Variable 1	Creativity	<ol style="list-style-type: none"> <li>1. My company provides the chance to do something that makes use of my abilities</li> <li>2. My company provides the chance to be creative and try my own methods of doing the job</li> </ol>
Variable 2	Freedom	<ol style="list-style-type: none"> <li>1. I have the freedom to decide what I do on my job</li> <li>2. I seldom have to follow the same work methods or steps for doing my major tasks from day to day</li> <li>3. My company provides freedom to use my own judgment</li> <li>4. Harsh criticism and punishment result from mistakes made on the job</li> <li>5. I almost always get to decide what I do on my job</li> </ol>
Variable 3	Autonomy	<ol style="list-style-type: none"> <li>1. I have much autonomy on my job and am left on my own to do my own work</li> <li>2. It is basically my own responsibility to decide how my job gets done</li> <li>3. I feel that I am my own boss and do not have to double check all of my decisions</li> </ol>

#### 4.6.4 Construct 4: Time availability

Variable 1: Workload; Variable 2: Job structure; Variable 3: Problem solving

The survey instrument statements applied to measure these variables formed part of the corporate development assessment instrument by (Hornsby, Kuratko & Zahra, 2002)

Table 36 : Construct 4 survey statements

		Survey Instrument Statement
Variable 1	Workload	1. During the past three months, my work load was too heavy to spend time on developing new ideas 2. I always seem to have plenty of time to get everything done 3. I have just the right amount of time and work load to do everything well.
Variable 2	Job structure	1. My job is structured so that I have very little time to think about wider company problems 2. I feel that I am always working with time constraints on my job
Variable 3	Problem solving	1. My co-workers and I always find time for long-term problem solving

#### 4.6.5 Construct 5: Entrepreneur PDM strategic profile

Variable 1: SME strategic “type”

To measure strategic type employees were requested to provide their perception of the strategic orientation of their company from the P-A-D-R framework

as described by Dyer & Song (1997, p.487) This formed part of the survey instrument and is depicted in table 37.

Table 37: Construct 5 survey statements

Type	Dyer & Song (1997)
<b>Prospector</b>	This type of company makes relatively frequent changes in, and additions to, its range of products. By responding rapidly to early signals of market needs or opportunities, this company tries to be 'first in' in new product and market areas
<b>Analyzer</b>	This type of company maintains a stable, limited line of products and simultaneously moves to follow a selected, promising set of new product developments in other areas. This company is seldom "first in" with new products, but instead may be "second in" with a more cost effective or better conceived product
<b>Defender</b>	This type of company locates and maintains a 'niche' in a relatively stable product area. Generally, they are not at the forefront of new product or market development, but concentrates instead on a limited range of products, doing the best job possible through quality, superior service, and so forth.
<b>Reactor</b>	This type of company does not appear to have a consistent product-market orientation. Unlike their competitors, they are not aggressive in maintaining established products and markets. This company changes its product offering when and where it is forced to by external pressures



The definitions offered previously in this dissertation by Brown, Nasarwanji & Catulli (2010, pp.4-5) and Desarbo, Benedetto, Song & Sinha (2005, pp.47-48) were discounted as they are summary statements which were unsuitable to use in question format. To give a better fit within the questionnaire the commencing words “this type of company” utilized by Dyer & Song were amended for this research study to the name of the participating company as is reflected below.

Table 38: Construct 5 revised survey statements

		<b>Survey Instrument Statement</b>
Variable 1	SME strategic “type” Method - Self- Classification Scale (Dyer & Song 1997; p487)	<ol style="list-style-type: none"> <li>1. Company name makes relatively frequent changes in, and additions to, its range of products. By responding rapidly to early signals of market needs or opportunities, we try to be 'first in' in new product and market areas</li> <li>2. Company name maintains a stable, limited line of products and simultaneously moves to follow a selected, promising set of new product developments in other areas. We are seldom "first in" with new products, but instead may be "second in" with a more cost effective or better conceived product</li> </ol>

(Continued)

Table 38 (Continued) : Construct 5 revised survey statements

		Survey Instrument Statement
Variable 1	SME strategic “type” Method - Self- Classification Scale (Dyer & Song 1997; p487)	<p>3. Company name locates and maintains a 'niche' in a relatively stable product area. Generally, we are not at the forefront of new product or market development, but concentrate instead on a limited range of products, doing the best job possible through quality, superior service, and so forth</p> <p>4. Company name does not appear to have a consistent product-market orientation. Unlike our competitors, we are not aggressive in maintaining established products and markets. Company name changes its product offering when and where it is forced to by external pressures</p>

#### 4.6.6 Construct 6: Intrapreneurial opportunity level

Variable 1: Management support for innovation;

Variable 2: Intrapreneur rewards/reinforcement

The survey instrument statements applied to measure these variables formed part of the corporate development assessment instrument by Hornsby, Kuratko & Zahra (2002) with one exception. To acknowledge that the target audience is employees of SMEs, “organization” has been replaced with “company” to avoid repetition. Again, to reflect the company’s common terminology each statement was

also tailored to replace the word “Manager” with “Supervisor” or “Director” as appropriate.

Table 39: Construct 6 survey statements

		<b>Survey Instrument Statement</b>
Variable 1	Management support for innovation	<ol style="list-style-type: none"> <li>1. <i>Company name</i> is quick to use improved work methods.</li> <li>2. <i>Company name</i> is quick to use improved work methods that are developed by workers</li> <li>3. In my company, developing one’s own ideas is encouraged for the improvement of the corporation</li> <li>4. Upper management is aware and very receptive to my ideas and suggestions</li> <li>5. Promotion usually follows the development of new and innovative ideas.</li> <li>6. Those employees who come up with innovative ideas on their own often receive management encouragement for their activities</li> <li>7. The employees are allowed to make decisions on projects without going through elaborate justification and approval procedures</li> </ol>

(Continued)

Table 39 (Continued): Construct 6 survey statements

		Survey Instrument Statement
Variable 1	Management support for innovation	<p>8. Senior managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track</p> <p>9. Many top managers have been known for their experience with the innovation process</p> <p>10. Money is often available to get new project ideas off the ground.</p> <p>11. Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system.</p> <p>12. There are several options within the organization for individuals to get financial support for their innovative projects and ideas</p> <p>13. Individual risk takers are often recognized for their willingness to champion new projects, whether eventually successful or not</p> <p>14. People are often encouraged to take calculated risks with new ideas around here.</p> <p>15. The term “risk taker” is considered a positive attribute for people in my work area</p> <p>16. <i>Company name</i> supports many small and experimental projects realizing that some will undoubtedly fail</p>

(Continued)

Table 39 (Continued): Construct 6 survey statements

		Survey Instrument Statement
Variable 1	Management support for innovation	<p>17. A worker with a good idea is often given free time to develop that idea</p> <p>18. There is considerable desire among people in the company for generating new ideas without regard to crossing departmental or functional boundaries</p> <p>19. People are encouraged to talk to workers in other departments of the company about ideas for new projects</p>
Variable 2	Intrapreneur rewards/reinforcement	<p>1. My manager helps me get my work done by removing obstacles</p> <p>2. The rewards I receive are dependent upon my work on the job</p> <p>3. My manager will increase my job responsibilities if I am performing well in my job</p> <p>4. My manager will give me special recognition if my work performance is especially good</p> <p>5. My manager would tell his boss if my work was outstanding</p> <p>6. There is a lot of challenge in my job</p>

#### 4.7 Interview Methodology

Interviews as a method of data collection are very flexible in the forms they can take, ranging from highly structured, to semi-structured to unstructured, or as described by Easterby-Smith, Thorpe & Lowe (1991, p.72) “akin to a free-ranging conversation”. An investigation by Bryman (2006) into the frequency of research

methods employed in 232 social science articles highlighted the lack of popularity for the unstructured interview research method and the recognition given to semi-structured and structured interviews; 69% of the papers used semi-structured interview techniques, 22% used structured interviews and 3% used unstructured interviews. Whilst face-to-face interviews would appear to provide an extremely adaptable and versatile approach to data collection there are some negatives to consider; they can be comparatively time consuming and may only gain information from individuals who are willing to participate in the process. The outcome can also be negatively impacted by the personal engagement between the interviewer and the interviewee, potentially encompassing several issues concerning gender, age and motivation as a case in point. Additionally, the practice of interviewing in itself is an immensely skilled task with the demeanor of the interviewer, for example facial expression, body language and tone of voice, a paramount factor in ensuring consistency and acceptable data.

Ellis et al (2002, p.1200) propose that the structured interview lessens the impact of “contamination from variables such as impression management”, a psychological aspect of the interview process where the interviewer may consciously or sub-consciously influence the perception of the interviewee. A further vital consideration is validity and reliability. Wiesner & Cronshaw (1988) submit that the greater the structure of an interview less problems should be encountered in validating the output data. Although their research is in the field of employment interviews, they raise a further principle which can be applied to all studies using interview methodology; the degree to which not only the interview, but the questions themselves are structured. Ellis et al (2002) note the variations that can occur when

the questions are experience-based or situational-based. Additionally, Kaplan & Duchon (1988) make an extremely important observation in that interviewers must focus the interview towards gathering data, not, and this is critical; find they have only gathered background information.

The quantitative nature of the research being undertaken in this study used structured interview questions to complement the statements within the employee survey instrument. Some questions also requested a Likert scale rating which could be elaborated upon by a comment from the employer. As suggested by Easterby-Smith, Thorpe & Lowe (1991, p.72) the final interview instrument comprised a set of judiciously prepared questions that were piloted and refined until the researcher was convinced of their validity. The interview questions can be found at appendix 9. The data collected through the employer interviews was used to enrich our understanding of the prevailing organizational culture within each case study company through the opinions of the entrepreneur primary decision maker (PDM). This proved invaluable in determining a context and explanation for why some employee scores were found to be moderately low or high within the Likert scale range.

## 4.8 Measuring the Construct Variables by Interview Questions

### 4.8.1 Construct 1: Entrepreneur PDM level of support for innovation

Table 40: Construct 1 interview questions

		Interview question(s)
Variable 1	Leadership attributes	Q1: Would you say your employees look to you for inspiration and innovative thinking to improve the business or come to you with new ideas?
Variable 2	Leadership behaviors	Q2: How important is it to you to select managers that are known for their experience with the innovation process? Q3: How do you feel about employees that would like to be risk-takers and may not always champion projects that have a successful outcome? Q4: How receptive would you be to allowing a promising employee idea to be advanced if it meant relaxing some of the usual rules and procedures? Q5: Do you enjoy employees coming to you with new ideas and suggestions regardless of how unworkable or impracticable they may seem at first glance?



#### 4.8.2. Construct 2: Organizational boundaries

Table 41: Construct 2 interview questions

		Interview question(s)
Variable 1	Operating procedures	<p>Q1: On a scale of 1 being frequent and 7 being infrequent, to what extent do employees have to follow standard operating procedures or practices to do their major tasks?</p> <p>Q2: On a scale of 1 being low and 7 being high, to what extent do employees know what level of work performance is expected from them in terms of amount, quality, and timeliness of output?</p>
Variable 2	Rules and regulations	<p>Q1: On a scale of 1 being low and 7 being high, to what extent are employees required to follow strict guidelines, rules and procedures in carrying out their work?</p>
Variable 3	Task evaluation	<p>Q1: On a scale of 1 being low and 7 being high, to what extent do you feel employees know what is expected of them and their job tasks?</p> <p>Q2: On a scale of 1 being infrequent and 7 being frequent, to what extent do you feel your managers or supervisors discuss employees work performance with them?</p> <p>Q3: On a scale of 1 being poor and 7 being excellent, to what extent do feel employee's job descriptions clearly specify the standards of performance on which their work is evaluated?</p>

### 4.8.3 Construct 3: Work discretion

Table 42: Construct 3 interview questions

		<b>Interview question(s)</b>
Variable 1	Creativity	<p>Q1: On a scale of 1 being infrequently and 7 being frequently, to what extent do you provide employee with tasks that make the best use of their abilities?</p> <p>Q2: On a scale of 1 being infrequently and 7 being frequently, to what extent do you provide employee with the opportunity to be creative and try different methods of working?</p>
Variable 2	Freedom	<p>Q1: On a scale of 1 being low and 7 being high, to what extent are employees able to use their own judgment in deciding how their work is done?</p> <p>Q2: On a scale of 1 being low and 7 being high, to what extent are employees criticized or disciplined when they make a mistake?</p>
Variable 3	Autonomy	<p>Q1: On a scale of 1 being low and 7 being high, to what extent do employees have autonomy to take responsibility for their work without close supervision?</p>

#### 4.8.4 Construct 4: Time availability

Table 43: Construct 4 interview questions

		Interview question(s)
Variable 1	Workload	Q1: On a scale of 1 being infrequently and 7 being frequently, to what extent do you feel employees have sufficient time to devote to developing new ideas? Q2: On a scale of 1 being infrequently and 7 being frequently, how often do you feel employees have a manageable workload to ensure they can do everything well?
Variable 2	Job Structure	Q1: On a scale of 1 being low and 7 being high, to what extent do you feel employees have sufficient time to devote to think about wider company problems?
Variable 3	Problem solving	Q1: On a scale of 1 being infrequently and 7 being frequently, to what extent do you feel employees have sufficient time to devote to for long-term problem solving?

#### 4.8.5 Construct 5: Entrepreneur PDM strategic profile

Strategic orientation was measured by the single variable “strategic type”. The employer completed a multi-choice answer self-assessment questionnaire with strategic type being determined as prospecting, defending, reacting or analyzing. This was achieved by utilizing an existing instrument (a multi-item scale for measuring

strategic types) introduced by Conant, Mokwa, & Varadarajan (1990, pp. 381-383)

Whilst their study confined to a Health Maintenance Organization (HMO) it is suited to measuring the strategic type of any business. The instrument questions can be found at appendix 10, within which there are several references to “HMO”. These have been changed to “company” in the survey instrument being utilized for this study, and again, to reflect the audience will be SMEs, “organization” has also been amended to read “company”. The full survey instrument to be completed by the employer is depicted at appendix 11. The questions asked of the PDM were as follows:

1. Entrepreneurial-product market domain: In comparison to other similar firms, the services which we provide are best characterized as:
2. Entrepreneurial-success posture: In contrast to other similar firms, my organization has an image in the marketplace as a company which:
3. Entrepreneurial-surveillance: The amount of time my company spends on monitoring changes and trends in the marketplace can best be described as:
4. Entrepreneurial-growth: In comparison to other similar firms, the increase or losses in demand which we have experienced are due most probably to:
5. Engineering-technological goal: One of the most important goals in this company, in comparison to other similar firms, is our dedication and commitment to:
6. Engineering-technological breadth: In contrast to other similar firms, the competencies (skills) which our managerial employees possess can best be characterized as:
7. Engineering-technological buffers: The one thing that protects my company from other similar firms is that we:

8. Administrative-dominant coalition: More so than many other similar firms, our management staff tends to concentrate on:

9. Administrative-planning: In contrast to many other similar firms, my organization prepares for the future by:

10. Administrative-structure: In comparison to other similar firms, the structure of my company is:

11. Administrative-control: Unlike many other similar firms, the procedures my organization uses to evaluate our performance are best described as:

#### **4.8.6 Construct 6: SME Intrapreneurial opportunity level**

Table 44: Construct 6 interview questions

		Interview question(s)
Variable1	Management support for innovation	Q1: Could you provide me with some examples of how innovative thinking is currently encouraged, recognized or rewarded by you?
Variable 2	Intrapreneur rewards/reinforcement	Q2: How extensive are the approval procedures for employees working on innovative projects? Q3: To what extent in finance available to get new project ideas off the ground? Q4: Should well-intentioned experimentation or creativity by an employee lead to failure how would you respond to this?

(Continued)

Table 44(Continued) : Construct 6 interview questions

		Interview question(s)
Variable1	Management support for innovation	Q5: To what extent do you feel employees are inclined to want to share ideas with other departments in the company? Q6: Employees sometimes mention that there are too many obstacles in getting their work done efficiently. In what
Variable 2	Intrapreneur rewards/reinforcement	ways can a manager ease this situation? Q7: Could you briefly explain any bonus or incentive schemes you have in place? Q8: Do your managers or senior employees make you aware of an employee who has found a creative solution to a problem? Q9: Are there any ways in which you make employees work more challenging for them?

Returning to the research questions; the extent to which the level of entrepreneurial primary decision maker (PDM) support for innovation influences the level of employee organizational boundaries, work discretion and time availability; the extent to which work discretion and time availability influence levels of intrapreneurial opportunity; and, to what extent does the SME strategic type of the entrepreneur PDM led UK technology-innovative business impact upon intrapreneurial opportunity levels, it was vital that both the employee survey statements and the leader interview questions reflected the research objectives, and confirmed, or not, the eight hypotheses. This is expanded upon within the validity and reliability sub-section of the dissertation at chapter five.

Next, we introduce the research participants and the research process applied. The chapter serves to review the analyzed data, present the findings and consider their relationship to the research questions, conceptual model and hypotheses. Each company is presented individually, after which comparative data is drawn across the 9 case study companies.



## CHAPTER 5

### DATA COLLECTION AND ANALYSIS

#### 5.1 Introduction

Within this dissertation chapter we present our findings from the data gathered commencing with the reliability and validity of our research methodology and research instruments. The resultant Cronbach Alpha statistical output serves to test for reliability utilizing the SPSS software program. Following on from this we address the issues enabling us to ensure we can demonstrate both content and face validity, before moving on to our assessment of the model fit by conducting several tests utilizing AMOS software.

As stated in the title of the dissertation the target research audience is UK SME's operating in a competitive technology-innovative sector. The researcher initially requested collaborations with fifty businesses which met the criteria, with the aim of securing 5 case study companies for participation as outlined in the research proposal document. A challenging aspect for such collaboration is found to be the willingness of SME owners to disclose sensitive information about, and within their business (Bryant, 2012) A further thought-provoking consideration was that in agreeing to participate, the employer may learn of dissatisfaction within the company that reflects negatively on them as individuals or their management team. The companies solicited did not lead to enough participants so the process took several months with almost 300 companies contacted. This provided a pilot study company and 8 further participating companies.

Those who were prepared to assist in the research received an introduction from the researcher outlining its objectives and how it could benefit them as a



growing SME. Finally, the structure of the research and instruments to be used, as detailed in the research methodology at chapter 4, were presented to the employer in advance of the data collection commencing. As stated previously, for the purpose of this dissertation, the company names have been changed to ensure anonymity but continue to reflect the business segment they operate in. We commence by introducing the process of data collection and the lessons learnt from our pilot study which proved vital as it directed us to some necessary amendments. We then turn to the data analysis which is presented as descriptive statistics. This was also the feedback mechanism used for our collaborating businesses. Within a maximum of one week from completion of the data gathering exercise, each business received a comprehensive review of their employee statement output and strategic orientation. Leading from that, the researcher was available to deliver assistance in establishing methods to share the findings with the employees, to produce graphs and PowerPoint presentations and of great meaning to both parties, to offer advice and suggestions based on both knowledge gained from the literature and the practical application of ideas generated within other participating companies albeit from an anonymous platform. This aspect of knowledge sharing was a very pleasurable aspect of the research journey and proved to be desired and appreciated by the business primary decision makers (PDMs). Whilst we accept that best practice may sometimes become confused with best strategy we did our utmost to provide each business with different concepts.

Finally as a matter of good procedure, we confirm that there was no potential risk or harm to any of the participants or the researcher who was the sole party

involved in the research process and data collection. The participants were all office-based and consent for completion of the surveys was given by the company on behalf of its employees. Equal opportunities were not an issue as the gender or ethnicity of the participants was not sought and the gender/ethnicity of the interviewees has not been disclosed within this dissertation. The author requested, and received permission to use recording equipment for the interviews with each business PDM. A sample interview transcript can be found at appendix 15.

## **5.2 Pilot Study**

Company 1 was the pilot participant for this research study. It is an independent engineering company established over 90 years ago who specialize in bespoke engineering products. Having gained agreement from the PDM to collaborate in this case study, the researcher initially visited the premises to talk through the objectives of the research, presenting the research questions, hypotheses and conceptual model. The data collection instruments for both employer and employee were agreed and unchanged from the research proposal. A date was selected for employee participation when all but one employee would be present. The employee who would be on holiday completed the questionnaire instrument in the presence of the researcher and undertook to keep the contents confidential. This was late in the afternoon of his last day before his leave and combined with his relatively senior status meant this was not of concern to the researcher in terms of him sharing thoughts with other employees.

The researcher returned to the premises the subsequent week for the remaining employee surveys to be completed. The researcher introduced the research instrument

to the gathered employees who sat at tables to complete the questionnaires with the researcher present. Questions were answered to ensure the participating employees felt this was a beneficial exercise for all. The PDM was not present at this stage of the research process or when the surveys were being completed as the researcher felt this might stifle the process and potentially dilute the number of questions raised. The company elected to use a paper rather than on-line data collection process as they felt more comfortable with that; some employees did not have access to a computer and using a paper-based approach meant that completion could be simultaneous and less disruptive to the business. A large envelope was provided for the completed documents which was then sealed by the researcher and removed from the premises. Following the employee data collection, the strategic orientation questionnaire was completed by the PDM and the employer interview was conducted.

### **5.2.1 Lessons Learnt Pilot Study**

From a data gathering perspective, one of the biggest lessons learnt during the pilot study was that agreeing to a process of completing the surveys manually was not a good idea. Some surveys were found to be incomplete when it came to the analysis stage, but due to employee anonymity, it was not desirable for the researcher to check them as they were handed in. By using a software product, Survey Gizmo for all further companies the survey was locked so that no questions could remain unanswered when submission took place. A further outcome of the pilot study process was that it needed to be streamlined and more controlled by the researcher. This resulted in the instructions and material sent to employees being drafted by the researcher for the employer to send and the construction of a time-line document with

delivery date deadlines for each research activity. This ensured that after the employee data had been gathered, the employer strategic orientation questionnaire and employer interview would take place in relatively quick succession so feedback to the employees was not unduly delayed. The researcher made the conscious decision not to provide the employer with the survey results until all activities were complete to ensure that all activities did actually take place. It was felt that based on receiving the data, some employers may have felt it unnecessary for them to undertake the interview process bearing in mind that this part of the data collection was only beneficial to the researcher. More importantly, if the employer had received the employee data feedback in advance, this may have swayed his or her thinking when it came to answering the interview questions. By undertaking the process as laid out above, each party's data was independent of the other. A further consideration that became evident was the employer was prioritizing their time within the business, dealing with unexpected issues and so forth which mean it was not always possible for the interview to take place when scheduled, and if it did, could be frequently interrupted. Finally, a mistake was identified in that whilst carrying out the interview with the PDM, the researcher overlooked the requirement for Likert scale scores for questions 6 through 20, instead documenting verbatim comments.

From the pilot study it was determined that the following precedents would be adopted. Firstly, that the survey questionnaires would remain anonymous; that the variable of length of time served with the company could stay as this was not a deterrent to completion; that future collaborating companies would be highly encouraged not to have paper survey completion and would access the instrument on-

line where every question had to be answered before submission could take place. Secondly, that a face-to-face interview with the employer PDM was desired but not essential and that it would be much more favorable to use software so that this could also be completed via the internet at any time to suit them rather than through a designated appointment which they may need to postpone. A further benefit of this process is that although the participants would be asked permission for the researcher to record the interview, this would be much less evident than doing so whilst sitting in front of them which can be a distraction along with a constant reminder that everything they say is being recorded. Additionally, that having engaged in a Skype call process, there could potentially be fewer interruptions than if they were sitting with the researcher. Within the pilot company, another problem arose. Whilst the pilot employer PDM interview was carried out on July 1<sup>st</sup> 2014, at the point of writing it up it was found necessary to repeat the process using Skype software combined with Video Call Recorder software. This provided a much greater quality of voice recording software when a manual intervention would be required, for example, to stop and restart the recording if someone entered the room when the interview was taking place. The pilot study employer PDM was very obliging in agreeing to repeat the process resulting in a greatly improved transcript.

From lessons learnt during the pilot study with Company 1, the five bespoke activities that would comprise the data collection process were set out in a time-line document for the ensuing companies to follow. An example of this is provided at appendix 12. It was the researcher's intention to compose the written material to

minimize the time that was being requested of the company and ensure consistency of approach.

For the first activity an email was written by the researcher to be forwarded to all employees, under the signature of the employer, explaining the nature of the exercise, its purpose, including the internet link that would take them directly to the on-line survey. A copy of the email letter can be found at appendix 13. The survey was build using a web-based software product; each question was locked so that the document could not be submitted unless every question had been answered. It remained unchanged that participating employees were not paid by the researcher or the company for completing the survey questionnaire as all had the opportunity to do so during working hours and, that the identities of the participants were not requested, only their total length of service with the company to include all roles they had undertaken. Any share-holding, executive or non-executive company directors within the business were excluded from the process to warrant that the data gathered came from salaried employees with no vested interest or ability to strongly influence business decisions or strategic orientation.

For the second activity, the strategic orientation form to be completed by the employer was emailed to the recipients, completed, scanned and returned to the researcher. For the third activity, the employer was given the interview questions in advance of the scheduled date and time that it would take place. Given the error made in not ascertaining Likert scores for some questions as noted above, the researcher amended the interview instrument being used to build this in as a future aide memoire. The fourth activity was a further email to be sent from the company to all

employees thanking them for making the time to submit the questionnaire. A copy of this is provided at appendix 14.

Finally, as documented in this sub-section introduction, the data was analyzed as descriptive statistics, the definition applied being that of Scheepers Hough & Bloom (2008, p.61) “to profile the sample, describe the data and determine associations between constructs”. The average scores by employee and employer for all companies follow the survey question format of a Likert scale from 1 to 6. We must again note that for the pilot company we do not have a Likert scale score from the employer PDM as this was an omission on the part of the researcher when the data was gathered. The pilot study company data did not reflect a requirement to change the strategic orientation instrument or employer questionnaire.

From a write-up perspective, the phraseology used by the researcher, for instance, “low score” to “high score” reflects the researcher’s interpretation of the Likert scale range of 1 meaning strong disagreement and 6 meaning strong agreement. It must be remembered that a low score is not necessarily a “bad” score/outcome, providing that is also reflected in the structure sought by the directors. For example, if we record that there are not many written rules and procedures to be followed, this could be considered a “good” low score if it is what is desired by those running the business. Other questions that recorded a low score may not be an issue providing that even though the employees disagree with the question, they understand the reasons why things are how they are at the moment through top-down communication. For example, the fact that employees perceive that financing new projects is not always easy could also be a positive rather than negative observation in that it shows open

lines of communication, a sharing of information and a degree of realism adopted by the employees. From a workload perspective, the scores for time available may often suggest that employees are stretched, but this is not unlikely to be the case in any other growing SME where individuals may have to undertake more than one role in the early stages.

### 5.2.2 Results From Pilot Employee Survey

The employee surveys were submitted between June 30<sup>th</sup> and July 1<sup>st</sup> 2014; the strategic orientation questionnaire was returned to the researcher on July 1st 2014. The first employer interview took place with the primary decision maker (PDM) on July 1<sup>st</sup> in person; the updated employer interview took place on July 21st 2014 via Skype. The employer data analysis is presented below:

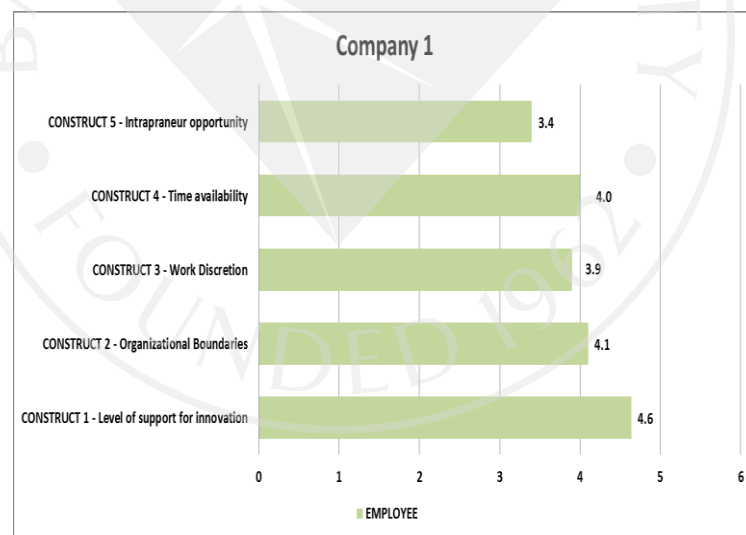


Figure 35 : Chart 1 - Descriptive Statistics – Company 1 (n = 17)

At Company 1, we can see the highest average scores fall in the construct of PDM level of support for innovation but the scores for intrapreneur opportunity levels falls below the median of 3.5. For the construct of managerial level of support for



innovation, the combined employee average scores ranged from 4.4 to 4.9; for organizational boundaries from 3.1 to 4.7 and for work discretion from 3.4 to 4.2. For the construct of time availability, the combined average scores were all grouped between 3.9 and 4.1.

Table 45 : Description - Level of Support for Innovation

Description - Level of Support for Innovation	Value
Q6: My company directors seem to genuinely care about the welfare of employees	4.9
Q4: My company directors do a good job of explaining decisions that affect me and my department	4.4
Description - Organizational Boundaries	Value
Q29: In the past three months, I have always followed standard operating procedures or practices to do my major tasks and Q31: In my job I have no doubt of what is expected of me	4.7
Q33: During the past year, my immediate supervisor discussed my work performance with me frequently Q34: My job description clearly specifies the standards of performance on which my job is evaluated	3.1

(Continued)

Table 45 (Continued) : Description - Level of Support for Innovation

Description - Work Discretion	Value
Q14: Harsh criticism and punishment result from mistakes made on the job	4.2
Q17: This company provides the chance to do something that makes use of my abilities	
Q22: I seldom have to follow the same work methods or steps for doing my major tasks from day to day	3.4
Description - Time Availability	Value
Q23: During the past three months, my work load was too heavy to spend time on developing new ideas	4.1
Q27: I feel that I am always working with time constraints on my job	
Q26: My job is structured so that I have very little time to think about wider company problems	3.9

For the construct of employee intrapreneurial opportunities there was range of average scores from 2.2 to 5.2 but 14 out of the 25 statements failed to reach the median score of 3.5.

Table 46 : Description - Employee Intrapreneurial Opportunity

Description - Employee Intrapreneurial Opportunity	Value
Q7: My manager helps me get my work done by removing obstacles	5.2
Q11: My manager would tell his/her boss if my work was outstanding	4.3

(Continued)

Table 46 (Continued) : Description - Employee Intrapreneurial Opportunity

Description - Employee Intrapreneurial Opportunity	Value
Q8: The rewards I receive are dependent upon my work on the job Q9: My supervisor will increase my job responsibilities if I am performing well in my job	4.1
Q44: Company 1 supports many small and experimental projects realizing that some will undoubtedly fail Q49: Senior managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track Q53: People are often encouraged to take calculated risks with new ideas around here	2.6
Q45: A worker with a good idea is often given free time to develop that idea	2.5
Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.4
Q51: Promotion usually follows the development of new and innovative ideas	2.2

The average employee scores for each period according to time served with the company were:

Table 47 : The Average Employee Scores

< 1 year:	1 to 2 years:	2 to 5 years:	5 to 10 years:	> 10 years:
3.0 – 5.8	2.0 – 5.7	1.6 – 5.0	1.0 – 5.5	1.7 – 5.5

Table 48 : The Average Employee Scores for Each Period

Period	Statement	Value
<1 Yr.	Q3: My founder/manager supports and helps me to do the best job I can Q49: My manager helps me get my work done by removing obstacles	5.8
	Q34: Promotion usually follows the development of new and innovative ideas	3.0
1-2 Yrs.	Q2: My founder/manager treats people with dignity and respect Q6: My founder/manager seems to genuinely care about the welfare of employees Q49: My manager helps me get my work done by removing obstacles	5.7
	Q44: The term “risk taker” is considered a positive attribute for people in my work area	2.0
2-5 Yrs.	Q7: In the past three months, I have always followed standard operating procedures or practices to do my major tasks	5.0
	Q34: Promotion usually follows the development of new and innovative ideas	1.6

(Continued)

Table 48 (Continued): The Average Employee Scores for Each Period

Period	Statement	Value
5-10 Yrs.	Q1: My founder/manager is approachable and easy to get on with, Q9: There are many written rules and procedures that exist for doing my major tasks Q10: In my job I have no doubt of what is expected of me	5.5
	Q34: Promotion usually follows the development of new and innovative ideas Q40: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system, Q43: People are often encouraged to take calculated risks with new ideas around here, Q44: The term “risk taker” is considered a positive attribute for people in my work area Q46: A worker with a good idea is often given free time to develop that idea	1.0
>10 Yrs.	Q7: In the past three months, I have always followed standard operating procedures or practices to do my major tasks Q14: This company provides the chance to do something that makes use of my abilities	5.5
	Q45: This company supports many small and experimental projects realizing that some will undoubtedly fail	1.7

Out of 51 statements the following received an average employee combined score of the median of 3.5 or higher:

Table 49 : Average Employee Combined Score

< 1 year: 49	1 to 2 years: 30	2 to 5 years: 20	5 to 10 years: 23	> 10 years: 39
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### 5.2.3 Results Employer Strategic Orientation Questionnaire

For the construct strategic alignment, Strategic Orientation (SO), the survey also measured and compared the strategic alignment as perceived by the employees with that suggested by the PDM in the SO questionnaire. From the PDM perspective, 1 answer given reflected a prospecting (P) stance; a company that makes relatively frequent changes in, and additions to, its range of products. By responding rapidly to early signals of market needs or opportunities this is a company which tries to be 'first in' in new product and market areas; 3 answers reflected an Analyzing (A) stance; a company which maintains a stable, limited line of products and simultaneously moves to follow a selected, promising set of new product developments in other areas. They are seldom "first in" with new products, but instead may be "second in" with a more cost effective or better conceived product; 5 answers reflected a Defending (D) stance; a company, which locates and maintains a 'niche' in a relatively stable product area. Generally, they are not at the forefront of new product or market development, but concentrate instead on a limited range of products, doing the best job possible through quality, superior service, and so forth and 2 answers reflected a Reacting (R) stance; A company which does not appear to have a consistent product-market orientation. Unlike its competitors, they are not aggressive in maintaining established

products and markets. This company changes its product offering when and where it is forced to by external pressures. From the employee scores, 5 (31%) perceived the strategic orientation as prospecting, whilst 7 (44%) thought defending and the remaining 4 (25%) opted for reacting.

#### **5.2.4 Summary and Conclusions**

At Company 1 we find a narrow grouping of scores for construct 1 but of note, there were no employee average scores recorded in excess of 4.9. If we consider that this construct is highly influential from an employer/employee relationship perspective we could reasonably expect these scores to be higher if a greater degree of engagement was sought by all parties. From a communication viewpoint the lowest score being received at 4.4 for the extent to which the PDM explained decisions affecting employees and/or their department would be the most straightforward to adjust and improve upon as the remaining questions are considerably more subjective in nature. For the construct organizational boundaries we can look to the statements made by the PDM to provide various opinions to guide our findings. For the lowest scoring question (Q33 at 3.1), the extent to which employee's work performance is discussed with them, we learn that changes have been made which might have lead this score to be higher now than it would have been previously, but at below the median of 3.5 it does not reflect the progress that had been anticipated by the company:

“In the past it was quite poor, but we now have a new manager who looks after the production staff and he does talk to people all the time about what they're doing, what they're supposed to be doing and how they are performing rather than

just waiting until an appraisal and then heap a load of stuff onto somebody that he is not happy with”.

When probed further by the researcher as to whether this could be considered to be an informal on-going evaluation:

“Yes it’s really mentoring I think is a good word for it as the whole time there’s feedback say asking one of the guys to have a go at doing something and the guy comes back and says yes, it’s great but if you had done it this way it would have been quicker overall. So there is constant mentoring going on now”.

We may note that whilst this observation does refer to the production staff alone, the majority of employees at Company 1 fall into that occupation category. The joint first lowest scoring question (3.1) for organizational boundaries related to whether the employee job descriptions clearly specified the standards of work performance on which they would be evaluated. Again, we see what is recorded as disagreement by the employees but a more positive stance is projected by the company PDM showing a lack of alignment between the two parties:

“I think fully. Here is an example of our job descriptions containing personal responsibilities, leading to activities, leading to the objectives and output measurable. It shows who the employee reports to and what areas of the business the employee reports on”.

Whilst there is a considerable disparity between the viewpoints, we may also suggest that as the latter is the state desired by the employer, this may necessarily restrict intrapreneurial activities. The potential constraints to intrapreneurship likewise extend to the higher scoring question (Q29) at 4.7 which assesses the extent for



following standard procedures and, whereby the employees overall are in agreement that this is most frequently the case. Turning to the literature, a probable negative effect of the scores recorded for the construct of organizational boundaries at Company 1 would appear to exist for latent intrapreneurs but a positive effect may be reflected in the performance of non-intrapreneurially inclined employees. As posited earlier in this dissertation, an absence of prescriptive procedures may cause the non-creative minded employees to flounder but in contradiction an abundance of them may disappoint the intrapreneurial employee, (Florida & Goodnight ,2005; Desouza, 2011; Amabile, 1998 and Pinchot & Pinchot, 1978)

The construct work discretion provides further insights into the work climate at Company 1 with the lowest overall average employee score of 3.4 recorded for Q22; (I seldom have to follow the same work methods or steps for doing my major tasks from day to day) falling below the median of 3.5 suggesting mild disagreement. This is quite an encouraging sign, as are the responses to the opportunities to be creative and the freedom to use one's own judgement at 3.9, signifying mild agreement by the employees. In exploring this further, there is no material difference in score according to time served with the company. From the PDM we learn:

“Employees are very much able to use their own judgment within the known company structure and processes. If somebody comes to me and says look, I've got to do this for the customer by x time and I can't do all the in-between processes now, they can be done back-datedly is it ok if I go ahead and do that, we have discussions like that. Generally back-datedly doing processes usually takes longer but there have been occasions when we have done that”.

This suggests the employees should not use their own judgment unless they do so within company procedures and, that rather than actually using their own judgement they are simply seeking permission to do so which could considerable dilute any benefits that may have been realized from this activity without the boundaries in which it exists. As analyzed within the literature, Amabile (1998) asserts that flexibility of work design and experimentation are vital for intrapreneurship to succeed and from Szerb (2003) the intrapreneur must be granted freedom and independence by the entrepreneur in defining their work activities and objectives.

We find a further example of a disparity of views within this construct for Q14 (harsh criticism and punishment result from mistakes made on the job) with a score of 4.2, so an employee position of agreement and an employer position which could be considered disagreement:

“I don't think they are particularly criticized. If it was an incident that had happened before and the employee had just failed to take heed of any advice they were given then we would go through a disciplinary process but, for instance, we had an incident last year where it cost £ (a significant sum of money) because a machine was damaged but we didn't take any disciplinary action against that person”.

It is of interest to note that at Company 1, the first line of action that seemed to be considered in managing mistakes or failures is one of a disciplinary nature.

Combining the information and knowledge we have gleaned for work discretion and organizational boundaries suggests that individual creativity, thoughts, deeds and actions are not encouraged at this company which, from the extant

literature, makes it unlikely that intrapreneurialism will be recognized or even appreciated. This becomes evident when we turn to the employee questions for intrapreneurial opportunities and identify that only 8 out of the 25 questions posed exceeded the median score and presented an outcome of agreement with the content. Negative views extended throughout many aspects of the company's climate and culture ranging from support for experimentation, rewards for innovative thinking and the time available to develop new ideas. The question that provided the highest level of agreement was that staff felt obstacles to completing their tasks were not an issue. This may be an encouraging observation, or could reflect a level of micro-management exists within a specific and defined work task structure.

Before finalizing our findings at Company 1 it is worthwhile to again reflect on how the literature presents a case for an organizational culture that would be supportive of intrapreneurial endeavors. Ahmed (1998) advises that an open leadership approach which encourages innovation from within the workforce is conducive to continued organizational creativity. Furthermore that organizations can create a physical environment to augment creative interaction between employees. Vazquez (2000) studied the psychological characteristics of the role of entrepreneurship in SMEs and concluded that the PDM leadership characteristics directly and indirectly influenced organizational climate and culture.

There is no strong evidence that an open leadership approach exists at Company 1 but significant examples of how the business culture is directed and controlled by the entrepreneur PDM. From the length of time served variable, employees with less than 1 year of service and employees with over 10 years of

service seem most tolerant of this dynamic. Employees with between 2 and 5 years of service appear least enamored by it. Within this group, the only question that scored above 4.6 was Q29 (in the past three months, I have always followed standard operating procedures or practices to do my major tasks). The PDM of Company 1 made a comment during the interview that was extremely shocking in respect of the extent to which employees have sufficient time to devote to for long-term problem solving. The response included the following opinion:

“The long-term is important to the (Name) family but I think it is difficult to get everyone feeling that way because mostly people are more concerned to earn a few more pounds this week rather than whether they’ll have a job in 6 years’ time. They’re like dogs, they’re living in the moment; they aren’t generally looking to the future or caring about it particularly”...

### **5.3 Participating Companies 2 to 9**

We will now introduce the other participating companies providing a brief overview of their history and composition. The amount of information contained for each company is very limited due to the fact that anonymity was assured and it is vital that they cannot be identified by any details disclosed within this dissertation. This was a condition of the Deed of Confidentiality.

Table 50 : Collaborating company details

Company	Data Collection period	Owners	Employees Excluding Directors	Employee Surveys Completed	Employer Interview Conducted
Company 1	30/6 - 1/7 2014	2	17	17 (100%)	1/7/2014
Company 2	13/8 - 18/8 2014	1	21	21 (100%)	5/9/2014
Company 3	19/1 2015	2	6	4 (66%)	23/1/2015
Company 4	29/1 – 6/2 2015	3	14	13 (93%)	10/3/2015
Company 5	23/2 - 25/2 2015	1	15	12 (73%)	26/2/2015
Company 6	5/3 – 6/3 2015	1	10	10 (100%)	6/3/2015
Company 7	16/3 - 18/3 2015	2	9	9 (100%)	16/4/2015
Company 8	17/3 – 1/4 2015	1	15	12 (73%)	2/4/2015
Company 9	28/4 – 5/5 2015	2	132	65 (49%)	12/5/2015
	TOTAL		238	163 (68%)	
10*	6/3- 20/3 2015	2	6	2	N/A

\*At an additional participating company (10), there was great enthusiasm for the research collaboration by the co-primary decision maker (PDM). Having run many successful large companies in the past, this was a start-up operation, founded by two industry experts with six employees looking for rapid growth during 2015/2016. The company specializes in developing innovative applications of technology through radically different technological platforms. Two on-line surveys were submitted on March 6<sup>th</sup> 2015 and then the process stalled. The company was launching a new

product at the time and the employees were very stretched from both a work-load perspective and time perspective. The researcher and PDM agreed not to pursue the collaboration so no further activities took place. The results from the two on-line surveys were exceptionally good and showed immense promise as a platform for growth. This was provided as feedback to the PDM along with the average score for each question. The PDM expressed a sincere interest to repeat the process, but in full, therefore including the strategic orientation questionnaire and the employer interview at some point in the future but not within the timeframe of this dissertation.

### **5.3.1 Company 2**

Company 2 operates in a niche electrical systems sector. They have 21 employees excluding Directors. All employees completed the survey providing a sample size of 100% of the workforce. The average scores compiled as descriptive statistics are presented below.

### 5.3.1.1 Results Employee Survey

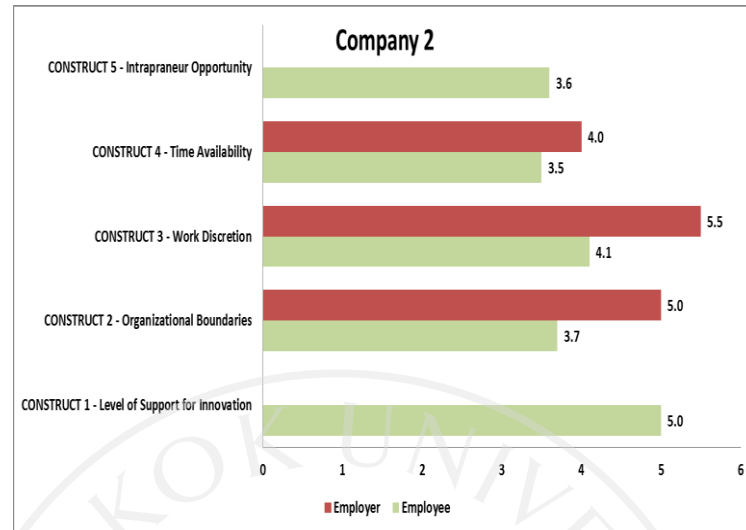


Figure 36: Chart 2 - Descriptive statistics – Company 2 (n = 21)

At Company 2, we can see a high level of PDM support for innovation and whilst the remaining constructs score the median of 3.5 or higher, the opportunities for intrapreneurship can be considered low at 3.6. For the construct managerial level of support for innovation, the combined employee average scores ranged from 4.2 to 5.4 and for organizational boundaries from 3.0 to 4.5. However, the scores received from the PDM for the questions relating to organizational boundaries reflected a significant variance to those from the employees; the scores for the employees at 3.7; the scores from the PDM at 5.0.

Table 51 : Level of Support for Innovation

Description - Level of Support for Innovation	Value
Q1: My founder/manager is approachable and easy to get on with and Q5: My company treats their employees as adults)	5.4
Q4: My founder/manager does a good job of explaining decisions that me and my department	4.2
Description - Organizational Boundaries	Value
Q31: In my job I have no doubt of what is expected of me)	4.5
Q35: I clearly know what level of work performance is expected from me in terms of amount, quality, and timeliness of output	4.4
Q30: There are many written rules and procedures that exist for doing my major tasks Q34: My job description clearly specifies the standards of performance on which my job is evaluated	3.0

For the construct of work discretion, the combined average scores ranged from 1.7 to combined average high scores of 4.9 and 4.8. The overall scores received from the PDM at 5.5 reflected a significant variance to those the employees at 4.1. For the construct of time availability, the combined average scores ranged from 3.4 to 4.4. For the construct of employee intrapreneurial opportunities there was a broad range of combined average scores between 2.2 and 4.5 with 10 out of 25 questions scores falling at or below the median point of 3.5.



Table 52 : Work Discretion

Description - Work Discretion	Value
Q16: Company 2 provides freedom to use my own judgment	4.9
Q19: It is basically my own responsibility to decide how my job gets done	4.8
Q14: Harsh criticism and punishment result from mistakes made on the job	1.7
Description - Time Availability	Value
Q27: I feel that I am always working with time constraints on my job	4.4
Q23: During the past three months, my work load was too heavy to spend time on developing new ideas	3.8
Q26: My job is structured so that I have very little time to think about wider company problems	3.4
Description - Employee Intrapreneurial Opportunity	Value
Q12: There is a lot of challenge in my job	5.0
Q7: My manager helps me get my work done by removing obstacles	4.5
Q11: My manager would tell his/her boss if my work was outstanding	4.4
Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas	2.4
Q51: Promotion usually follows the development of new and innovative ideas	2.3
Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.2

The average scores for each period of employee time served with the company were:

Table 53 : The Average Scores for Each Period

< 1 year:	1 to 2 years:	2 to 5 years:	5 to 10 years:	> 10 years:
1.0 – 6.0	1.7 – 6.0	1.8 – 5.4	1.8 – 5.5	NA

Out of 51 statements, the following received an average employee combined score at or above the median of 3.5:

Table 54 : Average Employee Combined Score

< 1 year: 24	1 to 2 years: 35	2 to 5 years: 33	5 to 10 years: 39	> 10 years: NA
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Period	Statement	Value
<1 Yr.	Q5: People here are treated as adults, Q12: There is a lot of challenge in my job and Q31: In my job I have no doubt of what is expected of me	6.0
	Q14: Harsh criticism and punishment result from mistakes made on the job and Q26: My job is structured so that I have very little time to think about wider company problems	1.0
1-2 Yrs.	Q5: People here are treated as adults and Q6; my founder/manager seems to genuinely care about the welfare of employees	6.0

(Continued)

Table 54 (Continued) : Average Employee Combined Score

Period	Statement	Value
	Q14: Harsh criticism and punishment result from mistakes made on the job	1.7
2-5 Yrs.	Q1: My founder/manager is approachable and easy to get on with	5.4
	Q2: My founder/manager treats people with dignity and respect	5.1
	Q14: Harsh criticism and punishment result from mistakes made on the job	1.8
5-10 Yrs.	Q1: My founder/manager is approachable and easy to get on with, Q5: People here are treated as adults and Q33: During the past year, my immediate supervisor discussed my work performance with me frequently	5.5
	Q27: I feel that I am always working with time constraints on my job	2.8
	Q14: Harsh criticism and punishment result from mistakes made on the job	1.8

The average scores for all 51 statements according to time served with the company were found to be as follows:

Table 55 : The Average Scores for all 51 Statements According

< 1 year: 3.2	1 to 2 years: 4.1	2 to 5 years: 3.8	5 to 10 years: 4.1
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### 5.3.1.2 Results Employer Strategic Orientation Questionnaire

For the construct strategic alignment, Strategic Orientation (SO) the PDM gave 8 answers that reflected a P stance, the further 3 answers reflected a R stance. From the employee scores, 2 perceived the strategic orientation as P (10%) whilst 6 thought A (29%), 3 selected R (14%) and 10 opted for D (48%).

### 5.3.1.3 Summary and Conclusions

From the data collected at Company 2 we can identify a trend across employees who have served differing amounts of time with the company. Firstly, we get an insight into the organization culture in that most employees strongly disagreed with the statement “harsh criticism and punishment result from mistakes made on the job”, therefore, there is not a prevalent culture of blame, or potentially disinclination by employees to experiment and sometimes take risks. As discussed within the analysis of the literature (Desouza, 2011 and Teltumbde, 2006) intrapreneurial employees are unlikely to respond well to criticism. The important factor being the ability to distinguish a mistake due to carelessness, from a mistake arising from an idea that didn’t work. When the company PDM was asked how he would respond to well-intentioned experimentation or creativity by an employee leading to failure, the response was ““I’m quite happy with that because to me it’s all just learning and part of their personal development. That’s just engineering to me.”

A further positive insight into the business culture was the relatively high scores found at construct 1, the level of support for innovation, which became the umbrella construct for how valued and respected employees felt they were. It was interesting to note that employees with less than 1 year of service gave the highest scores to the company's expectation of them, how their work was structured and how challenged they felt. This would appear to be a good indicator of how employees are inducted, and the effort that is put into giving their work boundaries in their early period of service whilst not reducing the opportunities to be challenged. The issue of work that is challenging being a key component of intrapreneurial opportunities is consistent within the literature (Morris, Kuratko & Covin, 2008; Bassett-Jones & Lloyd, 2005 and Florida & Goodnight, 2005) At Company 2, this increased with time of service. Those with less than 1 year of service scored an average of 3.2, with 1 to 2 years of service an average of 4.1, with 2 to five years of service an average of 3.8, and with 5 to 10 years of service, an average of 4.1. When asked if or how the company PDM felt able to ensure his employees felt challenged by their work he responded:

“I think we have been guilty in the past in thinking if someone is too challenged by their work we try to step in and ease that pain for them a bit. Probably what we've recognized in the last year or so is that probably what we're doing is just giving them the easy option by letting them sit behind somebody who takes all the difficult bits off them and that doesn't benefit them long term because they're not learning to deal with those challenges and situations themselves. So of late we've

been trying to make sure that people are actually being pushed out of their comfort zone and are trying to address those issues for themselves”.

Similarly, knowing the company’s expectations of the employee also remained consistently high across the variable of time served. When asked to comment on this the PDM responded:

“I would say they should have a good idea but they don’t necessarily stick to time limits for example, and, “I think they do know to a great extent but it isn’t always something that we document very well”.

The questions relating to organizational boundaries will impact upon organizational opportunities for creative thinking and score an average 3.7, but these are comparatively straightforward areas to modify according to the desired outcome by the PDM. There was a divergence in the questions relating to the construct of work discretion that the PDM had expected to score significantly higher than reported, but again, these would only require some internal adjustments to realise more positive scores in the future. Although the overall scores for the construct of managerial level of support for innovation can be seen as positive at 5.0, this does not translate into an equally encouraging score for intrapreneurial opportunities at 3.6, barely above the median. The reasons for this were found to be a lack of compensation or another reward mechanism for innovative ideas and efforts, a lack of time to pursue such activities and a perceived lack of finance available to support such activities “we are very hindered by finance”. The options for funding a SME business is identified within the literature as a potentially huge issue (Simpson, Padmore & Newman, 2012 and Pickernell et al, 2011) and whilst the motivation for intrapreneurially minded

employees is generally considered to come from intrinsic drivers, extrinsic drivers cannot be ignored (McAdam & McClelland, 2002 and Amabile, 1998) The PDM of Company 2 reported:

“Sadly it’s not something we really do. Other than recognizing people’s performance at appraisal time we don’t really have any sort of reward structure as such and not for anyone in particular. To be perfectly honest the appraisal system is only something we’ve done for the last two years”.

The evidence above, combined with the quite low scoring constructs of time availability (3.9) have all contributed to an environment where intrapreneurialism is unlikely to flourish unless some changes can be made/are made in the areas that will make a measurable difference to the opportunities for at least some employees to think and act creatively, champion new project ideas and feel encouraged and rewarded by doing so. There are however, positive signals from the PDM that if they could conquer the problems of time constraints and financial constraints, intrapreneurship would be viewed very favorably at Company 2:

“I’m always open to have people come up with new ideas and give them the time to go off and explore those ideas and support them with tools and equipment where that’s required. I think we do get most of the ideas from the guys. Certainly new technology ideas come from them. The employees are highly empowered and very much encouraged to use their own judgment”.

When we turn to strategic orientation there is a broad alignment between the company and the employees in respect of a prospecting stance being prevalent.

### 5.3.2 Company 3

Company 3 is based in the UK and specialize in marine and construction projects. They are based in the UK and have 6 employees excluding directors. The employer primary decision maker (PDM) interview was carried out on Jan. 23<sup>rd</sup> 2015.

#### 5.3.2.1 Results employee survey

From the six employees, two were excluded as they were working at client premises and, therefore, not working in the participating Company 3 company's environment and, as such, their workload was determined by a third party. This left a sample size of 66% of the workforce. The variable length of service is not considered relevant for such a small number of employees.



Figure 37: Chart 3 - Descriptive statistics – Company 3 (n = 4)

At Company 3, we can see a relatively high level of PDM support for innovation at 4.7 compared to the remaining constructs, which range from 3.1 to 4.3. The employee average scores for all constructs ranged from 2.3 to 5.5. For the construct managerial level of support for innovation the combined employee average



scores ranged from 3.8 to 5.5, for organizational boundaries from 2.5 to 3.5 and for work discretion from 2.5 to 4.8. For the construct of time availability, the combined average scores ranged from 2.8 to 4.5.

Table 56 : All Constructs

Description - All Constructs	Value
Q1: My company directors are approachable and easy to get on with	5.5
Q40: many top managers at Company 3 have been known for their experience with the innovation process	
Q41: Money is often available to get new project ideas off the ground	2.3
Q42; there are several options within the company for individuals to get financial support for their innovative projects and ideas	
Description - Level of Support for Innovation	Value
Q1: My founder/manager is approachable and easy to get on	5.5
Q4: My founder/manager does a good job of explaining decisions that affect me and my department	3.8

Overall the scores received from the PDM relating to organizational boundaries reflected a significant variance to those from the employees; the scores for the employees at 3.1; the scores from the PDM at 4.7. Work discretion scores also showed an inconsistency with 3.9 reported by the employees and 4.5 reported by the PDM.

Table 57 : Organizational Boundaries

Description - Organizational Boundaries	Value
Q32: There is little uncertainty in my job tasks	3.5
Q35: I clearly know what level of work performance is expected from me in terms of amount, quality, and timeliness of output	
Q30: There are many written rules and procedures that exist for doing my tasks	2.5
Q33: During the past year, my supervisor discussed my work performance with me frequently	
Description - Work Discretion	Value
Q15: Company 3 provides the chance to be creative and try my own methods of doing the job	4.8
Q14: Harsh criticism and punishment result from mistakes made at work	4.5
Q17: Company 3 provides the chance to do something that makes use of my abilities	
Q21: I have much autonomy on my job and am left on my own to do my work	
Q22: I seldom have to follow the same work methods or steps for doing my major tasks from day to day	2.8
Q13: I feel that I am my own boss and do not have to double check all of my decisions	2.5

(Continued)

Table 57 (Continued): Organizational Boundaries

Description - Time Availability	Value
Q26: My job is structured so that I have very little time to think about wider company problems	4.5
Q27: I feel that I am always working with time constraints on my job	4.3
Q24: I always seem to have plenty of time to get everything done	2.8

For the construct of employee intrapreneurial opportunities there was a broad range of scores between 2.3 and 5.5, with 10 out of 25 statement scores falling at or below the median point of 3.5.

Table 58 : Employee Intrapreneurial Opportunity

Description - Employee Intrapreneurial Opportunity	Value
Q40: Many top managers at Company 3 have been known for their experience with the innovation process	5.5
Q12: There is a lot of challenge in my job	5.0
Q41: Money is often available to get new project ideas off the ground	2.3
Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas	

### 5.3.2.2 Employer From Strategic Orientation Questionnaire

For the construct strategic alignment, the PDM gave 6 answers that reflected a P stance, 3 answers that reflected an A stance and 2 answers that reflected a D stance. From the employee scores, 3 perceived the strategic orientation as P (75%) whilst 1 thought A (25%).

### 5.3.2.3 Summary and Conclusions

From the data collected at Company 3 we can identify moderately low scores across all five constructs. With a maximum score of 6 available, the level of managerial support for innovation as perceived by the employees as 4.7 appears to be quite low, especially as the questions for this construct all refer to the behaviors and attributes of the company Director. When we look further into this construct, the question that had the most detrimental effect on the average scores received was my company directors do a good job of explaining decisions that affect me and my department at 3.8. This is the only question that specifically addresses communication within the construct and it could be considered unacceptably low. Overall the question scores for construct 1 are below what one might reasonably expect within such a small team; three Directors and four on-site employees who work in very close proximity to each other. Furthermore, within the construct of organizational boundaries the employees disagreed that their work performance was discussed with them on a frequent basis, another indicator of poor communication. A positive aspect when viewing the perceived lack of engagement between the employees and the Directors is the fact that they chose to collaborate in this research study. That in itself means they are open to hearing what is working well, and not so well.

Turning to the construct of organization boundaries, we can identify a low score of 2.5 for the degree of written rules and procedures that exist, which in terms of intrapreneurship is an encouraging stance as posited by Sandberg, Hurmerinta & Zettining (2013); Markova & Ford (2011) and Zimmerman (2009) However, when we review the scores for the construct “work discretion”, we have two that are not

commensurate with intrapreneurial opportunities; the employees disagreed that they felt a good degree of autonomy, and, appeared to follow a fairly methodical and repetitive routine for completing their tasks. Again, within the contrast “time availability” there appears to be evident constraints to complete everyday tasks well and limited openings for a longer term vision and problem solving activities. The degree of autonomy is an important facet for intrapreneurial opportunities as proposed by Bystead (2013); Vora, Vora & Polley (2012) and De Villiers-Scheepers (2011) without which there is little freedom for creative thinking and/or experimentation by the employees.

All of the above are reflected in the overall score of 3.7, which measures the extent to which intrapreneurial opportunities exist at Company 3. The employee with between two and five years of service appeared to be most aware of the financial limitations for innovative behaviors. As reported by the Director interviewed when asked if as a small business it was difficult to get finance to get new ideas progressed:

“Oh absolutely, yes. Yes for sure. Even these Government Assistance Schemes you hear about for example the ... (Enterprise Name) are an absolute nightmare. Absolute nightmare as they are so risk-averse. In fact the impression I get is that I am better off just going to the bank because that’s the level of risk they will take”.

For the employees with less than one year of service the greatest concern was recorded as the extent to which the company Director was receptive to their ideas and suggestions. The interview again gave an insight into why this might be the case when

the Director was asked if employees looked to him for inspiration and innovative thinking to improve the business or came to him with new ideas:

“Well, probably the first option. We give guidance to our employees; we do not expect them to come up with solutions. Obviously, whoever comes up with the best ideas, what works you know”.

It is also worth considering the Directors stance on innovative activities that would not be without a level of risk:

“I think it is good to come up with novel approaches and ideas but I bring you back to the point, at the end of the day, we have to produce drawings or whatever our task is for our clients. I think the idea if taking a risk is, I don't know, I don't like the idea of risk. You know, it is one thing being innovative and I probably prefer that to taking risks, we are very safety conscious here”.

However, the issue of risk tolerance did become confused later in the interview when the Director was asked how he would respond to a well-intentioned experimentation or creativity by an employee that led to failure:

“I'm just trying to think of where we've had a failure... I'm not averse to trying things that are high risk. I've done stuff in the past but the trouble is with a small company we just have to be very careful”.

This is a good insight into how one individual has had to adapt his natural inclination to tolerate risk in a large organization towards curtailing it in the SME environment. Again, we may reflect upon the writings of Antoncic & Hisrich (2003) who propose that despite similarities between intrapreneurs and entrepreneurs there is a divergence in terms of risk-taking; primarily that for the entrepreneur it is

financially a sole risk, for the intrapreneur it is a shared risk. At Company 3, whilst the employees would welcome a less risk-adverse environment, the Director had been taking a low risk stance.

### 5.3.3 Company 4

Company 4 is based in London and their expertise and main business lies in the building services industry.

#### 5.3.3.1 Results Employee Survey

At Company 4, thirteen employees completed the survey providing a sample size of 93% of the workforce.

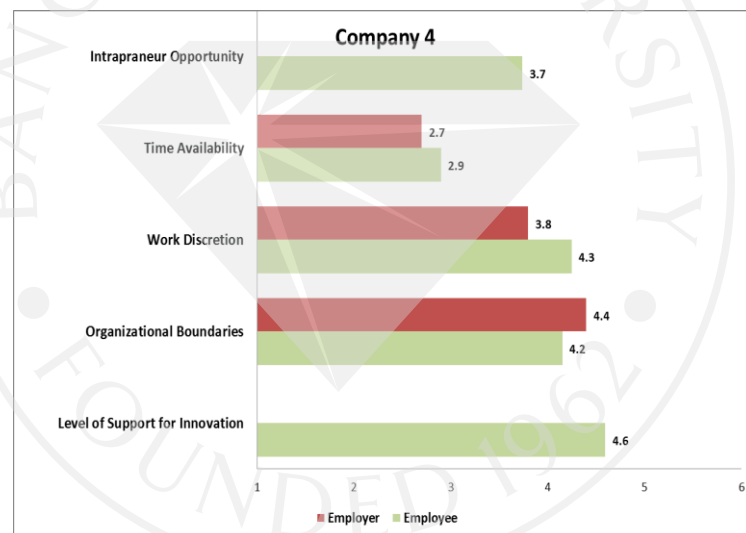


Figure 38 : Chart 4: Descriptive statistics – Company 4 (n = 13)

At Company 4, we can see a relatively high level of PDM support for innovation and the remaining constructs score above the median of 3.5 with the exception of time availability at 2.9. The opportunities for intrapreneurship are also low at 3.7. The average scores for the combined constructs ranged from 2.3 to 5.2.

Table 59 : All Constructs

Description - All Constructs	Value
Q31: In my job I have no doubt of what is expected of me	5.2
Q26: My job is structured so that I have very little time to think about wider company problems	2.3

For the construct of managerial level of support for innovation, the combined employee average scores ranged from 4.2 to 5.0, for organizational boundaries from 3.3 to 5.2, for work discretion from 3.5 to 4.8, for time availability from 2.3 to 2.8. For the construct employee intrapreneurial opportunities there was a broad range of combined scores between 2.7 and 4.8, with 10 out of 25 questions scores falling at or below the median point of 3.5. Throughout the constructs there are no significant inconsistencies in the scores submitted by the employees compared to those submitted by the PDM.

Table 60 : Level of Support for Innovation

Description - Level of Support for Innovation	Value
Q1: My company director is approachable and easy to get on	5.0
Q4: My company director does a good job of explaining decisions that affect me and my department	4.2
Description - Organizational Boundaries	Value
Q31: In my job I have no doubt of what is expected of me	5.2
Q32: There is little uncertainty in my job tasks	4.6

(Continued)



Table 60 (Continued) : Level of Support for Innovation

Description - Organizational Boundaries	Value
Q33: During the past year, my immediate supervisor discussed my work performance with me frequently	3.4
Q30: There are many written rules and procedures that exist for doing my tasks	3.3
Description - Work Discretion	Value
Q15: Company 4 provides the chance to be creative and try my own methods of doing the job	4.8
Q19: It is basically my own responsibility to decide how my job gets done	
Q22: I seldom have to follow the same work methods or steps for doing my major tasks from day to day	3.5
Q14: Harsh criticism and punishment result from mistakes made at work	
Description - Time Availability	Value
Q28: My co-workers and I always find time for long-term problem solving	3.8
Q25: I have just the right amount of time and work load to do everything well	3.3
Q26: My job is structured so that I have very little time to think about wider company problems	2.3

(Continued)

Table 60 (Continued) : Level of Support for Innovation

Description - Employee Intrapreneurial Opportunity	Value
Q9: My supervisor will increase my job responsibilities if I am performing well in my job	4.8
Q12: There is a lot of challenge in my job	4.7
Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas and Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.8
Q51: Promotion usually follows the development of new and innovative ideas	2.7

For variable lengths of service, the average employee scores for each period according to time served with the company were:

Table 61: Service the Each Period According to Time Served

< 1 year:	1 to 2 years:	2 to 5 years:	5 to 10 years:	> 10 years:
2.3 – 4.9	3.0 – 5.5	1.7 – 6.0	NA	NA

Out of 51 statements, the following received an average employee combined score at or above the median of 3.5:

Table 62 : The Received an Average Employee Combined Score

< 1 year:	1 to 2 years:	2 to 5 years:	5 to 10 years:	> 10 years:
31	44	36	NA	NA

Period	Statement	Value
<1 Yr.	Q31: In my job I have no doubt of what is expected of me	4.9
	Q26: My job is structured so that I have very little time to thank about wider company problems, Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system Q51: Promotion usually follows the development of new and innovative ideas	2.3
1-2 Yrs.	Q1: My company directors are approachable and easy to get on with, Q5: My company treats their employees as adults, Q9: My supervisor will increase my job responsibilities if I am performing well in my job Q12: There is a lot of challenge in my job Q15: Company 4 provide the chance to be creative and try my own methods of doing the job Q18: I have the freedom to decide what I do on my job	5.5

(Continued)

Table 62 (Continued) : The Received an Average Employee Combined Score

Period	Statement	Value
1-2 Yrs.	<p>Q19: It is basically my own responsibility to decide how my job gets done</p> <p>Q29: In the past three months, I have always followed standard operating procedures or practices to do my major tasks</p> <p>Q38: At Company 4 developing one's own ideas is encouraged for the improvement of the company</p>	5.5
	<p>Q34: My job description clearly specifies the standards of performance on which my job is evaluated</p> <p>Q39: The employees are allowed to make decisions on projects without going through elaborate justification and approval procedures</p> <p>Q41: Money is often available to get new project ideas off the ground</p> <p>Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas</p> <p>Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system</p>	3.0

(Continued)

Table 62 (Continued) : The Received an Average Employee Combined Score

Period	Statement	Value
2-5 Yrs.	Q18: I have the freedom to decide what I do on my job, Q19: It is basically my own responsibility to decide how my job gets done, Q21: I have much autonomy on my job and am left on my own to do my own work Q31: In my job I have no doubt of what is expected of me	6.0
	Q23: During the past three months, my work load was too heavy to spend time on developing new ideas Q30: There are many written rules and procedures that exist for doing my major tasks	2.0
	Q27: I feel that I am always working with time constraints on my job	1.7

The average scores for all 51 statements according to time served with the company were found to be as follows:

Table 63 : The Average Scores for all Statements According

< 1 year: 3.7	1 to 2 years: 4.4	2 to 5 years: 4.4
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Of specific interest at Company 4, we may reflect that even though the company commenced trading over 10 years ago, there are no employees that have served longer than 5 years.

### **5.3.3.2 Results from Employer Strategic Orientation Questionnaire**

For the construct strategic alignment the PDM gave 2 answers that reflected a P stance, 6 answers that expressed an A stance, 1 answer of a D stance and 2 answers that presented a R stance. From the employee scores, 7 perceived the strategic orientation as P (54 %) whilst 2 thought A (15%) and the remaining 4 selected D (31%).

### **5.3.3.3 Summary and Conclusions**

From the data collected at Company 4 we can identify moderately low scores for the construct of management support for innovation with an employee range of 4.2 to 4.8 with the exception of how approachable their PDM was of 5. As found at Company 3, the question that scored lowest was “my company directors do a good job of explaining decisions that affect me and my department” at 4.2. Again, this is an issue of communication, which is also reflected in the low score of 3.4 for the frequency with which employee’s work performance was discussed with them. This is inconsistent with the perception of the PDM who not only suggested a score of 5, but added “regularly so I give this a 5”. However, within the same construct of organizational boundaries the level of written rules and procedures scored 3.3, therefore only mild agreement from the staff overall revealing a more liberal approach to autonomy, which is substantiated by a score of 4.8 for the degree to which employees have the opportunity to be creative, try their own methods of working and take responsibility for those aspects of their job tasks. A slight negative is that they also mildly agreed that harsh criticism and punishment would result from mistakes

made but this was not the intention of the PDM when asked how he would respond to well-intentioned experimentation or creativity by an employee leading to failure:

“I think it’s the unavoidable. I think it’s the unavoidable if something is new then risk takes are normal. Where we are at the moment with new employees then mistakes are made and I think they are important for the learning curve and they need to make that mistake then that is fine”.

Time available at 4.3 is also an issue at Company 4 with no strong agreement that routine tasks can be carried out to the best of their abilities and limited prospects for the staff to embrace a longer term vision in respect of problem solving. This would suggest that there may be an issue with efficiency which could be caused by an extreme workload, a lack of training or a lack of alignment between the employee skills and their job tasks as suggested by the Director interviewed when asked to what extent he provided employees with tasks that made the best use of their abilities:

“I’ll give this a 3 with the comment that we will improve this and myself, I am introducing tasks according to the employee’s skills. This is general for a small company where everybody is covering the roles instead of some part of his job”.

This brings us to the construct of intrapreneurial opportunities. Interestingly there was disagreement that developing new ideas would lead to promotion, and that individuals with successful innovative ideas would receive additional reward/compensation. Returning to the literature we need to consider that many creative employees do not seek promotion but respond most favorably to their status within the company (Goffee & Jones, 2007) and that creative thinkers may also identify money as an adverse motivator implying it can be perceived as a bribe or a

method of controlling the employee (Amabile, 1998) This aligns with the employees recording the highest scores in the construct of intrapreneurial opportunities of 4.8 for receiving increased job responsibilities if they are performing well and that at 4.7 they find a lot of challenge in their work. It should also be noted that the employees work tasks became more challenging the longer they had served with the company. For employee with less than one year's service it was recorded as 4.0 at one to two years as 5.5 and at two to five years as 5.7 which is a healthy indicator of an intrapreneurial practice being in place (Morris, Kuratko & Covin, 2008 and Bassett-Jones & Lloyd, 2005) Overall, at Company 4 the average score recorded as 3.7 for intrapreneurial opportunities is not strong at this point in their maturity with an inclination to use improved work methods at 3.6, and an inclination to support small and experimental projects realizing that some will undoubtedly fail at 3.3. However, from the PDM interview there were some promising observations to support future tendencies:

“I appreciate when employees come to me with suggestions and I am always keen to do this. Better that sometimes whether it is a good idea or not is a different thing and better that... if it fits into the schedule at the moment or into the budget that's important. If it doesn't fit into the schedule or it doesn't fit into the budget for whatever reason the individual employee can probably see it from the investment view. I try to explain why that is and attempt to give some understanding that the innovation is appreciated but it's probably right now not the time to do it”. “At this point we have restructured the company so we are working with new employees as well, so they have to be more closely monitored but I hope we do not have to do this



in 6 months' time". "I think it's more important to have innovative people in their roles to move forward and so on".

### **5.3.4 Company 5**

Company 5 is an exceptional digital innovator due to its capabilities in developing bespoke software applications and pioneering technological processes.

#### **5.3.4.1 Results Employee Survey**

Out of a total of fifteen employees, twelve (80%) submitted the survey. One survey was considered unreliable as there were so many scores of 1 and 2 that a conclusion could be drawn that the employee had misread the completion instructions and had mistakenly thought that these were positive rather than negative answers. The remaining employees had considerably higher scores for the same questions so it was deemed unlikely that one individual would provide such a negative assessment of the company. As such, when this was confirmed internally within the company the survey output for this individual was discounted from the final results. The resulting sample size was 73% of the workforce.

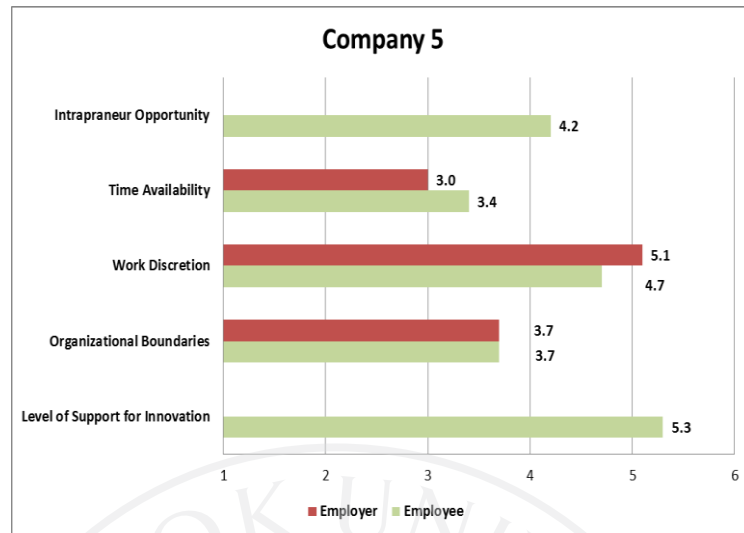


Figure 39 : Chart 5: Descriptive Statistics – Company 5 (n = 12)

At Company 5 we can see a very high level of PDM support for innovation, with the remaining constructs scores all above the median of 3.5 with the exception of time availability at 3.4. The combined employee average scores ranged from 2.3 to 5.7.

Table 64 : The Support for Innovation for The Combined Employee Average

Constructs

Description - All Constructs	Value
Q1: My company directors are approachable and easy to get on with	5.7
Q6: My company directors seem to genuinely care about the welfare of employees	
Q30: There are many written rules and procedures that exist for doing my major tasks	2.3

For the construct of managerial level of support for innovation, the combined employee average scores ranged from 4.3 to 5.7 for organizational boundaries from

2.3 to 4.6 for work discretion, from 3.5 to 5.4 and for time availability between 2.7 and 4.4. Throughout the constructs of time availability, work discretion and organizational boundaries there are no very significant inconsistencies by the scores submitted by the employees compared to those submitted by the PDM, but of note, the employees felt they had more available time than that thought by the PDM.

Table 65 : Description - Level of Support for Innovation

Description - Level of Support for Innovation	Value
Q1: My company directors are approachable and easy to get on with	5.7
Q6: My company directors seem to genuinely care about the welfare of employees	
Q4: My company directors do a good job of explaining decisions that affect me and my department	4.3
Description - Organizational Boundaries	Value
Q35: I clearly know what level of work performance is expected from me in terms of amount, quality, and timeliness of output	4.6
Q30: There are many written rules and procedures that exist for doing my tasks	2.3
Description - Work Discretion	Value
Q15: Company 5 provide the chance to be creative and try my own methods of doing the job	5.4
Q17: Company 5 provide the chance to do something that makes use of my abilities	5.3

(Continued)

Table 65 (Continued) : Description - Level of Support for Innovation

Description - Work Discretion	Value
Q22: I seldom have to follow the same work methods or steps for doing my major tasks from day to day	3.5
Description - Time Availability	Value
Q23: During the past three months, my work load was too heavy to spend time on developing new ideas	4.4
Q27: I feel that I am always working with time constraints on my job	3.8
Q26: My job is structured so that I have very little time to think about wider company problems	2.7

For the construct of employee intrapreneurial opportunities there was a broad range of combined employee average scores ranging from 2.6 to 5.2. Only 5 out of 25 statement scores fell below the median point of 3.5.

Table 66 : Description - Employee Intrapreneurial Opportunity

Description - Employee Intrapreneurial Opportunity	Value
Q38: At Company 5 developing one's own ideas is encouraged for the improvement of the company	5.2
Q54: People are encouraged to talk to workers in other departments of this company about ideas for new projects	
Q9: My supervisor will give me special recognition if my work performance is especially good	5.1

(Continued)

Table 66 (Continued) : Description - Employee Intrapreneurial Opportunity

Description - Employee Intrapreneurial Opportunity	Value
Q41: Money is often available to get new project ideas off the ground	2.6
Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas	

For variable lengths of service, the average employee scores for each period

according to time served with the company were:

Table 67 : Lengths of Service the Average Employee Scores for Each Period

According to Time Served

< 1 year:	1 to 2 years:	2 to 5 years:	5 to 10 years:	> 10 years:
2.0 – 6.0	2.7 – 5.7	2.0 – 5.7	NA	NA

Out of 51 statements, the following received an average employee combined

score at or above the median of 3.5:

Table 68 : Following Received an Average Employee Combined Score

< 1 year:	1 to 2 years:	2 to 5 years:	5 to 10 years:	> 10 years:
42	43	40	NA	NA

Period	Statement	Value
<1 Yr.	Q1: My company directors are approachable and easy to get on with Q6: My company directors seem to genuinely care about the welfare of employees	6.0

(Continued)

Table 68 (Continued) : Following Received an Average Employee Combined Score

Period	Statement	Value
<1 Yr.	Q16: Company 5 provide freedom to use my own judgment	6.0
	Q54: People are encouraged to talk to workers in other departments of this company about ideas for new projects	
	Q51: Promotion usually follows the development of new and innovative ideas	2.7
	Q26: My job is structured so that I have very little time to think about wider company problems	2.0
	Q30: There are many written rules and procedures that exist for doing my major tasks	
1-2 Yrs.	Q1: My company directors are approachable and easy to get on with	5.7
	Q5: My company treats their employees as adults	
	Q6: My company directors seem to genuinely care about the welfare of employees	
	Q30: There are many written rules and procedures that exist for doing my major tasks	2.5
	Q41: Money is often available to get new project ideas off the ground	
	Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas	2.3

(Continued)

Table 68 (Continued) : Following Received an Average Employee Combined Score

Period	Statement	Value
2-5 Yrs.	Q1: My company directors are approachable and easy to get on with Q6: My company directors seem to genuinely care about the welfare of employees, Q9: My supervisor will increase my job responsibilities if I am performing well in my job Q11: My supervisor would tell his/her boss if my work was outstanding Q38: At Company 5 developing one's own ideas is encouraged for the improvement of the company	5.7
	Q30: There are many written rules and procedures that exist for doing my major tasks Q33: During the past year, my immediate supervisor discussed my work performance with me frequently	2.3
	Q34: My job description clearly specifies the standards of performance on which my job is evaluated	2.0

The average scores for all 51 statements according to time served with the company were found to be as follows:

Table 69 : The Average Scores Statements According to Time Served

< 1 year: 4.5	1 to 2 years: 4.2	2 to 5 years: 4.3
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#### 5.3.4.2 Results from Employer Strategic Orientation Questionnaire

For the construct strategic alignment the PDM gave 8 answers that reflected a P stance and 3 answers that expressed a R stance. From the employee

scores, 7 perceived the strategic orientation as P (64%) whilst 2 chose A (18%) and 2 thought D (18%).

#### **5.3.4.3 Summary and Conclusions**

Overall the employee survey completed at Company 5 showed very high levels of support, respect and engagement and alignment between the directors and employees. It was interesting to note that as with Company 3 and Company 4 the lowest scoring question for the managerial level of support for innovation was 3.9 the extent to which the company directors explained decisions that affected the employees in their day-to-day work. Another most encouraging observation from these scores is the extent to which employees, regardless of their length of service feel they have freedom to use their judgment (5.2), think creatively when seeking solutions or developing ideas (5.2) and are motivated by the fit between their skills and their roles in the company (5.3)

Turning to organizational boundaries the lowest recorded score of 2.7 concerned a mild disagreement that there were many rules and procedures for employees to carry out their work tasks, to which the PDM added:

“That’s something we’re looking at the moment so I’d probably put a 3 there for now as things change every day in this place. I don’t think anything is written down”.

This is a good example of where a “low” score is not necessarily a “bad” score. The employees and the PDM were in alignment and there appeared to be an action plan in place to address this. This is also a good example of where a low score can be a positive in terms of intrapreneurship. Intrapreneurs, by nature, do not want to



be restricted by a rigorous set of rules and policy documents that curtail their inclination to experiment and create (Guillen & Saris, 2013, Bonet, Armengot & Martin, 2011) and (Burgers & Van De Vrande, 2011) At Company 5 we note that whilst there was not an abundance of written rules and procedures, the employees did know the level of work performance that was expected of them in terms of the amount, quality and timeliness of output. Again, time constraints were an issue but this is now becoming a common theme within the companies studied due to their size and in many cases immaturity.

The construct of work discretion proved to be extremely positive and suggested a higher level of autonomy than any of the other 8 companies studied. The high scores recorded for agreement that not only were employees using their skills and abilities to a high degree, but were also provided the opportunity to be creative and apply their own methods to their job tasks is very much in alignment with the intrapreneurship literature; flexibility of work design and experimentation are vital for sustained intrapreneurial opportunity and creativity (Amabile, 1998) and that intrapreneurs are motivated by being able to set and achieve their own goals and desire to feel in charge of their work and life. This individual need satisfaction is achievable through a leadership style that supports employee creativity (Sandberg, Hurmerinta & Zettining, 2013) As the PDM reported:

“I think we have a culture where we expect people to think. We are great believers in people taking their responsibilities and pushing the boundaries of what they do, and by the same token, we will set paths for certain people on what we want delivered and we will set the tone of what we expect. So the short answer is [for] them

that can think, we make sure they are thinking and [for] them that can't, we make sure we cuff [them] behind their ears until they are, and we encourage them to develop that mind-set".

Additionally, when asked to what extent his employees had to follow standard operating procedures or practices to do their major tasks, the response was "well basically we just let them get on with it".

When we look at construct 5, we again see high scores for intrapreneurial opportunities with the exception of the availability of finance which in common with the other companies studied does reflect what we have learnt from the literature as a barrier to growth in SMEs at some point in their maturity (Simpson, Padmore & Newman, 2012) Again, this is an area that the PDM shares openly with the employees:

"If the guys across the business know that we really don't have pots of cash to throw around as we're not funded yet and we might not even bother getting funded if it washes its own face so we're all respectful and mind full of that. I've got to think about the guys and on an operational level what would they really like and if we can make what they would really like work somehow then generally we do, and there's lots of juggling and this that and the other involved and so on and so forth".

Finally, a further highly positive influencing factor in the SME setting of Company 5 is the cohesion between individuals and between departments/functions which scored an overall average of 5.2. This demonstrates the achievement of having created a solid team environment where ideas are shared and discussed as espoused by the PDM.

“We actually have structured our business to fully capture everyone’s thinking. We have an executive strategy day and one of the biggest and most important outputs for me is that we’ve set up an operational board. The operational board is made up of people who are from the coal face and the whole purpose of it is to make sure everyone is aligned properly with the goals of the business and the agenda is that any and all ideas are given due consideration”.

### 5.3.5 Company 6

Company 6 is a leading professional aviation and vehicle technology company. It was founded in 2005 by one individual. Directors who are known for their entrepreneurial achievements have since joined.

#### 5.3.5.1 Results employee survey

All ten employees at Company 6 completed the survey providing a sample size of 100% of the workforce. The average scores compiled as descriptive statistics are presented below.

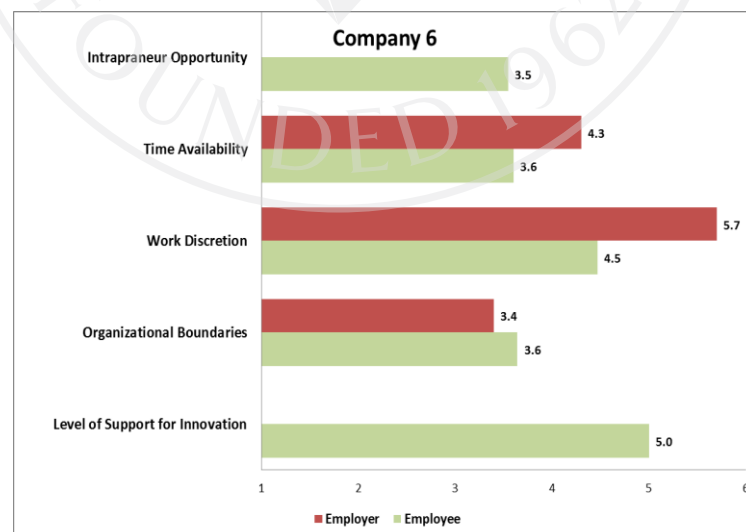


Figure 40 : Chart 6: Descriptive Statistics – Company 6 (n = 10)

At Company 6, we can see a high level of PDM support for innovation and the remaining constructs scoring the median of 3.5 or higher. The opportunities for intrapreneurship, which are reflected at 3.5, appear low considering the level of support for innovation is 5.0. The employee average scores for the combined constructs ranged from 2.2 to 5.6

Table 70 : The Employee Average Scores for the Combined Constructs Ranged

Description - All Constructs	Value
Q5: My company treats their employees as adults	5.6
Q50: Promotion usually follows the development of new and innovative ideas	2.2

For the construct managerial level of support for innovation the combined employee average scores were between 3.9 and 5.6, for organizational boundaries between 2.3 and 5.0, for work discretion between 3.4 and 4.9 and for time availability between 2.4 and 4.0. Overall the scores received from the PDM for the questions relating to work discretion reflected a significant variance to those from the employees; the scores for the employees at 4.5; the scores from the PDM at 5.7.

Table 71 : The Relating to Work Discretion a Significant Variance to the Employees

Description - Level of Support for Innovation	Value
Q5: My company treats their employees as adults	5.6
Q4: My company directors do a good job of explaining decisions that affect me and my department	3.9

(Continued)

Table 71 (Continued) : The Relating to Work Discretion a Significant Variance to the  
Employees

Description - Organizational Boundaries	Value
Q31: In my job I have no doubt of what is expected of me	5.0
Q35: I clearly know what level of work performance is expected from me in terms of amount, quality, and timeliness of output	4.7
Q30: There are many written rules and procedures that exist for doing my tasks	2.7
Q33: During the past year, my immediate supervisor discussed my work performance with me frequently	2.3
Description - Work Discretion	Value
Q19: It is basically my own responsibility to decide how my job gets done	4.9
Q17: Company 6 provide the chance to do something that makes use of my abilities	4.8
Q18: I have the freedom to decide what I do on my job	
Q21: I have much autonomy on my job and am left on my own to do my own work	
Q13: I feel that I am my own boss and do not have to double check all of my decisions	3.8
Q22: I seldom have to follow the same work methods or steps for doing my major tasks from day to day	3.4

(Continued)

Table 71 (Continued) : The Relating to Work Discretion a Significant Variance to the Employees

Description - Time Availability	Value
Q23: During the past three months, my work load was too heavy to spend time on developing new ideas	4.0
Q26: My job is structured so that I have very little time to think about wider company problems	3.9
Q27: I feel that I am always working with time constraints on my job	2.4

For the construct of employee intrapreneurial opportunities there was a broad range of scores, with 13 out of 25 statements falling at or below the median point of 3.5. The lowest combined employee average score was 2.2 and there was only one combined employee average score for this construct that was higher than 4.0 at 5.3.

Table 72 : The Combined Employee Average Score

Description - Employee Intrapreneurial Opportunity	Value
Q12: There is a lot of challenge in my job	5.3
Q49: Upper management encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track	2.7
Q51: Promotion usually follows the development of new and innovative ideas	2.4
Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.2

For variable lengths of service, the average employee scores for each period according to time served with the company were:

Table 73 : The Average Employee Scores for Each Period According to Time Served

< 1 year:	1 to 2 years:	2 to 5 years:	5 to 10 years:	> 10 years:
3.0 – 6.0	1.7 – 6.0	2.0 – 5.7	1.5 – 5.5	NA

For the variable length of service there were material differences found as a result of time served with the company. Out of 51 statements, the following received an average employee combined score at or above the median of 3.5:

Table 74 : The Variable of Service Were Material Time Average Employee

< 1 year: 46	1 to 2 years: 35	2 to 5 years: 32	5 to 10 years: 23	> 10 years: NA
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Period	Statement	Value
1-2 Yrs.	Q2: My company directors treat people with dignity and respect Q5: My company treats their employees as adults	6.0
	Q33: During the past year, my immediate supervisor discussed my work performance with me frequently Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system Q51: Promotion usually follows the development of new and innovative ideas	2.3

(Continued)

Table 74 (Continued) : The Variable of Service Were Material Time Average

## Employee

Period	Statement	Value
	Q14: Harsh criticism and punishment result from mistakes made at work	1.7
2-5 Yrs.	Q1: My company directors are approachable and easy to get on with Q2: My company directors treat people with dignity and respect Q3: My company directors support and help me to do the best job I can Q12: There is a lot of challenge in my job	5.7
	Q33: During the past year, my immediate supervisor discussed my work performance with me frequently Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.0
5-10 Yrs.	Q5: My company treats their employees as adults	5.5
	Q1: My company directors are approachable and easy to get on with Q12: There is a lot of challenge in my job, Q18: I have the freedom to decide what I do on my job and	5.0

(Continued)



Table 74 (Continued) : The Variable of Service Were Material Time Average

## Employee

Period	Statement	Value
	Q19: It is basically my own responsibility to decide how my job gets done	5.0
	Q41: Money is often available to get new project ideas off the ground Q45: A worker with a good idea is often given free time to develop that idea Q54: People are encouraged to talk to workers in other departments of this company about ideas for new projects	1.5

The average scores for all 51 statements according to time served with the company were found to be as follows:

Table 75 : The Average Scores for Statements According to Time With the Company Were Found

< 1 year:	1 to 2 years:	2 to 5 years:	5 to 10 years:	> 10 years:
4.5	3.8	4.0	3.2	4.4

### 5.3.5.2 Results employer strategic orientation questionnaire

For the construct strategic alignment the PDM answered 5 of the questions from a P stance, 2 from an A stance, 2 from D stance and 2 from a R stance. From the employee scores, 1 chose P (10%), 3 chose A (30%), 5 chose D (50%) and the remaining 1 opted for R (10%).

### 5.3.5.3 Summary and conclusions

A common trend is beginning to emerge with respect to decisions made by the participating companies PDM's not adequately explaining decisions they make that affect the employees work and/or their department. This is again the case at Company 6 with a score of 4.0, so only just above the median point of 3.5, whilst the other aspects of managerial support for innovation score highly. Despite this being a common theme, the data does not offer any obvious general conclusions as to the reason, neither do the employer interviews. One point that may be of relevance though, from the same communication perspective is the frequency with which employees receive feedback on their work performance. At Company 6, the employees scored this 2.3 so were in disagreement that this was a regular activity. The PDM, however, felt the score for this was 5.0 which reflected quite strong agreement. This is a good example of how feedback from the researcher has enabled the company to make small, incremental changes that could have a positive effect on employee engagement and Director and employee alignment.

As seen at Company 5, the employees disagreed that they had to follow many written rules and procedures (2.7) but, agreed that they knew what was expected of them in their job role. The PDM provided an insightful comment on this topic and introduced a necessity to increase written procedures when seeking accreditation within a standardized quality programme; I would score that with 2, but we are now under ISO9001 so these are going to increase". It could be argued that this may be necessary to fulfill customer requirements that they are trading with a recognized supplier within the framework of quality systems but equally it may well

hamper innovation thinking and creative activities. However, if the documented procedures reflect current practices, and those practices are accepted by the quality governing body, there should not be a highly negative impact on the positive responses recorded for the construct of work discretion. With some forethought and planning by the management team, they should still be able to retain the moderately high level of employee autonomy that exists currently for employees making the best use of their abilities, having the freedom to decide how they carry out their job tasks, and the independence to work without close supervision. It is interesting to note that whilst not substantially so, the employees did agree that from a time availability perspective they did have plenty of time to get everything done, they had a manageable workload and could find some time to spend on longer term problem solving with their co-workers.

Turning to intrapreneurial opportunities we learn that, akin to Company 4, there appears to be an absence of additional reward for innovative ideas and a lack of promotion opportunities for creative thinkers. Again, we must reflect carefully upon what this means in terms of intrapreneurial inclination and focus upon whether other need satisfaction requirements are acting as a healthy substitute. At Company 6 we may highlight the positive employee perceptions of how aware and receptive the company directors are to ideas and suggestions and the level of encouragement that is exhibited by them for innovative thinking. We should also consider the comments made by the PDM in respect of additional reward:

“I always try to avoid financial bonuses in any sense because I think financial motivation doesn't work in this industry. It has to be passion driven just because of

how much work and the hours so for example, we won (*a major event*) this year so every member of staff throughout the business was given quite an expensive gift. There is always a (*sizeable*) party for the staff departments and then we generally do another party as well for the staff which includes their friends and their family which is quite a big event and various other incentives through the year but avoid financial incentives. My thought is that we should pay probably slightly above the industry standard, but then not offer financial incentives.

We should acknowledge the word “passion” as used by the PDM in respect of a thought-provoking observation quoted by Cardon (2008; p83) in that “once passion is present and reinforced throughout an organization, it becomes contagious”. It is noteworthy that whilst the above employee recognition could appear to reflect a genuine, and generous, desire to reward excellence within the business, they are not perceived to be associated with individual performance or individual creativity. Overall, with a starting point of 5.0 for managerial support for innovation, this becomes diluted by the low scores above and such as those found for the risk element of the business resulting in intrapreneurial opportunities recording the median score of 3.5. The employees disagreed that term “risk taker” was considered a positive attribute (2.9) and that upper management encouraged innovators to bend rules and rigid procedures to keep promising ideas on track (2.7):

“Any employee that comes to us with an idea will always be considered but it will come down to the risk versus reward calculation and a proper discussion”.

One such idea materialized into reality at Company 6 when the employer interview revealed a case study intrapreneur. This was a very exciting research find

and the only example of intrapreneurship in the sense of an employee commencing a start-up business within an existing company that was found throughout the collaborating companies. What follows are the verbatim statements from the PDM:

“I can give you an example of that actually. We had a guy join us in (*engineering discipline*) who asked if he could set it up as a business. The investment was £ (*substantial 6 figure sum*) but we thought it would work. It is now a (*number of employees*) business. In fact, they are so skilled and have advanced so much that we now go outside of our business for this (*engineering discipline*) needs. It causes some issues internally but he has lots of business and we can get what we need going elsewhere and cheaper.

What we learn from this case study is that the PDM was presented with an opportunity for an intrapreneurial project within his business. It was highly unlikely that the employee could have obtained the financial backing for his innovation independently but this was met by the company. A significant aspect of remarkable success in this instance is that the intrapreneurial activity was not founded solely to support the core business requirements of Company 6 but to expand their service delivery within their niche sector. Currently over 90% of the work produced by this business unit is sold to external parties. The employee had the vision to identify the opportunity, the mathematical skills to deliver a highly sought after technical solution and the ability to communicate his talents within the industry. The employer had the vision to recognize the potential of the employee proposition, the business skills to manage the project within the core business and other employee expectations and the ability to gain the necessary funding required for it to commence. Finally we may

reflect on why, giving this would appear to be a great accomplishment for the company, it is not highly recognized by the other employees who scored the company's predisposition to use improved work methods at 3.8, and its predisposition to use improved work methods that are developed by workers at 3.6. This would suggest that even with an intrapreneurial project team in place, other employees may not cover the same opportunity, may be envious of the individual/opportunity or may underestimate the openings that exist for them to do likewise. Further indications of the desire to embrace innovative and shared thinking by the employees are evident in the employer interview:

“We are a small team so it important not to hold back the business or any of the guys if something new comes up or a new way of doing things”. “We are small, and I think we're very open. I think there's a lot of transition of ideas between (*engineering discipline*) there is a lot of knowledge transfer between the same elements of the business definitely”.

### **5.3.6 Company 7**

Company 7 was founded in 2002 by two individuals and specializing in the provision of technological solutions to the data collection industry through market leading software with a worldwide network of customers.

### 5.3.6.1 Results employee survey

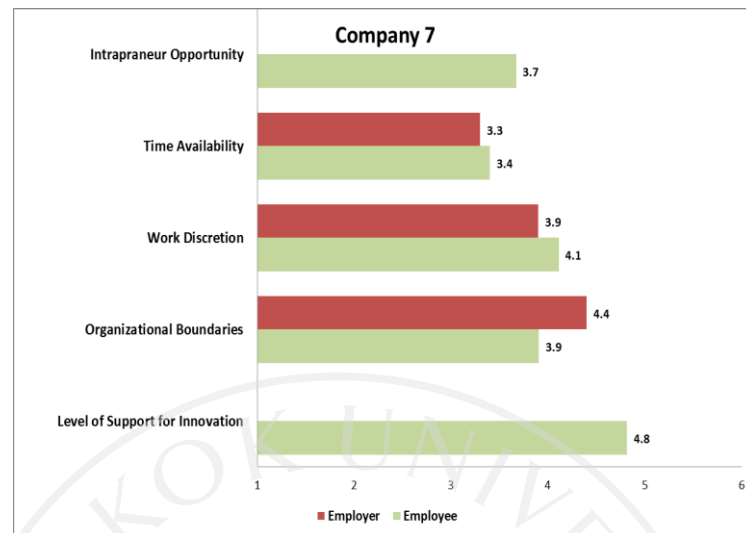


Figure 41 : Chart 7: Descriptive statistics – Company 7 (n = 9)

At Company 7, we can see a PDM level of support for innovation of 4.8 whilst the remaining constructs score at or above the median of 3.5. The opportunities for intrapreneurship are fairly low at 3.7. The average combined employee average scores for the combined constructs ranged from 2.6 to 5.4. For the construct of managerial level of support for innovation, the combined employee average scores ranged between 4.3 to 5.4, for organizational boundaries from 2.7 to 4.9, for work discretion from 3.3 and 4.6 and for time availability from 3.2 and 3.7. For the construct of employee intrapreneurial opportunities there was a broad range of scores between 2.6 and 4.7 with 10 out of 25 statements scores falling below the median point of 3.5.

Table 76 : The Construct of Employee Intrapreneurial Opportunities

Description - All Constructs	Value
Q1: My company directors are approachable and easy to get on with	5.4
Q43: The term risk-taker is considered a positive attribute for people in my work area	2.6
Description - Level of Support for Innovation	Value
Q1: My company directors are approachable and easy to get on with	5.4
Q4: My company directors do a good job of explaining decisions that affect me and my department	4.3
Description - Organizational Boundaries	Value
Q31: In my job I have no doubt of what is expected of me	4.9
Q30: There are many written rules and procedures that exist for doing my tasks	2.7
Description - Work Discretion	Value
Q16: Company 7 provide freedom to use my own judgment and Q17: Company 7 provide the chance to do something that makes use of my abilities	4.6
Q14: Harsh criticism and punishment result from mistakes made at work	3.3
Description - Time Availability	Value
Q23: During the past three months, my work load was too heavy to spend time on developing new ideas	3.7

(Continued)



Table 76 (Continued) : The Construct of Employee Intrapreneurial Opportunities

Description - Time Availability	Value
Q27: I feel that I am always working with time constraints on my job	3.6
Q26: My job is structured so that I have very little time to think about wider company problems	3.2
Description - Employee Intrapreneurial Opportunity	Value
Q12: There is a lot of challenge in my job	4.7
Q47: The company directors are aware and very receptive to my ideas and suggestions	4.5
Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.9
Q43: The term risk taker is considered a positive attribute for people in my work area	2.6

There were no significant inconsistencies identified in the scores recorded by the employees compared to those recorded from the Director for the constructs of time availability, work discretion and organizational boundaries. For variable lengths of service, the average employee scores for each period according to time served with the company were:

Table 77 : Lengths of Service, the Average Employee Scores for Each Period

According to Time Served

< 1 year: 2.2– 5.3	2 to 5 years: 2.0 – 5.7	5 to 10 years: 1.5 – 5.5
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For the variable length of service there were material differences found as a result of time served with the company.

Out of 51 statements, the following received an average employee combined score at or above the median of 3.5:

Table 78 : The Received an Average Employee Combined Score

< 1 year: 34	1 to 2 years: 22	2 to 5 years: 49
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There was only one employee who had been with the company for 1 to 2 years so is excluded from the data table below.

Table 79 : The Received an Average Employee Combined Score

Period	Statement	Value
<1 Yr.	Q1: My company directors are approachable and easy to get on with	5.3
	Q5: My company treats their employees as adults	5.0
	Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas	2.3
	Q43: The term risk taker is considered a positive attribute for people in my work area	2.2

(Continued)

Table 79 (Continued) : The Received an Average Employee Combined Score

Period	Statement	Value			
2-5 Yrs.	<p>Q1: My company directors are approachable and easy to get on with</p> <p>Q3: My company directors support and help me to do the best job I can</p> <p>Q13: I feel that I am my own boss and do not have to double check all of my decisions</p> <p>Q15: Company 7 provide the chance to be creative and try my own methods of doing the job</p> <p>Q16: Company 7 provide freedom to use my own judgment</p> <p>Q18: I have the freedom to decide what I do on my job</p> <p>Q21: I have much autonomy on my job and am left on my own to do my own work</p> <p>Q38: at Company 7 developing one's own ideas is encouraged for the improvement of the company</p>	6.0			
	<p>Q14: Harsh criticism and punishment result from mistakes made at work</p> <p>Q27: I feel that I am always working with time constraints on my job</p> <p>Q30: There are many written rules and procedures that exist for doing my major tasks</p>	2.5			
	<table border="1"> <tr> <td>&lt; 1 year: 3.6</td> <td>1 to 2 years: 3.5</td> <td>2 to 5 years: 5.0</td> </tr> </table>	< 1 year: 3.6	1 to 2 years: 3.5	2 to 5 years: 5.0	
< 1 year: 3.6	1 to 2 years: 3.5	2 to 5 years: 5.0			

### 5.3.6.2 Results from Employer Strategic Orientation Questionnaire

For the construct strategic alignment the primary decision maker (PDM) gave 3 answers that reflected a P stance, 3 answers that indicated an A stance and 5 questions that expressed a R stance. From the employee scores, 1 perceived the strategic orientation as P (11%), whilst 3 thought A (33%), 4 selected D (45%) and 1 opted for R (11%).

### 5.3.6.3 Summary and Conclusions

It is interesting to note that again the lowest score found for the PDM level of support for innovation was in their communications with employees (4.3), but surprisingly, the extent to which employees considered they genuinely cared about their welfare was only marginally higher (4.6). Whilst this may not be considered a “low” score it may reflect a behavior of the PDM which is interpreted by the team in a less positive way than may have been intended. A similar observation can be made of a score of 4.8 for the perception of the degree of dignity and respect that the employees receive. With the knowledge gained from this research activity this is an area that is very easily addressed if higher scores are desired from the workforce as the company operates with a very flat structure:

“There are two Directors and all of the staff are direct reports into one of the two of us”.

Within the construct of organizational boundaries we learn that the staff are not overly burdened with written rules, regulations and procedures, and for work discretion there is a good tolerance for errors made at work within a structure that the employees deem empowers them to use their own judgement and aims to provide

opportunities for them to make use of their skills. The above represent positive indicators for an optimism in employee creativity and individual resourcefulness as discussed in the literature of Menzel et al (2006, p.20) for “entrepreneurial behavior to emerge”, and Maier & Pop Zenovia (2011, p.972) “hierarchies “compel employees to ask permission for actions that fall outside their daily duties.” Within the employer interview the question was raised into a potential open-mindedness to employees who would like to be risk-takers and may seek to champion projects that are unlikely to have a successful outcome. This was specifically in respect of how the PDM would respond to such a situation and whether there was a way to mitigate the employee negativity that might be expressed by rejection. The response could be considered to be favorably open-minded and suggested that all ideas are given attention and deliberation:

“I would very much want that feedback because essentially how we define our strategy might be right across the board on average but in terms of employee engagement it’s probably not going to be ideal. So if you’ve got someone with courage and a good relationship with the customer in understanding exactly what they require and comes back with “this is what I think we should look at”, I absolutely wouldn’t dismiss it. Whether we’ve got the capability or the resources and the inclination to delivery exactly that, that would be the question for me and whether it’s profitable. So, I absolutely wouldn’t dismiss things out of hand, I would encourage it. That to me is the value-add of the personalities and the relationships where they really understand what a customer needs and they’re prepared to come up with something slightly different. They may not have come up with the best solution but if they are

bringing back a requirement and we can look at it as a business and what we can do with our skills, great, and I will support that. That is how we've got our best engagements, from somebody talking to a customer and coming back with some requirements”.

From this statement we also learn that Company 7 has adopted a strategy of customer involvement in new product development. This was not overtly communicated to the researcher by any of the other collaborating companies and is a stance which cannot be underestimated in terms of its prospective worth to a SME business as it reflects a tactic that has proved to be valuable in other enterprises (Bughin, Chui & Johnson, 2008) and Florida & Goodnight (2005) cite the company SAS, a global business analytics software and service provider, as an exemplary example of creativity and innovation through customer collaboration by positively and consistently seeking consumer feedback and involving them directly in the research and design process. Company 7 seem to have a good approach to engaging their employees and clients in the innovation process. Areas that will necessarily be less straightforward to improve upon are those identified as financial constraints in that growth can be achieved by continuing to invest in low capital product and projects as we learnt from the PDM interview:

“We're not talking about heavily capital-invested projects where we've got a big margin. We deal in *product* so small investments of hundreds of pounds not thousands of pounds so relatively small. If we get an opportunity that runs into thousands of pounds or more then that is a no-brainer”. (This is a slang expression in the UK used in this context to express there is no chance at all of doing something).

### 5.3.7 Company 8

Company 8 was founded in December 2001 and specialize in a range of innovative fabricated products and associated services.

#### 5.3.7.1 Results Employee Survey

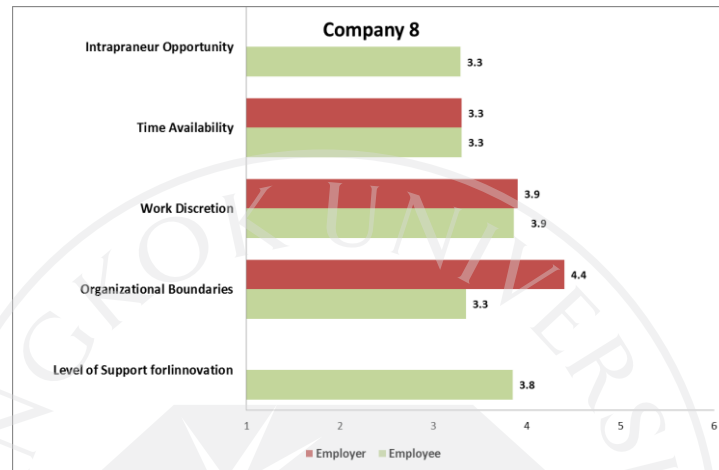


Figure 42 : Chart 8: Descriptive statistics – Company 8 (n = 12)

At Company 8, we see a relatively low level of primary decision maker (PDM) support for innovation at 3.8 with construct scores of less than the median of 3.5 for organization boundaries at 3.3 and intrapreneur opportunity and time availability at 3.3. The average combined employee scores for the combined constructs ranged from 2.1 to 4.6.

Table 78 : The Average Combined Employee Scores for the Combined Constructs

Description - All Constructs	Value
Q6: My company directors seem to genuinely care about the welfare of employees	4.6
Q50: Promotion usually follows the development of new and innovative ideas	2.1

For the construct of managerial level of support for innovation, the combined employee average scores ranged between 3.3 and 4.6, for organizational boundaries

from 2.2 to 4.4, for work discretion from 2.9 to 4.3 and for time availability from 3.3 to 4.4.

Table 79 : Employee Average Scores Ranged Organizational Boundaries

Description - Level of Support for Innovation	Value
Q6: My company directors seem to genuinely care about the welfare of employees	4.6
Q4: My company directors do a good job of explaining decisions that affect me and my department	3.3
Description - Organizational Boundaries	Value
Q31: In my job I have no doubt of what is expected of me	4.4
Q33: During the past year, my immediate supervisor discussed my work performance with me frequently	2.2
Description - Work Discretion	Value
Q19: It is basically my own responsibility to decide how my job gets done	4.3
Q14: Harsh criticism and punishment result from mistakes made at work	2.9
Description - Time Availability	Value
Q23: During the past three months, my work load was too heavy to spend time on developing new ideas	4.4
Q26: My job is structured so that I have very little time to think about wider company problems	2.7
Q24: I always seem to have plenty of time to get everything done	2.9



For the construct of employee intrapreneurial opportunities the scores ranged from 2.1 to 4.0 with 16 out of 25 statement scores falling at or below the median point of 3.5.

Table 80 : The Construct of Employee Intrapreneurial Opportunities the Scores Ranged

Description - Employee Intrapreneurial Opportunity	Value
Q39: The employees are allowed to make decisions on projects without going through elaborate justification and approval procedures	4.0
Q38: At Company 8 developing one's own ideas is encouraged for the improvement of the company	3.9
Q12: There is a lot of challenge in my job, Q37: Company 8 is quick to use improved work methods that are developed by workers Q54: People are encouraged to talk to workers in other departments of this company about ideas for new projects	3.8
Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas	2.3
Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.1

The most significant inconsistency identified in the combined scores recorded by the employees compared to those recorded from the primary decision maker

(PDM) was found at organizational boundaries with 4.4 (PDM) compared to 3.3 (employees).

For the variable length of service, there were no employees that had served less than one year with the company and one employee who had served between one and two years with the company. The average employee scores for each period according to time served with the company were:

Table 81 : The Average Employee Scores for Each Period According

2 to 5 years:	5 to 10 years:	> 10 years:
2.0 – 4.8	2.3 – 4.3	1.0 – 5.7

For the variable length of service there were material differences found as a result of time served with the company. Out of 51 statements, the following received an average employee combined score at or above the median of 3.5:

Table 82 : The Received an Average Employee Combined Score

1 to 2 years: 40	2 to 5 years: 21	5 to 10 years: 27	> 10 years: 29
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Period	Statement	Value
2-5 Yrs.	Q6: My company directors seem to genuinely care about the welfare of employees	4.8
	Q36: Company 8 is quick to use improved work methods Q45: A worker with a good idea is often given free time to develop that idea	2.3

(Continued)

Table 82 (Continued) : The Received an Average Employee Combined Score

Period	Statement	Value
2-5 Yrs.	Q6: My company directors seem to genuinely care about the welfare of employees	4.8
	Q36: Company 8 is quick to use improved work methods Q45: A worker with a good idea is often given free time to develop that idea Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.3
	Q33: During the past year, my immediate supervisor discussed my work performance with me frequently	2.0
5-10 Yrs.	Q6: My company directors seem to genuinely care about the welfare of employees Q36: Company 8 is quick to use improved work methods Q37: Company 8 is quick to use improved work methods that are developed by employees	4.3
	Q14: Harsh criticism and punishment result from mistakes made at work Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas	2.5

(Continued)

Table 82 (Continued) : The Received an Average Employee Combined Score

Period	Statement	Value
	Q52: Individual risk takers are often recognized for their willingness to champion new projects, whether eventually successful or not	
	Q33: During the past year, my immediate supervisor discussed my work performance with me frequently	2.3
>10 Yrs.	Q19: It is basically my own responsibility to decide how my job gets done	5.7
	Q16: Company 8 provide freedom to use my own judgment Q18: I have the freedom to decide what I do on my job Q20: I almost always get to decide what I do on my job Q21: I have much autonomy on my job and am left on my own to do my own work Q31: In my job I have no doubt of what is expected of me	5.0
	Q51: Promotion usually follows the development of new and innovative ideas	1.3
	Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	1.0

The average scores for all 51 statements according to time served with the company were found to be as follows:

Table 83 : The Average Scores Statements According to Time Served

1 to 2 years: 4.5	2 to 5 years: 3.3	5 to 10 years: 3.4	> 10 years: 3.6
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### 5.3.7.2 Results from employer strategic orientation questionnaire

From the PDM perspective, 1 of the answers reflected a P stance, 3 an A stance, 2 a D stance and 5 a R stance. From the employee scores, 1 thought P, (8%) 4 selected A (33%), 5 chose D (42%) and the remaining 2 opted for R (17%).

### 5.3.7.3 Summary and conclusions

With a score of 3.8 for the level of support for innovation, Company 8 falls below what one might reasonably expect of a company that was quoted by the PDM as saying:

“We’re looking to replace 30% of our product over the next 12 months, you know, replacing, updating” and “we do operate a R&D development program as well so we have an R&D program that we do develop.”

As such, the intent for renewal and development as a supplier of an innovative product is evident, but the perceptions of the employees do not reflect that being achievable within the current organizational boundaries and time availability. In some respects, neither do the behaviors of actions of the PDM for whom the average score for approachability, support, communication and the way employees generally felt treated in terms of respect and dignity was 3.6. When asked whether employees looked to him for inspiration and innovative thinking to improve the business or came to him with new ideas, the answer was “basically they look to me automatically”. This is interesting in that we learnt from a study conducted by Scozzi, Garavelli &

Crowston (2005) that entrepreneurs felt that most innovative initiatives or original ideas came primarily from them, not the workforce or third party collaborations.

Similarly, there are other verbatim comments that could lead us to conclude the employees seem to feel somewhat remote from the PDM who seems content to delegate authority through the line managers. When asked how extensive the PDM felt the approval procedures were for individuals working on innovative projects and if, bearing in mind there are 15 employees, they could not or did not approach him directly, the response received was:

“Yes, they go through people in-between. Basically, we’ve got a team leader and a design and engineering department as well so the supervisor in design or engineering would have a look at it in terms of feasibility, then I’ve got an engineering coordinator who also does feasibility as well”.

A suggested lack of regular close contact and communication with the PDM was found when asked if the managers or senior employees made him aware of an employee who had found a creative solution to a problem:

“I do encourage that. However, I do encourage them to manage their area themselves. Basically they own their part of the factory, they are the factory, so as far as I am concerned they are the boss, their people work for them and as long as they are successful I’m happy”.

This devolution of communication and feedback mechanisms through other employees may suggest that Company 8 is less likely to fulfill or exceed the entrepreneurial innovation vision as they are somewhat removed from the source of that vision. Again, with 15 employees it difficult to understand from the information

available why this might be, other than it is the PDM's choice to lead in this way.

What does emerge from this behavioral stance, whether consciously or sub-consciously acted, is a similar lack of connection between the team of employees by what one could consider to be a "mirroring" of the PDM's approach. Within the construct of organizational boundaries, the combined employee average lowest score received was 2.2 when asked the frequency with which their immediate supervisor discussed their work performance with them. Furthermore, through another observations identified in the employer interview there is a suggestion that a desire to communicate and share ideas may be under-utilized within the team, and this could ultimately encompass knowledge and creativity becoming unrecognized and unrealized. For example, from a project perspective we understand that objectives are set and measured as would be expected in a manufacturing environment:

"We have workshop meeting where all of the objectives are set out for the day. There's a weekly project meeting to measure the adherence to the overall plan and then any issues are addressed either there or at other meetings to discuss whatever issues have been dragged up and that can be if they haven't performed, and if they haven't performed because of the tools then hopefully; you know I've been late in from work and all that sort of thing; so we act as quickly as we can whenever we can. Some projects take a little bit longer to resolve".

However, these interactions may be considered to be largely project and customer centric and this does not appear to be balanced by any employee centric attention at PDM level which may in part also explain why Q3; (my company directors support and help me to do the best job I can) scored barely above the median

at 3.6, and Q1; (my company directors are approachable and easy to get on with) scored 3.7. These could both be considered low scores in the context of the questions asked. This is compounded when we consider the PDM's view on the extent to which employees are inclined to want to share ideas with other departments (or individuals) in the company:

“They get a bit daunted. However, if you are open and transparent as a management team and you can put that forward across to the people they seem to be reasonably keen to do that”.

A pertinent observation could be the use of the word “if”, suggesting it could be the case, but isn't necessarily so. When we look again to the analysis of literature undertaken, we discussed examples which would support an argument that such distance from the leader and ultimate decision maker is not conducive to the encouragement of intrapreneurship, typically that a SME can generally be more flexible with fewer reporting lines and the ability for the PDM and management to communicate their vision and expectations more directly with their workforce (Molina & Callahan, 2009)

Finally, although we learn that time availability is an issue at Company 8, a score of 4.4 for Q23; (during the past three months, my work load was too heavy to spend time on developing new ideas) and 4.3 for Q26; (my job is structured so that I have very little time to think about wider company problems), the employees disagree (score 2.9) that harsh criticism and punishment result from mistakes made at work. In respect of experimentation leading to a degree of failure, there is evidence that a



tolerance exists but we cannot ignore the fact there is a financial incentive from the UK government in place for the company to do so:

“I don’t have an issue with that. If you don’t try something you’ll never know, and a lot of experience can be good, or bad, it depends what you take out of it. The other thing that’s important is if there is something to be learnt from doing something and also part of the tax credit criteria is that they expect you to have some failure as well. They won’t just pay out on projects that have been successful. Yes, they like to see a couple of projects that have gone south (this is a slang expression in the UK for failing or failed) because you’re taking the risk. Yes, you’re taking the risk so they’ll try to help you along because if they don’t; they would rather expect rather than we don’t do things that we try things”.

In summary, we cannot find many positive interpretations from the data collected at Company 8 to suggest they are well positioned for the growth objectives they desire, or to encompass intrapreneurship as a vehicle to complement those goals. As Scozzi, Garavelli & Crowston (2005) proposed, smaller businesses will usually provide a high level of communication in a less complex management structure enabling greater aware and inclusion for its employees. At Company 8 this does not seem to be the case.

### **5.3.8 Company 9**

Company 9 was founded in the UK in 2012. It specializes in advanced engineering concepts. The Deed of Confidentiality signed when undertaking this research collaboration precludes any further information being available in this dissertation.

### 5.3.8.1 Results Employee Survey

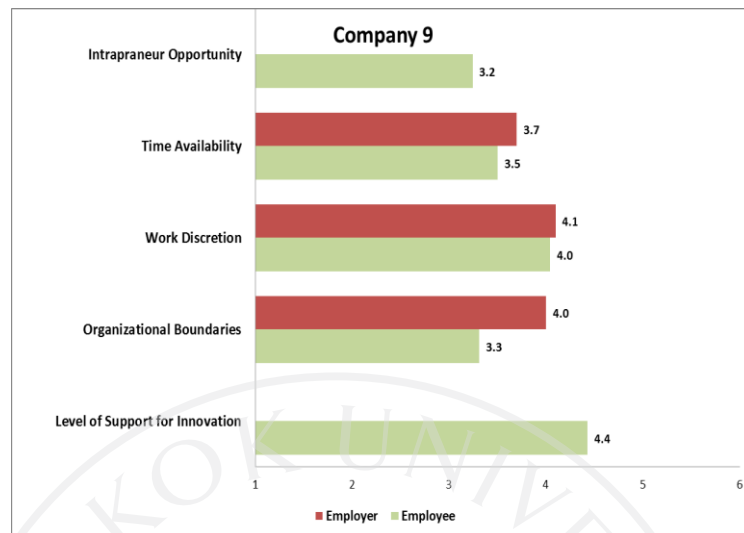


Figure 43 : Chart 9: Descriptive Statistics – Company 9 (n = 65)

At Company 9 we see a score of primary decision maker (PDM) level of support for innovation of 4.4 with two of the remaining constructs scoring below the median of 3.5, organisation boundaries at 3.3 and intrapreneurial opportunities at 3.2. The combined employee average scores for the combined constructs ranged from a low of 2.2 to and high of 4.9.

Table 84 : Decision Innovation Constructs The Combined Employee

Description - All Constructs	Value
Q2: My manager treats people with dignity and respect	4.9
Q50: Individuals with successful innovation projects receive additional reward and compensation for their ideas and effort	2.2

For the construct of managerial level of support for innovation the scores ranged from 4.0 and to 4.9, for organizational boundaries from 2.4 to 4.1, for work discretion from 2.8 to 4.6, for time availability from 2.8 to 4.5.

Table 85 : The Construct of Managerial Level Support for Innovation the Discretion

Description - Level of Support for Innovation	Value
Q2: My manager treats people with dignity and respect	4.9
Q1: My manager is approachable and easy to get on with	4.8
Q4: My manager does a good job of explaining decisions that affect me and my department	4.0
Description - Organizational Boundaries	Value
Q31: In my job I have no doubt of what is expected of me	4.1
Q30: There are many written rules and procedures that exist for doing my tasks	2.4
Description - Work Discretion	Value
Q21: I have much autonomy on my job and am left on my own to do my own work	4.6
Q16: Company 9 provide freedom to use my own judgment	4.5
Q14: Harsh criticism and punishment result from mistakes made at work	2.8
Description - Time Availability	Value
Q23: During the past three months, my work load was too heavy to spend time on developing new ideas	4.5
Q27: I feel that I am always working with time constraints on my job	
Q26: My job is structured so that I have very little time to think about wider company problem	2.8

For the construct of employee intrapreneurial opportunities there was a broad range of combined employee scores between 2.2 to 5.2 with 17 out of 25 statement scores falling below the median point of 3.5.

Table 86 : The Construct of Employee Intrapreneurial Opportunities

Description - Employee Intrapreneurial Opportunity	Value
Q12: There is a lot of challenge in my job	5.2
Q47: My manager is aware and very receptive to my ideas and suggestions	4.0
Q45: An employee with a good idea is often given free time to develop that idea	2.6
Q41: Money is often available to get new project ideas off the ground Q42: There are several options within the company for individuals to get financial support for their innovative projects and ideas Q51: Promotion usually follows the development of new and innovative ideas	2.4
Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	2.2

For variable lengths of service, the average employee scores for each period according to time served with the company were:

Table 87 : The Average Employee Scores for Each Period According to Time Served

< 1 year:	1 to 2 years:	2 to 5 years:
2.6 – 5.4	2.0 – 5.7	1.8 – 5.4

For the variable length of service there were material differences found as a result of time served with the company. Out of 51 statements, the following received an average employee combined score at or above the median of 3.5:

Table 88 : The Service Result of Received an Average Employee Combined Score

< 1 year: 38	1 to 2 years: 37	2 to 5 years: 29
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Period	Statement	Value
<1 Yr.	Q12: There is a lot of challenge in my job	5.4
	Q1: My manager is approachable and easy to get on with	5.2
	Q14: Harsh criticism and punishment result from mistakes made at work	2.7
	Q30: There are many written rules and procedures that exist for doing my major tasks	2.6
1-2 Yrs.	Q2: My manager treats people with dignity and respect	5.7
	Q1: My manager is approachable and easy to get on with Q19: It is basically my own responsibility to decide how my job gets done	5.3
	Q29: In the past three months, I have always followed standard operating procedures or practices to do my major tasks	2.3
	Q14: Harsh criticism and punishment result from mistakes made at work Q30: There are many written rules and procedures that exist for doing my major tasks	2.0

(Continued)

Table 88(Continued) : The Service Result of Received an Average Employee

## Combined Score

Period	Statement	Value
2-5 Yrs.	Q12: There is a lot of challenge in my job Q23: During the past three months, my work load was too heavy to spend time on developing new ideas Q27: I feel that I am always working with time constraints on my job	5.4
	Q2: My manager treats people with dignity and respect Q13: I feel that I am my own boss and do not have to double check all of my decisions	4.8
	Q41: Money is often available to get new project ideas off the ground Q42: There several options within the company for individuals to get financial support for their innovative projects and ideas Q51: Promotion usually follows the development of new and innovative ideas	2.0
	Q50: Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system	1.8

At Company 9 there is no disparity in the overall scores received from employees with up to two years of service. After that there is a slight drop:

Table 89 : The Scores Received from Employees to Two Years of Service

<1 year: 4.0	1 to 2 years: 4.0	2 to 5 years: 3.7
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### 5.3.8.2 Results from Employer Strategic Orientation Questionnaire

From the PDM perspective, 4 of the answers given reflected a P stance, 5 an A stance, 1 a D stance and 1 a R stance. From the employee scores, 30 expressed P (43%), 10 declared A (14%), 8 thought D (17%) and 17 stated R (26%).

### 5.3.8.3 Summary and Conclusions

One of the first factors we note at Company 9 is that there are no scores in the category of managerial support over 4.9. Communication of decisions affecting employees and/or their department is again a low scoring question in this construct along with the degree to which employees feel they are respected/treated as adults at 4.9. Whilst scores in this range are not comparatively low compared to the other constructs, they are noteworthy in that they reflect the actions or behaviors of the company management which is an important aspect of this dissertation. Furthermore, that this construct is the most easily remedied to reflect a greater degree of confidence from the workforce if that was considered desirable.

Turning to the construct of work discretion we saw positive scores for questions that encompass autonomy, the use of employee skills and the freedom to use their own judgement without a high degree of supervision. This is in alignment with the scores recorded from the interview with the PDM. Within the construct of organizational boundaries we saw relatively low employee average scores, with 5 out

of the 7 questions recorded at below the median of 3.5, primarily those pertaining to employee feedback on the performance standards expected of them and the frequency with which their performance is discussed with them. Again, there is an appreciation of this being an area of concern by the PDM who also scored this construct below the median at 3.3. We have reported mixed findings for the construct intrapreneur opportunity levels with a range of scores from 2.2 to 5.2. The lowest score, for additional reward or recognition for innovative employee ideas and efforts requires some contemplation as this could embrace both extrinsic and intrinsic motivational actions by the company. When we turn to Q48; (employees who come up with innovative ideas on their own often receive management encouragement for their activities), we find a higher range of scores at 3.1 to 3.8 for what could be considered purely intrinsic motivational behaviors by the PDM.

Our analysis of the literature discussed the merits of intrinsic and extrinsic rewards identifying that extrinsic rewards are received in the form of remuneration packages and incentive schemes; intrinsic rewards result from the work itself, particularly its meaningfulness to the employee (Amabile 1998 and Pullins et al 2000). In respect of the comments received from the PDM it would appear that attention is paid to activities that would be considered intrinsic rewards:

“In terms of personal engagement I talk to people and by an email with a wide circulation as well. We also have a bi-monthly all staff update for all Company 9 projects and in discussing the projects we make special mention of people who have contributed and maybe give them a contribution as well”.



It remained unclear how “a contribution” to the employee was defined and whether it was executed with any degree of frequency, but from the strength of employee feelings that there was little recognition for innovation, we may assume that some extrinsic compensation may be desired or expected for them to truly espouse an intrapreneurial stance. This was not reflected in some of our analysis of the literature. For example, Bassett-Jones & Lloyd (2005) suggest that money and recognition may not be significant aspects for stimulating employees to be innovative and intrinsic drivers outweigh extrinsic drivers. Markova & Ford (2011) purport that intrinsic motivation mediates the relationship between non-monetary rewards, performance and innovation whilst extrinsic rewards diminish inherent interest in a task and lower intrinsic motivation. To conclude our findings on reward mechanisms at Company 9, it was evident that a bonus scheme existed for idea generation, and although very few employees were currently part of this it was a situation that was under scrutiny by the PDM:

“I would say there are probably half a dozen people in this business that are more likely to be paid and it’s probably more biased towards bringing in *engineering discipline* work rather than any idea, but often that *engineering discipline* work you’re bringing in an idea or a concept as well. We don’t have anything broader as an organization as a whole but we have a lot of debate about that. What we do as a commercial business is find that everybody says yes that is a good idea forgetting about the actual project on the table so there has to be a balance there as a whole. It is something that we discuss, it is something that we may do in the future but we are not in that position yet”.

The highest scoring question in the construct of intrapreneurial opportunities was found to be the degree of challenge employees obtained from their roles and work tasks. This was consistent across the time served variable with scores ranging from 5.4 (less than one year), 5.0 (between one and two years) and 5.4 (between two and five years). We have already discussed how essential this aspect of employee engagement is to stimulate intrapreneurial thinking and we can draw upon the opinions of the PDM to understand how this is achieved at Company 9:

“I think it’s a combination of things. A combination of the number of people on a project, the constant rigor and debate we have about how to deal with the customer satisfactorily and of course we have very high profile customers which means quite high expectations. And, that’s all driving the dynamics so it’s not necessarily all coming from our own operations but it’s also coming from our customers that are equally demanding in terms of pressure or expectations so I think there’s a known reason as to why people are challenged. The reason we’re involved in the number of projects we are, is that companies come to us on occasions to provide solutions to work that has been carried out elsewhere. So by the sheer nature of that, you know, they aren’t always straightforward. I don’t think we have any straightforward projects either through content or time or the project requirements. On a couple of occasions it’s a bit scary as well because in terms of technical solutions at what point are you over challenged and the people close to the projects need to manage that”.

We can also report that when asked how the PDM would react to a well-intentioned experimentation or creativity by an employee leading to failure the response was balanced in terms of risk versus demotivation:

“I think the first thing is to be able to review that and to have a good understanding about why that’s happened and how it has happened. On the basis of learning from that I would put the point forward that that is acceptable on one or two occasions but if it’s a routine or repetitive issue then that needs to be addressed in some way. Customers are relying on reliability as well but we’re generally supportive. My view is if you’re not trying hard enough you don’t make mistakes”.

In summary, we would suggest that Company 9 has many of the prospective ingredients for intrapreneurial opportunities to exist but is not currently at the stage of maturity to fully realise the potential of them. Furthermore, that there is willingness evident from the PDM for a future state that will be more conducive to the encouragement of corporate entrepreneurship as a tenet of the business.

### **5.3.9 Summary**

As acknowledged in the research methodology chapter of this dissertation, data was collected using 3 separate instruments and we only considered this task finished when all were completed at each company on a one-by-one basis. To avoid any potential bias or leading on the researcher’s part, the employee data, although in the main gathered first, was not analyzed at the point when the employer interview took place so the researcher was completely unaware of the content of the employee responses. Based on the verbatim comments received from the company PDM a more positive position was observed in their confidence levels than was generally reflected

in their employee scores. In reality, this was sometimes met with considerable disappointment when the employee results were made available but, this allowed the researcher to make their participation truly collaborative by offering many suggestions and any assistance required from a tactical perspective to improve any aspects of the business that formed part of the survey on a pro-bono basis. In this respect we turn to the employee note of thanks for their participation (appendix 14) that was written by the researcher but sent from each employer to their team, and one paragraph in particular:

“Please remember that this is not just a one-off activity to stimulate thought and gain your views. We would like that to be an on-going process without the formality of surveys. As such, please try to think more about the questions raised and do make any of the Directors aware of your own thoughts for not only improving the way we may do things on a regular basis but how we may adopt new ideas as we grow”.

Through this missive we had attempted to ensure that the possibility of any similar surprises to the PDM would be minimized in the future. The variable of time served is not included within the boundaries of this research study in respect of the research questions or hypotheses. Its inclusion in the employee survey instrument was solely to provide an additional layer of insight to the participating companies in order that they could more fully understand any potential impact of this variable within their organizational culture as perceived by employees with differing lengths of time served. As such, it added value to the case study businesses when determining a strategy to address some of the survey findings presented to them. The output data for

this variable has therefore, been confined to our report of the descriptive statistics for each company.

At the introduction and within the analysis of literature sections of this dissertation we acknowledged that an SME business can be considered “unique” (Simpson, Padmore & Newman, 2012) As such, to aim to draw direct comparisons between the companies reported in this investigative research study would not be very meaningful as we have so many variables to consider that are not within the boundaries of our research objectives. For example, to confine to what we consider a reasonable exploration of the field, we did not seek to include the gender, age or background of the entrepreneur primary decision maker (PDM). Although the companies may be grouped as technologically innovative and operating in highly competitive industry sectors there remains a great diversity between them. We have introduced a company that has been trading for 3 years to one that has been trading for over 100 years; we have companies with no share-holding directors outside of the founder(s) or their generations of offspring to those which have sought external expertise to assist in their business growth objectives; we have companies that were founded by one individual and others by more than one individual; we have companies with employees with over 10 years of service and companies with employees with a maximum of 2 to 5 years of service. This all amounts to what would become both tenuous and confused linkages if we attempt to categorize our findings by comparing them in respect of the research questions and hypotheses.

The one thing we cannot ignore is despite the lack of comparability in terms of the profiles of the collaborating businesses as noted above, we recorded relatively

high scores for construct 1, the level of support for innovation (chart 10) but the corresponding scores for construct 5, intrapreneur opportunity levels (chart 11) can be considered low in most cases. The relative scores for construct 2, organizational boundaries (chart 12), construct 3, work discretion (chart 13) and construct 4, time availability (chart 14) are all presented below for information. Following this a correlation matrix is provided for consideration. Finally, for each construct we have depicted the average values, standard deviation, kurtosis and skewness values at table 90.

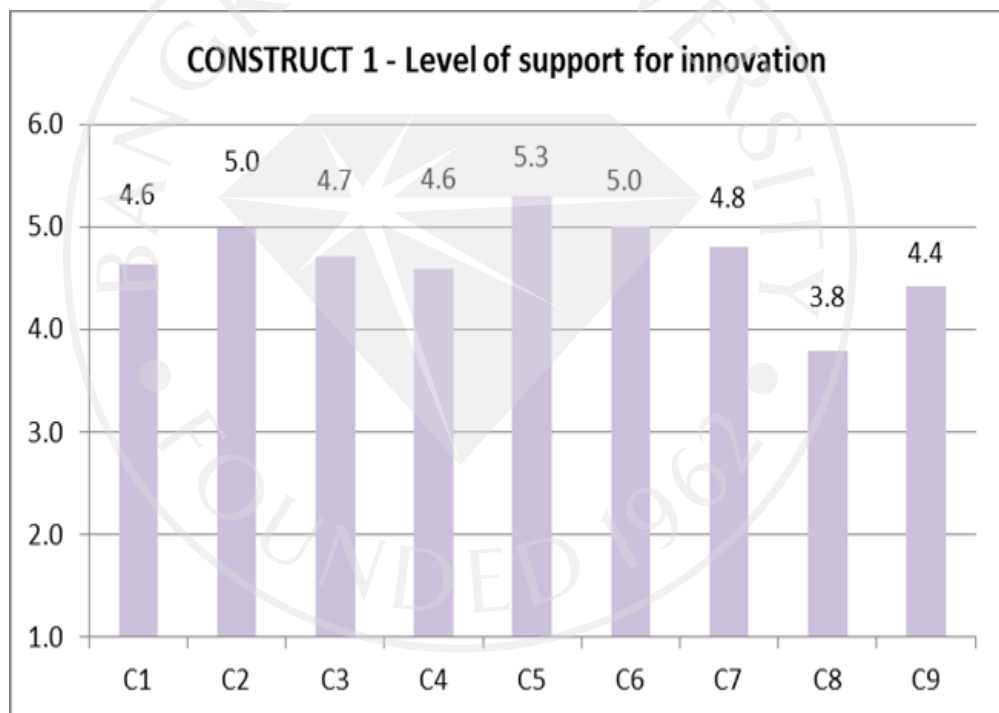


Figure 44 : Chart 10: Descriptive statistics level of support for innovation (n = 163)

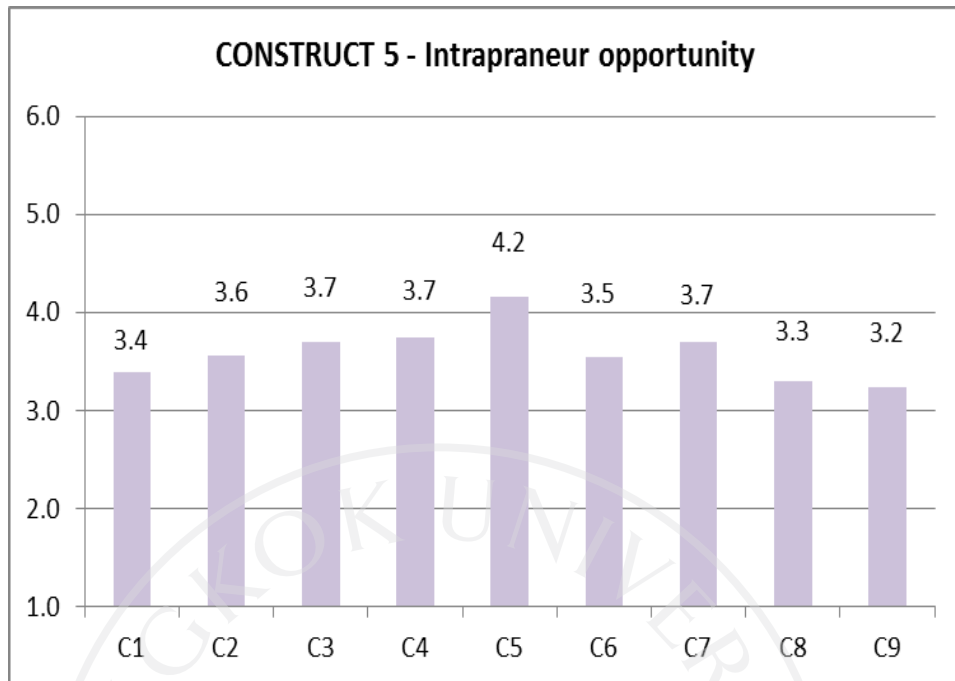


Figure 45 : Chart 11: Descriptive statistics intrapreneur opportunity (n = 163)

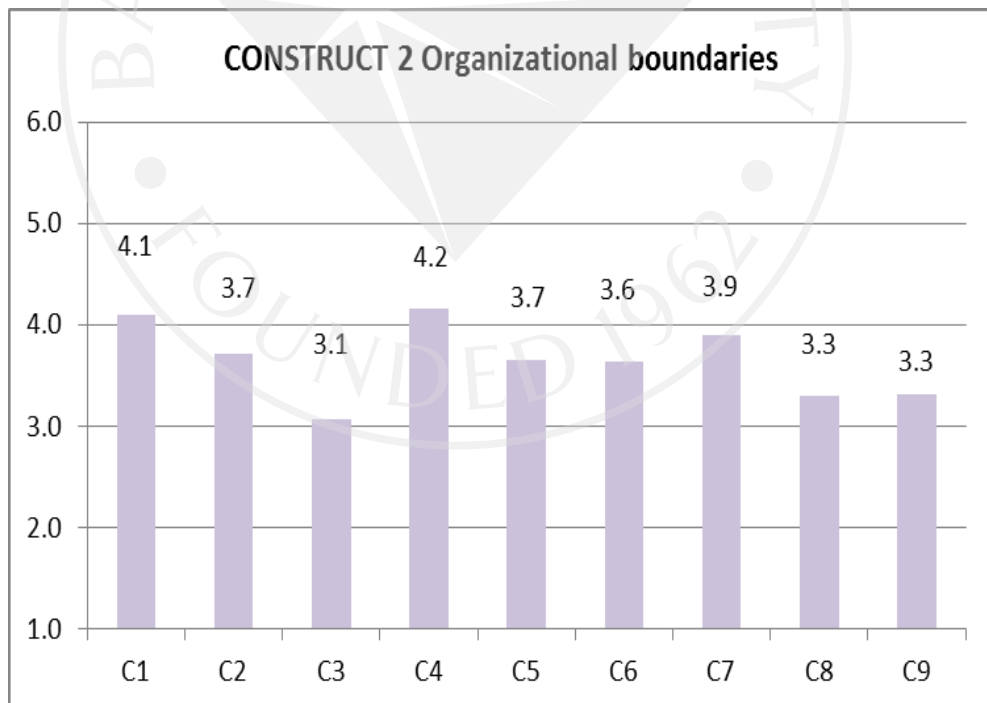


Figure 46 : Chart 12: Descriptive statistics organizational boundaries (n = 163)

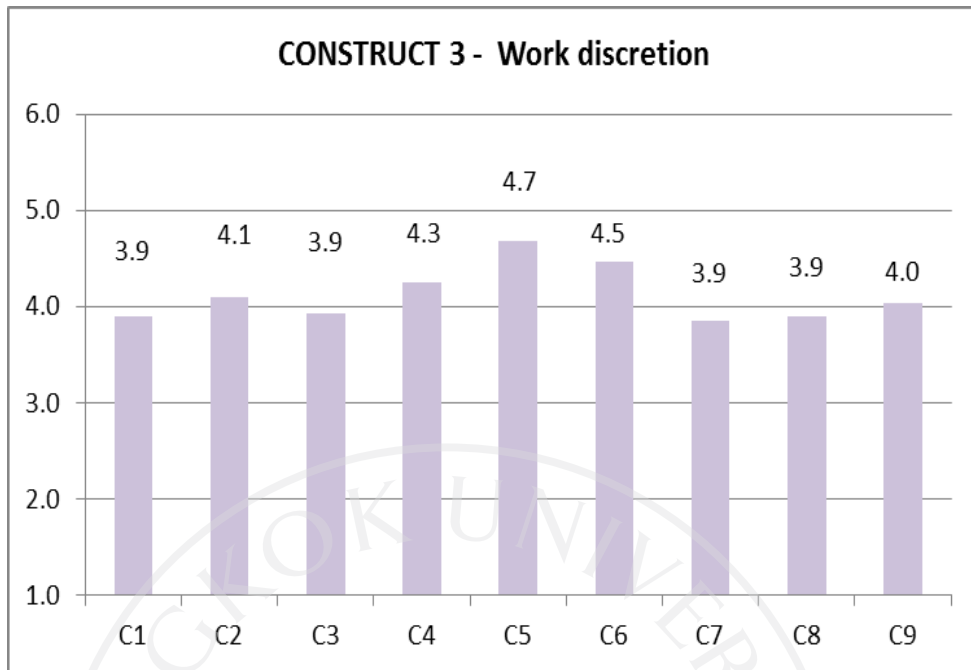


Figure 47 : Chart 13: Descriptive statistics work discretion (n = 163)

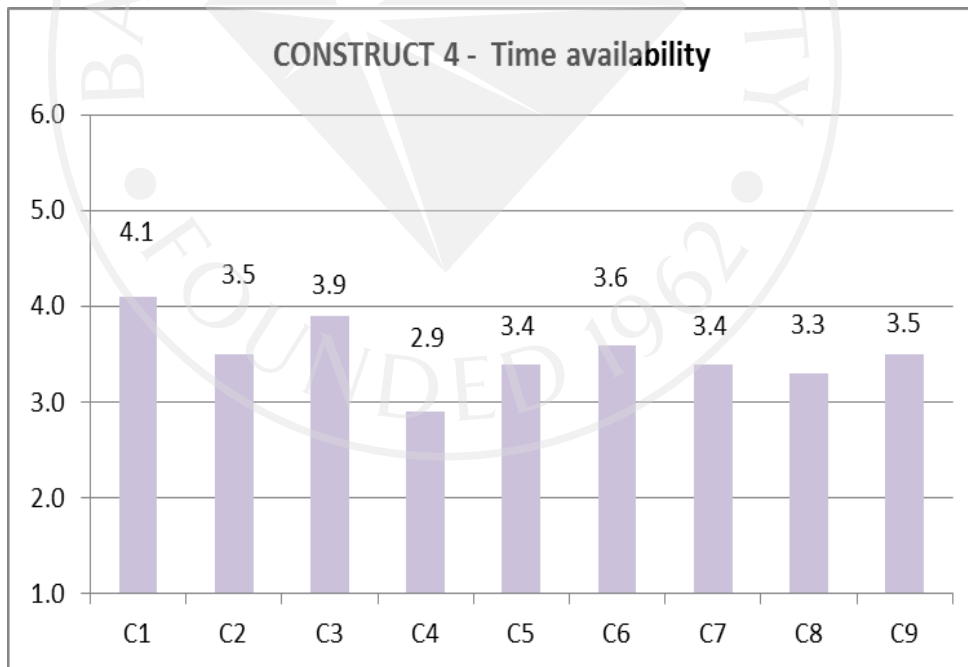


Figure 48 : Chart 14: Descriptive statistics time availability (n = 163)



Table 90: Summary data (n = 163)

## Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EntSupport	163	4.5970	.96935	-.775	.190	.300	.378
OrgBound	163	3.4930	.90287	-.104	.190	-.143	.378
WorkDisc	163	4.0938	.80948	-.326	.190	-.133	.378
IntOpport	163	3.4843	.78988	.025	.190	.204	.378
time	163	3.2234	1.05864	-.106	.190	-.605	.378
Valid N (listwise)	163						

**5.3.10 Correlation matrix**

To aid our understanding of the correlation matrix displayed below at table 37, we have undertaken a review of its component parts and their interpretation through <http://www.ats.ucla.edu/stat/sas/notes2/> (accessed July 18<sup>th</sup> 2015) and <http://libguides.library.kent.edu/SPSS/PearsonCorr> (accessed July 22<sup>nd</sup> 2015).

Table 91: Correlation Matrix

## Correlations

		EntSupport	OrgBound	WorkDisc	IntOpport	time
EntSupport	Pearson Correlation	1	.528**	.469**	.620**	.284**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	163	163	163	163	163
OrgBound	Pearson Correlation	.528**	1	.355**	.562**	.424**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	163	163	163	163	163
WorkDisc	Pearson Correlation	.469**	.355**	1	.537**	.204**
	Sig. (2-tailed)	.000	.000		.000	.009
	N	163	163	163	163	163
IntOpport	Pearson Correlation	.620**	.562**	.537**	1	.499**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	163	163	163	163	163
Time	Pearson Correlation	.284**	.424**	.204**	.499**	1
	Sig. (2-tailed)	.000	.000	.009	.000	
	N	163	163	163	163	163

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

The Pearson Correlation score (shown at a.) measures the “strength and direction of the linear relationship between two variables; one listed in each row, the other listed in each column.

The correlation coefficient can range from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all”. A guideline offered is  $.1 < |r| < .3$  (weak correlation)  $.3 < |r| < .5$  (moderate correlation) and  $.5 < |r|$  (strong correlation). The Sig. (2-tailed) shown at b, is the “p-value associated with the correlation. The value for N (shown at c.) is the number of cases used for the correlation matrix, therefore, the number of submitted employee questionnaires.

The next section of this dissertation serves to explain the rationale and methods employed to validate our conceptual model, evaluate our hypotheses and answer our research questions.

#### **5.4 Reliability and validity**

Validity and reliability are widely cited as two corner-stones for the legitimacy of any research methodology and ensuing research instrument; reliability asks will the measure yield the same results on different occasions (assuming no real change in what is being measured); validity asks if an instrument measures what it is supposed to measure. The common approaches to assess validity are face validity, content validity, criterion validity and construct validity.

##### **5.4.1 Reliability**

General reliability can be defined as whether a measure will produce the same results on different occasions, assuming no real change in what is being measured. In

respect of interview reliability there are three main factors to consider. Firstly the reliable of the interview process itself; secondly the reliability of the data collected and thirdly, how, when combined with quantitative research methods the two sets of data findings can be reliably linked. At a practical level, reliability may be described as consistency; “to what extent can we say that the data are consistent” (Huch & Cormier, 1996, p.76)

During the interview process Creswell (2009) stresses the importance of the researcher using a consistent approach, for example in terms of dress, body language, and facial expression, combined with how critical the accuracy of the transcript method is. (Easterby-Smith, Thorpe & Lowe, 1991) add the ability of the researcher to identify what is relevant from the interview as other discussion introduced by the interviewee may be unconnected with the research purpose and goals. A further skill is the ability to listen, in terms of this not being a debate, but the elicitation of data in which the opinions of the researcher are not relevant and should not be voiced. There is also an issue of trust to be developed if the interviewer and interviewee are strangers thus negating a temptation by the interviewee to answer questions in the way they feel the researcher is expecting them to, or to paint the most positive picture of themselves and the organization. It is further suggested that a major consideration is the interviewees should perceive some value from the procedure and actively seek to be honest with their responses.

As this research study involved an interview methodology with the entrepreneur primary decision maker (PDM), it appeared unlikely that they will provide the time to participate and then attempt to seriously bias the outcome.

Especially, in that the research study aims to provide the PDM with evidence that will allow him/her to realise greater potential from their workforce and ultimately the exercise may provide a tangible benefit to the company. There is no evidence to suggest that the answers provided were anything other than sincere and at no time was this indicated to the researcher either in their body language or a lack of eye contact. As documented in the data collection section of this dissertation at chapter 5, to provide flexibility to the interviewees, many who found they had to reschedule due to business priorities, it became necessary to use computer software as an interview tool. This meant that interviews could be scheduled when the interviewee found he/she had some free time rather than planned in advance.

The data from the pilot company was manually entered into excel and checked by two independent people. The remaining employee survey data collected electronically could be exported directly into excel and collated for all companies as one file which in turn was exported into SPSS. An assessment of reliability was then undertaken for internal consistency through analysis of the conceptual model constructs; constructs 1,2,3,4 and 6 being ordinal and construct 5 being nominal (Stevens, 1946). A Cronbach Alpha test was used as defined within the Journal of Extension (1999) as determining “the internal consistency or average correlation of items in a survey instrument to gauge its reliability” and by The Institute for Digital Research and Education as “a measure of internal consistency, that is, how closely related a set of items are as a group”. Furthermore, we acknowledge that Cronbach's alpha is not a statistical test; it is a coefficient of reliability (or consistency). In the

statistics presented below, we are seeking a result of 0.7 as deemed satisfactory by Nunnally (1978) and which a conventional interpretation.

#### 5.4.2 Cronbach Alpha Reliability Statistics

For each construct we have analyzed the Cronbach Alpha statistical value as presented below.

##### Scale: Support

The cronbach alpha value for the *Support* construct  $\alpha = 0.898$  is greater than 0.7 Consequently, we can be satisfied with the reliability level of this construct.

Table 92 : Support Construct

		N	%
Cases	Valid	163	100.0
	Excluded <sup>a</sup>	0	.0
	Total	163	100.0

Cronbach's Alpha	N of Items
<b>.898</b>	6

##### Scale: Discretion

The cronbach alpha value for the Discretion construct  $\alpha = 0.836$  is greater than 0.7 Consequently, we can be satisfied with the reliability level of this construct.

Table 93 : Discretion Construct

	N	%
Valid	163	100.0
Cases Excluded <sup>a</sup>	0	.0
Total	163	100.0

Cronbach's Alpha	N of Items
<b>.836</b>	10

**Scale: Time**

The cronbach alpha value for the Time construct  $\alpha=0.605$  is lower than 0.7

The reliability level of this construct is not so strong and will have to be strengthened for future assessment.

Table 94 : Time Construct

	N	%
Valid	163	100.0
Cases Excluded <sup>a</sup>	0	.0
Total	163	100.0

Cronbach's Alpha	N of Items
<b>.605</b>	6

**Scale: Boundaries**

The cronbach alpha value for the Boundaries construct  $\alpha = 0.772$  is greater than 0.7 Consequently, we can be satisfied with the reliability level of this construct.

Table 95 : Boundaries Construct

		N	%
Cases	Valid	163	100.0
	Excluded <sup>a</sup>	0	.0
	Total	163	100.0

Cronbach's Alpha	N of Items
.772	7

**Scale: Opportunities**

The cronbach alpha value for the Opportunities construct  $\alpha = 0.932$  is greater than 0.7 Consequently, we can be satisfied with the reliability level of this construct.

Table 96 : Opportunities Construct

**Case Processing Summary**

		N	%
Cases	Valid	162	99.4
	Excluded <sup>a</sup>	1	.6
	Total	163	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.932	25



### 5.4.3 Face and content validity

Face validity is proposed to be “a measure of how representative a research project is 'at face value,' and whether it appears to be a good project” and as expressed by Louangrath (2013) “does the test cover all relevant items needed to answer the research question?” Nevo (1985, p.292) proposes that measurement of the quality of a “test” (which is aligned to the principle of assessing the quality of a research study), can be “established statistically”. An opposing view is that in the field of social sciences, “it is very difficult to apply the scientific method, so experience and judgment are valued assets”. The extant literature advises that content validity is a fundamental prerequisite to criterion validity in assessing if an instrument measures what it has been constructed to measure. Huch & Cormier (1996) propose that subjective opinions obtained from experts in the field of the research study are a suitable measurement tool. As such, the test for face and content validity was undertaken by two experts in the field of intrapreneurship to gain their observations and feedback. After reviewing the survey questions, their opinions were as follows:

Expert 1:

Having reviewed your innovation and intrapreneur survey instrument, I believe that it has strong face and content validity, and that you are definitely on track to measure what you have set out to measure. You should feel comfortable with your current efforts, and I'm sure you will continue to validate the instrument through further (statistical) analyses as you run more test subjects.

Expert2:

Thanks for asking me to assess the survey.

As a practitioner, I'm very much interested in understanding whether employees have the opportunities to be intrapreneurial in their thoughts and actions in the workplace.

After careful review, I find the attached survey questions are a sound survey instrument to measure that.

### **5.5 Model validity; assessing the model fit**

We commence by considering our adoption of constructing a conceptual model as an attempt to “approximate or explain some process of scientific interest that cannot be directly observed” (Preacher (2006, p.227) Within our chosen methodology of quantitative case studies, and our target audience being all employees, a model was created to evaluate the impact of certain variables upon intrapreneurial opportunity, a phenomenon that we could not directly observe. We now turn to assessing how valid (fit for purpose) the model proved to be.

There are several tests required of the data to assess validity. All validity measurements were tested through the software program AMOS which is a commonly used program to present visual Structural Equation Modeling (SEM). SEM is described by Schreiber et al (2006, p.324) as a combinations of exploratory factor analysis and multiple regression.

Firstly we provide a definition of the aspects of validity that were necessary to examine the conceptual model in detail and to draw conclusions in respect of the hypotheses.

Criterion validity can be expressed as the “degree of correspondence between a measure and a criterion variable, usually measured by their correlation” (Bollen, 1989, p.186) or, how well “one or more variables predict the outcome” Louangrath (2013, p.3) Therefore, whether dependent variables are identifiable contingent upon the other variables measured.

Convergent validity may be expressed as whether the values of a construct are similar in weight to other constructs. Lastly, construct validity questions if an instrument adequately measures what it is supposed to measure.

The model validity investigations as detailed above were statistically tested utilizing Confirmatory Factor Analysis (CFA). Schreiber (2006, p.323) describe this approach as “theory driven”. Factor analysis methods can be applied in an exploratory or confirmatory setting (DeCoster, 1998) The former “attempts to discover the nature of the constructs influencing a set of responses”, the latter confines to “whether a specified set of constructs is influencing responses in a predicted way”. The application of this technique was guided by the work of Byrne (2001) in that our aim was to test the 8 hypotheses derived from the conceptual model, and that our research questions were the subject of theoretical assumptions. Our aim was to seek positive or negative correlations between the conceptual framework constructs.

To evaluate the model’s goodness of fit, the output will be presented in terms of CMIN (chi-square), RMR and GFI, Baseline Comparisons, Parsimony, RMSEA, AIC, ECVI and Hoelter all of which are defined below.

### 5.5.1 CMIN (Chi-square)

The chi-square statistical method is used to measure an assessment of “global fit of the model to the data” (Bandalos & Gagné, 2015, p.118) To test the conceptual model hypotheses we are seeking a chi-square value of  $> .05$ , combined with a positive level for degrees of freedom and a p-value (probability) of  $> 0.05$  to confirm an acceptable model fit. From the AMOS output we observe that the “minimum was achieved; we have a chi-square statistic of 28.879 and a positive 16 degrees of freedom. The computation for degrees of freedom consisted of 36 distinct sample moments, minus 20 distinct parameters estimated. The probability level was .025 as seen in the output visual below.

Table 97 : CMIN (n=163)

Model	NPA R	CMI N	DF	P	CMIN/ DF
Default model	20	28.87	16	.02	1.80
		9	5		5
Saturated model	36	.000	0		
Independence model	8	406.9	28	.00	14.53
		23	0		3

### 5.5.2 RMR (Root Mean Square Residual) & GFI (Goodness of Fit Index)

The goodness of fit index is of paramount importance to our research study as described by Preacher (2006, p.231) as “the empirical correspondence between a

model's predictions and observed data" and by Vandekerckhove, Matzke & Wagenmakers (2014, p.3) as "how well the model is able to account for a given set of observations. It addresses the following question: Under the assumption that a certain model is a true characterization of the population from which we have obtained a sample, and given the best fitting parameter estimates for that model, how well does our sample of data agree with that model"?

Within the literature we learn that there is considered to be a good model fit if the calculation of RMRI is low. Whilst 0.0 would represent an exact fit, a measurement of good fit may be considered at  $\leq .05$ . In assessing the GFI a measurement of  $\geq .90$  may be considered to demonstrate a good fit, with a perfect fit considered at 1.0. These requirements have been met through the RMR of 0.27 and the GFI of 0.958 as seen below:

Table 98: RMR & GFI (n=163)

Model	RM R	GFI	AGF I	PGF I
Default model	.027	.958	.905	.426
Saturated model	.000	1.00	0	
Independence model	.181	.598	.483	.465

### 5.5.3 Baseline Comparisons

The baseline comparisons comprise a Normed Fit Index (NFI), a Relative Fit Index (RFI), an Incremental Fit Index (IFI), the Tucker-Lewis Coefficient (TLI) and the Comparative Fit Index (CFI). CFI values range from 0 to 1 with the largest indicating better fit (Byrne2006). When assessing the data output we are seeking a CFI score of >0.9 which has been achieved as seen below at 0.996. All other fit indices can be seen to meet the same criteria.

Table 99 : Baseline Comparisons (n=163)

Model	NFI	RFI	IFI	TLI	CFI
	Delta	tho1	Delta 2	tho2	
1					
Default model	.929	.876	.967	.941	.996

### 5.5.4 Parsimony Adjusted Measures

The parsimony ratio is termed PRATIO which reflects an inclusive guideline as to how parsimonious the model is. Preacher (2006, p.227) advises that “adjusted fit” is traditionally quantified by combining the model properties in respect of parsimony and goodness of fit. The parsimonious fit indices are shown as PNFI and PCFI as seen below.

Table 100 : Parsimony Adjusted Measures (n=163)

Model	PRATIO	PNFI	PCFI
Default model	.571	.531	.552
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

Newson (2005, p.2) suggests “although many researchers believe that parsimony adjustments are important, there is some debate about whether or not they are appropriate”. However, if we accept that it is a tried and tested way to distinguish between competing models, (Preacher 2006), it is useful to report the values for consideration in future research studies where a differing or adapted model may be found. As Vandekerckhove, Matzke & Wagenmakers (2014, p.4) assert “the principle of parsimony forces researchers to abandon complex models that are tweaked to the observed data in favor of simpler models that can generalize to new data sets. Furthermore “the principle also gives ground to reject propositions that are without empirical support”.

This follows the standard set out when we assess the appropriateness of the scientific methods we have applied at the concluding part of this chapter in that we have sought the “simplest or logically most economical explanation” Bhattacharjee (2012, p.5)

### 5.5.5 RMSEA (Root Mean Square Error of Approximation)

There is considered to be a good model fit if the calculation of RMSEA is  $\leq .05$ . This is expressed by (Wicherts & Dolan, 2004, p.486) as the generally accepted “rule of thumb” for this measurement tool and by Anagnostopoulos, Niakas & Pappa (2005, p.1959) as “indicative of a close fit between the hypothesized model and the observed data”.

What is important to consider is reporting the RMSEA for any and every model test and it provides an index for lack of fit if detected (West, Taylor & Wu, 2015, p.218) An exact fit is recognized at 0.0, a reasonable or adequate fit may be considered at .06 or .07. A mediocre fit would be found at between .08 and .10 and  $> .10$  would constitute poor fit. At 0.070 we have demonstrated a good model fit for RMSEA.

Table 101 : RMSEA (n=163)

Model	RMSE	LO	HI	PCLOS
	A	90	90	E
Default model	.070	.025	.111	.190
Independence model	.289	.265	.314	.000

### 5.5.6 Hoelter Index (Hoelter's Critical N)

Hoelter's critical N, also known as the Hoelter index is defined by Hoelter (1983, p.325) as “whether or not a given theoretical model adequately represents the data used for its assessment” and is applied to measure a sample size for adequacy.



Conventionally an acceptable number size is considered to be  $> 200$ . A number size of  $< 75$  is considered unacceptably low. Two measurements are shown within the output, one at 0.05 and one at 0.01. Again, the table below demonstrates that the model has been assessed as acceptable in this respect.

Table 102 : Hoelter Index (n=163)

Model	HOELT	HOELT
	ER	ER
	.05	.01
Default model	148	180
Independence model	17	20

### 5.5.7 AIC (Akaike Information Criterion)

The AIC statistical calculation is used to measure the complexity of a model (West, Taylor & Wu, 2015) As a single sample cross-validation index, it is considered that a low score equates to the best fit (Wicherts & Dolan, 2004, p.46) in the context of model comparisons (Vandekerckhove, Matzke & Wagenmakers, 2014, p.10)

Table 103 : AIC (n=163)

Model	AIC	BCC	BIC	CAI C
Default model	68.87	71.23	130.75	150.75
	9	2	4	4
Saturated model	72.00	76.23	183.37	219.37
	0	5	5	5
Independence model	422.92	423.86	447.67	455.67
	3	4	3	3

As with parsimonious fit, it is useful to report the values for consideration in future research studies where a differing or adapted model may be found.

#### 5.5.8 ECVI (Expected Cross-Validation Index)

West, Taylor & Wu (2015, p.225) propose that the cross-validation index creates a way of “estimating the generalizability of the model fit in a new sample from the same population” as also expressed by Byrne (2001). There does not appear to be a standard of range for ECVI values but it is understood that within the AMOS output data, one should seek the model with the lowest value as representing the best potential for replication.

Table 104 : ECVI (n=163)

Model	ECVI	LO 90	HI 90	MECVI
Default model	.425	.356	.543	.440
Saturated model	.444	.444	.444	.471
Independence model	2.611	2.231	3.036	2.616

### 5.5.9 Statistical Model Data Summary

The statistical model presented below requires some explanation of its composition and components comprising the confirmatory factor analysis as shown below:

Observed endogenous (dependent) variables:

Construct 1: Level of support for innovation

Construct 2: Level of organizational boundaries

Construct 3: Level of work discretion

Construct 4: Level of time availability

Construct 6: Level of intrapreneurial opportunity

Observed exogenous (independent) variables:

Construct 5: Strategic orientation

Prospecting

Analyzing

Defending

Latent endogenous (dependent) variables:

Construct 2: Level of organizational boundaries

Construct 3: Level of work discretion

Construct 4: Level of time availability

Construct 6: Level of intrapreneurial opportunity

Latent exogenous (independent) variables:

Construct 1: Level of support for innovation

Construct 5: Strategic orientation

Prospecting

Analyzing

Defending

The key to the AMOS visual output is as follows:

Dependent (endogenous) variables; these are recognized by exhibiting one or more arrows leading to another variable: Independent (exogenous) variables; these are recognized by any variable that does not have an arrow leading to it: A rectangle represents an observed variable. A circle or eclipse represents a latent variable.

A 2-way arrow represents covariance or correlation .A 1-way arrow represents a unidirectional relationship: e = error

Figures 49 and 50 depict graphically the hypothesized model and the fit of the data. Firstly, the model is presented showing the relationship between each hypothesis, subsequent to which we have added the statistical results.

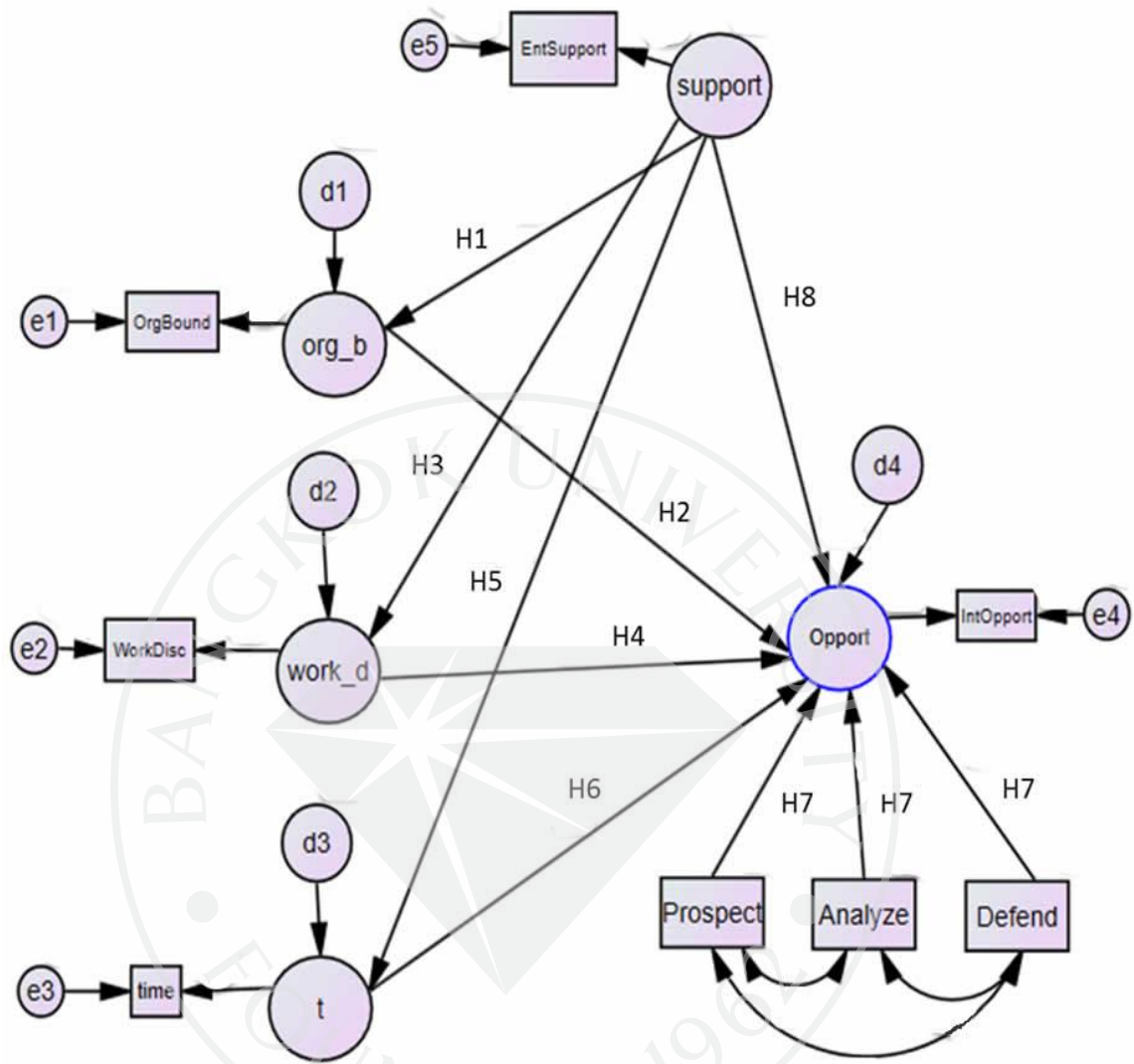


Figure 49 : AMOS model data output - (n = 163)

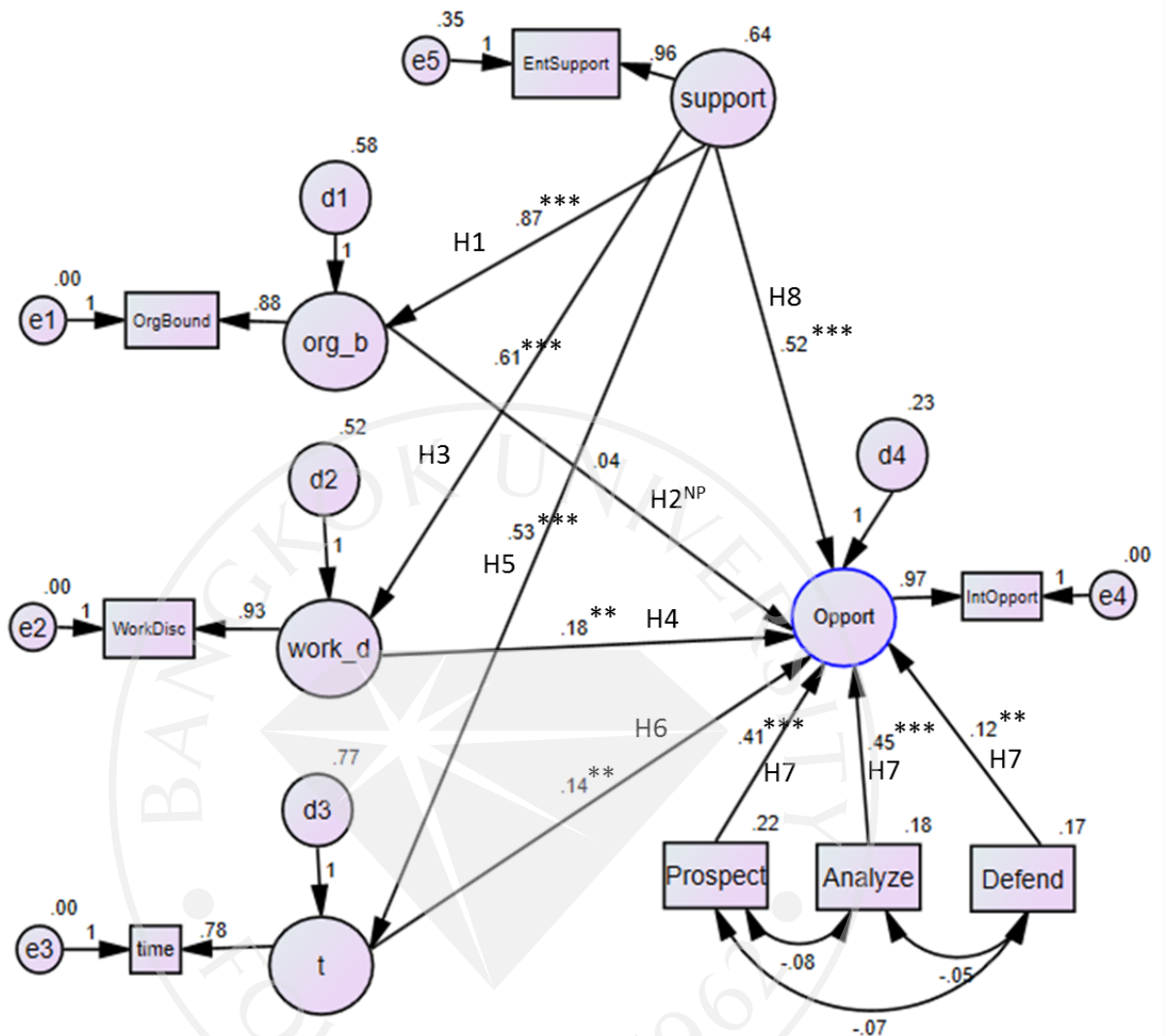


Figure 50 : AMOS model data output 2 - (n = 163)

We can see from the model at figure 45 that we have a significant association between entrepreneur PDM support for innovation and intrapreneur opportunity levels with a beta value of .52 and similar significant associations between this construct and organizational boundaries ( $\beta = .87$ ), work discretion ( $\beta = .61$ ) and time availability ( $\beta = .53$ ). Significant, but less strong associations can be seen between work discretion and intrapreneur opportunity levels ( $\beta = .18$ ) and time availability and intrapreneur

opportunity levels ( $\beta = .14$ ). With a beta value of .04 there is no proven association between organizational boundaries and intrapreneur opportunities levels. This is expanded upon in the findings chapter of this dissertation. We can also report significant values for the association between a prospecting strategic type and intrapreneur opportunity levels ( $\beta = .41$ ) the analyzing strategic type and intrapreneur opportunity levels ( $\beta = .45$ ). A lesser but still significant association is found between the defender strategic type and intrapreneur opportunity levels ( $\beta = .12$ ).

As part of the AMOS analysis process we have also considered the direct, indirect and total effects for each construct variable as presented at table 46 below. As proposed by Schreiber et al (2006, p.325) a direct effect “represents the effect of an independent variable (exogenous) on a dependent variable (endogenous). An indirect effect can be explained as the effect “of an independent variable on a dependent variable through a moderating variable. The total effect is considered to be “the summation of the direct and indirect effects of variables”.

Table 105: Table of Effects – (n=163)

		Direct Effect				Indirect Effect				Total Effect			
Support		Org_b	Work_d	time	Opport	Org_b	Work_d	time	Opport	Org_b	Work_d	time	Opport
Support -	Coeff.	.870***	.609***	.527***	.516***	-	-	-	-	-	-	-	-
>Org_b													
Support -	SE	.118	.099	.119	.124	-	-	-	-	-	-	-	-
>Work_d													
Support -	t	7.353	6.161	4.446	4.158	-	-	-	-	-	-	-	-
>time	(C.R.)												
Support -	CS	.676	.560	.433	.516	.000	.000	.000	.218	.676	.560	.433	.733
>Opport													

(Continued)



Table 105 (Continued) : Table of Effects – (n=163)

		Direct Effect				Indirect Effect				Total Effect			
<b>Org_b</b>													
Org_b ->	Coeff.	-	-	-	.04	-	-	-	-	-	-	-	-
	Opport												
	SE	-	-	-	.064	-	-	-	-	-	-	-	-
	t	-	-	-	.632	-	-	-	-	-	-	-	-
	(C.R.)												
	CS	-	-	-	.052	-	-	-	.000	-	-	-	.052
<b>Work_d</b>													
Work_d ->	Coeff.	-	-	-	.183**	-	-	-	-	-	-	-	-
	Opport												

(Continued)

Table 105 (Continued) : Table of Effects – (n=163)

		Direct Effect				Indirect Effect				Total Effect			
	SE	-	-	-	.064	-	-	-	-	-	-	-	-
	t	-	-	-	2.836	-	-	-	-	-	-	-	-
	(C.R.)												
	CS	-	-	-	.198	-	-	-	.000	-	-	-	.198
<b>Time (t)</b>													
Time ->	Coeff.	-	-	-	.136**	-	-	-	-	-	-	-	-
Opport													
	SE	-	-	-	.052	-	-	-	-	-	-	-	-
	t	-	-	-	2.605	-	-	-	-	-	-	-	-
	(C.R.)												
	CS	-	-	-	.165	-	-	-	.000	-	-	-	.165

(Continued)

Table 105 (Continued) : Table of Effects – (n=163)

		Direct Effect				Indirect Effect				Total Effect			
<b>Prospect</b>													
Prospect -> Opport	Coeff.	-	-	-	.410***	-	-	-	-	-	-	-	-
	SE	-	-	-	.115	-	-	-	-	-	-	-	-
	t (C.R.)	-	-	-	3.553	-	-	-	-	-	-	-	-
	CS	-	-	-	.240	-	-	-	.000	-	-	-	.240
<b>Analyze</b>													
Analyze -> Opport	Coeff.	-	-	-	.455***	-	-	-	-	-	-	-	-

(Continued)

Table 105 (Continued) : Table of Effects – (n=163)

		Direct Effect				Indirect Effect				Total Effect			
	SE	-	-	-	.126	-	-	-	-	-	-	-	-
	t (C.R.)	-	-	-	3.614	-	-	-	-	-	-	-	-
	CS	-	-	-	.240	-	-	-	.000	-	-	-	.240
<b>Defend</b>													
Defend ->	Coeff.	-	-	-	.119**	-	-	-	-	-	-	-	-
Opport													
	SE	-	-	-	.126	-	-	-	-	-	-	-	-
	t (C.R.)	-	-	-	.944	-	-	-	-	-	-	-	-
	CS	-	-	-	.061	-	-	-	.000	-	-	-	.061

\* p<.05 \*\*p<.01 \*\*\* p<.001

## 5.6 Conceptual Model Data Findings

Guided by the results of our Cronbach alpha testing and the SEM (Structural Equation Modeling) findings we now look to how these can be interpreted in respect of our research questions. For each hypotheses we were seeking an alpha score  $\geq .7$  for reliability combined with the P-Value measurement of validity which ranges from 0.0 to 1.0. To measure the significance of each hypothesis we are seeking a score towards the higher end of this range as representing the degree of correlation, therefore, the significance of the relationship between two variables. To interpret the model's findings in terms of the implication of each hypothesis in that we can be confident the relationships measured did not happen coincidentally. In terms of how significance is interpreted \*\*\* reflects a significance of  $\geq .001$  which represents 99.9 % certainty; \*\* reflects a significance of  $\geq .01$  which represents 99% certainty; \* reflects a significance of  $\geq .05$  which represents 95% certainty. The absence of a \* represents that the hypothesis failed to be proven

### 5.6.1 Research question 1

RQ1: To what extent does the level of entrepreneurial PDM support for innovation influence levels of employee organizational boundaries, work discretion and time availability within UK technology-innovative SMEs?

The measurement of RQ1 comprises hypotheses 1, 3, 5 and 8.

H1: The entrepreneur PDM's level of support for innovation positively influences levels of organizational boundaries

H1<sub>0</sub>: There is no relationship between the entrepreneur PDM's level of support for innovation and the level of organizational boundaries

Hypothesis 1 served to investigate if, and to what extent, a relationship existed between the level of support for innovation and levels of organizational boundaries. From the model output this hypothesis was demonstrated significant with a  $\beta$  value of 0.87 ( $p \leq .001$ ) so we may reject the null hypothesis and accept our alternative hypothesis.

H3: The entrepreneur PDM's level of support for innovation positively influences levels of work discretion

H3<sub>0</sub>: There is no relationship between the entrepreneur PDM's level of support for innovation and the level of work discretion

Hypothesis 3 served to investigate if, and to what extent, a relationship existed between the level of support for innovation and levels of work discretion. From the model output this hypothesis was demonstrated significant with a  $\beta$  value of 0.61 ( $p \leq .001$ ) so we may reject the null hypothesis and accept our alternative hypothesis.

H5: The entrepreneur PDM's level of support for innovation positively influences levels of time availability

H5<sub>0</sub>: There is no relationship between the entrepreneur PDM's level of support for innovation and the level time availability

Hypothesis 5 served to investigate if, and to what extent, a relationship existed between the level of support for innovation and levels of time availability. From the

model output this hypothesis was demonstrated significant with a  $\beta$  value of 0.53 ( $p \leq .05$ ) so we may reject the null hypothesis and accept our alternative hypothesis.

H8: The entrepreneur PDM's level of support for innovation positively influences levels of intrapreneurial opportunity

H8<sub>0</sub>: There is no relationship between the entrepreneur PDM's level of support for innovation and the level of intrapreneurial opportunity

Hypothesis 8 served to investigate if, and to what extent, a relationship existed between the level of support for innovation and levels of intrapreneurial opportunity. From our model output this hypothesis was demonstrated significant with a  $\beta$  value of 0.52 ( $p \leq .05$ ) so we may reject the null hypothesis and accept our alternative hypothesis.

### 5.6.2 Research Question 2

RQ2: To what extent does the level of employee organizational boundaries, work discretion and time availability influence levels of intrapreneurial opportunity within UK technology-innovative SMEs?

The measurement of RQ2 comprises hypotheses 2, 4, and 6.

H2: The level of organizational boundaries positively influences the level of intrapreneurial opportunity

H2<sub>0</sub>: There is no relationship between the level of organizational boundaries and the level of intrapreneurial opportunity

Hypothesis 2 served to investigate if, and to what extent, a relationship existed between the level of organizational boundaries and the level of intrapreneur opportunity.

We can see from the model output above that the significance of the relationship is  $\beta$  value of 0.04 ( $>.05$ ). Consequently, we fail to reject the null hypothesis, and fail to accept the alternative hypothesis. Our data sample doesn't allow us to have a 95 % confidence that there is a positive relationship between organizational boundaries and entrepreneurial opportunity. As such, this hypothesis was not proven with a p-value of 0.04. The construct of organizational boundaries was the only one which could not be proven through our conceptual model data. The measures taken in order to explain this finding are detailed later within our interpretation of the data and model results.

H4: The level of work discretion positively influences the level of intrapreneurial opportunity

H4<sub>0</sub>: There is no relationship between the level of work discretion and the level of intrapreneurial opportunity

Hypothesis 4 served to investigate if, and to what extent, a relationship existed between the level of work discretion and the level of intrapreneur opportunity. We can see from the model output above that this hypothesis was proven with a  $\beta$  value of 0.18 ( $p \leq .05$ )

H6: The level of time availability positively influences the level of intrapreneurial opportunity

H6<sub>0</sub>: There is no relationship between the level of time availability and the level of intrapreneurial opportunity



Hypothesis 6 served to investigate if, and to what extent, a relationship existed between the level of organizational boundaries and the level of intrapreneur opportunity. We can see from the model output that this hypothesis was proven with a  $\beta$  value of 0.14 ( $p \leq .05$ ).

### **5.6.3 Research Question 3**

RQ3: To what extent does the SME strategic type of the entrepreneur PDM led UK technology-innovative business impact upon intrapreneurial opportunity levels?

The measurement of RQ3 comprises hypothesis 7.

H7: The strategic type of the entrepreneur PDM SME influences levels of intrapreneurial opportunity

Hypothesis 7 served to investigate if, and to what extent, a relationship existed between the strategic type of the entrepreneur PDM and levels of intrapreneurial opportunity.

As this variable is categorical in nature, 4 dummy variables were created to independently represent each of the 4 strategic types.

### **5.6.4 Summary of hypotheses**

At table 47 below we have summarized the findings for hypotheses 1 through 6 and hypothesis 8 which is followed by our interpretation of the data findings.

Table 106 : Summary of Hypotheses - (n = 163)

	Hypothesis		p-Value
H1	The entrepreneur PDM's level of support for innovation positively influences levels of organizational boundaries	<input checked="" type="checkbox"/>	$p \leq .001$
H2 <sub>0</sub>	There is no relationship between the level of organizational boundaries and the level of intrapreneurial opportunity	<input type="checkbox"/>	$P > .05$
H3	The entrepreneur PDM's level of support for innovation positively influences levels of work discretion	<input checked="" type="checkbox"/>	$p \leq .001$
H4	The level of work discretion positively influences the level of intrapreneurial opportunity	<input checked="" type="checkbox"/>	$p \leq .05$
H5	The entrepreneur PDM's level of support for innovation positively influences levels of time availability	<input checked="" type="checkbox"/>	$p \leq .05$
H6	There is no relationship between the level of time availability and the level of intrapreneurial opportunity	<input checked="" type="checkbox"/>	$p \leq .05$
H8	The entrepreneur PDM's level of support for innovation positively influences levels of intrapreneurial opportunity	<input checked="" type="checkbox"/>	$p \leq .05$

## CHAPTER 6

### INTERPRETATION AND FINDINGS

Based on the previous statistical analyzes and the findings of the model testing as shown above we can be confident about the validity and reliability of our data collection instrument. Additionally, the hypothesized model appears to represent a good fit to the data eliminating the requirement for “post-hoc modifications” (Schreiber et al, 2006, p.332)

#### **6.1 Research question 1**

RQ1: To what extent does the level of entrepreneurial PDM support for innovation influence levels of employee organizational boundaries, work discretion and time availability within UK technology-innovative SMEs?

The measurement of research question 1 comprises hypotheses 1, 3, 5 and 8.

##### **6.1.1 Hypothesis 1**

Hypothesis 1 served to investigate if, and to what extent, a relationship existed between the level of support for innovation and levels of organizational boundaries. From the model output this hypothesis was demonstrated significant with a  $\leq .001$  p-value. This is in keeping with the critical analysis of the extant literature. The level of support shown by the primary decision maker (PDM) was measured in terms of leadership attributes and leadership behaviors both of which, in an entrepreneurial context, could impact upon innovativeness within their SME business. The rationale behind this viewpoint was developed when operationalizing the construct of organizational boundaries through the extant literature. Of significance, we learnt from Jimenez-Jimenez, Valle & Hernandez-Espallardo (2008) that the business infrastructure and culture created by leaders can enable creativity and openness to

new ideas; from Bassett-Jones & Lloyd (2005) that the opportunities to transfer ideas into actions are highly motivational for the intrapreneur but are dependent upon internal policy and procedural constraints; from Entrialgo, Fernandez & Vazquez (2000) that the PDM leadership characteristics directly and indirectly influence organizational boundaries and from Lee, Peris-Ortiz & Fernandez-Guerrero (2011) that whilst the characteristics of the business leader can expose corporate entrepreneurship within individuals it will be through satisfying the factors that would cause employee participation.

To engage employee participation, we are guided by the literature on intrapreneur motivation. A demotivational aspect from the degree of organizational boundaries apparent is encapsulated by Amabile (1998) in purporting that the potential freedom from tiers of decision makers is the discretion of the PDM and lessens the boundaries within which the intrapreneur will need to operate and therefore, heighten levels of motivation. Florida & Goodnight (2005) concur in suggesting that intrapreneurial creativity and motivation is consistent with relatively relaxed organizational boundaries; from Antoncic & Hisrich (2003) intrapreneurs anticipate the opportunity to operate outside of what would be considered customary business procedures; from Scheepers Hough & Bloom (2008) “fluid” boundaries would be highly desirable; from Menzel, Aaltio & Uljin (2007) the elimination of fixed organizational structures to more “flatter or flexible structures” and from Maier & Pop Zenovia (2011) and Menzel et al (2006) decentralized organizational hierarchies will cause employees to exhibit a greater freedom of thought and actions that could be considered to fall outside of their job requirements.

Lastly, it is appropriate to consider what are categorized as “obstacles” within the literature. Obstacles, or barriers, feature prominently in hampering the engagement of intrapreneurial employees. In the main, obstacles are created by the depth to which organizational boundaries control and restrict the everyday business activities. As such, they may be considered as occurring at the discretion of the PDM. We argue that the PDMs influence over this construct is paramount to intrapreneurial opportunity levels and subject to the level of managerial support invested in innovation. As such, the data collected and the extant literature supports research hypothesis 1.

### **6.1.2 Hypothesis 3**

Hypothesis 3 served to investigate if, and to what extent, a relationship existed between the entrepreneur primary decision maker’s (PDMs) level of support for innovation and the levels of work discretion. From the model output this hypothesis was demonstrated significant with a  $\leq .001$  p-value. When we reflect upon the literature we find direct observations from contributing authors as to the constraining factors associated with levels of discretion and the value of greater flexibility for intrapreneurial opportunities to exist. From Vora, Vora & Polley (2012) we learnt three central aspects of this; a need for a culture which embraces employees taking initiative and a degree of autonomy, without an inherent fear of detrimental negative consequences for failure through experimentation. This was very succinctly captured by Dewett (2004) and Russell (1999) in proposing that leaders need to separate the treatment of creative efforts from creative outcomes. As Davenport, Prusak & Wilson (2003) and Manimala, Jose & Thomas (2006) propose, work discretion should encompass recognition for effort and commitment regardless of whether the outcome

of such employee engagement was successful, a view promoted by Willison (2006) who suggests the PDM should continue to praise and acknowledge effort even when the ideas put forward are unable to be implemented and by Dewett (2004) in that leaders need to separate the treatment of creative efforts from creative outcomes. We learnt from Alpkhan et al (2010) that within the levels of support for intrapreneurship a tolerance by management for a degree of trial and error or failures is a significant factor in the relationship between leader and the led. The business leader's approach to success or failure in innovative activities became key to their sustainability.

From Amabile (1998) we understood that intrapreneurship is unlikely to succeed without opportunities for flexibility of work design and experimentation and from Antoncic & Hisrich (2003) that a flexible organizational structure and climate can provide intrapreneurial "incubators". We note that the concept of incubation in respect of how intrapreneurship can be positively managed in the SME environment was recognized by Scheepers, Hough & Bloom (2008), by Carrier (1997) and in a general more setting was found in the work of Phan (2009) and Kanter (1990). We should also reflect upon the work of Szerb (2003) and Menzel, Aaltio & Uljin (2007) who all define intrapreneurial opportunities as requiring a degree of work discretion freedom incorporated within an organizational structure that supports innovative thoughts and deeds. A view supported by de Villiers-Scheepers (2011) in proposing intrapreneurs cannot explore the more challenging facets of their work without a relatively high degree of organizational freedom. Hypothesis 3 is supported not only through the extant literature but within our employee data analysis.

### **6.1.3 Hypothesis 5**

Hypothesis 5 served to investigate if, and to what extent, a relationship existed between the level of support for innovation and levels of time availability. From the model output this hypothesis was demonstrated significant with a p-value of  $\leq .05$ . When we revert back to the extant literature, employee time availability was considered a significant factor for intrapreneurial opportunities to exist (Scheepers Hough & Bloom, 2008; Willison, 2006 and Bassett-Jones & Lloyd, 2005) as it touches upon many aspects of this dynamic being achievable and intrapreneur needs being met. For example, we are seeking opportunities for employees to introduce creativity into their work tasks; to enjoy a degree of freedom from excessive operating procedures; to encompass problem solving with a progressive degree of frequency; to have optimism that time spent generating new ideas will be endorsed wherever practicable by the primary decision maker (PDM). None of these facets of working life can be embraced without the availability of time in which to do so.

### **6.1.4 Hypothesis 8**

Hypothesis 8 served to investigate if, and to what extent, a relationship existed between the level of support for innovation and levels of intrapreneurial opportunity. From our model output this hypothesis was demonstrated significant with a  $\leq .001$  p-value. This hypothesis can be considered as the building blocks or the foundation that under-pins the whole concept of intrapreneurship in SMEs. We may recall from the literature that Darling, Gabrielsson & Seristo (2007) advocated that the leadership exhibited by successful contemporary entrepreneurs is associated with an innovation-related culture. However, leadership may be viewed in its practical application of how to authenticate the concept of innovation through the vehicle of intrapreneurship. In

this respect the extant literature is abundant with theories that embrace the main tenets of intrapreneurial opportunity, recognition and reality. It would be respectful to commence with the work of Pinchot (1985) as the founding father of the terminology and his view that intrapreneuring/intrapreneurship is best sustained by the removal of management indecisiveness. Sathe (2003) advises that organizational culture is a key driver of innovation, and we accept that the primary decision maker (PDM) is the key driver of how this is shaped and formulated. Organizational culture is a vast subject area and it would be wise to consider the elements that feature most prominently in this field of study. Within the body of literature we acknowledge the contributions of Zhao (2005); Humphreys, McAdam & Leckey (2005); Antoncic & Hisrich (2003); Davenport, Prusak & Wilson (2003) and Ross (1987) who quantify the implementation of employee innovation from an organizational performance perspective and innovation implementation and those of Menzel, Aaltio & Uljin (2007); Milne (2007); Willison (2006); Zhao (2005) and Ahmed (1998) who cast thought-provoking observations upon leadership qualities and attributes.

We will now expand upon leadership support for innovation, its tenets and what could be considered to constitute a positive impact. We can group the influence of PDMs by turning to the work of Bystead (2013); Darling, Gabrielsson & Seristo (2007); Florida & Goodnight (2005); Bassett-Jones & Lloyd (2005); Davenport, Prusak & Wilson (2003); Cottam, Ensor & Band (2001); Ahmed (1998) and Amabile (1998). To précis our key findings our attention is drawn to engaging employees intellectually; ensuring managers take responsibility for championing creativity in such a way as is delegated to them; creating a company-wide acceptance of innovative initiatives and focusing managers towards a working environment that



delivers sustainable internal motivation. This can range from idea generation and opportunity to acknowledging the excitement employees feel when they see ideas transformed in actions and outcomes. We may again reflect on a powerful observation from Christensen (2005, p.320) in that “Managers can be the biggest obstacle to intrapreneurs, in-as-much as a single decision can kill a project before it gets started”. The second grouping serves to further assess the impact of employee recognition and the sustainability of intrapreneurship through the work of Bystead (2013); Painoli (2012); De Villiers-Scheepers (2011); Desouza (2011); Milne (2007); Markova & Ford (2011) and Bassett-Jones & Lloyd (2005) in that it is proposed that lasting intrapreneurial opportunity will be achieved through a combination of the contribution the employee can make and the acknowledgement they receive for it.

Acknowledgement is in itself a broad field, but of relevance to this hypothesis we may look to empowerment, recognition of effort, commitment and learning, social incentives and further intrinsic drivers which may be gained through increasing challenging work for example. A powerful note that emerged from the literature and one that encompasses all relational aspects of the entrepreneur PDM’s level of support influence upon levels of intrapreneurial opportunity was innovation trust. This could be encapsulated within a climate and culture of information sharing, knowledge transfer and collaboration Heinonen & Toivonen (2008); Bassett-Jones & Lloyd (2005); Amar 2004 and Amabile 1998).

Thirdly, we can apply the theories above to the bespoke SME environment through the writings of Ates, Garengo, Cocca & Bitici (2013); Irwin & Scott (2010); Barringer, Jones & Neubaum (2005); Thompson (2004); Poutziouris (2003); Entrialgo, Fernandez & Vazquez (2000); Deakins & Freel (1998); Merz & Sauber

(1995) and Bates (1990) who all indicate a direct association between the selection of innovative activities in SMEs and the personality of the PDM and his/her ethos and principles. Furthermore, in contrast to large organizations, the personal characteristics of the PDM are generally considered the most influencing factor in SMEs. What needs to be considered is the potential employment of a command & control culture specifically in that SME may be dominated by the PDM's personal business style and beliefs. To expand upon this aspect of hypothesis 8 there are many more characteristics associated with or inextricably linked with the entrepreneur PDM which can have a positive or negative impact on intrapreneurialism, for example, diversity, temperament, talent, openness, supportiveness, tolerance Painoli (2012); Simpson, Padmore & Newman (2010) and Wunderer (2001). In summary, we find that hypothesis 8 is fully supported throughout the literature and within this research case study investigation.

## **6.2 Research Question 2**

RQ2: To what extent does the level of employee organizational boundaries, work discretion and time availability influence levels of intrapreneurial opportunity within UK technology-innovative SMEs?

The measurement of research question 2 comprises hypotheses 2, 4, and 6.

### **6.2.1 Hypothesis 2**

Hypothesis 2 served to investigate if, and to what extent, a relationship existed between the level of organizational boundaries and the level of intrapreneur opportunity. With a p-value of 0.230 ( $>.05$ ) we failed to reject the null hypothesis and failed to accept the alternative hypothesis. From the extant literature we cannot readily identify the reason for hypothesis 2 being unproven. The boundaries that

confine the intrapreneur are reflected in the business infrastructure and may be generally considered to reflect internal policies and procedures within the setting of the culture generated by the PDM (Zhao, 2005). For example, there is a direct reference made to this by Molina & Callahan (2009) who assert that the constructs of the organizational environment are influential to intrapreneurship. Whilst internal policies will always exist and are necessary to ensure a consistency service or product delivery, a uniformity of service or product quality and, in some sectors a compliance with governing body requirements, it is the extent to which they are present, controlled and enforced that is of interest to this research study. It could be argued that the SME business has greater flexibility to decide the extent to which organizational boundaries exist. Firstly, in that the evaluation generally lies with one or maybe two people, and secondly, that the SME is an optimum size for less rigidity when compared with a business that has many hundreds or thousands of employees. In the latter case, it is not unusual that the company becomes managed by policy documents rather than people to a greater degree. As Amabile (1998) proposes, freedom from tiers of decision makers is the discretion of the primary decision maker (PDM) and lessens the boundaries within which the intrapreneur will need to operate and heighten levels of motivation.

Furthermore, when we reflect upon the research target audience being technologically innovative, it is most likely that they will have to operate within set industry codes and audit procedures which in itself will contribute a high level of procedural requirements. As Ross (1987) posits, a rigid work structure and working practices will hinder organizational innovation. What we may consider is not how strictly such obligations are enforced, as it would be risky and short-sighted to ignore

them, rather to what extent does the PDM allow them to control the business in such a way that it impacts upon all employees whereas it may be possible to shield employees from some restraining influences by allocating a complimentary amount of time to work outside of such boundaries in such a way as it is experimental and does not impact upon a product or service delivery without some further rigor built into the process. In doing so, the requirements for innovative thinking and actions could be met without any direct impact upon service quality or delivery. From Bassett-Jones & Lloyd (2005) we learnt that the opportunities to transfer ideas into actions are highly motivational for the intrapreneur but are dependent upon internal policy and procedural constraints and from Florida & Goodnight (2005) that intrapreneurial creativity and motivation is consistent with relatively relaxed organizational boundaries.

Hypothesis 2 is the only one which could not be proven through our conceptual model test. To understand further potential reasons for this outcome we need to look to other aspects of the data gathered. We believe that the methodology of a quantitative case study approach through the employee survey instrument was a sound process both in its content and its execution. Furthermore, the employee survey instrument, our own adaptation from the work of Bassett-Jones & Lloyd (2005) in conjunction with the CEAI from Hornsby, Kuratko & Zahra (2002) appeared to be fit for purpose and was proven to be the case for the other hypotheses. However, the combination of the uniqueness of each SME business, the specific industry sector chosen (whilst marginally diverse and confined to technology dependent) within a designated country (the UK) and, the number of cases studied (nine) on a non-repetitive basis may all, or in part, have impacted upon the test results. We did extend

our test results to look at the conceptual model data from different perspectives. Firstly, whether it would offer different results if we combined the constructs organizational boundaries, work discretion and time availability and measured the three under the heading of “need satisfaction”. No material impact was found. Secondly, we looked at the impact of Company 9 as the employee numbers were significantly higher than those of the other SMEs. By removing this data no material impact was found. Thirdly, combining companies in smaller groups did not affect our findings.

In summary, so much of the extant literature acknowledges the construct of the level of organizational boundaries as central to intrapreneurial opportunity levels that although it was not proven in the conceptual model, we argue that at this time it has a right to be there and a further method of investigation needs to be sought to clarify this position. It could be, for example, that the questions asked of the employees under this construct headings were not comprehensive or inclusive enough but this is not supported by the extant literature. As such, we propose that our research vehicle was a contributing factor to hypotheses 2 failing to be proven and, that an alternative methodological approach or a longitudinal study approach could be considered. This is detailed within the methodological limitations of this dissertation at chapter 7.

#### **6.2.2 Hypothesis 4**

Hypothesis 4 served to investigate if, and to what extent, a relationship existed between the level of work discretion and the level of intrapreneur opportunity. From our model output this hypothesis was demonstrated significant with a  $\leq .001$  p-value.

The extant literature suggests that this is a highly significant construct, for example, Antoncic & Hisrich (2003) assert that intrapreneurs anticipate the opportunity to operate outside of what would be considered customary business procedures, a view also posited by Turner & Bryant (2014); Christensen (2005) assesses intrapreneurial opportunities enablers in a similar way and study by Bystead (2013) found a positive correlation between job autonomy and innovative work behaviour. Szerb (2003) proposes that the intrapreneur must be granted freedom and independence by the entrepreneur in defining their work activities and objectives; Painoli (2012) that leaders should empower employees at all levels to generate their own new ideas; Sandberg, Hurmerinta & Zettining (2013) and De Villiers-Scheepers (2012) that a leadership style which supports creativity will motivate intrapreneurial employees by enabling them to set and achieve their own goals and fulfil their desire to have autonomy in their work tasks and Amabile (1998) in that flexibility of work design and experimentation are vital for sustained intrapreneurial opportunity and creativity. Autonomy within work discretion is made further compatible by the intrapreneur's disposition to take responsibility for actions combined with an inherent dislike of close supervision (Bystead, 2013; Vora, Vora & Polley, 2012; De Villiers-Scheepers, 2011; Alpkhan et al, 2010; Florida & Goodnight, 2005 and Kuratko, Montagno, & Hornsby, 1990). From a further positive perspective within the SME setting we may reflect that Menzel, Aaltio & Uljin (2007) reported that whilst flexibility of work discretion could be unattainable in large corporations it should be possible within the SME environment.

### 6.2.3 Hypothesis 6

Hypothesis 6 served to investigate if, and to what extent, a relationship existed between the level of organizational boundaries and the level of intrapreneur opportunity. From our model output this hypothesis was demonstrated significant with a  $\leq .001$  p-value.

Within the construct of time availability we need to contemplate two significant aspects of intrapreneurial opportunity, the desire for innovative experimentation and a predisposition towards problem-solving activities. Both are considered central to intrapreneurial satisfaction as found in the work of Sandberg, Hurmerinta & Zettining (2013); Sim, Griffin, Price & Vojak (2007); Amabile (1998) and Carrier (1994) Furthermore, problem-solving is suggested to be central in the successful evolution of innovative products or services (Thompson, 2004; Brunaker & Kurvinen, 2006 and Menzel, Aaltio & Uljin, 2007) Through experimentation and problem solving it is also posited that it becomes more likely for employees to identify business opportunities (Sandberg, Hurmerinta & Zettining, 2013; Burgers & Van De Vrande, 2011; Wang & Poutziouris, 2010; Todd, 2010; Scheepers, Hough & Bloom, 2008) and Kanter (1990) who asserts that for an organization that purports itself to be entrepreneurial will treat seriously the time required to be allocated for innovative experimentation. However, time availability, especially in the SME environment where resources may be fully utilized on the everyday operational activities that keep the business alive will be an issue. We did find the literature on intrapreneurship in the SME business environment scant and may revert to the observation from Bouchard & Basso (2011, p.224) that “corporate entrepreneurship as an intra-firm process in SMEs has received little attention”, and that subsequent to the

research study conducted by Carrier (1997) that there have been no further similar noteworthy research efforts in the ensuing years. Our search for literature post-dating the findings of Bouchard & Basso did not prove fruitful in any further examination of intrapreneurship in the context of SMEs that was relevant to the scope of our investigation, which concurs with the findings of Simpson, Padmore & Newman (2012, p.278) in that this is “an area very difficult to research” and, as a result, “theoretical advancement in this area has been slow if not completely stagnant over the last 30 years”.

When we reflect upon hypotheses 2, 4 and 6, we may revert to the introduction chapter of this dissertation in that these were the constructs chosen to represent an “umbrella” heading of need satisfaction fulfilment. It is very noteworthy that whilst a relationship between employer levels of support for innovation had a confirmed impact upon the level of organizational boundaries, the level of work discretion and the level of time availability, this was not reflected in the forward relationship between these three variables and intrapreneur opportunity. When we turn to the literature there appears to be no obvious reason why this would be the case from a conventional perspective. Organizational boundaries, work discretion and time availability have all been critically analyzed within our work as being deemed to have a very substantial impact upon intrapreneurship and we believe this to be the case from our investigative experience.

### **6.3 Research Question 3**

RQ3: To what extent does the SME strategic type of the entrepreneur PDM led UK technology-innovative business impact upon intrapreneurial opportunity levels?



The measurement of RQ3 comprises hypotheses 7.

### **6.3.1 Hypothesis 7**

H7: The strategic type of the entrepreneur PDM SME influences levels of intrapreneurial opportunity

Hypothesis 7 served to investigate if, and to what extent, a relationship existed between the strategic type of the entrepreneur primary decision maker (PDM) and levels of intrapreneurial opportunity. Using the “reactor” profile as a base for comparison we note that the prospector and analyzer profiles are those which are most significant in terms of intrapreneur opportunity levels. This aligns with the position we observed from the literature in that defending PDMs, are by nature considered to be more conservative than prospecting PDMs, and are similarly described within the literature as more risk-adverse. This will commonly present a strategic type which utilizes a narrow product and market focus but, potentially, hold a strong position in a market segment which they wish to sustain. As such the company strategy may place emphasis on productivity levels and cost control which is not conducive to lasting intrapreneurial opportunities.

Businesses which are led by a PDM who displays “analyzer” behaviors are considered to be neither overtly defensive nor prospective but will adopt different stances based on a statistical approach to business opportunities. This strategic type can be considered as likely or unlikely to create meaningful levels of ongoing intrapreneurial opportunity dependent upon the decisions made by the PDM.

The “reactor” entrepreneur’s behavior is characterized as creating a working environment that is perpetually unstable and inconsistent. There may be sporadic bursts of low and high risk ill-defined innovative activity as the PDM tries to sustain

the business' viability to meet ever changing market and consumer needs. This strategic type can be considered unlikely in creating meaningful levels intrapreneurial opportunity on a lasting basis.

The "prospector" entrepreneur PDM emerges from the literature as displaying a dynamic and challenging behavioral profile and the resulting organizational climate and culture will necessarily be highly innovation oriented and positioned. As such, whilst we would have expected to find the highest levels of intrapreneurial opportunity in this workplace environment, the levels were not materially different to those found for the analyzer strategic type. This could result from our sample size of 9 case studies and as such, the findings could change either as a result of those businesses maturing, or, by collecting data from a much greater number of businesses.

#### **6.4 Scientific Method**

Lastly we have ensured that the research study meets the requirements of the scientific method, defined by Bhattacharjee (2012, p.5) as a "standardized set of techniques for building scientific knowledge, such as how to make valid observations, how to interpret results, and how to generalize those results". It is proposed that the scientific method should fulfil four characteristics, that of replicability, that of precision, that of falsifiability and that of parsimony. As Vandekerckhove, Matzke & Wagenmakers (2014, p.3-4) assert "the principle of parsimony forces researchers to abandon complex models that are tweaked to the observed data in favor of simpler models that can generalize to new data sets". The expression originated through astronomical research dating back to the 2<sup>nd</sup> century by Ptolemy (c.AD 90 – c.AD 168), the central observation being that we should aim to explain a phenomenon in the simplest way, but, with the caveat that in doing so we are not contradicting our data.

Table 107 : Scientific Method

Characteristic	Recommendations	Researcher Evidence
Replicability	Others should be able to independently replicate or repeat a scientific study and obtain similar, if not identical, results.	Due to the nature of the survey instruments constructed for the research study, the methodology of their application, and the statistical analysis tools adopted they can be replicated and could produce similar results if utilized within the same research framework.
Precision	Theoretical concepts, which are often hard to measure, must be defined with such precision that others can use those definitions to measure those concepts and test that theory.	<p>From the critical analyze of literature, we have succinctly defined the usage of the terminologies that constituted the research investigation: innovation, entrepreneur, leadership, strategic type, intrapreneur, intrapreneurship, SME, organizational boundaries, work discretion, time availability and strategic orientation.</p> <p>The conceptual model, its constructs and ensuing hypotheses have been explored and explained in great detail so that they may be used by others to test intrapreneurship levels in the SME environment.</p>

(Continued)

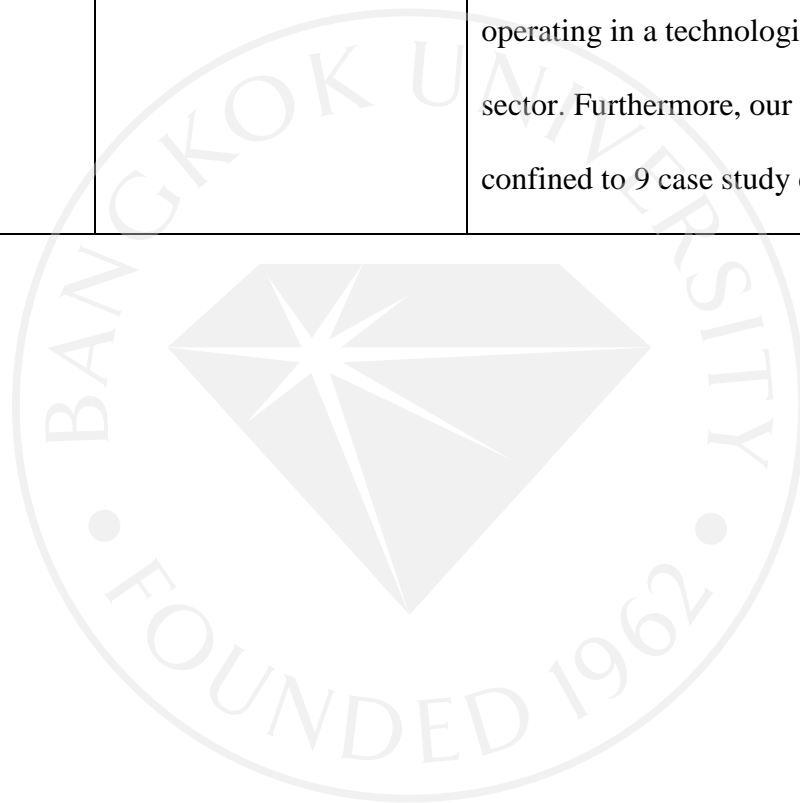
Table 107 (Continued) : Scientific Method

Characteristic	Recommendations	Researcher Evidence
Falsifiability	A theory must be stated in a way that it can be disproven. Theories that cannot be tested or falsified are not scientific theories and any such knowledge is not scientific knowledge. A theory that is specified in imprecise terms or whose concepts are not accurately measurable cannot be tested, and is therefore not scientific.	Hypotheses 1 through 8 have been constructed in such a way that they can be disproven. The method by which each construct was operationalized, the diligence of the data collection and analysis combined to ensure complete precision in terms of what we were seeking to measure scientifically.
Parsimony	When there are multiple explanations of a phenomenon, scientists must always accept the simplest or logically most economical explanation.	Parsimony was demonstrated in the reported findings for this research. Hypotheses 2 and 6 were not proven and hypothesis 4 was low in significance. The conclusion that was most obvious and logical to be applied in our research

(Continued)

Table 107 (Continued) : Scientific Method

Characteristic	Recommendations	Researcher Evidence
	This concept is called parsimony or “Occam’s razor.”	findings that this was most likely to be subject to the nature of the collaborating businesses. They were all unique in terms of SME profile and were all operating in a technological innovative sector. Furthermore, our audience confined to 9 case study companies.



## CHAPTER 7

### CONCLUSIONS AND DISCUSSION

#### 7.1 Introduction

At the commencement of this research study we drew significant attention to the work conducted by Carrier (1997) and highlighted the main areas in which our research study differs. As, in wider sense this constitutes a continuation of her work, we will now look to our respective findings. In common with Carrier (p.7) we chose to position our methodology within an overall case study framework “to enable the representations of each to be studied in detail”. The ensuing research strategy diversifies at that point from her qualitative and interpretive study to our quantitative and post-positivist study. The reason for doing so was the advantages that could be realised by seeking intrapreneurial opportunities in the SME environment rather than investigating those with operational intrapreneurs already in place. This meant in the Carrier study the methodology comprised interviews with 5 company primary decision makers (PDMs) and 5 of their employees. In this research study we created the opportunity to record data from 9 PDMs and 162 employees. In 4 cases this represented 100% of the workforce and with the exception of Company 9 at 49%; the remainder were not less than 66% of the workforce. Furthermore, whilst her case study companies were varied in nature, ours have been grouped within the UK technological sector which we felt would most likely produce the suggested “fertile ground for intrapreneurship” (p.9). In doing so, we acknowledge the proposition that “popular mythology would seem, unfortunately, to link innovation exclusively with technology” (p.8) but, there was no reasonable justification to suggest selecting another industry sector or a mix of industry sectors would have better met the aims of

the research questions. We may in fact substantiate our decision for content analysis with a direct quotation from Carrier (p. 8); “Bardin (1989) states that content analysis has two possible functions. Its function is said to be heuristic when the analysis enriches exploration and increase the propensity for discovery. On the other hand, its function is to "administer proof" when systematic analysis is performed to confirm or invalidate one or more hypothesis”. We believe we have met both criteria.

## **7.2 Comparative Findings**

In common, we find agreement with 3 of Carrier’s 6 postulates “supporting the need to reconcile the concepts of intrapreneurship and small business” (p.7); that intrapreneurial characteristics are not the exclusive property of employees of large firms; that intrapreneurs can be first-class allies for primary decision makers (PDMs) of growing small businesses; that intrapreneurs are weakly represented within the SME literature does not mean that they have no right to be there. The above are well documented within the extant literature and our investigative study gives us no cause to dispute the reliability of these statements. Postulate 4 proposes that “the loss of an intrapreneur will have more serious consequences for small firms than for large firms” but this was not part of our research study aims. Postulate 5 proposes that “small firms are potential incubators for intrapreneurs and postulate 6 that “small business provides a favorable environment for innovation”. Within our study, and from the employee data collected, we cannot conclude that our PDMs sought to identify entrepreneurial traits within their workforce through intrapreneurial opportunities. Whilst we accept that this reflects an “employee perception”, the fact that it remains consistent across the nine companies studied suggests it is could be more an “employee reality”.

Alternatively, we could conclude from some of the verbatim comments received from

the business leaders that intrapreneurial opportunities were indeed an intended state, but we still cannot overlook the evidence that this was not deemed to be the case by the workforce. Again, from the literature we would have to concur that, on balance, the loss of an intrapreneurial employee would be significant in the SME environment, but with the exception of Company 6, we have no further evidence on this point.

Company 6 alone contributed to the proposition that “small and medium-sized firms seem to provide a more fertile environment than might at first be thought for the development of rich and varied innovations under the supervision of enthusiastic employees” (p.9) in that we had similarly found an example of an intrapreneurial employee proposing a specific type of spin-off venture that led him to essentially create his own firm within the incubator firm, but with no real managerial responsibility (p.10).

We are fortunate in that Carrier (1997, p.10) provided us with a “comparative analysis of the factors governing the emergence of intrapreneurship as perceived by the PDMs”, which may guide us to the factors that suggest whether our collaborating companies provided an organizational structure and culture that was found to be conducive to intrapreneurial activities.

Firstly, we acknowledge a “simple” or what we might label a relatively “flat” structure in terms of hierarchy. With the exception of Company 9 with 132 employees, this was the case for 7 of the remaining case studies. It is interesting to reflect on the other case study company, Company 8, which whilst only comprising 15 employees did not have a flat reporting structure as identified from the employer interview. This business, from the analyzed employee data, presented the poorest findings overall and the second lowest score for intrapreneurial opportunities at 3.3/6.



The company that had the lowest score for intrapreneurial opportunities was Company 9 at 3.2/6, which now adds the dimension of business size to that of organizational structure to be considered. With maturity of employee numbers it may become impossible for the PDM to remain in close proximity, from a relationship perspective, to his/her workforce and, to operate with a flat non-hierarchical reporting structure. These two potential requirements for intrapreneurial recognition are therefore, both supported within the literature and the interim findings of this research study. It will require further research of a similar nature in SMEs with, say, over 100 employees to more fully expand upon and prove or disprove this theory. With the exception of Company 9 we suggest that in all other case study companies the workforce size was such that intrapreneurial opportunities could be developed and individuals identified to fulfill the role of intrapreneur.

The third factor was the ability of PDMs to trust employees and delegate. This aspect of organizational culture has been captured at construct 3, work discretion. The range of employee scores received varied by company from a low of 3.9/6 (Company 1, Company 3 and Company 8) to a high of 4.7/6 (Company 5). The highest scoring company also had the highest levels of intrapreneur opportunity at 4.2/6 compared to an average across the other companies of 3.5/6. The fourth factor was the right of employees to make mistakes. Again, at construct 3 we included the statement “harsh criticism and punishment result from mistakes made at work” to evaluate this element in the work place. This was recorded as having the lowest score within the construct which, as a reverse score question with a low score indicating disagreement, concurs with Carrier’s observations.

Within the analysis of literature we discussed Carrier’s “personal motivations

of intrapreneurs”. The intrinsic personality-related motivations such as discovering better ways of working and a sense of working for oneself are also addressed at construct 2, work discretion. By reflecting on the writings of Desouza 2011 in that a major motivation for intrapreneurs is their contribution in the workplace and from Sim, Griffin, Price & Vojak (2007) their desire to be involved in more complex problem-solving activities we can again concur that a high level of intrinsic motivation may equate to a higher level of intrapreneurial opportunity recognition by the employee. Within the category of extrinsic, reward-related motivations, aspects such as promotion and bonuses are covered. From our analysis of the literature we learnt that promotion was not necessarily a desired outcome of intrapreneurship and financial rewards could be considered quite negative or tantamount to a “bribe” as voiced by Amabile (1998) in that creative thinkers may identify money as an adverse motivator whilst implying it could be perceived as a method of controlling the employee. Goffee & Jones (2007) add that promotion is likely to be viewed negatively by innovators as they are indifferent to the use of job titles but highly motivated by their status within the organization. In our case study SMEs we found disagreement that promotion usually follows the development of new and innovative ideas in all companies. At Company 1 we find the lowest average employee score of 2.2/6. When we consider this more in more depth, the company has been operating as a SME for over 100 years and has employees with over 10 years of service who may naturally have seen promotion as a natural or inevitable outcome for innovative ideas or activities. As a business that has been owned and managed by a tight-knit family unit for its entire trading life, this experience is supported in the work of Hunter & Kazakoff (2012, p.109) who posit that within the small family business a “strong

sense of identity is created” leading to a greater commitment to each other and the business, leading to promotion opportunities within this positive work environment. This component of the literature analysis is not proven at Company 1 and we have seen from the PDM interview that a very controlled environment exists with little freedom for any unapproved behaviors or undertakings.

Lastly, within our inspection of extrinsic, reward-related motivations, we found that financial incentives for innovative thinking also scored below the median in all case study companies with a combined average of 2.6. Carrier (p.16) reported “most of the intrapreneurs were stimulated by the challenge of innovating and the learning involved. However, after the fact, they were generally dissatisfied with the almost total lack of extrinsic reward to denote the value of their contribution and encourage them to initiate new projects (for example, promotions, bonuses, stock holdings, discretionary budgets to develop new projects)”. This calls into question a sizeable proportion of the extant literature which addressed the use of rewards, and which we feel may have underestimated the value of extrinsic rewards linked to innovation. Within our study we found they barely existed and no SMEs had high levels of intrapreneurial opportunities. Within Carrier’s study she found that even when intrapreneurial opportunities did exist and had been embraced by employees, they may not have been sustainable without extrinsic compensation in some form.

The final factor in Carrier’s personal motivation of intrapreneurs concerned organizational context covering aspects that all relate to the entrepreneur management style and the quality of his/her relationship with their employees. This factor was measured by construct 1. With the exception of Company 8 at 3.8/6, this was the highest scoring construct by comparison with the other constructs.

Next we turn to construct of strategic type, and in common with Carrier, we have used the categorizations proposed by Miles & Snow (1978) prospecting, analyzing, defending and reacting. Within her 5 case studies, interviews with the PDMs identified 2 as defending and 3 as prospecting. The explanation for this being “this is undoubtedly explained by the small size of the companies concerned (no surplus resources to overanalyze the environment)”, and, with a growth ideology it would be “difficult to imagine a reactor-type profile” (pp. 14-15). Without exception, and perhaps unsurprisingly, the 9 companies collaborating in our research study all sought growth as their primary driver. It is unknown what questions Carrier asked of the PDMs which would have elicited a response classifying them according to the Miles and Snow typography as defending or prospecting. Furthermore, should we have followed what we can only consider to be a subjective reasoning by Carrier through an interview process we may have received similar results. By rationalizing the method utilizing the multi-item scale for measuring strategic type (Conant, Mokwa & Varadarajan, 1990) any potential subjectivity on our part was removed as was any subjectivity by the PDM. This provided an outcome as seen below.

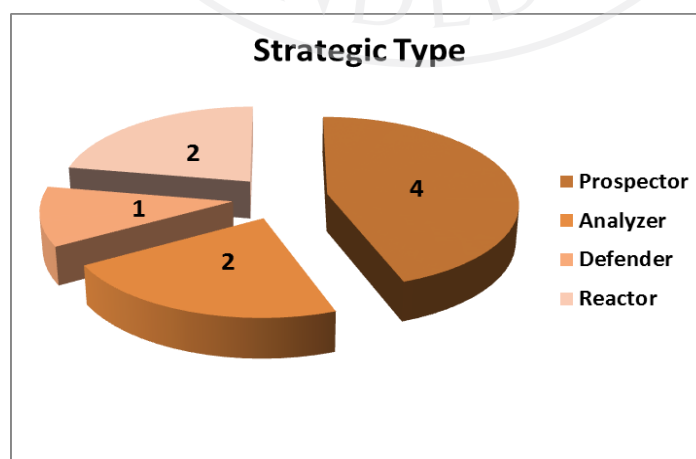


Figure 51 : Chart 15 – Strategic Type as Perceived by the PDM – n=9

We acknowledge that this observation could be considered as purely theoretical but feedback from some of the primary decision makers (PDMs) agreed that whilst they desired their strategic orientation to be, for example, primarily prospecting, in reality their actions and decisions did not reflect this. Within the research scope we also sought the employees' perspective of their company's strategic orientation which resulted in the observation that 3 companies showed alignment between the employer and the employee. We have also provided for comparison the average score for each company for construct 6, the levels of intrapreneurial opportunities recorded from the employee surveys. It must be remembered however, that the employee's views were subjective and conducted as a self-assessment from the descriptions of the Miles and Snow (1978) typography provided in the survey instrument. The employees would not have been in a position to accurately choose from the statements offered in the questionnaire completed by the PDM.

Table 108 : Strategic Orientation Comparison

Companies	1	2	3	4	5	6	7	8	9
Employer's view	D	P	P	A	P	P	R	R	A
Employee's view	D	R	P	P	P	D	D	D	P
Construct 5 - intrapreneur opportunity levels	3.4	3.6	3.7	3.7	4.2	3.5	3.7	3.3	3.2

Key: P: Prospector; A: Analyzer; D: Defender; R: Reactor

At this point we also diverge from carrier's observation that "it is clear that the intrapreneur's strategic behavioral profile is a direct result of the PDM's strategy" (p15) as this was not proven in our research findings. Carrier's dimension of

intrapreneurial motivation in relation to past experience and future career objectives was not included in the scope of our research.

### **7.3 Methodological limitations**

“Knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand.”

Albert Einstein 1879 to 1955.

We commence this sub-section by reflecting upon what methods may in future be applied to discover more about intrapreneurship within SMEs. Within Carrier's (1997) study we learn that “the choice of a subjective, interpretivist approach provided a "progressive construction" (p.15) but no explanation of how this was achieved is provided. Secondly “the subjects' remarks may have been influenced by the researcher and her goal, and cannot therefore be considered to be neutral” (p.16). We can address both of these points from a methodology perspective. As known, we introduced a quantitative survey instrument for the employees which were completed on-line. With the exception of the pilot company, the researcher was not present at the time of completion and did not meet any of the employees so no biased interpretations could be made. Furthermore, they remained anonymous throughout the research process which we anticipate led to greater honesty in their responses. We are also satisfied that the utmost care was taken in not influencing the primary decision maker (PDM) interview which comprised a series of questions that were made available to the participant in advance for due consideration and reflection. The participants presented a high level of business and personal confidence and it was highly unlikely that their opinions would be materially influenced by a university researcher gathering data. We acknowledge that in the interview process there were random occasions

when the researcher felt required to prompt further for an answer, for example, when the question was met with a significant pause by the participant. Again, we do not see this as being “influential” or “biased”, more that there will always be occasions when questions can be interpreted in different ways and it is helpful to elaborate, to the interviewee, the area of specific interest that the question addresses.

### **7.3.1 Research Process**

It is well documented throughout the literature that the same person may answer the same survey or interview question one way today but differently tomorrow, therefore the output may not be reliable (Creswell, 2009 and James, 2010). This is a noteworthy limitation of our research; it is not a longitudinal study, a weakness presented by Menzel et al (2006, p.35) that exists in other research into innovation-supportive cultures, and by Langley, Pals & Ortt (2005, p.73) in investigating the predictors of success for major innovations. Furthermore we suggest that due to the small sample size the findings cannot be “generalized to the population at large”, (Easterby-Smith, Thorpe & Lowe, 1991, p.72) or “outside of the current research study” (Louangrath, 2013, p.5). Bhattacharjee (2012, p.100) proposes that case study research tends to examine unique and non-replicable phenomena that may not be generalized to other settings. To define generalization we have adopted the characteristics offered by Huch & Cormier (1996, p. 602) the degree to which our research findings hold true for settings other than that (or those) used within the research investigation. However, as the study is exploratory in nature and is investigating an area of intrapreneurship that had not been previously researched in the same context or with the same methodology, the participating companies were purposefully selected to ensure they meet the research objectives, not that the findings

would generalize to all entrepreneurs or technical sector SMEs. As Desarbo, Benedetto, Song & Sinha (2005, p.48) report, “our goal is not to uncover generic strategic types that could be necessarily generalized across all time periods, industries, data samples, etc., as we believe this would be impossible to do”. From Carrier (1997, p.15) we can make the same observation in that we have conducted a study on a case-by-case basis with “each case providing a better understanding of the others” and “because of the type of analysis involved, we had to work with a small sample. It is therefore difficult to generalize the results, in the usual sense of the term, and thus may be perceived as a major limitation”.

An additional limitation for the quantitative research method applied is the use of a Likert scale. With this, we identify 2 primary issues. Firstly that posited by Easterby-Smith, Thorpe and Low (1991, p.120) in that an approach “with closed questions or statements are quick to complete and analyze but the data obtained may be very superficial”. However, the statements included in the survey instrument utilized within this research study called for some thought by the employee and the outcome was highly unlikely to be superficial due to the emotive nature of the content. Secondly, that we introduced a scale of 1 (the strongest rating of disagreement) to 6 (the strongest rating of agreement), the outcome of which was what is known as the “forced choice” method with no middle option of neither agree nor disagree" available (Allen & Seaman, 2007, pp. 64-65)

Finally, we may consider what additional literature content may be pertinent to this research study. Although expansive, any analysis of literature is unlikely to be completely exhaustive. Further areas of input could be reviewed such as the “LMX theory” (Isaacs, 1993 and Jian, 2016) which investigates the relationship between the



leader and the led on an individual basis.

### **7.3.2 Data Collection Instrument**

One could also revisit the usage of the Corporate Entrepreneurship Assessment Instrument (CEAI) as part of our data collection tools. To recap, the CEAI was originally created in 1990 by Kuratko, Montagno & Hornsby (447 citations) and reassessed by Hornsby, Kuratko, & Zahra in 2002, (433 citations). When writing the latter paper they recommended additional validation and it has been tested by authors in subsequent years, for example, and of specific relevance, de Villiers-Scheepers (2011) The 2011 study focused upon the relevance of rewards in motivating intrapreneurs and took a sub-section of the original instrument adding in further questions bespoke to the research paper's theme. Furthermore, it was featured in a study into organizational support for intrapreneurship by Alpkan et al (2010) and Rutherford & Holt (2007, p.429) utilized the concept and factors developed within the instrument to address their research interest, "what encourages individuals to engage in entrepreneurial activities in an organization?" Hayton (2005, p.30) submits that the categories identified and used within the instrument were subject to "studies of US samples" which "confirmed the empirical significance of these five dimensions of organizational environments for promoting CE". This is further substantiated in the work of Shepherd & Krueger (2002); by Marzban, Moghimi & Ramezan (2013) in a study of factors affecting organizational entrepreneurship climate; throughout the writings of Ireland, Covin, & Kuratko (2009) and at the University of Dortmund for a study into intrapreneurial governing factors in December 2014.

In early 2015 the researcher became aware of a further re-assessment of the CEAI published in late 2013 by Hornsby, Kuratko, Holt & Wales. By applying three

studies for content, construct and convergent validity it is stated that the CEAI was found to be “a relatively stable instrument, although the factor structure that emerged varied slightly from the original instrument” (p.937) This resulted in the concept of reducing the CEAI from the original 48 statement tool, to an 18 statement tool in what is described as a more “parsimonious and psychometrically sound approach”. The participants for the study comprised “thirty-nine working professionals enrolled in an executive graduate program at a Midwestern university” who evaluated each statement. The origins of the ensuing adaptation stemmed from a Master of Science degree dissertation (2006) by Tassika M. Davis, a Captain in the United States Air Force and a paper written by a member of his panel Daniel T. Holt in conjunction with Rutherford and Clohessy in 2007. However, after a great deal of contemplation and deliberation, we chose to continue with the usage of the original instrument. The primary reason for this was the lack of evidence to demonstrate that the latter version had been extensively tried, tested and re-evaluated as had the earlier version. As such, it would have been unacceptable to us to action what would amount to re-testing the instrument ourselves through a limited number of case study businesses and presenting a high degree of confidence in our findings. Furthermore, the validation of a survey instrument was not the goal of this research study and the lengthy and longitudinal work required to do so would be better served as a separate research project either by the researcher at some point in the future or by others with an equally invested interest in the field of intrapreneurship.

We remain concerned, although intrigued that the measurement of organizational boundaries through the employee survey instrument was a cause for concern within our reliability calculations. We further acknowledge that apart from

our research vehicle methodology being a contributing factor, we have been unable to establish any other reasonable cause for this. The questions within the instrument were tried and tested in several previous research studies and met the criteria as fit for purpose. Furthermore, we can find no evidence within the literature that the construct of organizational boundaries is unimportant in relationship to intrapreneurial opportunity, or less significant than work discretion and time availability. In fact, we would strongly argue that it is paramount to levels of intrapreneurial opportunity.

Finally, we accept that a substantially greater number of case studies may make a difference to this type of investigative research study. Again, this provides a consideration for other researchers.

The above limitations can be viewed in a positive light as providing scope for follow-on research by the author or other researchers in the future. They provide additional considerations to our research platform that can be revisited outside of the scope of this dissertation which could include, for example, the combining of quantitative and qualitative methods to obtain the employee feedback data.

#### **7.4 Research original contribution**

Although not proven in its entirety, we argue that the conceptual model constructed to measure intrapreneur opportunity levels in technology-innovative UK SMEs demonstrates an original contribution to the extant body of literature. As far as we are aware, it is the first study of its type to be carried out in the UK, within a specific sector and a defined company size of fewer than 250 employees. The research questions were specifically constructed to follow a journey between entrepreneurial leadership and intrapreneur opportunity in the SME environment and, as postulated by Schreiber et al (2006, p.326) that we have provided sufficient information to

demonstrate that our model is theoretically grounded. This objective has been met and has also provided many considerations as to how that journey has been shaped and what constituted the component parts. In addition we have addressed the literature gap expressed at the beginning of the dissertation whilst creating a platform for further research. We are excited by the realization that contrary to everything previous written in the field, we were unable to demonstrate a clear association from hypothesis 2 between organizational boundaries and intrapreneur opportunity levels. This establishes a potential lack of clarity in previously published work whilst providing extensive opportunities for further research.

The study conducted by Carrier (1997, p.16) proposes that “at first glance, small business seems to be an ideal potential incubator for intrapreneurs”. In reality we found scant evidence to support this but we acknowledge the caveat “at first glance”, which again calls for further research to be conducted in the field of intrapreneurship in SMEs. Whilst Carrier (p.17) suggests this might be better achieved by applying an interactionist perspective, we are not convinced that by substituting the subjective position of interpretative for the subjective position of interacting will necessarily provide more conclusive evidence in the field. However, we accept that this approach would provide a richer perspective than relying solely on statistical data. The latter method can be justly criticized for presenting a snap-shot in time opinion being gleaned from all participants.

### **7.5 Practical implications for UK SMEs**

Turning to the scope of the research currently undertaken, it was inevitable that during the data collection and analysis phase of this study, the researcher would reflect upon all aspects of the questions asked, but specifically those that would most

impact the creation of intrapreneurial opportunities. We cannot lose sight of two issues when considering this; the first being that the SME businesses were found to be financially constrained in any incentives might want to commit to; the second being the viewpoint from the extant literature that financial incentives may not be perceived as a motivating factor by employees who were intrapreneurially disposed. Embracing both, the researcher would like to put forward some suggestions that could prove suitable and did not emerge from the data collected. From the SME PDM employer perspective, we may look at how to mitigate a potential lack of intrapreneur opportunity deterred by cost and funding issues. Specifically with reference to the current systems operated in the UK, there are options available that could be considered and explored. There are 538 schemes available which encompass finance, equity, grants, loans, expertise and advice and recognition awards (accessed, 2016). Streamlining of the options available can be accessed by business address postcode, number of employees (0 to 9; 10 to 249), by business sector followed by business stage (pre-start; start-up; growth and sustain). There are innovation voucher schemes, research and development grants and countless financial options for business backing ranging from Enterprise Funds, Finance Solutions through to Business Innovation Centers, Specialist Advisor and Consultancy Funds. We also noted in the analysis of literature the demographic consideration of geographically positioning the SME business within complimentary or business competitors. Many technology and innovation businesses are now clustered within what have become known as Science Parks and exist across the UK through the United Kingdom Science Park Association. To quote; “The mission of UKSPA is to be the authoritative body on the planning, development and the creation of Science Parks and other innovation locations that are

facilitating the development and management of innovative, high growth, knowledge-based organisations” (accessed, 2016). Their members provide environments for technology entrepreneurs, start-ups, University spin-off companies in over 100 locations “Science, Research and Technology Parks, Technology Incubators and innovation Centres”. In 1982 only 2 Science parks existed.

All of the above are there to assist businesses to move forward; it remains to consider what positive actions or activities can be embraced by these businesses internally. We discussed the perception of annual appraisals and found they were somewhat lacking in respect of purpose, consistency, continuity and motivation. Our first recommendation is that these could serve an additional purpose in targeting and measuring individual creative awareness, idea generation and activity. For example, employees, regardless of their function could be set a goal to put forward four ideas each year which would be something that was a quantifiable benefit to the efficiency or functionality of their department, or a product development, or a customer service enhancement. If advantageous to the business, idea generation could take the form of a “campaign” in which employee ideas could be sought for a specific company goal in a given period. Again we should remember that it is not necessarily helpful in a small company to aim to create a “think tank” for such activities, rather that we include everyone’s suggestions. If the idea is rejected for implementation, it should still be logged and recognized in order to cultivate employees into the right mind-set but in a feasible way. If their first idea is not practicable or affordable, with correct treatment internally it is likely that their second, if not third idea can move forward in some form at some point in time. In addition, ideas can be published and openly acknowledged in team meetings as either falling into a category that was immediately

suitable for implementation or one that would need to be revisited at a later date. Recognition could also encompass a team reward to foster participation within small groups. These relatively small employee activities could also be considered as developmental to the SME primary decision maker (PDM) or directors/line managers as a culture of idea generation and discussion would become more normal than infrequent which in itself could be inspirational. To achieve this it may be wise to have a target timescale in place for the evaluation of ideas put forward, for example, 2 weeks. There appears to be no reason why idea creation cannot be rewarded with material rewards; we simply suggest that this is not the sole form of encouragement adopted.

In putting forward this suggestion, we are in part addressing the employee feedback, which, when taken across all 9 companies, informed us that the score for how eager their company was to use improved work methods was 3.7, and how eager to use improved work methods developed by employees was 3.8. Therefore, only just above the median scale score of 3.5. In summary, our aim for this dissertation was always to consider how one could operationalize our vision that “when you hire a pair of hands you get a free brain”.

There are many obvious recommendations identified within this dissertation for practical implementation in the SME workplace, all of which have been shared and are implicit within the dissection of the hypotheses and contributing data findings. Our most practical recommendation would be to seek the views of the workforce. Cause them to think about what they could do rather than what they are doing. Cause them to reflect upon any changes, however incremental, which could advance the area they work in. Cause them to feel their opinions are valued and welcome. Rather than a

workforce, create a team of individuals whose aims and goals both personally and for the business are aligned with those of the SME PDM.

## **7.6 Directions for Further Research**

As highlighted in our summary of research limitations, it would be very beneficial to follow one or more complementary routes of further study in the future to continue to progress what is known about the contributing factors for intrapreneurship to not only exist, but become sustainable in the SME environment. Firstly, a longitudinal study could be conducted by re-visiting the companies that collaborated in this dissertation. To expand the boundaries of this research degree, the researcher made that option available to the participating company directors to ensure that as changes were made according to the results of the employee survey data provided, there would be a like-for-like measurement in place that they could call upon at any time in the future, and on more than one further occasion if desired. This was considered by the researcher to be a tangible way to fully appreciate and thank those who participated in this dissertation for their time. A second research option is that the study could be opened up to industries that are not operating in a technical sector to establish if and what differentiators to the conceptual model might be relevant. A third research option would be to look to relative data either from companies that are larger SMEs, or SME companies that operate in the same sectors but are domiciled outside of the UK.



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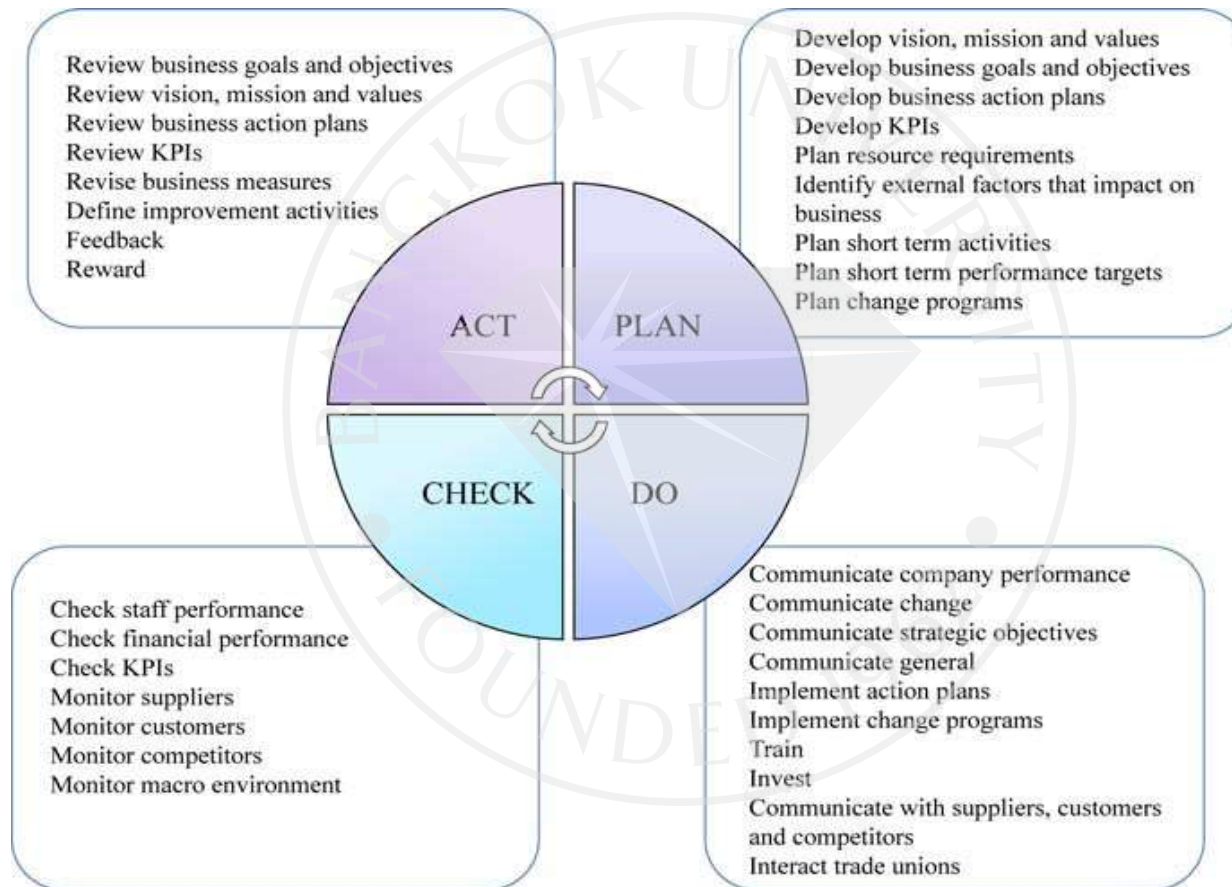


## APPENDIX 1 – Business and Personal Goals of SME Owners

No	Owner-director characteristics	Average rating	Not important (%)	Neutral (%)	Important (%)
1	Increase the profitability of the business	4.44	4.1	8.9	87.0
2	Retain independence as a business owner	4.22	9.0	10.5	80.4
3	Build up a pension fund	3.89	14.5	16.7	68.8
4	Increase leisure time	3.86	10.7	23.7	65.6
5	Increase personal asset base	3.82	13.6	20.5	65.9
6	Improve standard of living	3.65	17.2	23.9	58.9
7	Be recognised as a successful business owner	3.39	26.9	20.5	52.6
8	Increase the size of the business	3.24	27.6	28.5	44.0
9	Invest in labour saving equipment/technology	2.88	37.9	25.7	36.3
10	Repay borrowings	2.85	45.3	13.4	41.3
11	Pass business (or shares) on to children	2.73	48.7	17.0	34.4
12	Become the owner of a larger business	2.64	48.5	19.2	32.3
13	Carry on as you are	2.32	55.7	26.3	18.1
14	Not looking for any changes at present	2.25	53.5	31.6	14.8
15	Raise funds for expansion	2.11	65.5	16.5	18.0
16	Expand the management team	2.05	66.3	20.0	13.7
17	Sell all or part of the business	1.86	73.7	10.5	15.8
18	Expand by buying another business	1.79	74.2	14.3	11.5
19	Narrow the range of business activities	1.55	82.7	11.6	5.6
20	Find partner to share the business risk	1.52	84.4	7.6	8.1
21	Get a job working for someone else	1.29	92.2	4.1	3.7

Source: Pickernell (2001; p197)

**APPENDIX 2 - A model for SME managerial practice**



Source: Ates, Garengo, Cocca & Bititci (2013)

APPENDIX 3 – A Framework for the Study of Entrepreneurship

Dimension	Procedural	Typological	Behavioral	Environmental
Insights of Thirteen Practitioner Entrepreneurs	Opportunity, Recognition or Creation  Innovation or Invention  Genesis Moment  Action	Social  Lifestyle  Intrepreneur (sic)  Middle Market  Liquidity Event	Personal Values  Self-Awareness  Self-Discipline  Intellectual Curiosity  Intellectual Honesty  Accountability	Legal System  Education System  Research University  Vibrant Economy
Unit of Analysis	The Process or the Act	The Venture	The Entrepreneur	The Ecosystem

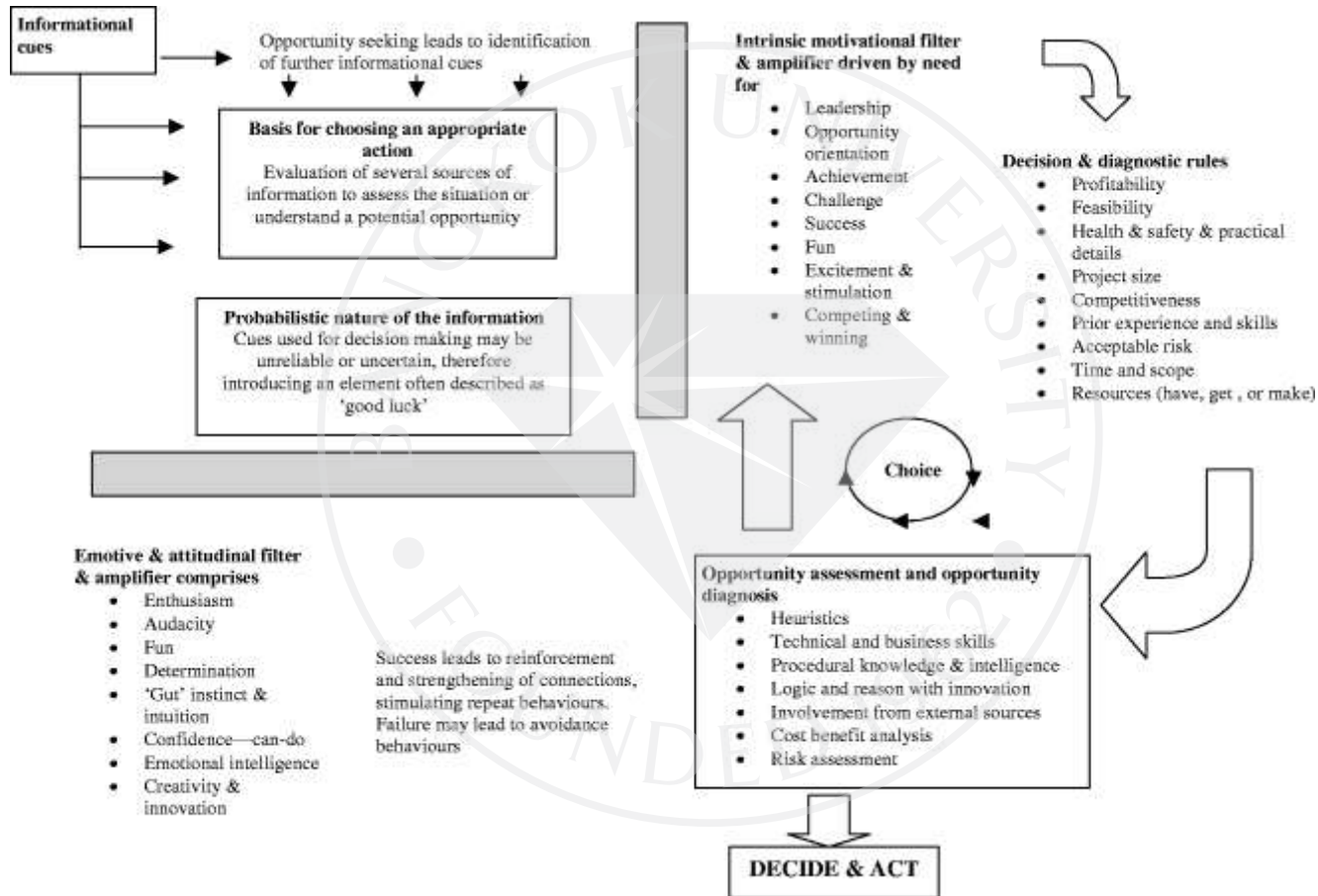
Source: Zimmerman (2009; p75)

APPENDIX 4 – Entrepreneur Motivation Antecedents

Name	DoB	Age Start Co.	Degree	Business	Early pursuits	Parent(s)
Ecclestone	1930	18	N	Motor Racing	Selling cakes from a suitcase aged 9. Buying and selling fountain pens aged 14	Fish Trawlerman
Etzin	1976	15	N	Events Organizing	Cleaning cars aged 12. Selling posters	Salesman
Sullivan	1949	12	Y	Sports Newspapers	Selling football programs aged 12	RAF Officer
Saul	1950	20	N	High Fashion	Buying and selling Victorian Military Uniforms	Unknown
Threlfall	1948	10	N	Retail Stores	Selling pet food door-to-door. Working in markets. Selling caravans	Tea and sugar sales/Hot Dog sales
Shwed	-	13	N	Software Technology	Unknown	Systems analyst
Swan	1958	12	N	Car Parts	Buying and repairing old bicycles to sell	Polytechnic Lecturer/Tax Officer
Branson	1950	17	N	Travel & Entertainment	Growing Christmas Trees. Breeding rabbits.	Barrister
Blanc	1949	28	N	Restaurateur/Hotelier	Small restaurant and bakery business	Clockmaker
Bloomberg	1942	39	N	Financial Information	Selling Christmas wreaths door-to-door	Bookkeeper at a dairy
Baker	1965	24	N	Staffing Solutions	Digging for fish bait on local beaches	Farmer
Hardcastle	1934	38	N	Electronics	Processing film rolls	Naval gunner/Domestic help
Gooley	1936	31	N	Trailfinder Holidays	Unknown	Army warrant officer/Nurse
Hamnett	-	19	N	Fashion	Made dolls aged 14 to sell to parent's friends	RAF Defence Attaché
Mack	1948	21	N	Air Transport	Unknown	Flying School Owner
Lopalco	1940	27	N	Restaurateur	Washing up. Opened a transport café	Tenant Farmer
Walter	1952	42	Y	Storage Products	Sewing jeans	Unknown
Richards	1952	24	Y	Motor Racing	Photographer/Tour guide	Farmer
Cohen	1943	17	N	Home Improvement Stores	Market trader	Machinist, Raincoat Factory
Ducksbury	1932	18	N	Modeling Agencies	Unknown	Hotelier
McGovern	1937	27	Y	International Data	Delivering newspapers. Painting homes. Science lab projects	Unknown

Name	DoB	Age Start Co.	Degree	Business	Early pursuits	Parent(s)
Reger	1935	23	Y	Underwear	Shop/Café work	Unknown
Reynard	1951	13	Y	Motor Racing	Car maintenance	Unknown
Elvidge	1963	27	N	Gadget retail	Selling kitchen goods door-to-door	Unknown
Potter	1943	20	Y	Computers	Lorry driver. Ice cream seller. Encyclopedia seller	Died young
Bleasdale	1961	26	Y	Healthcare	Setting up nurse bank systems	Unknown
Fennel	1951	25	Y	Jewelry	Selling jewelry	Unknown
Butler	-	37	Y	Vision Services	Crafting eye lens	Advertising Executive
Lewis	1939	21	Y	Computer Supplies	Unknown	Lorry Driver/Factory Cook
Stringfellow	-	21	N	Restaurateur	Selling firewood aged 12	Steelworker
Cavanagh	1957	30	Y	Computer Games	Buying and selling used cars aged 17	Small Electronics Business
McCulloch	1948	21	N	Hotelier	Plucking chickens in a British Rail Hotel	Show-business Reporter
Fields	1951	19	Y	Fashion Retailing	Dying fabrics. Selling fish	Unknown
Smith	1946	21	N	Fashion Designing	Making ties in his Mother's lounge	Credit Draper
Pearl	1945	19	N	Property	Cutting grass. Packing clothes into boxes aged 15	Unknown
Koch	1950	21	Y	Venture Capitalism	Selling stamps aged 13	Unknown
Farmer	-	16	N	Automotive	Rebuilt bicycles. Cleaned cookers.	Shipping Agent
Bilimoria	1961	27	Y	Cobra Beer	Selling pogo sticks, fabric, beer	Unknown
Taylor	1947	24	N	Printing	None	Printing
Tenison	1966	23	N	Children's clothes	Making and selling clothes at school	Diplomat
Clark	1927	22	N	Automotive	Delivering milk and papers	Steel Worker/Butcher's Assistant

APPENDIX 5 - Decision Process Model



Source: Pech & Cameron (2006; p71)



## APPENDIX 6 - Corporate Entrepreneurship Assessment Instrument

### Factor 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. Promotion usually follows 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” are allowed to make decisions on projects 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 reward and compensation for their ideas and efforts beyond the standard reward system.
12. There are several options within the organization for individuals to get financial support for their innovative projects and ideas
13. Individual risk takers are often recognized for their willingness to champion new projects, whether eventually successful or not
14. People are often encouraged to take calculated risks with new ideas around here.
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. A worker 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 to crossing departmental or functional boundaries

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

#### Factor 2: Work discretion

1. I feel that I am my own boss and do not have to double check all of my decisions.

2. Harsh criticism and punishment result from mistakes made on the job

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

4. This organization provides freedom to use my own judgment

5. This organization provides the chance to do something that makes use of my abilities.

6. I have the freedom to decide what I do on my job.

7. It is basically my own responsibility to decide how my job gets done.

8. I almost always get to decide what I do on my job.

9. I have much autonomy on my job and am left on my own to do my work

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

#### Factor 3: Rewards/reinforcement

1. My manager helps me get my work done by removing obstacles

2. The rewards I receive are dependent upon my work on the job.

3. My supervisor will increase my job responsibilities if I am performing well in my job.

4. My supervisor will give me special recognition if my work performance is especially good

5. My manager would tell his boss if my work was outstanding

6. There is a lot of challenge in my job

Factor 4: Time availability

1. During the past three months, my work load was too heavy to spend time on developing new ideas
2. I always seem to have plenty of time to get everything done.
3. I have just the right amount of time and work load to do everything well.
4. My job is structured so that I have very little time to think about wider organizational problems
5. I feel that I am always working with time constraints on my job.
6. My co-workers and I always find time for long-term problem solving

Factor 5: Organizational boundaries

1. In the past three months, I have always followed standard operating procedures or practices to do my major tasks
2. There are many written rules and procedures that exist for doing my major tasks
3. On my job I have no doubt of what is expected of me.
4. There is little uncertainty in my job
5. During the past year, my immediate supervisor discussed my work performance with me frequently.
6. My job description clearly specifies the standards of performance on which my job is evaluated.
7. I clearly know what level of work performance is expected from me in terms of amount, quality, and timeliness of output.

Source: Hornsby, Kuratko, & Zahra (2002, p264)

## APPENDIX 7 – Survey Statements

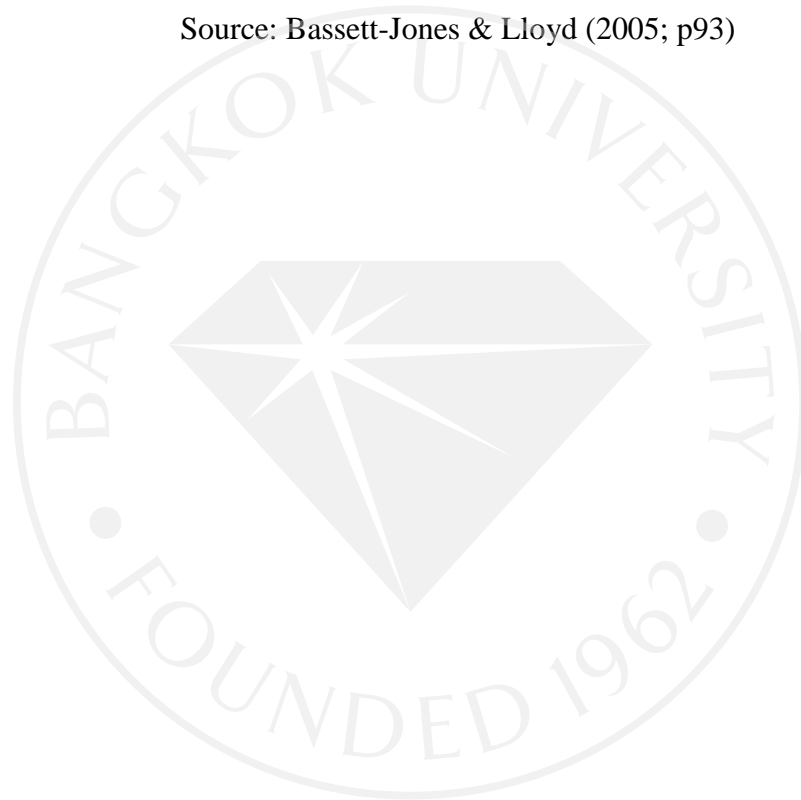
1. Management here encourages people to make their own decisions as far as possible
2. People here are treated as adults – used at construct 1
3. On the whole, I am satisfied with the management of this organisation
4. I would recommend the organisation as a good place to work
5. Management seldom pushes us to achieve output at the expense of quality
6. The organisation is effective in putting its values about management into practice
7. Managers here have leadership qualities
8. The organisation has a good future
9. Management here is generally effective in making decisions
10. Management here seems genuinely to care about the welfare of its employees – used at construct 1
11. This organisation trusts its employees
12. Management has earned the loyalty of employees
1. My manager is approachable and easy to get on with – used at construct 1
2. My manager has the technical know-how to do his/her job
3. My manager treats people with dignity and respect – used at construct 1
4. My manager supports and helps me to do the best job I can – used at construct 1
5. My manager makes sufficient effort to act on the opinions and suggestions of people who work in my department

6. I have confidence in the judgment and ability of my department's management

7. My manager does a good job of explaining decisions that effect (sic) me and my department – used at construct 1

8. My manager monitors my performance and discusses it with me

Source: Bassett-Jones & Lloyd (2005; p93)



## APPENDIX 8 – Employee Survey Instrument Complete

This survey questionnaire is highly confidential. You are not required to disclose your identity. No-one within company name will have access to the completed questionnaires; they will be used for research purposes only and destroyed when the data has been analysed. Feedback will be provided at that time.

**May we start by extending an enormous thank you for aiding us in this research study.**

Please respond to the following statements by rating them using a circle as follows:

A rating of **1** means you **strongly disagree** with the statement; the scale moves to a rating of **6** which means you **strongly agree** with the statement.

So let's begin!

- |  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| 1. My PDM is approachable and easy to get on with  | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. My PDM treats people with dignity and respect   | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. My PDM supports and helps me to do the best job I can                                     | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. My PDM does a good job of explaining decisions that affect me and my department           | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. People here are treated as adults   | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. My PDM seems to genuinely care about the welfare of employees                             | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. My manager helps me get my work done by removing obstacles                                | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. The rewards I receive are dependent upon my work on the job                               | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. My supervisor will increase my job responsibilities if I am performing well in my job     | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. My supervisor will give me special recognition if my work performance is especially good | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. My manager would tell his/her boss if my work was outstanding                            | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. There is a lot of challenge in my job  | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. I feel that I am my own boss and do not have to double check all of my decisions         | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. Harsh criticism and punishment result from mistakes made on the job                      | 1 | 2 | 3 | 4 | 5 | 6 |

- |  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| 15. This company provides the chance to be creative and try my own methods of doing the job                          | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. This company provides freedom to use my own judgment   | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. This company provides the chance to do something that makes use of my abilities                                  | 1 | 2 | 3 | 4 | 5 | 6 |
| 18. I have the freedom to decide what I do on my job   | 1 | 2 | 3 | 4 | 5 | 6 |
| 19. It is basically my own responsibility to decide how my job gets done   | 1 | 2 | 3 | 4 | 5 | 6 |
| 20. I almost always get to decide what I do on my job  | 1 | 2 | 3 | 4 | 5 | 6 |
| 21. I have much autonomy on my job and am left on my own to do my own work   | 1 | 2 | 3 | 4 | 5 | 6 |
| 22. I seldom have to follow the same work methods or steps for doing my major tasks from day to day                  | 1 | 2 | 3 | 4 | 5 | 6 |
| 23. During the past three months, my work load was too heavy to spend time on developing new ideas                   | 1 | 2 | 3 | 4 | 5 | 6 |
| 24. I always seem to have plenty of time to get everything done  | 1 | 2 | 3 | 4 | 5 | 6 |
| 25. I have just the right amount of time and work load to do everything well   | 1 | 2 | 3 | 4 | 5 | 6 |
| 26. My job is structured so that I have very little time to think about wider company problems                       | 1 | 2 | 3 | 4 | 5 | 6 |
| 27. I feel that I am always working with time constraints on my job  | 1 | 2 | 3 | 4 | 5 | 6 |
| 28. My co-workers and I always find time for long-term problem solving   | 1 | 2 | 3 | 4 | 5 | 6 |
| 29. In the past three months, I have always followed standard operating procedures or practices to do my major tasks | 1 | 2 | 3 | 4 | 5 | 6 |
| 30. There are many written rules and procedures that exist for doing my major tasks                                  | 1 | 2 | 3 | 4 | 5 | 6 |
| 31. In my job I have no doubt of what is expected of me  | 1 | 2 | 3 | 4 | 5 | 6 |
| 32. There is little uncertainty in my job tasks  | 1 | 2 | 3 | 4 | 5 | 6 |
| 33. During the past year, my immediate supervisor discussed my work performance with me frequently                   | 1 | 2 | 3 | 4 | 5 | 6 |
| 34. My job description clearly specifies the standards of performance on which my job is evaluated                   | 1 | 2 | 3 | 4 | 5 | 6 |

- |  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| 35. I clearly know what level of work performance is expected from me in terms of amount, quality, and timeliness of output                                  | 1 | 2 | 3 | 4 | 5 | 6 |
| 36. My company is quick to use improved work methods   | 1 | 2 | 3 | 4 | 5 | 6 |
| 37. My company is quick to use improved work methods that are developed by workers   | 1 | 2 | 3 | 4 | 5 | 6 |
| 38. In my company, developing one's own ideas is encouraged for the improvement of the corporation   | 1 | 2 | 3 | 4 | 5 | 6 |
| 39. The "doers" are allowed to make decisions on projects without going through elaborate justification and approval procedures                              | 1 | 2 | 3 | 4 | 5 | 6 |
| 40. Many top managers have been known for their experience with the innovation process   | 1 | 2 | 3 | 4 | 5 | 6 |
| 41. Money is often available to get new project ideas off the ground   | 1 | 2 | 3 | 4 | 5 | 6 |
| 42. There are several options within the company for individuals to get financial support for their innovative projects and ideas                            | 1 | 2 | 3 | 4 | 5 | 6 |
| 43. The term "risk taker" is considered a positive attribute for people in my work area  | 1 | 2 | 3 | 4 | 5 | 6 |
| 44. This company supports many small and experimental projects realizing that some will undoubtedly fail   | 1 | 2 | 3 | 4 | 5 | 6 |
| 45. A worker with a good idea is often given free time to develop that idea  | 1 | 2 | 3 | 4 | 5 | 6 |
| 46. There is considerable desire among people in the company for generating new ideas without regard to crossing departmental or functional boundaries       | 1 | 2 | 3 | 4 | 5 | 6 |
| 47. Upper management is aware and very receptive to my ideas and suggestions   | 1 | 2 | 3 | 4 | 5 | 6 |
| 48. Those employees who come up with innovative ideas on their own often receive management encouragement for their activities                               | 1 | 2 | 3 | 4 | 5 | 6 |
| 49. Senior managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track  | 1 | 2 | 3 | 4 | 5 | 6 |
| 50. Individuals with successful innovative projects receive additional reward and compensation for their ideas and efforts beyond the standard reward system | 1 | 2 | 3 | 4 | 5 | 6 |



51. Promotion usually follows the development of new and innovative ideas 1 2 3 4 5 6
52. Individual risk takers are often recognized for their willingness to champion new projects, whether eventually successful or not 1 2 3 4 5 6
53. People are often encouraged to take calculated risks with new ideas around here 1 2 3 4 5 6
54. People are encouraged to talk to workers in other departments of this company about ideas for new projects 1 2 3 4 5 6

From the examples provided below, please circle which definition you feel best describes your company's strategy. **Please tick only 1 option:**

My company makes relatively frequent changes in, and additions to, its range of products. By responding rapidly to early signals of market needs or opportunities, this company tries to be 'first in' in new product and market areas

My company maintains a stable, limited line of products and simultaneously moves to follow a selected, promising set of new product developments in other areas. We are seldom "first in" with new products, but instead may be "second in" with a more cost effective or better conceived product

My company locates and maintains a 'niche' in a relatively stable product area. Generally, we are not at the forefront of new product or market development, but concentrates instead on a limited range of products, doing the best job possible through quality, superior service, and so forth

My company does not appear to have a consistent product-market orientation. Unlike our competitors, we are not aggressive in maintaining established products and markets. My company changes its product offering when and where it is forced to by external pressures


Finally, how long have you been employed by company name? Please tick:

Less than 1 year	<input type="checkbox"/>	5 - 10 years	<input type="checkbox"/>
1 to 2 years	<input type="checkbox"/>	Over 10 years	<input type="checkbox"/>
2 to 5 years	<input type="checkbox"/>		

**Again, please accept our most sincere thanks  
for taking the time to let us have your  
opinions. It is greatly appreciated**



## APPENDIX 9 – Entrepreneur PDM interview instrument

Interview question(s) – Those in italic are answered on a Likert Scale basis with 1 equal to low and 6 equal to high

1. Would you say your employees look to you for inspiration and innovative thinking to improve the business or come to you with new ideas?
2. How important is it to you to select managers that are known for their experience with the innovation process?
3. How do you feel about employees that would like to be risk-takers and may not always champion projects that have a successful outcome?
4. How receptive would you be to allowing a promising employee idea to be advanced if it meant relaxing some of the usual rules and procedures?
5. Do you enjoy employees coming to you with new ideas and suggestions regardless of how unworkable or impracticable they may seem at first glance?
6. To what extent do employees have to follow standard operating procedures or practices to do their major tasks?
7. To what extent do employees know what level of work performance is expected from them in terms of amount, quality, and timeliness of output?
8. To what extent are employees required to follow strict guidelines, rules and procedures in carrying out their work?
9. To what extent do you feel employees know what is expected of them and their job tasks?
10. To what extent do you feel your managers or supervisors discuss employees work performance with them?
11. To what extent do you feel employee's job descriptions clearly specify the standards of performance on which their work is evaluated?
12. To what extent do you provide employee with tasks that make the best use of their abilities?
13. To what extent do you provide employee with the opportunity to be creative and try different methods of working?
14. To what extent are employees able to use their own judgment in deciding how their work is done?

15. To what extent are employees criticized or disciplined when they make a mistake?
16. To what extent do employees have autonomy to take responsibility for their work without close supervision?
17. To what extent do you feel employees have sufficient time to devote to developing new ideas?
18. To what extent do you feel employees have a manageable workload to ensure they can do everything well?
19. To what extent do you feel employees have sufficient time to devote to think about wider company problems?
20. To what extent do you feel employees have sufficient time to devote to for long-term problem solving?
21. Could you provide me with some examples of how innovative thinking is currently encouraged, recognized or rewarded by you?
22. How extensive are the approval procedures for employees working on innovative projects?
23. To what extent in finance available to get new project ideas off the ground?
24. Should well-intentioned experimentation or creativity by an employee lead to failure how would you respond to this?
25. To what extent do you feel employees are inclined to want to share ideas with other departments in the company?
26. Employees sometimes mention that there are too many obstacles in getting their work done efficiently. In what ways can a manager ease this situation?
27. Could you briefly explain any bonus or incentive schemes you have in place?
28. Do your managers or senior employees make you aware of an employee who has found a creative solution to a problem?
29. Are there any ways in which you make employees work more challenging for them?

## APPENDIX 10 – A multi-item scale for measuring strategic types

The 11 scale items comprising the final instrument correspond to the 11 adaptive cycle dimensions in the Miles and Snow typology. The four response options listed under each scale item characterize the distinctive 'adaptive stance activities' of the archetypes relative to the dimension of the adaptive cycle.

### 1. Entrepreneurial-product market domain.

In comparison to other HMOs, the services which we provide to our members are best characterized as:

(a) Services which are more innovative, continually changing and broader in nature throughout the organization and marketplace. (P)

(b) Services which are fairly stable in certain units/departments and markets while innovative in other units/departments and markets. (A)

(c) Services which are well focused, relatively stable and consistently defined throughout the organization and marketplace. (D)

(d) Services which are in a state of transition, and largely based on responding to opportunities or threats from the marketplace or environment. (R)

### 2. Entrepreneurial-success posture.

In contrast to other HMOs, my organization has an image in the marketplace as an HMO which:

(a) Offers fewer, selective services which are high in quality. (D)

(b) Adopts new ideas and innovations, but only after careful analysis. (A)

(c) Reacts to opportunities or threats in the marketplace to maintain or enhance our position. (R)

(d) Has a reputation for being innovative and creative. (P)

### 3. Entrepreneurial-surveillance.

The amount of time my HMO spends on monitoring changes and trends in the marketplace can best be described as:

(a) Lengthy: We are continuously monitoring the marketplace. (P)

(b) Minimal: We really don't spend much time monitoring the marketplace. (D)

(c) Average: We spend a reasonable amount of time monitoring the marketplace. (A)

(d) Sporadic: We sometimes spend a great deal of time and at other times spend little time monitoring the marketplace. (R)

#### 4. Entrepreneurial-growth.

In comparison to other HMOs, the increase or losses in demand which we have experienced are due most probably to:

(a) Our practice of concentrating on more fully developing those markets which we currently serve. (D)

(b) Our practice of responding to the pressures of the marketplace by taking few risks. (R)

(c) Our practice of aggressively entering into new markets with new types of service offerings and programs. (P)

(d) Our practice of assertively penetrating more deeply into markets we currently serve, while adopting new services only after a very careful review of their potential. (A)

#### 5. Engineering-technological goal.

One of the most important goals in this HMO, in comparison to other HMOs, is our dedication and commitment to:

(a) Keep costs under control. (D)

(b) Analyze our costs and revenues carefully, to keep costs under control and to selectively generate new services or enter new markets. (A)

(c) Insure that the people, resources and equipment required to develop new services and new markets are available and accessible. (P)

(d) Make sure that we guard against critical threats by taking whatever action is necessary. (R)

#### 6. Engineering-technological breadth.

In contrast to other HMOs, the competencies (skills) which our managerial employees possess can best be characterized as:

(a) Analytical: their skills enable them to both identify trends and then develop new service offerings or markets. (A)

(b) Specialized: their skills are concentrated into one, or a few, specific areas. (D)

(c) Broad and entrepreneurial: their skills are diverse, flexible, and enable change to be created. (P)

(d) Fluid: their skills are related to the near-term demands of the marketplace. (R)

7. Engineering-technological buffers.

The one thing that protects my organization from other HMOs is that we:

(a) Are able to carefully analyze emerging trends and adopt only those which have proven potential. (A)

(b) Are able to do a limited number of things exceptionally well. (D)

(c) Are able to respond to trends even though they may possess only moderate potential as they arise. (R)

(d) Are able to consistently develop new services and new markets. (P)

8. Administrative-dominant coalition.

More so than many other HMOs, our management staff tends to concentrate on:

(a) Maintaining a secure financial position through cost and quality control measures. (D)

(b) Analyzing opportunities in the marketplace and selecting only those opportunities with proven potential, while protecting a secure financial position. (A)

(c) Activities or business functions which most need attention given the opportunities or problems we currently confront. (R)

(d) Developing new services and expanding into new markets or market segments. (P)

9. Administrative-planning.

In contrast to many other HMOs, my organization prepares for the future by:

(a) Identifying the best possible solutions to those problems or challenges which require immediate attention. (R)

(b) Identifying trends and opportunities in the marketplace which can result in the creation of service offerings or programs which are new to the HMO industry or which reach new markets. (P)

(c) Identifying those problems which, if solved, will maintain and then improve our current service offerings and market position. (D)

(d) Identifying those trends in the industry which other HMOs have proven possess long-term potential while also solving problems related to our current service offerings and our current customers' needs. (A)

10. Administrative-structure.

In comparison to other HMOs, the structure of my organization is:

(a) Functional in nature (i.e. organized by department -marketing, accounting, personnel, etc.). (D)

(b) Service or market oriented (i.e. departments like pediatrics or Ob/Gyn have marketing or accounting responsibilities). (P)

(c) Primarily functional (departmental) in nature; however, a service or market oriented structure does exist in newer or larger service offering areas. (A)

(d) Continually changing to enable us to meet opportunities and solve problems as they arise. (R)

11. Administrative-control.

Unlike many other HMOs, the procedures my organization uses to evaluate our performance are best described as:

(a) Decentralized and participatory encouraging many organizational members to be involved. (P)

(b) Heavily oriented toward those reporting requirements which demand immediate attention. (R)

(c) Highly centralized and primarily the responsibility of senior management. (D)

(d) Centralized in more established service areas and more participatory in newer service areas. (A)

Legend: (D) = Defender, (P) = Prospector, (A) = Analyzer and (R) = Reactor.

Provided for informational purposes only. Not part of the instrument.

Source: Conant, Mokwa & Varadarajan (1990; p381-383)



## APPENDIX 11 – SME strategic type questionnaire

Please tick only 1 answer for each of the 11 questions

### 1. Entrepreneurial-product market domain.

In comparison to other similar engineering\* firms, the services which we provide to our members are best characterized as:

(a) Services which are more innovative, continually changing and broader in nature throughout the organization and marketplace.

(b) Services which are fairly stable in certain units/departments and markets while innovative in other units/departments and markets.

(c) Services which are well focused, relatively stable and consistently defined throughout the organization and marketplace.

(d) Services which are in a state of transition, and largely based on responding to opportunities or threats from the marketplace or environment.

### 2. Entrepreneurial-success posture.

In contrast to other similar engineering firms, my organization has an image in the marketplace as a company which:

(a) Offers fewer, selective services which are high in quality.

(b) Adopts new ideas and innovations, but only after careful analysis.

(c) Reacts to opportunities or threats in the marketplace to maintain or enhance our position.

(d) Has a reputation for being innovative and creative.

### 3. Entrepreneurial-surveillance.

The amount of time my company spends on monitoring changes and trends in the marketplace can best be described as:

(a) Lengthy: We are continuously monitoring the marketplace.

(b) Minimal: We really don't spend much time monitoring the marketplace.

(c) Average: We spend a reasonable amount of time monitoring the marketplace.

(d) Sporadic: We sometimes spend a great deal of time and at other times spend little time monitoring the marketplace.

#### 4. Entrepreneurial-growth.

In comparison to other similar engineering firms, the increase or losses in demand which we have experienced are due most probably to:

(a) Our practice of concentrating on more fully developing those markets which we currently serve.

(b) Our practice of responding to the pressures of the marketplace by taking few risks.

(c) Our practice of aggressively entering into new markets with new types of service offerings and programs.

(d) Our practice of assertively penetrating more deeply into markets we currently serve, while adopting new services only after a very careful review of their potential.

#### 5. Engineering-technological goal.

One of the most important goals in this company, in comparison to other similar Engineering firms, is our dedication and commitment to:

(a) Keep costs under control.

(b) Analyze our costs and revenues carefully, to keep costs under control and to selectively generate new services or enter new markets.

(c) Insure that the people, resources and equipment required to develop new services and new markets are available and accessible.

(d) Make sure that we guard against critical threats by taking whatever action is necessary.

#### 6. Engineering-technological breadth.

In contrast to other similar engineering firms, the competencies (skills) which our managerial employees possess can best be characterized as:

(a) Analytical: their skills enable them to both identify trends and then develop new service offerings or markets.

(b) Specialized: their skills are concentrated into one, or a few, specific areas.

(c) Broad and entrepreneurial: their skills are diverse, flexible, and enable change to be created.

(d) Fluid: their skills are related to the near-term demands of the marketplace.

### 7. Engineering-technological buffers.

The one thing that protects my company from other similar engineering firms is that we:

- (a) Are able to carefully analyze emerging trends and adopt only those which have proven potential.
- (b) Are able to do a limited number of things exceptionally well.
- (c) Are able to respond to trends even though they may possess only moderate potential as they arise.
- (d) Are able to consistently develop new services and new markets.

### 8. Administrative-dominant coalition.

More so than many other similar engineering firms, our management staff tends to concentrate on:

- (a) Maintaining a secure financial position through cost and quality control measures.
- (b) Analyzing opportunities in the market- place and selecting only those opportunities with proven potential, while protecting a secure financial position.
- (c) Activities or business functions which most need attention given the opportunities problems we currently confront.
- (d) Developing new services and expanding into new markets or market segments.

### 9. Administrative-planning.

In contrast to many other similar engineering firms, my organization prepares for the future by:

- (a) Identifying the best possible solutions to those problems or challenges which require immediate attention.
- (b) Identifying trends and opportunities in the marketplace which can result in the creation of service offerings or programs which are new to the industry or which reach new markets.
- (c) Identifying those problems which, if solved, will maintain and then improve our current service offerings and market position.

(d) Identifying those trends in the industry which other similar Engineering firms have proved possess long-term potential while also solving problems related to our current service offerings and our current customers' needs.

#### 10. Administrative-structure.

In comparison to other similar engineering firms, the structure of my company is:

(a) Functional in nature (i.e. organized by department -marketing, accounting, personnel, etc.).

(b) Service or market oriented (i.e. all departments like have marketing or accounting responsibilities).

(c) Primarily functional (departmental) in nature; however, a service or market oriented structure does exist in newer or larger service offering areas.

(d) Continually changing to enable us to meet opportunities and solve problems as they arise.

#### 11. Administrative-control.

Unlike many other similar engineering firms, the procedures my organization uses to evaluate our performance are best described as:

(a) Decentralized and participatory encouraging many organizational members to be involved.

(b) Heavily oriented toward those reporting requirements which demand immediate attention.

(c) Highly centralized and primarily the responsibility of senior management.

(d) Centralized in more established service areas and more participatory in newer service areas.

\*Please note that the word “other similar engineering firms” was modified to “other similar firms” where necessary.

## APPENDIX 12 – Employer timeline document

Dear (Name),

As promised, everything is ready to go for our research study, following the timescales set out below:

First activity: I have attached the email that goes from you to the employees:

At the moment I have not inserted completion dates as I need a steer from you on that. Assuming you send out the email on (date), we could insert “between now and (date)”. As you know, I really do want them to be submitted independently of the opinion of others so not to have the survey open for too long. On (day) evening I will let you know how many we have so a gentle reminder can be sent to call in the last few if required. If anyone is out of the office on (days), they can log-on from home or anywhere. If they are away on leave I will come up with a strategy to include their input.

Second activity: I have attached a strategic orientation questionnaire:

This is for (Name) to complete and scan back to me by close of business on (date).

Third activity: I have attached a copy of the interview questions I will ask (Name):

This is not as onerous as it may appear for two reasons. It is not a debate; it is only your views that I am interested in. For 15 of the questions I will only ask you to give me a Likert scale score of 1(low/poor) to 6 (high/good).

As agreed the interview will take place on (date) at (time).

Fourth activity: Thank you note

I have attached an email that you could adapt/send to everyone thanking them for taking the time to complete the survey.

And that is it – job done!

Final activity:

When the above are complete, I will collate the data and feedback the results to you by (date – not more than 7 days after the data has been collected). When you have had the opportunity to look at the data output, we can set up a call or visit for me to talk through any questions you may have and discuss ways forward as a result of what we have learned if that would be helpful. I am also very happy to repeat the exercise for you at any point in the future to check that progress has been made as and where you intended.

This is just one small way I can think of to thank you again for supporting me.

#### APPENDIX 13 – Employee email from employer

Dear all,

I am writing to advise you of a short collaborative research activity we are engaging in. It is part of a PhD study being conducted by a lady named Researcher Orchard who specializes in innovation and knowledge transfer. The basis of the study is of great interest to us as it will enable us to gain your views on life at (Company) and your perception of the opportunities that exist for you to be innovative within your roles.

The research comprises of an on-line survey for all of you to complete. This has been tested and should take you no more than 6 to 8 minutes which can of course be undertaken during working hours. These will be anonymous and will focus on how each of you individually, could increase your innovative awareness and thinking so we are all aligned in achieving our company goals. As such, I must ask please that you do this independently without discussion or input from your colleagues so we get a good range of opinions.

There are no right or wrong answers – you will be asked to mark each question with a score from 1 to 6 depending on how strongly you feel it represents the culture here. It would be very helpful if you could all complete the survey between now and (insert date) or (today or tomorrow) by logging on to this link:

(SurveyGizmo link)

If you have a questions prior to completing the survey or whilst completing the survey please do not hesitate to let me know so I can assist you.

We would like to take this opportunity to extend our sincere thanks in advance for you taking the time to do this. Your views matter to us and this activity can only strengthen our team effort as we progress through the important stages of growth and opportunities we all desire for the future.

APPENDIX 14 – Employee thank you email from employer

Dear All,

I just wanted to write to thank you for participating in the short research survey carried out by Researcher Orchard.

As we said at the beginning, it means a great deal to us to have your open and honest opinions as we steer the way forward at (Company name).

The results are in the process of being analyzed and will be back with us soon, as our aim was to make the whole process proactive as we look forward to 2015 being our best year ever.

Please remember that this is not just a one-off activity to stimulate thought and gain your views. We would like that to be an on-going process without the formality of surveys. As such, please try to think more about the questions raised and do make any of the Directors aware of your own thoughts for not only improving the way we may do things on a regular basis but how we may adopt new ideas as we grow.

Again, we thank you for your participation and will be sharing the research results with you in due course.

#### APPENDIX 15 – Interview Transcript Example

Exchange of pleasantries, explanation of interview process and permission sought to record interview.

Interview commences

1. Would you say your employees look to you for inspiration and innovative thinking to improve the business or come to you with new ideas?

It's a bit of both to be honest. I think probably most of the ideas come from them. Engineers are quite curious about technology and different ways of doing things so they tend to come along with ideas. I do have to knock some ideas back and try to maintain focus on what we are trying to achieve as a business. One of the other things is that they are probably exposed to a wider range of technologies so you can sometimes see how things link together a bit more so I do, well hopefully I do add something. I think we do get most of the ideas from the guys. Certainly new technology ideas come from them.

2. How important is it to you to select managers that are known for their experience with the innovation process?

I guess our focus really has been to appoint managers that are primarily technology focused so we've probably gone to in some ways quite extreme lengths to get people who are less managerially focused but have more technology focus and understand how technologies are actually delivered and what's important from a technology standpoint. I think that probably brings benefits to the guys that work for them. It brings them up to date with their technology skills more quickly rather than if you had somebody who was just a straight man manager.

3. How do you feel about employees that would like to be risk-takers and may not always champion projects that have a successful outcome?



I guess I'm always open to listen to ideas but I think the only issue that I have is that at times – we're quite a small organization so it's very easy for us, and we've fallen into this trap in the past of spreading ourselves too thin so if people do come along with ideas and I knock them back I try to explain to them why from a company perspective and I guess try to let them know that if circumstances change and we are able to take those ideas up in the future then we're open to doing that.

4. How receptive would you be to allowing a promising employee idea to be advanced if it meant relaxing some of the usual rules and procedures?

I think we tend to be a bit too risk happy for the size of the organization. We're quite happy to look at things that will push our resources but when we do that we also push some of the responsibility back onto the engineers. We probably take on a lot more than companies of a similar size might do. I guess the other thing we do is that we have periods of down time occasionally and certainly we in no way discourage people from going off and playing with ideas to see if they can develop technologies or skills to carry forward.

5. Do you enjoy employees coming to you with new ideas and suggestions regardless of how unworkable or impracticable they may seem at first glance?

Answered above.

6. To what extent do employees have to follow standard operating procedures or practices to do their major tasks?

I guess we are probably middle ground. We do have some major standards that everybody has to stick to but there's certainly some fiddling around the edge that goes on in order to allow some flexibility. Engineers just don't like being constrained.<sup>4</sup>

7. To what extent do employees know what level of work performance is expected from them in terms of amount, quality, and timeliness of output?

Yes, I would say they should have a good idea but they don't necessarily stick to time limits for example.<sup>6</sup>

8. To what extent are employees required to follow strict guidelines, rules and procedures in carrying out their work?

No, I would say they are completely disinclined to want to stick to any procedures. In the main the engineering staff are, but the other staff can be quite the opposite. <sup>4</sup>

9. To what extent do you feel employees know what is expected of them and their job tasks?

I think they do know to a great extent but it isn't always something that we document very well. 6

10. To what extent do you feel your managers or supervisors discuss employees work performance with them?

I think it's very variable to be honest. I would score it mid-range but I think that might be slightly optimistic on my part. I think some do. We have got some very good managers and some don't. It's one of those things that we are trying to build up for the guys that are doing that role. 4

11. To what extent do you feel employee's job descriptions clearly specify the standards of performance on which their work is evaluated?

I would say not good but in part that is a deliberate policy to avoid tying people down to a very specific role probably isn't that suitable for us. We do carry out performance appraisals so I think they should understand what they're going to be judged on. 5

12. To what extent do you provide employees with tasks that make the best use of their abilities? 6

13. To what extent do you provide employee with the opportunity to be creative and try different methods of working?

Very much so. 6

14. To what extent are employees able to use their own judgment in deciding how their work is done?

Very much so. The employees are highly empowered and very much encouraged to use their own judgment. 6

15. To what extent are employees criticized or disciplined when they make a mistake?

I'd say that in some ways that is quite limited and very infrequent. Very rarely – they are encouraged to try things. 1

16. To what extent do employees have autonomy to take responsibility for their work without close supervision?

Very much so. 6

17. To what extent do you feel employees have sufficient time to devote to developing new ideas?

It probably varies throughout the year. At the moment its low. Certainly some of the teams are barely able to stand upright as we're running so fast. 4

18. How often do you feel employees have a manageable workload to ensure they can do everything well?

I think for the most part that is fairly good so I would score that high. I think there are probably some areas and days when they probably don't feel like that. 4

19. To what extent do you feel employees have sufficient time to devote to think about wider company problems?

Probably above mid-level on that. 3

20. To what extent do you feel employees have sufficient time to devote to for long-term problem solving?

I'd score that quite high. 4

21. Could you provide me with some examples of how innovative thinking is currently encouraged, recognized or rewarded by you?

I'm always open to have people come up with new ideas and give them the time to go off and explore those ideas and support them with tools and equipment where that's required.

Is there any way in which that are recognised in such a way that other employees see that recognition?

Probably not as much as we should do to be honest.

22. How extensive are the approval procedures for employees working on innovative projects?

They are extremely minimalist. Basically people will go and do things off their own bat. When we become aware of that we don't in any way discourage it so we're quite happy for people to go off and have a play, find out if things work or not. That's just part of normal business here.

23. To what extent in finance available to get new project ideas off the ground?

Yes we are very hindered by finance.

Do you think your staff feel that or do you try to internalize it?

I think they probably feel it less than I do. We do our utmost to limit their explorations etc. but obviously the difficulty in taking these things any further is you clearly need some sort of business funding to do it. I think probably the staff are less discouraged in that respect than I am. I am always trying to find out if there is money available to do things.

24. Should well-intentioned experimentation or creativity by an employee lead to failure how would you respond to this?

I'm quite happy with that because to me it's all just learning and part of their personal development. That's just engineering to me.

25. To what extent do you feel employees are inclined to want to share ideas with other departments in the company?

The teams are all so small here and so closely grouped together that I imagine they don't find it much of an issue at all in sharing things within a team and are not inclined to keep anything quiet. And across teams especially as everyone is virtually sat side by side I don't think there is any issue in sharing.

Do you find there is any conflict between teams in wanting to their ideas to come first?

I think broadly speaking there are occasional conflicts where ideas aren't communicated as effectively as they could be between the teams and we get the minor upset when somebody says "we thought you were doing this, and you're doing that" but I've never seen that become a big issue.

26. Employees sometimes mention that there are too many obstacles in getting their work done efficiently. In what ways can a manager ease this situation?

I think the only significant obstacle we have is the lack of peace and quiet. It's the only obstacle I've ever had mentioned to me. Some of the software guys I know would prefer to sit in a totally closed off environment and we don't offer that. We have had people ask to work from home and we have rarely accepted that way of work which I guess in some ways is a blocker to some people but I think the majority of people do benefit from being in an environment where they can hear what's going on.

How do you try to manage the situation when you've been advised that some employees feel an obstacle does exist?

Well, there are only xx of them (xx engineers), xx of them already work off-site, xx is working abroad, xx works off-site four days out of five at the customer's site. The guy who has brought it up has not been here for that long and he's been offered alternatives if he can provide us with a means to measure his output so he will have to come back to us with a proposal on that.

27. Could you briefly explain any bonus or incentive schemes you have in place?

Sadly it's not something we really do. Other than recognizing people's performance at appraisal time we don't really have any sort of reward structure as such and not for anyone in particular. To be perfectly honest the appraisal system is only something we've done for the last two years.

28. Do your managers or senior employees make you aware of an employee who has found a creative solution to a problem?

That's an interesting one because the way that we tend to work is that I tend to float about every so often as well and speak to pretty much everybody so I would expect to find out from the person themselves really rather than from their manager. We don't maintain a very hierarchical structure. We have it on paper and everybody understands how that works but I guess I am not particularly disposed to having a them and us situation with the guys that work here. So, hopefully some of them will come to me directly. I'm not aware of anybody who has had an idea that has been picked up through a different route.

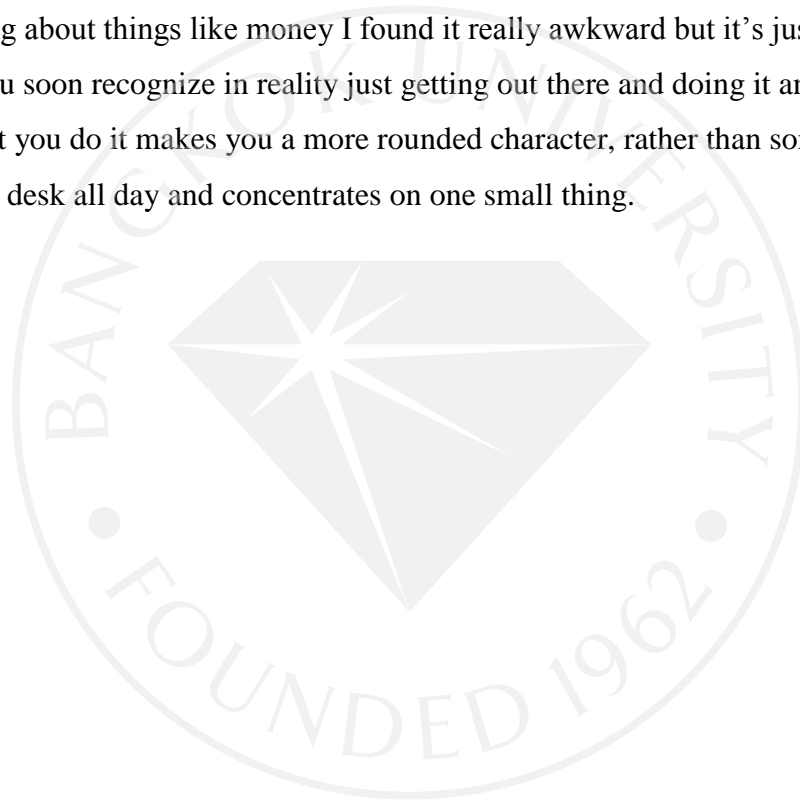
29. Are there any ways in which you make employees work more challenging for them?

I guess the one thing we have been doing of late (incomplete sentence) I think we have been guilty in the past in thinking if someone is too challenged by their work we try to step in and ease that pain for them a bit. Probably what we've recognized in the last year or so is that probably what we're doing is just giving them the easy option by letting them sit behind somebody who takes all the difficult bits off them and that doesn't benefit them long term because they're not learning to deal with those challenges and situations themselves. So of late we've been trying to make sure

that people are actually being pushed out of their comfort zone and are trying to address those issues for themselves.

Do you find your engineers prefer to be challenged rather than just following a process?

I think technically what we do differently to a lot of places is our sales force is largely carried out by our engineers so all of our engineers are involved in the sales process, involved in speaking to clients and I don't think that necessarily comes naturally to them. When I started this I was an engineer and when people starting speaking about things like money I found it really awkward but it's just part of the job. You soon recognize in reality just getting out there and doing it and learning how it is that you do it makes you a more rounded character, rather than somebody who sits at a desk all day and concentrates on one small thing.



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