

Putting the Individual back into the Corporate Entrepreneurial Process: Studies in the Determinants and Consequences of Employee Entrepreneurial Behaviour

MIKE JAMES MUSTAFA

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EXTENDED ABSTRACT

In order to survive and thrive in today's modern and hyper-competitive environments, it is becoming increasingly necessary for firms to foster entrepreneurial and innovative activities. This particular thesis recognises that one of the most important sources of a firm's entrepreneurialism and innovativeness is the entrepreneurial behaviour of its employees. However, many questions still remain in the existing literature with respect to how employees can become entrepreneurial, and what are the personal consequences for employees behaving entrepreneurially in the workplace. Broadly, this particular thesis to shed light on some of these important questions by utilising the JD-R model to examine the determinants and consequences of employee entrepreneurial behaviour. In order to address the objectives of thesis, four empirical studies were carried out.

The first study was a Systematic Literature Review (SLR) of employee entrepreneurial behaviour in established organisations. The rationale for this study was to provide an overview of the current state of knowledge concerning employee entrepreneurial behaviours in pursuit of Corporate Entrepreneurship (CE). A careful review of the 26 SLR article found existing research into employee entrepreneurial behaviour to be highly quantitative in nature and focused mostly on determining the environmental and organisational related factors that enable such behaviour. More importantly though, findings from the SLR also revealed a gap in

the literature concerning how the design of employees' jobs and their attitudes towards their roles/job influences their entrepreneurial behaviour.

The second study was a series of semi-structured interviews with nine entrepreneurial employees across a range of occupational groupings and industries. The rationale for conducting this study was to understand how an employees' active orientation towards their work influences their entrepreneurial behaviour. Findings suggested that an employees' active orientation towards their jobs/role affects their entrepreneurial behaviours through self-determination, realising the significance of ones' work/role and possessing specific capabilities and skills. The emergent concepts from the study were found to be similar to the similar to the established construct of Psychological Empowerment (PE).

Study 3 was a quantitative survey designed to address the question of whether an employees' Psychological Empowerment (PE) moderates the relationship between their Job Demands, Job Resources (job autonomy and task variety) and their entrepreneurial behaviour. The question was tested on a sample of 321 knowledge-workers from knowledge intensive organisations. Results indicated that different job resources and job demands can have differential effects on specific aspects of employee entrepreneurial behaviour and its associated dimensions.

Study 4 was a qualitative in nature and consisted of a single case study of 11 entrepreneurial and innovative employees from a corporate incubator in Malaysia. This study sought to understand the personal-level consequence of employee entrepreneurial behaviour by addressing the question of which personal resources do employees develop from being entrepreneurial at work that positively influences

their engagement at work. Findings indicated the formation of an entrepreneurial self, entrepreneurial learning, being optimistic about entrepreneurial activity, emerged as key personal resources developed by employees as a result of behaving entrepreneurially at work. Moreover, such personal resources were considered as particularly valuable resources by employees in that they helped them cope with the demands of their job/role and motivated entrepreneurial employees to stay engaged at work.

By furthering our understanding of what determines employee entrepreneurial behaviour, and the psychological benefits of behaving entrepreneurially in the workplace, the thesis contributes to the existing literature by addressing calls in the field to better understand the nuances of employees' entrepreneurial behaviour in established organisations. Additionally, by drawing on the JD-R model to examine the determinants and consequences of employee entrepreneurial behaviour, the thesis also demonstrates how the job design and proactive behavior literatures can be used to understand employee entrepreneurial behaviours.

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“Perseverantia omnia vincit”

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“Iter Est Latin”

PREFACE

This thesis describes a series of study that was conducted to understand the determinants and consequences of employee entrepreneurial behaviour in established. Specifically, this thesis draws on the Job Demands – Control model (Bakker & Demerouti, 2017) as a viable theoretical framework to explore the determinants and consequences of employee entrepreneurial behaviour

This thesis is structured into nine chapters. Chapter 1 [*Introduction*] provides an overview of the general research area at hand, including the research background and motivations for conducting this research. This includes the significance of the research and its potential contributions to the literature on employee entrepreneurial behaviour.

Chapters 2 [*Systematic Review of the Literature on Employee Entrepreneurial Behaviour*] provides the details and findings of a Systematic Literature Review (SLR) of 26 studies into the field of employee entrepreneurial behaviour. The chapter also serves to identify the relevant gaps in the field, especially regarding the lack of empirical studies and knowledge into how an employees' job design can influence their entrepreneurial behaviour and its consequences.

Chapter 3 [*Theoretical Framework*] provides a discussion of the relevant theoretical framework used in this thesis and discusses the relevant literature in the field of employee entrepreneurial behaviour. The chapter also provides a rationale for how the key concepts in the thesis may be inter-related.

Chapter 4 [*Methodological Overview of Empirical Chapters*], discusses the research designs and methodologies used in the thesis, including the rationale for a sequential design of thesis, the sampling methods used, ethical considerations, and a description of the participants recruited in the different studies of the thesis.

Chapter 5 [*Empirical Study 2*], reports the findings of an investigation into how the work/role orientations of employees may influence their entrepreneurial behaviours. Data was drawn from nine semi-structured interviews with employees across a range of occupations and age groups.

Chapter 6 [*Empirical Study 3*] provides details of a quantitative analysis in order to address the question of whether employees' psychological empowerment (PE) moderates the relationship between their job demands, job resources (job autonomy and task variety) and their entrepreneurial behaviour. It begins with a brief description of the proposed hypothesis, followed by analysis of the data, a short description of validity and assumption checks undertaken and a presentation of the key finding

Chapter 7 [*Empirical Study 4*] reports the findings of a qualitative investigation into how the personal resources that employees develop from being entrepreneurial at work and the personal resources that positively influence their engagement at work. Data was obtained through a series of semi-structured interviews with 11 entrepreneurial and innovative employees at a Malaysian Corporate Incubator.

Chapter 8 [*Reflections, Contributions, Limitations, Suggestions for Future Research and Conclusions*] integrates the findings of the four empirical chapters of this thesis and discusses them as a whole. The chapter also provides a reflection on the entire thesis process as well as on each individual empirical chapter. Also included in the chapter is a detailed discussion of the limitations of the entire thesis and each individual empirical chapter as well as suggestions for future research.

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LIST OF ABBREVIATIONS

ABS	Associated Business Schools
CE	Corporate Entrepreneurship
CFA	Confirmatory Factor Analysis
COR	Conservation of Resources Theory
CV	Corporate Venturing
EEB	Employee Entrepreneurial Behaviour
EO	Entrepreneurial Orientation
HR	Human Resources
HRM	Human Resource Management
JCM	Job Characteristics Model
JD-C	Job Demands – Control Model
JD-SC	Job Demand-Control-Support Model
JD-R	Job Demand – Resources Model
KSA	Knowledge, Skills and Abilities
PE	Psychological Empowerment
SCT	Social Cognitive Theory
SE	Strategic Entrepreneurship
SLR	Systematic Literature Review
SPSS	Statistical Package for Social Sciences

Chapter One: Introduction

1. Background to Thesis

Through increasing competitive capacity in developed and developing economies (European Commission, 2003), entrepreneurial activity has long been regarded as a critical determinant in the growth and development of nations (Acs & Audretsch, 1988; Schumpeter 1934). Numerous studies have shown the beneficial effects of entrepreneurial activity on a broad range of economic and social indicators such as increased employment and job creation (Baptista Escária & Madruga, 2008; Baumol, 2004), innovation (Schumpeter 1934) and wealth creation (Bosma & Levie, 2010). Criticisms of present-day research into entrepreneurship has been lack of a critical framework to describe the phenomena (Venkataraman, 2019) as well as agreement to where and when entrepreneurial activity actually takes place (Shane & Venkataraman, 2000). Broadly, entrepreneurship has been defined as the “the processes of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them” (Shane & Venkataraman, 2000, p. 218). Shane and Venkataraman’s (2000) definition remain popular because it suggests that entrepreneurship can take place anywhere and anyhow, thus being free of context.

The above definition also suggests that entrepreneurial activity need not be restricted to mere creation of new enterprises (Lampe, Kraft & Bausch, 2019; Sharma & Chrisman, 1999) and may also occur through the activities of established

firms. As innovation continues to occur at breakneck speeds, so does the need to alter the very nature and scope of how business is conducted. Recent observations suggest that both innovation and entrepreneurship are creating a new wave of technological disruptions (Cozzolino & Rothaermel, 2018). Yet, as Kuratko, Covin, and Hornsby (2014) suggest, despite such dramatic changes in their operating environments, organisations continue to face difficulties in developing and implementing appropriate strategies to address such challenges (Kuratko & Morris, 2018). Early writings on entrepreneurship (Schumpeter, 1934), argued that organisations may achieve superior profits through continuous innovation. Such a capability may be highly necessary for organisations to meet the ongoing challenges posed by unpredictable market conditions, hyper-competition and severe resource constraints (Kuratko, Hornsby & Hayton, 2015). (Ireland, Covin & Kuratko, 2009; Hughes & Mustafa, 2017). The notion of entrepreneurship at the firm-level, as a means of assisting organisations to cope in dynamic markets and ensuring their growth and survival has thus been rapidly gaining traction in the literature (Covin & Slevin, 1991).

Scholars have recognised that an entrepreneurial strategy at the firm-level, sometimes referred to as Corporate Entrepreneurship (CE) (Stopford & Baden-Fuller, 1994), may represent a guiding light and motivating force for organisations to sustain competitive advantages and to meet external challenges (Kuratko & Morris 2018). Besides putting into place pro-entrepreneurial organisational architectures, the proactive and discretionary behaviours of employees is also necessary to achieve CE (Crant, 2000; Thomas, Whitman & Viswesvaran, 2010).

Such behaviours typically consist of employees scanning their internal and external environments in anticipation of potential problems and the generation of unique solution to those problems (Beltrán-Martín, Bou-Llugar, Roca-Puig & Escrig-Tena, 2017; Thomas et al., 2010). Hence, firm-level entrepreneurship may be attributed to individual employees' entrepreneurialism (Belschak & Den Hartog, 2010).

1.2 Employee Entrepreneurialism

1.2.1 Firm-level Entrepreneurship and its Antecedents.

The term Corporate Entrepreneurship (CE) has been used to describe the broad array of entrepreneurial behaviours at the firm-level (Stopford & Baden-Fuller, 1994). Over the past 40 years, terms, such as organisational entrepreneurship, intrapreneurship, Corporate Venturing (CV), Strategic Entrepreneurship (SE) and Entrepreneurial Orientation (EO) (Corbett, Covin, O'Connor & Tucci, 2013) have been used to describe various aspects of entrepreneurial activity at the firm-level. Theoretical thinking around CE has been concerned with whether such behaviours represents an attitude, outlook, or perspective within organisations, or whether it represents a set of behaviours (Hanan, 1976). One stream of research has tended to view CE as a specific orientation or attitude (Covin & Slevin, 1991; Zahra, Jennings & Kuratko, 1999) inside of an organisation. The term Entrepreneurial Orientation (EO) (Miller, 1983; Covin & Slevin, 1989) was developed to describe an organisation's strategic behavioural proclivities. The EO perspective suggest that organisations can range from either being conservative to more entrepreneurial in nature along three key dimensions: innovativeness, proactiveness and risk-taking

(Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin & Frese, 2009). Various studies have established a positive relationship between an organisations EO and their performance throughout several contexts (Stam & Elfring, 2008).

The second stream of research has tended to view CE as a domain of different activities (Sharma & Chrisman, 1999). Corporate Entrepreneurship (CE) is defined as “the process whereby an individual or a group of individuals, in association within an existing organisation, create a new organisation or instigate renewal or innovation within that organisation” (Sharma & Chrisman, 1999, p. 18). Theorising by Kuratko and Audretsch (2013) suggested that CE can be thought of as an umbrella concept, comprising of two key domains of entrepreneurial activity, Corporate Venturing (CV) and Strategic Entrepreneurship (SE). Corporate Venturing (CV), refers to either the internal or external launching of new ventures (Covin & Miles, 2007). Strategic Entrepreneurship (SE) refers to the variety of entrepreneurial and innovative activities adopted by organisations in pursuit of competitive advantages (Kuratko & Audretsch, 2013). Strategic entrepreneurship activities may occur either via strategic renewal (adoption of a new strategy), sustained regeneration (introduction of a new product or service into an existing category), domain redefinition (reconfiguration of existing product or market categories), organisational rejuvenation (internally focused innovation for strategy improvement), and business model reconstruction (redesign of existing business model)(Covin & Miles, 1999; Ireland, Hitt & Sirmon, 2003; Ireland & Webb, 2007). Irrespective of the where and how SE occurs, scholars agree that such activities can help organisations fundamentally differentiate themselves from rivals

in the industry (Ireland et al., 2003). Accordingly, SE has been linked to increased organisational performance and innovativeness (Bierwerth, Schwens, Isidor & Kabst, 2015; Rauch et al., 2009), firm growth (Antoncic, 2007), revitalisation of existing business, and a capacity to react to changes in the environment (Zahra 1991).

This thesis focuses on the CE approach rather than the EO approach. The CE approach is in line with the broad objectives of this thesis and consistent with existing studies that have looked specifically at organisational and individual process related to organisational-level entrepreneurship (Kuratko, Hornsby & Bishop, 2005; Mustafa, Martin & Hughes, 2016; Sieger, Zellweger & Aquino, 2013). Research into the antecedents of CE has been well established in the literature (Hornsby, Kuratko & Zahra, 2002; Kuratko, Ireland, Covin & Hornsby, 2005). Prior studies have identified a range of internal, cultural and external factors which condition the process (Hughes & Mustafa, 2017). Recently, scholars have focused on understanding the human element associated with CE (Sieger, Zellweger & Aquino, 2013). The human perspective, or the micro-foundations view of CE, view employees and their associated behaviours, skills and knowledge as critical antecedents to the CE process (Floyd & Wooldridge, 1997; Mustafa, Lundmark & Ramos, 2016; Smith & Di Gregorio, 2002). This view also suggests that organisations will only be entrepreneurial in nature to the extent that their human resources are likewise (Lau, Shaffer, Fai Chan & Wing Yan Man, 2012). For instance, an established organisation's willingness and capacity to be innovative and engage in strategic renewal will in part be determined by the extent

to which its management and employees are willing to pursue and engage in discretionary and proactive behaviours. Hence, studies have demonstrated the positive relationship between employee discretionary and proactive behaviours and organisational performance and innovativeness, especially in turbulent environments (Anderson, Covin & Slevin, 2009).

1.2.2 Employee Entrepreneurial Behaviour and Corporate Entrepreneurial Processes.

The importance of employee discretionary behaviours in helping organisations achieve their objectives is well known (Den Hartog & Belschak, 2007; Whitman, Van Rooy & Viswesvaran, 2010). Discretionary behaviours tend not to be explicitly recognised by organisational systems and process as they occur largely outside of an employee's job description (LePine, Erez & Johnson, 2002). Such behaviours have been positively associated with organisational effectiveness and functioning (Den Hartog & Belschak, 2007). The organisational psychology literature has identified a range of overlapping and related constructs such as (a) proactive personality (Bateman & Crant, 1993), (b) personal initiative (Frese, Kring, Soose & Zempel, 1996), (c) employee voice behaviour (Van Dyne & LePine, 1998), (d) taking charge (Morrison & Phelps, 1999), (e) organisational citizenship behaviour (OCB) (Organ, 1988) and (f) Innovative Work Behaviours (IWB)(Scott & Bruce, 1994) as different forms and types of discretionary behaviours.

Employee discretionary behaviours have been strongly associated with CE (Xerri, 2013; Zhang, Wan & Jia, 2008). Besides discretionary behaviours,

employees must also engage in proactive behaviours if they are to positively contribute to organisational effectiveness (Bateman & Crant, 1993; Crant, 2000). Proactive employee behaviours refers to “self-initiated and future-oriented action that aims to change and improve the situation or oneself” (Parker, Williams & Turner, 2006, p. 636). Proactive employees are likely to change existing circumstances or create new situations which facilitate personal and organisational success (Chan & Schmitt, 2000). Hence proactivity among employees is not only a dispositional trait (Wu, Parker & Bindl, 2013) that differentiates employees from one another, but also a motivational force which can energise employees (Parker, Bindl, & Strauss, 2010). For instance, studies have established a positive link between employee proactive behaviours and individual and collective benefits such as enhanced work success (Fuller & Marler, 2009), improved organisational effectiveness (Raub & Liao, 2012) and innovation (Griffin, Neal & Parker, 2007).

With many organisations becoming reliant on their employees’ proactivity and personal initiatives to instigate development and bring about constructive changes in the workplace (Unsworth & Parker, 2003), scholars have begun to examine the role of employee entrepreneurial behaviours in this process. Several studies have suggested that employee entrepreneurial behaviours form a distinct type of voluntary and proactive behaviour, which contribute to firm-level entrepreneurship (Gawke, Gorgievski & Bakker, 2019; Neessen, Caniëls, Vos & De Jong, 2019; Rigtering & Weitzel 2013).

1.2.3 Employee Entrepreneurial Behaviour.

The capacity of an organisation's employees to contribute to its growth and development, goes beyond simply engaging effectively in in-role behaviours and completing set tasks and objectives (Snape & Redman, 2010). In addition to performing prescribed tasks, employees' willingness to engage in positive and voluntary extra-role behaviours are particularly useful in simulating and sustaining organisational development and evolution. According to Bosma, Wennekers and Amorós (2012), employee entrepreneurialism constitutes a significant form and type of entrepreneurial activity, which has largely overlooked by official statistics. Employee entrepreneurialism may be highly necessary for the survival and development of corporations. Ireland, Covin, and Kuratko (2009) reinforced this notion by suggesting that the entrepreneurial behaviours of organisational members across all levels can serve as a critical antecedent to CE. Accordingly, studies have shown how employee entrepreneurial behaviours across all levels has contributed to new product design (Marvel, Griffin, Hebda, & Vojak, 2007), implementation of new ideas (Hornsby, Kuratko, Shepherd, & Bott, 2009), creation of new ventures and instigating strategic renewal (Belousova & Gailly, 2013; Blanka, 2018; Gawke, Gorgievski & Bakker, 2019)

While employee entrepreneurial behaviour may be found throughout an organisation, such behaviours are likely to vary depending on an individual's role within the hierarchy of the organisation (Hornsby et al., 2002; Hornsby et al., 2009; Mustafa, Martin & Hughes, 2016). For example, senior-level managers are said to contribute to CE through their willingness and ability to synthesise information and

spot entrepreneurial opportunities (Sieger et al., 2013). They are also likely to be play a crucial role in creating and implementing organisational initiatives designed to support a pro-entrepreneurship organisational architecture (Ireland et al., 2009). Similarly, the unique organisational positioning of middle-level managers makes them particularly influential in collecting and disseminating knowledge (Mustafa, Lundmark & Ramos, 2016) as well as endorsing, refining and shepherding of entrepreneurial opportunities. In contrast, both junior-level managers and non-managerial employees may contribute to CE by deviating from their formal work requirements and experimenting with new ideas and resources provided by the organisation in order to exploit emergent opportunities (Belousova & Gailly, 2013; Globocnik & Salomo, 2015).

While there continues to be growing scholarly interest in employee entrepreneurial behaviours (Mustafa, Gavin & Hughes, 2018), the current literature on the concept continues to remain fragmented. Particularly lacking has been the agreement on the usage of a consistent term to describe the concept, and the conceptualisation of it (Mustafa, Gavin & Hughes, 2018). Regarding terminology, scholars have referred to the concept using a variety of terms such as either entrepreneurial behaviour and/or intrapreneurial behaviour (Blanka, 2018; Mustafa, Gavin & Hughes, 2018). Although both refer to employee entrepreneurship within an organisation, they nevertheless approach such behaviours from different perspectives.

Scholars using the term intrapreneurial behaviour have typically referred to employee entrepreneurship as the bottom-up self-initiated behaviours of employees

which results in them innovating and seeking out business opportunities that benefit the organisation (Antoncic & Hisrich, 2001; Rigtering & Weitzel, 2013). Additionally, such behaviour is said to constitute a challenging type of extra-role behaviour and is also considered to occur outside of one's job description and organisational policies (De Jong & Wennekers, 2008). In contrast, scholars using the term entrepreneurial behaviour have done so by situating the concept within the broader CE literature. Employee entrepreneurial behaviour is often viewed as the discovery or development and exploitation of previously unnoticed entrepreneurial opportunities (Mustafa, Martin & Hughes, 2016; Shane & Venkataraman, 2000; Sieger et al., 2013; Smith & Di Gregorio, 2002). This view recognises that employees' contributions to CE process may emerge as result of either individual spontaneous behaviours (Amo 2010; Rigtering & Weitzel 2013) or as part of planned, promoted, and monitored actions by the organisation (Sharma & Chrisman, 1999).

Both the terms entrepreneurial and intrapreneurial have been used interchangeably in the literature leading to significant confusion. In this thesis however, the researcher has utilised the term entrepreneurial behaviour. This is in part motivated by the idea that entrepreneurial behaviour may incorporate a broad array of behaviours, which may be either discretionary or self-initiated in nature and/or may be induced more formally through organisational and job design. Additionally, this view also recognises that employee entrepreneurial behaviours are not only a challenging form of extra-role behaviour but also a form of proactive of behaviour. Typically, employee entrepreneurial behaviour is conceptualised as a

higher order construct reflecting the specific orientations of personal initiative, individual risk taking and innovativeness (De Jong, Parker, Wennekers, & Wu, 2015; Rigtering & Weitzel, 2013; Valsania, Moriano & Molero, 2016). Such a conceptualisation is consistent with the broader organisational-level construct of EO which views CE as a set of innovative, proactive and risk taking behaviour (Covin & Slevin 1989; Rauch et al. 2009) and one that is commonly adopted by studies examining employee entrepreneurial behaviour (De Jong et al., 2015, Gawke, Gorgievski and Bakker, 2019; Rigtering & Weitzel, 2013, Valsania et al., 2016, Wakkee, Elfring & Monaghan, 2010). In line with the above conceptualisation, and De Jong et al. (2015) and Lau et al.'s. (2012) behaviourist view, employee entrepreneurial behaviour in this thesis is broadly defined as:

“The extent to which individual workers proactively engage in the creation, introduction, and application of opportunities at work, marked by taking business-related risks” (De Jong et al., 2015, p. 982).

The researcher acknowledges that this is an initial definition and may be needed to be refined and developed as the phenomena is investigated further. There are several advantages for adopting the behavioural-based approach to conceptualising employee entrepreneurial behaviour. Firstly, the behavioural-based approach may be particularly advantageous when trying to determine what actually constitutes employee entrepreneurial behaviour. Employee entrepreneurial behaviours may incorporate a broad array of micro individual and group-level behaviours (Mustafa, Martin & Hughes, 2016; Sieger et al., 2013) which may or may not manifest themselves in quite different ways from

organisational-level entrepreneurial behaviours (De Jong et al., 2015; Mustafa, Gavin & Hughes, 2018).

Secondly, recognising that employee entrepreneurial behaviour may occur with or without official organisational mandates (Globocnik & Salomo, 2015), the behavioural-based approach permits the concept to be situated in the broader discretionary and proactive behaviour literatures, while also differentiating it from similar concepts in the literature (Gawke et al., 2019; Parker & Collins, 2010). For example, while considered a discretionary and proactive form of behaviour, employee entrepreneurial behaviour differs from the concept of Organizational Citizenship Behaviour (OCB) (Organ, 1988) in that it not only promotes organisational effectiveness, but it can also lead to the development of new products/services and pursuit of new opportunities. It also differs from the concept of innovative work behaviour (IWB) (Scott & Bruce, 1994) in that in addition to ideation and idea implementation, employee entrepreneurial behaviour also includes behaviours that help organisations take risks to pursue opportunities (Janssen, 2000). Finally, it also differs from the concept of job crafting (Tims, Bakker & Derks, 2012) in that it includes behaviours that can result in positive changes with regards to how a firm fit with its external environment (Gawke et al., 2017)

Finally, the behavioural-based approach also presents great potential for the theoretical advancement of the field, especially regarding the determinants of such behaviour. Recently, Gawke, Gorgievski and Bakker (2019) demonstrated how a broad behavioural-based conceptualisation may allow the integration of the concept

into the broader job characteristics and design literatures (Oldham & Hackman, 1976). Hence, the behavioural-based approach to conceptualising employee entrepreneurial behaviour may permit a broader investigation into the determinants and consequences of such behaviours.

1.3 Problem Statement and Thesis Objectives.

The notion that employee entrepreneurial behaviour can lead to firm competitiveness through differentiation and growth (Antoncic & Hisrich 2001; Covin & Miles 1999) has been well established in the literature. Given the strategic value of employee entrepreneurial behaviours to organisations, scholars have called for further investigations into the range of antecedents as well as the consequences of such behaviour (Miller, 2011; Mustafa, Gavin & Hughes, 2018; Rigtering & Weitzel 2013). However corresponding research examining its determinants and consequences remains limited (Ireland et al., 2009; Lau et al., 2012; Wales, 2016). Such issues have restricted the field from developing a detailed understanding of employee entrepreneurial behaviour, the conditions under which it emerges and the impact of such behaviour on employees' attitudes and motivations (Blanka, 2018, Neessen et al., 2018; Mustafa, Gavin & Hughes, 2018).

This thesis seeks to advance the knowledge in the area by investigating the determinants and consequences of employee entrepreneurial behaviour. It seeks to achieve this by addressing specific issues identified in the literature. One of the first issues concerns the determinants of employee entrepreneurial behaviour. Currently, scholars in the area have been pre-occupied with addressing the broad research

question of how managers and organisations influence and support employee entrepreneurial behaviours. Hence, a plethora of research has examined a range of organisational climate and support practices which facilitate employee entrepreneurial behaviour (Hornsby et al., 2009; Kuratko et al., 2005; Rigtering & Weitzel, 2013). Such studies have typically concluded that presence of entrepreneurial environments (Rutherford & Holt, 2007) and supportive management and leadership as critical to promoting employee entrepreneurialism (Hornsby et al., 2009). Yet equally important, but often under explored is how the design of an employees' job may influence their entrepreneurial behaviour. The lack of scholarly attention in this area is surprising, given the significance of how the design of one's job can intrinsically motivate employees to engage in pro-active and discretionary behaviours (De Jong et al. 2015; D'Souza & Mulla 2011; Hackman & Oldham, 1976). Hence, further empirical investigation is needed to understand either the motivational and/or de-motivational aspect of an employees' job on their willingness to act entrepreneurially.

Specifically, the existing literature has largely remained focused on limited number of job design characteristics such as work discretion/job autonomy (De Jong et al., 2015; Hornsby et al., 2009; Kuratko et al., 2005), tenure and job security (Zampetakis & Moustakis, 2010) albeit with mixed results. Such a focus has however left several gaps in our understanding regarding the role of job design and employee entrepreneurial behaviour. In particular, the existing literature has often been treated specific aspects of an employee's job as a resource that enables employee entrepreneurialism (De Jong et al., 2013; Rutherford & Holt, 2007). In

addition to acting as a specific resource, an employee's job may also be associated with various demands and challenges (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Such demands and challenges may either enable or hinder an employee's entrepreneurial behaviour. Yet, empirical evidence concerning this remains sorely lacking. Therefore, in order to understand the effects of job design on employee entrepreneurial behaviour, it is imperative that both the demands and resources associated with the job be evaluated.

Secondly, while organisational and job characteristics may be important, they might not sufficiently explain why an individual may or may not choose to behave entrepreneurially (Kuratko et al., 2005; Rigtering & Weitzel 2013). Prior research has identified a number of individual or dispositional factors that may determine whether an employee engages in entrepreneurial behaviour or not (Mustafa, Martin & Hughes, 2016; Sieger et al., 2013). However, much of this research has tended to focus on a narrow set of dispositional traits, demographic characteristics, values, and attitudes (Holt, Rutherford & Clohessy, 2007; Sieger et al., 2013). As result, the field has only a limited understanding of the variation in personal circumstance that may pre-dispose an employee towards entrepreneurial behaviour (Neessen et al., 2018). A small number of studies have suggested that an employees' positive feelings and attitudes towards their organisation (Mustafa, Martin & Hughes, 2016; Sieger et al., 2013) may influence their entrepreneurialism. While employees may feel 'empowered' and 'motivated' through their positive attitudes and relations with their organisation (Park, Kim & Krishna, 2014), they may also do likewise via their positive attitudes towards their job. Currently, there

is a lack of conceptual and empirical evidence concerning how an employees' orientations towards their job may influence their entrepreneurial behaviours.

Thirdly, Brunåker and Kurvinen (2006) and Belousova and Gailly (2013) suggested that employee entrepreneurial behaviours may be necessary to build consensus among various internal stake holders and ensure the success of local entrepreneurial initiatives. Such findings suggest that employees' entrepreneurial behaviour can contribute to their ability to stay energized and engaged with their work. Organisations are likely to stay entrepreneurial to the extent that their employees bring high levels of energy and involvement to their work (Bakker, Albrecht, & Leiter, 2011). While studies have examined the various antecedents of employee entrepreneurial behaviour (Hornsby et al., 2002; Ireland et al., 2009), few studies have examined the individual outcomes associated with such behaviour (Gawke et al., 2017). Employee entrepreneurialism may strengthen employees own and others' attitudes to towards the organisation and their job and may also encourage their engagement in additional forms of pro-organisational behaviours and attitudes (Grant, 2000; Pearce, Kramer & Robbins, 1997). For instance, Rutherford and Holt (2007) found entrepreneurial employees to be more satisfied with their current jobs, more committed to their organisations and less likely to quit, while found Park et al., (2014) showed such employees to be more willing to share and forward relevant information with their co-workers. Rigtering and Weitzel (2013) further showed that employee entrepreneurial behaviours such as innovativeness and proactiveness were necessary to sustain firm CE initiatives. Similarly, Gawke et al. (2018) demonstrated how employee entrepreneurialism can

lead to increased well-being and work engagement. Despite such findings, significant scope still remains in the literature to examine exactly how employees may remain engaged at work by behaving entrepreneurially.

Finally, current studies examining employee entrepreneurial behaviour have investigated the phenomena without explicitly drawing relevant theoretical frameworks or model. Consequently, scholars have lamented on the inability of the field to draw on relevant theories to explain employee entrepreneurial behaviours and process (Urbano & Turró, 2013). Recently, Gawke et al. (2017) drew on the well-established Job Demands – Resources (JD-R) model (Bakker & Demerouti, 2017) to examine the motivational aspects of employee entrepreneurial behaviour. However, JD-R model has been rarely used to examine the determinants of employee entrepreneurial behaviour. The inherent flexibility of the JD-R model and the theory behind it may permit the examination of the micro-foundations through which employee entrepreneurial behaviour emerges, as well as the individual-level positive psychological benefits associated with such behaviour.

In sum, prior literature on employee entrepreneurial behaviour continues to remain underdeveloped (Mustafa, Gavin & Hughes, 2018). The above discussion suggests that there are several gaps in the literature that require further investigation, especially with respect to the effects of job design on employee entrepreneurial behaviour, and how such behaviour impacts employee's engagement at work. Based on the above discussion of the broad gaps in the field, this thesis proposes to the following research objectives.

RO1: Provide an overview of the current state of knowledge concerning employee entrepreneurial behaviour in pursuit of Corporate Entrepreneurship (CE);

RO2: Examine the effects of employees' job design and individual attributes/attitudes on their entrepreneurial behaviour;

RO3: Explore how an employee entrepreneurial behaviour influences their engagement at work;

RO4: Utilise the JD-R model to examine the determinants and consequences of employee entrepreneurial behaviour.

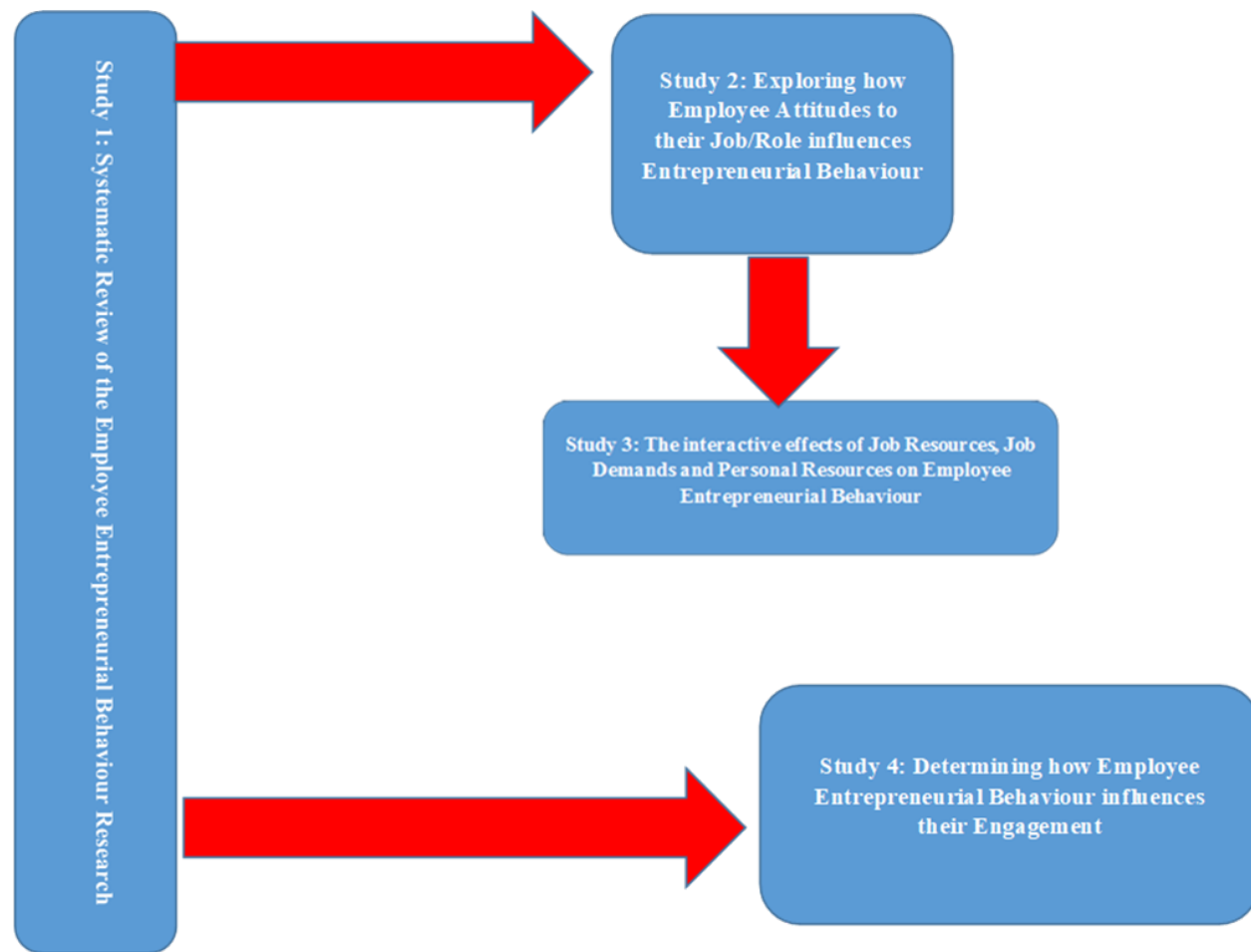
In addressing the above research objectives, the researcher conducted four separate, but inter-connected studies. Each study is built on one another and in doing so advanced the existing literatures understanding regarding the determinants and consequences employee entrepreneurial behaviour. The following section provides a brief overview of the research flow.

1.4 Thesis Structure and Flow of Empirical Chapters

Employee entrepreneurial behaviour represents a broad concept whose epistemological origins are rooted in several different disciplines. For instance, much of the early thinking around the concept has been rooted in strategic management literatures (Stopford & Baden-Fuller, 1994; Urbano & Turró, 2013), however, recent developments in the field have also drawn on theories and developments from allied fields such as entrepreneurship (De Jong et al., 2015)

and organisational psychology (Gawke et al., 2017; 2019). Consequently, such developments in the field have led to a looseness over the definition and conceptualisation of the concept, which has also led to a lack of synthesis over its nomological network (Mustafa, Gavin & Hughes, 2018). Hence, there is an increasing need to bring clarity to field through the development of an integrative framework which provides an overarching perspective on employee entrepreneurial behaviour, how such behaviour is enabled in established organisations, and its consequences (Neessen et al., 2018; Mustafa, Gavin & Hughes, 2018). To address this issue in the literature, the researcher began by carrying out systematic literature review (SLR) of the field of employee entrepreneurial behaviour. This was done to bring greater clarity to the field, and to also identify areas for future research. Hence, the SLR (chapter 2) and the integrative framework developed from it formed the foundation for this particular thesis.

Building on from the SLR, the researcher identified the need to explore how employees' positive orientations towards their jobs may motivate them to engage in entrepreneurialism, thus leading to Study 2 (chapter 5). Additionally, Study 3 (chapter 7) built directly on from Study 2 and the SLR, by empirically testing the emergent concepts from those chapters by focusing on employees' job demands as well as both job and personal resources. Finally, Study 4, built directly from the research gap identified in the SLR. Figure 1.1 below provides a conceptual flow of each of the empirical chapters in the thesis.



Figure

1.1. Conceptual Flow of Each Empirical Chapter in the Thesis.

1.5 Summary of Empirical Chapters and Specific Research Questions

The thesis consisted of four (4) empirical chapters. Of these four chapters one was a Systematic Literature Review (SLR) (Study 1) consisting of 26 relevant articles. Study 2 and 4 were both qualitative and consisted of interviews with entrepreneurial employees (Study 2) and a single case study of innovative and entrepreneurial employees in a Malaysian corporate incubator (Study 4). Study 3 was based on quantitative cross-sectional survey of 321 knowledge intensive workers regarding the determinants of their entrepreneurial behaviour. Table 1.1 below provides a summary of the empirical chapters and the specific research questions.

Research Objectives	Study	Research Question(s)	Method Utilised	Summary of Key Findings
RO1: Provide an overview of the current state of knowledge concerning employee entrepreneurial behaviours in pursuit of Corporate Entrepreneurship (CE)	1	RQ1: What are the main publication trends, terminologies, research methods and theories used in the literature concerning employee entrepreneurial behaviours? RQ2: What constitutes employee entrepreneurial behaviours in established organisations and what is its nomological network?	Qualitative – Non-empirical – Systematic Review of the Literature (SLR) – 26 articles.	Existing research into employee entrepreneurial behaviour remains highly quantitative in nature and focused mostly on determining the environmental and organisational related factors that enable such behaviour. Employee entrepreneurial behaviour represents a higher order construct, consisting of three broad behaviours (proactiveness, innovativeness and risk-taking). The micro behaviours that constitute the above were distinct from firm-level entrepreneurial behaviours. Additionally, there continues to be a gap in the literature concerning how the design of employees job and their attitudes towards their roles/job influences their entrepreneurial behaviour.

RO2: Examine the effects of employees' job design and individual attributes/attitudes on their entrepreneurial behaviour.	2	RQ: How does an employees' active orientation towards their work influences their entrepreneurial behaviour?	Qualitative – 9 Semi-structured interviews.	Employees' active orientation towards their jobs/role affects their entrepreneurial behaviours through Self-determination, Realising the significance of ones work/role and Possessing Specific Capabilities and Skills. Such concepts are similar to that of the construct Psychological Empowerment (PE).
RO2: Examine the effects of employees' job design and individual attributes/attitudes on their entrepreneurial behaviour & RO4: Utilise the JD-R model to examine the determinants and consequences of employee entrepreneurial behaviour.	3	RQ: Does employee Psychological Empowerment (PE) moderate the relationship between their Job Demands, Job Resources (Job Autonomy and Task Variety) and their entrepreneurial behaviour?	Quantitative – Cross-sectional survey.	Different job resources (task variety and job autonomy) and job demands can have differential effects on specific aspects of employee entrepreneurial behaviour. Employee personal resources, in the form of Psychological Empowerment, only moderated the effects of job resources (task variety or job autonomy) on entrepreneurial behaviour.
RO3: Explore how employee entrepreneurial behaviour influences their engagement at work; &	4	RQ: What personal resources arise from being entrepreneurial at work that positively influence employee work engagement?	Qualitative – Single Case Study and 11 interviews	The Formation of an Entrepreneurial Self, Entrepreneurial Learning, Being Optimistic about Entrepreneurial Activity, emerged as key personal resources developed by employees as a result of behaving

RO4: Utilise the JD-R model to examine the determinants and consequences of employee entrepreneurial behaviour	entrepreneurially at work. They were considered as particularly valuable resources by participants in that they helped them cope with the demands of their job/role and motivated entrepreneurial employees to stay engaged at work.

Table 1.1. Summary of Key Empirical Chapters and Findings.

1.5.1 Study 1 – Systematic Literature Review (SLR) of employee entrepreneurial behaviour – Chapter 2.

A growing stream of studies are now casting light on the importance of employee entrepreneurial behaviour across organisational levels in the process of firm-level entrepreneurship (Bosma et al., 2012; Mustafa, Martin & Hughes, 2016; Wales, 2016 2011). In fact, Ireland, Covin and Kuratko (2009) regard employee entrepreneurial behaviour as a key antecedent in enabling and sustaining firm-level entrepreneurship (Hornsby et al., 2009; Monsen & Boss 2009 Wales, Gupta & Mousa, 2013). Yet in contrast to research on firm-level entrepreneurship, scholars have yet to agree on what exactly employee entrepreneurial behaviour constitutes, and was its correlates (Anderson & Covin, 2014; Lau et al., 2012; Rigtering & Weitzel, 2013). Furthermore, it does not necessarily follow that firm entrepreneurial performance is the result of an additive process of individual employee entrepreneurial behaviours. It is quite plausible that different parts of an organisation need to act together for performance to emerge and, indeed, there are likely to be negative performance consequences if all members of an organisation take risks, encourage innovation and seek out opportunities routinely,

simultaneously or in excess. For example, firm entrepreneurship activity is resource intensive such that in excess it may offer little contribution to performance without those resources being replenished to fuel subsequent go-to-market activities (Hughes, Eggers, Kraus & Hughes, 2015).

Despite resurgent calls to put the individual employee back into the entrepreneurial process (Rauch et al., 2009), knowledge concerning the drivers and outcomes of employees entrepreneurial behaviours in support of CE remains limited and disparate (Lau et al., 2012; Mustafa, Martin and Hughes, 2016; Rigtering & Weitzel, 2013; Wales et al. 2013). This is partly driven by the fact that scholars have adopted different approaches to defining and conceptualising employee entrepreneurial behaviour. This has also impacted the overall development of the field, especially concerning the determinants and consequences of such behaviour. To address this crucial gap in our knowledge, this study seeks to address the following two research questions:

RQ1: What are the main publication trends, terminologies, research methods and theories in the literature concerning employee entrepreneurial behaviors?

RQ2: What constitutes employee entrepreneurial behaviours in established organisations and what are its correlates?

In addressing the above research questions, a Systematic Literature Review (SLR) following the steps outlined by Denyer and Tranfield (2009) and Wang and Chugh (2015) was carried out. The SLR identified 26 peer-review papers listed in

ABS-level 2 and above journals for further empirical investigation. The SLR focused on studies which only examined employee entrepreneurial behaviour in pursuit of CE and hence excluded studies looking at entrepreneurial/intrapreneurial intentions, and competencies. In addressing the first research question the study revealed a limited knowledge base, based mostly on quantitative papers and utilising a limited number of theoretical perspectives. The field seems to be particularly well developed with respect to understanding how organisational cultures support employee entrepreneurial behavior. Regarding the second research question, the study identified employee entrepreneurial behaviour as a higher order construct consisting of three key dimensions: innovativeness, proactiveness and risk taking. Such behaviours were found to be quite distinct from firm-level entrepreneurial behaviours. Additionally, the study also highlighted the urgent need to examine employees' job characteristics such as the demands of one's job and employees' attitudes towards their job in influencing their entrepreneurial behaviour.

1.5.2 Study 2 – Exploring how employee attitudes towards their job influences their entrepreneurial behaviour – Chapter 5.

Study 1 identified an established body of literature in the field focusing mostly on the internal environmental (Hornsby et al., 2009) and managerial/leadership (Moriano, Molero, Topa & Mangin, 2014) factors that shape employee entrepreneurial behaviour. A smaller group of studies were identified as focusing on the job context of employees (De Jong et al., 2015; Rigtering & Weitzel, 2013; Zampetakis, Beldekos & Moustakis, 2009; Zampetakis &

Moustakis, 2007). Typically, such studies have focused on structural characteristics of an employee's job, such as the amount of work discretion, tenure, and job security, extent of vertical and horizontal integration which can either enable or hinder employee entrepreneurial behaviour. While the characteristics of one's job can induce positive psychological states and motivate individuals towards performance (Oldham & Hackman, 1976), so can an employee's positive cognitions about themselves in relation to their jobs. Yet there continues to remain a lack of understanding and empirical evidence regarding how employee's attitudes towards their job can influence their entrepreneurial behaviours at work. Hence, Study 2 set out to address the following exploratory research question:

RQ: How does an employees' active orientation towards their work influence their entrepreneurial behaviour?

Given the explorative objectives of the study, a qualitative research design was adopted. Empirical evidence was drawn from semi-structured interviews with 9 full-time employees in knowledge-intensive organisations. Thematic analysis was used to analyse the interview data. Findings identified three major themes, which were considered as important attitudes towards an employee's job and which influenced their entrepreneurial behaviour. These were Self-determination, Realizing the significance of ones work and Possessing Specific Capabilities and Skills. Comparisons with the existing literature suggested that that emergent themes were similar to four cognitions found in the construct of Psychological Empowerment (PE) (Spreitzer, 1995), which reflected an individual's active orientation to their job.

1.5.3 Study 3 – The interactive effects of job resources, job demands and personal resources on employee entrepreneurial behaviour – Chapter 6.

Study 3 built on the findings of Study 2 as well as the gap identified in Study 1 regarding the lack of empirical evidence concerning the role of job demands in either enabling or constraining employee entrepreneurial behaviour. The findings from Study 3 suggested that employees' psychological empowerment (PE) (Spreitzer, De Janasz & Quinn, 1999) can potentially influence their entrepreneurial behaviours. While the prior literature has established an association between PE and concepts such as innovative work behavior (Pieterse, Van Knippenberg, Schippers & Stam, 2010) and personal initiative (Hong, Liao, Raub & Han, 2016), there continues to be a lack of empirical evidence between PE and employee entrepreneurial behaviour. Hence, establishing an empirical and statistically significant link between the two concepts, will also help to confirm the findings of Study 2.

Additionally, study 1 also showed that prior studies have tended to treat job characteristics as resources. As resources, specific job characteristics are expected reduce the costs associated with work and should balance the demands of a job (Demerouti et al. 2001). However, the literature has also acknowledged that jobs can also have specific demands and challenges (Bakker & Demerouti, 2007) which can also influence employee behaviours. Therefore, in order to better understand the complex process through which employees' entrepreneurial behaviour emerges, it is important to not only examine job resources, but also job demands, and the

personal resources that one has. Study 3 draws on the JD-R model (Bakker & Demerouti, 2007) to investigate the interactions between employee's job demands and job resources (job autonomy and task variety) and their personal resources (Psychological Empowerment) in facilitating entrepreneurial behavior. Doing so, also address recent calls in the literature to explore the complex process through which employee entrepreneurial behaviour emerges (Mustafa, Gavin & Hughes, 2018; Rigtering & Weitzel, 2013). Specifically, study 3 examined whether employees PE moderates the relationship between job resources, job demands and their entrepreneurial behaviour. Hence, study 3 sought to address the following research question:

RQ: Does employee Psychological Empowerment (PE) moderate the relationship between their job demands and job resources (job autonomy and task variety) and their entrepreneurial behaviour

Results were derived from 321 knowledge-workers in knowledge intensive organisations. Both job autonomy and job demands were found to have a direct significant relationship with entrepreneurial behaviour. However, PE was found to moderate only the relationship between both job resources (task variety and job autonomy) and entrepreneurial behavior. A more interesting picture emerged when examining the proposed relationship with respect to specific dimensions of the employee entrepreneurial behaviour (ideation, personal initiative, risk-taking).

Regarding the ideation dimension, job resources (job autonomy and task variety) were only found to have significant direct effects. Psychological Empowerment (PE) was found to only moderate the relationship between job

resources (task variety and job autonomy) and employee ideation. Regarding the personal initiative dimension, both job demands and PE were found to have significant direct effects. However, PE was found to have no significant moderating effects with respect to either job demands or job resources. Finally, regarding the risk-taking dimension, only job autonomy and job demands was found to have a significant positive relationship. Psychological Empowerment however was found to have no significant moderating effects with respect to either job demands, job autonomy or task variety. In sum, the findings from study 4 suggest that in some instance employees PE may have significant moderating effects on their job demands or specific job resources. Study 4 also highlights how different job resources and job demands can have differential effects on specific aspects of employee entrepreneurial behaviour and its associated dimensions. Hence it is important to delineate the dimensions of entrepreneurial behaviour in order to understand their unique determinants.

1.5.4 Study 4 – Determining how employee entrepreneurial behaviour influences their engagement at work – Chapter 7.

The entrepreneurial behaviours of employees can assist organisations to anticipate and respond to external and internal opportunities and threats (e.g., Hornsby et al., 2009; Krauss, Frese, Friedrich & Unger, 2005; Marvel et al., 2007). Currently, majority of studies in the field have focused on examining the conditions under which employee entrepreneurial behaviours emerge (Blanka, 2018; Neessen et al., 2018; Mustafa, Gavin & Hughes, 2018). As identified by study 1, the existing literature on the effects of employee entrepreneurial behaviour on employee pro-

organisational attitudes (Gawke et al., 2017; Mustafa, Gavin & Hughes, 2018; Park et al., 2014) has received far less scholarly attention. While employee's entrepreneurialism can positively influence their job satisfaction and reduce their intentions to quit (Rutherford & Holt, 2007), it has also been found to positively influence employees' engagement (Gawke et al., 2017; Heinonen & Toivonen, 2008).

Engagement is described as an individual's active, positive work-related state characterized by vigor, dedication, and absorption (Schaufeli & Bakker, 2010). Employee engagement has been positively associated with both individual and organisational-level performance (Christian, Garza, & Slaughter, 2011). In order to remain engaged at work, employees require the necessary personal resources to provide them with sufficient energy and motivation to engage in activities that fulfil their personal needs and buffer against workplace stressors (, 2007). Gawke et al. (2017) recently conceptualised employee entrepreneurial behaviour as a challenging type of work demand. Specifically, they showed employee entrepreneurial behaviour to significantly contribute to work engagement, by increasing and fostering the development personal resources. While their study represents one of the first attempts in the field to link the two concepts, many questions still remain, especially concerning the psychological mechanisms and the motivational process (Bakker & Demerouti, 2017) that underlies such a relationship.

Particularly lacking is an understanding of the different types of personal resources that develop as a result of employees' entrepreneurial behaviour and

which help them to overcome the challenges in the workplace, thus keeping them engaged. Drawing on the JD-R model (Bakker & Demerouti, 2017), study 4 sought to explore the personal resources that employees develop from being entrepreneurial at work and which positively influences their affective and motivational state; namely their engagement. In doing so, Study 4 responded to calls in the literature to utilise process-oriented studies focusing on the positive consequences of employee entrepreneurial behaviours (Belousova & Gailly, 2013; Dess, Ireland, Zahra, Floyd, Janney & Lane, 2003; Sieger et al., 2013). Specifically, Study 4 addressed the following research question:

RQ: What personal resources arise from being entrepreneurial at work that positively influence employee work engagement?

In addressing the above research question, empirical data was drawn from 11 entrepreneurial and innovative employees at a corporate incubator in Malaysia. Secondary data was also collected. The interview and secondary data were analyzed using thematic analysis techniques. The Formation of an Entrepreneurial Self, Entrepreneurial Learning, Being Optimistic about Entrepreneurial Activity, emerged as key personal resources developed by employees as a result of behaving entrepreneurially at work. The findings suggest that such personal resources were the product of deep learning and helped them to remain engaged at work.

1.6 Theoretical Contributions of Thesis and Chapter Conclusion

In lieu of the strategic value of individual employees' entrepreneurial activity for organisations (Gawke et al., 2019; Miller, 2011), there has been increasing calls by scholars to better understand the nuances of employees' entrepreneurial behaviour in established organisations. Accordingly, this thesis was motivated by the broad objective of understanding the determinants and consequences of employee entrepreneurial behaviour. In trying to address this broad question, the researcher conducted four separate empirical studies designed to tackle specific aspects of the thesis objectives. By addressing the four objectives posed earlier, the findings from the individual empirical studies advances the field in several ways.

Firstly, the thesis advances the field by providing furthering our understanding of what determines employee entrepreneurial behaviour, and the psychological benefits of behaving entrepreneurially in the workplace. On one-level the findings from the thesis reveal that entrepreneurial behaviour can emerge through a range of individual and job specific factors (Rigtering & Weitzel, 2013). More importantly though, the utilisation of the JD-R permitted the researcher to examine the micro-foundations through which employee entrepreneurial behaviour emerges. Prior research has mostly focused mostly on organisational-level factors and a limited number of individual-level factors which condition employee entrepreneurial behaviour. In contrast, this thesis focused specifically on job-level attributes and characteristics (De Jong et al., 2015). Specifically, the addition of job

demands to study employee entrepreneurial behaviour, further expanded the nomological network regarding the determinants of such behaviour.

Findings from the thesis also goes some way in advancing the field's understanding regarding the individual outcomes associated with employee entrepreneurialism. While a small number of studies in the field have examined the effects of employee entrepreneurial on a limited range of individual outcomes (Park et al., 2014; Rutherford & Holt, 2007), there continues to be lack of empirical evidence and understanding of exactly how and why such relationships occur (; 2018). Using the JD-R model to examine the motivational aspects of an employee's well-being and engagement, the thesis highlighted how employees' entrepreneurial behaviour can help them to develop specific personal resources that may assist them in coping with the demands of their job and remain engaged at work. By doing so, the thesis responds to recent calls in the literature to utilise process-oriented approaches which focuses on the consequences of employee entrepreneurial behaviors for employees (Belousova & Gailly, 2013; Dess et al., 2003; Gawke et al., 2017). Furthermore, in identifying a new set of personal resources not considered by the literature previously, the thesis also adds to list of potential personal resources in the JD-R model. Doing so strengthens the overall model.

Secondly, the thesis also added to the limited research examining personal-level factors which determine employee entrepreneurial behaviour. Prior research has tended to traditionally view personal-level factors as individual differentiators which might lead to variations in why some employees may behave entrepreneurially and others not. By using the JD-R model, the thesis

conceptualised Psychological Empowerment (PE) (Spreitzer et al., 1999) as a personal resource (Bakker & Demerouti, 2008). Moreover, PE attenuating certain aspects of their job (Xanthopoulou et al., 2007). This may be of particular importance in extending the fields understanding why some employees may or may not engage in entrepreneurial behaviour, even though organisations may have created favourable conditions for such behaviour.

Finally, the JD-R model has long been used by scholars in organisational psychology to examine the motivational and health impairment pathways associated with regards to specific job demands and resources (Bakker & Demerouti, 2017). However, the model has rarely been used to examine individual-level entrepreneurialism in established organisation (De Clercq, Dimov & Belausteguigoitia, 2016; Messmann, Stoffers, Van der Heijden & Mulder, 2017). By using the use of the JD-R model to examine the determinants and consequences of employee entrepreneurial behaviour, the thesis furthermore demonstrates how the job design and proactive behavior literatures can be used to understand employee entrepreneurial behaviours. Specifically, existing research into employee entrepreneurial behaviours has largely been criticised for lacking relevant theories to explain such a phenomenon (Neessen et al., 2019). The thesis demonstrated how the utilisation of the JD-R model may permit the usage of a range of work and motivational theories to explain employee entrepreneurialism, thereby further advancing the field of employee entrepreneurial behaviour.

1.7 Chapter Summary

In summary, the chapter began with an overview of the field of employee entrepreneurial behaviour and the significance of such behaviours to firm-level entrepreneurship. Specifically, it was highlighted how and why employee entrepreneurial behaviour may be regarded as critical antecedent to firm-level entrepreneurship. The chapter also established the rationale for investigating the determinants and consequence of employee entrepreneurial behaviour by highlighting some of the gaps in the current literature. In particular, the chapter argued that more empirical work is needed to examine how an employee's job characteristics and how such attitudes can jointly influence their entrepreneurial behaviour. The chapter also reiterated the urgent need to examine the positive individual-level benefits of employees engaging in entrepreneurial behaviour. Next the chapter summarized the four empirical chapters of the thesis and how they are interconnected with one another. Finally, the chapter provide a brief description of the major theoretical contributions of the thesis.

CHAPTER TWO: Systematic Review of the Literature on Employee Entrepreneurial Behaviour

2. Chapter Overview

This chapter seeks to address research objective one (provide an overview of the current state of knowledge on employee entrepreneurial behaviours in pursuit of Corporate Entrepreneurship (CE), by conducting a systematic review of the literature on employee entrepreneurial behaviour. The principles and guidelines outlined by Tranfield, Denyer and Smart (2003) were used in carrying out the Systematic Literature Review (SLR). The review sought to provide a detailed overview of employee entrepreneurial behaviour in established organisations, as well as develop an understanding regarding the particular antecedents and consequences of such behaviour. Additionally, the review also set out to identify areas of further research in the field. Specifically, the chapter sought to address the following research questions:

RQ1: What are the main publication trends, terminologies, research methods and theories used in the literature on employee entrepreneurial behaviours?;

RQ2: What constitutes employee entrepreneurial behaviours in established organisations and what is its nomological network?

Data for this study came from 26 English peer-reviewed, empirical articles published in category 2 or higher journals in the ABS journal list. The chapter begins with an explanation regarding the conceptual boundaries of the SLR and the specific steps involved in carrying out the SLR. Next, findings from the SLR are presented with respect to the two research questions posed above. Finally, the chapter concludes with a discussion of the major themes and findings from the SLR and suggestions for areas of future exploration. A version of this chapter, and its associated findings, was published in the *Journal of Enterprising Culture*¹.

2.1 Systematic Literature Review (SLR) Rationale

Compared to ad-hoc reviews of the literature, SLRs are noted for their thoroughness and rigor. Systematic literature reviews have several unique features which enhance the legitimacy and objectivity of their results (Tranfield et al., 2003). Firstly, the methodological and step-by-step approach to collecting studies enhances the validity of the review by enabling replicability (Denyer & Neely, 2004). Secondly, the systematic generation of supporting evidence related to the

¹ Mustafa, M., Gavin, F., & Hughes, M. (2018). Contextual Determinants of Employee Entrepreneurial Behaviour in Support of Corporate Entrepreneurship: A Systematic Review and Research Agenda. *Journal of enterprising culture*, 26(03), 285-326.

research questions enhances the rigor of the review (Pittaway, Robertson, Munir, Denyer & Neely, 2004). Thirdly, the systematic synthesis and analysis of the relevant knowledge in the field can increase the generalisability of key findings. Therefore, in providing a holistic overview of the knowledge base in a field, SLRs can contribute to the advancement of the field by identifying different research streams and illustrating possible future research agendas.

Systematic reviews have previously been used to provide an overview of research into CE. For instance, Sharma, and Chrisman (1999) reviewed the studies on CE to bring definitional clarity to the field. Majority of the SLRs in the field have been used to understand either the determinants or consequences of CE. For instance, Hayton, George and Zahra (2002) reviewed 21 studies to understand how national and individual cultural characteristics influence CE. Additionally, Hayton (2005) reviewed how Human Resources Management (HRM) practices can promote CE, while Arz (2017) reviewed the mechanisms through which organisational cultures foster CE. Nason, McKelvie and Lumpkin (2015) also incorporated SLR techniques as part of their meta-analysis to explain how organisational size contributes to the heterogeneous nature of CE activities. Recently, Blanka (2018), Neessen et al. (2019) and Mustafa, Gavin and Hughes (2018) have also used systematic reviews of the literature to focus specifically on the issue of employee entrepreneurialism. Hence, an SLR was considered as an ideal method of inquiry in order to develop a proper overview of the field of employee entrepreneurial behaviour

2.2 Conceptual Boundaries of the Systematic Literature Review (SLR)

According to Tranfield et al. (2003), the first step in an SLR begins with setting the conceptual boundaries of the SLR. This enables the correct identification of relevant studies to be included in the SLR. The concept of employee entrepreneurial behaviour has been plagued by considerable ambiguity in the existing literature. Gartner noted that “the choice of words we use to define entrepreneurship sets the boundaries of how we think about and study it” (Gartner 1993, p. 232). Within the existing literature, different terms have been used to describe employee entrepreneurial behaviour. For instance, some scholars have used the more general term ‘entrepreneurial behaviour’ (Kuratko et al., 2005; Lua et al., 2012; Sieger, Zellweger & Aquino 2013), arguing that it is context neutral and may involve the establishment of new ventures in organisations. The parallel term, intrapreneurial behaviour (Kanter 1985; Rigtering & Weitzel, 2013), has also been used frequently in reference to the bottom up self-initiated discretionary behaviours of employees.

Employee entrepreneurial behaviour is often considered as a type of extra role behaviour, which traditionally occurs outside of the employee’s job scope, with or without managerial approval (Åmo & Kolvereid 2005; Rigtering & Weitzel, 2013). Similar to Lau et al. (2012), De Jong et al. (2015) and Shane and Venkataraman’s (2000) opportunity-seeking view of entrepreneurship, a behavioural-based approach was used to define employee’s entrepreneurial

behaviour in this particular thesis. Such an approach is warranted given the ambiguity surrounding the nomological network of employee entrepreneurial behaviour and ambiguity with respect to definition of the concept. Such an approach ensures sufficient latitude to ensure that specific behaviours are not unduly excluded from the review. Similar to De Jong et al. (2015, p. 938), employee entrepreneurial behaviour is defined as “the extent to which employees proactively engage in the creation, introduction, and application of opportunities at work, marked by taking business-related risk”. This definition is also consistent with Shane and Venkataraman’s (2000) conceptualisation of the entrepreneurial process as consisting of discovery, evaluation and exploitation of entrepreneurial opportunities.

Opportunities refer to those situations in which new goods/services, raw materials, and organising methods can be introduced and sold at a price greater than their cost of production (Casson, 1982). Discovery is closely related to the concept of creation, and refers to how, when and why entrepreneurial opportunities emerge and are recognised (Shane & Venkataraman, 2000); and evaluation refers to the normative assessment of entrepreneurial ideas and opportunities and their development into the valuable initiatives and concepts. Finally, exploitation, refers to the specific action modes directed at gathering the necessary resources and bringing valuable projects to the market. These can be broadly related to the creation, introduction, and application of opportunities, as mentioned in the above definition.

Historically, firm-level entrepreneurship has been viewed and described in many ways. One common type of conceptualisation has been that of Corporate Entrepreneurship (CE) (Sharma & Chrisman, 1999). However, some scholars have also used terms such as intrapreneurship and Entrepreneurial Orientation (EO) to also describe organisational-level entrepreneurship. This particular study focuses on the term CE. Corporate Entrepreneurship can be broadly defined as “the process whereby an individual or group of individuals, in association with an existing organisation, create a new organisation or instigate renewal or innovation within an organisation” (Sharma & Chrisman, 1999, p.88). Corporate Entrepreneurship can be manifested in organisations through either Corporate Venturing (VC) or via Strategic Entrepreneurship (SE) (Morris, Kuratko & Covin, 2011). Corporate Venturing (VC) refers to the various methods for creating, adding to, or investing in new businesses (Covin, Ireland, & Kuratko, 2003; Kuratko et al., 2009). Corporate venturing (VC) can be either internal, co-operative, or external in nature. On the other-hand, Strategic Entrepreneurship (SE) refers to the simultaneous opportunity-seeking and advantage-seeking behaviours (Ireland, Hitt & Sirmon, 2003). Kuratko and Audretsch (2009) suggested innovations as focal points of SE related activities as they constitute ways in which organisations may capitalise on opportunities. Moreover, Kuratko and Audretsch (2009) also suggest that such innovations may occur anywhere within an organisation.

Finally, considerable variability in the context in which employee individual entrepreneurial behaviours can take place may also exist. Contexts can include large established multi-national firms (Sieger et al., 2013; Wakkee Elfring

& Monaghan, 2010), small and medium-sized firms (Carrier, 1996) as well as government and not-for-profit organisations (Zampetakis & Moustakis, 2007). Hence, the SLR views such contexts as mutually exclusive in order to enable consistent categorisation of employee entrepreneurial behaviours within the data collection and analysis process.

2.3 Scope of the Systematic Literature Review (SLR)

The boundary conditions describe below were used in conducting the Systematic Literature Review (SLR). Firstly, only English peer-reviewed, empirical articles published between January 1985 and December 2018 formed part of the review. Hence, books, book chapters, conference papers and non-English manuscripts were excluded. 1985 was chosen as the search starting point, as the term “intrapreneur” first began to appear in the literature during this period in works by Pinocht (1985) and Kanter (1984). Secondly, the SLR focused only on academic articles published in journals listed in the Association of Business Schools (ABS) Academic Journal Quality Guide Version 5. Only including journals in the ABS guide has been a common feature of many SLRs (Wang & Chugh, 2014); it is also an important means of ensuring quality. The SLR focused on articles found in journals within the following subject domains in the ABS list. The primary domain consisted of the subject domain areas of ‘Entrepreneurship and Small Business’, ‘Innovation’ and ‘Strategic Management’.

These subject domains have traditionally dealt strongly with the topics of entrepreneurship and strategic management, which have a long historical

association with employee entrepreneurial behaviour and CE in general. The SLR also included the following secondary subject domains: ‘Organisation Studies’, ‘General Management’, and the subject domains of ‘Organisational Psychology’ and ‘Human Resource Management’ in order to capture relevant studies from these disciplines. These latter two subject areas have a long history of publishing studies relating to similar concepts, such as innovative work behaviour (Hughes, Rigtering, Covin, Bouncken & Kraus, 2018; Woods, Mustafa, Anderson & Sayer, 2018) and personal initiative (Frese, Kring, Soose & Zempel, 1996) and the deterrents of such behaviours. Finally, only studies found in journals listed in ABS category 2 or higher journals were included in order to ensure quality.

2.4 Sampling and Data Collection Strategy

Örtenblad’s (2010) recommendations were followed with regards to the SLRs sampling strategy. Specifically, a combination of specific and broad search terms was used in order to include as much variation within the search pattern as possible. Based on an initial review of the literature on entrepreneurial behaviour by Lau et al. (2012) and Belousova and Gailly (2013), several closely related terms used to refer to employee entrepreneurial behaviour were identified. Some scholars have referred to employee entrepreneurial behaviour simply as ‘entrepreneurial behaviour’ or ‘Corporate Entrepreneurship’. However, other scholars have used a parallel term “intrapreneurial behaviour” or “intrapreneuring” to describe the phenomenon. In conducting the SLR, both “intrapreneurial” and “entrepreneurial” were used in order to increase the breadth of the SLR search. The following

keyword combinations were used as part of the search criteria: (“entrepreneurial behaviour”) OR (“intrapreneurial behaviour”) OR (“entrepreneurial action*”) OR (“intrapreneuring”) OR (‘intrapreneurial action*’) AND (intrapreneurship*) OR (corporate entrepreneurship*) OR (‘innovativeness’) OR (‘strategic renewal’) OR (‘business/corporate venturing’) OR (‘strategic entrepreneurship’).

Due to differences in the English spelling conventions of the United Kingdom (UK) and the United States (US), the terms “behavior” and “behaviour” were included in the search query. The primary keywords were made intentionally broad so as to cover as many articles as possible in the first search and to produce a significant number of articles, even if many were less relevant to the study. Thirdly, key terms and their combinations were applied to search the titles, keywords and abstracts using the following databases: EBSCO, ABI-Inform, Emerald, ISI-Web of Knowledge, Science Direct and Springer-Link. Endnote was used to save all searches in the relevant databases as it made it easier for the researcher to manage the large number of articles and to edit and remove any duplicates.

Next, a set of exclusion criteria was developed to ensure that the articles fit the conceptual boundaries set at the outset and fell within the scope of the review. To do this, the abstract and titles of each article were read carefully, and the following exclusion criteria were applied. In some instances, the abstract and title of each article was re-read to ensure consistency and reduce any errors. The following three broad exclusion criteria were applied to each article.

1. Non-empirical articles (e.g. conceptual studies/articles) or works which are practitioner orientated. The field of CE and employee entrepreneurial behaviour has several articles, which can be best described as best practice articles. The purpose of these articles is simply to highlight the benefits of entrepreneurial behaviour and the characteristics and/or attributes of successful entrepreneurial employees. Accordingly, they contained little empirical evidence of employee's entrepreneurial behaviour, and also contained very little evidence with respect to the drivers and outcomes of employee entrepreneurial behaviour. Hence such studies were excluded.
2. Articles that did not substantially discuss employee individual entrepreneurial/intrapreneurial behaviours with respect to organisational-level entrepreneurship or CE. As the focus was on employee entrepreneurial behaviour in established organisations, emphasis was on only studies which sustainably discussed such behaviour with respect to firm-level entrepreneurship (e.g. CE, CV, SE). Some studies have briefly alluded to firm-level entrepreneurship activity in their introduction but failed to discuss it in a substantial way later on. Hence such studies were also excluded.
3. Articles that focused on Corporate Entrepreneurs or Intrapreneurs' skills/attributes and intention to engage in intrapreneurship/CE instead of employee entrepreneurial behaviour. The focus of thesis was explicitly on employee's entrepreneurial behaviour, and not

their intentions or attributes/skills. Prior research has suggested that intentions differ from actual behaviours in that an intention in one point in time may not actually translate into a future behaviour (Kautonen, Gelderen & Fink, 2015). Similarly, studies dealing with specific competencies of entrepreneurial employees, such as the ability network or share knowledge were also included. These were classified as specific attributes and were deemed as not explaining or identifying specific behaviour(s) and were thus also excluded.

The review spanned articles published between January 1985 to December 2018. Using the above-mentioned search and exclusion criteria mentioned above, a total of 1384 articles were identified (see Table 2.1). 170 duplicate articles were identified using Endnote software, leaving a total of 1214 articles. The remaining 1193 articles were screened to determine whether the articles appeared in ABS listed journals or not. This resulted in the further removal of 855 articles. Next, the abstract and titles of each of the remaining 359 articles were carefully read (and re-read in some instances) and the exclusion criteria outlined above applied. This resulted in the further removal of 260 articles. Finally, after meticulously reading the remaining 99, a further 73 were removed, leaving a total of 26 articles upon which the SLR was based upon.

	ISI-Web of Knowledge	Springer Link	ABI-Infoform	EBS CO	Science Direct	Emerald	Totals
Initial search returns	274	202	66	341	399	102	1384
No. of duplicates removed	35	25	20	41	34	15	170
Total after duplicates were removed	239	177	46	300	365	87	1214
No. of non-ABS journals removed	185	153	34	214	198	71	855
Totals	54	24	12	86	167	16	359
No. of articles removed after first reading of abstract and title and applying exclusion criteria							260
Total No. of articles after reading of abstract and title							99
No. removed after reading full article							73
No. of total articles included for analysis							26

Table 2.1. Database Selection of Final Articles for Analysis.

2.5 Data Analysis Strategy

Both content and thematic analytic techniques were utilised in the analyses of the 26 articles. The first question of the SLR (RQ1: What are the main publication trends, terminologies, research methods and theories used in the literature on employee entrepreneurial behaviours?) required the researcher to provide conceptual clarity, elucidate themes and patterns of previous research and also identify research gaps that require further scholarly attention (Rashman,

Withers & Hartley, 2009). To do this, the researcher developed a coding template based on the following content areas: (a) Year of publication, (b) Citation count, (c) Journal Information, (d) Terminology used, (e) Theoretical frameworks(s) adopted and (f) Method and foci of analysis. Each article was carefully read by the researcher and its contents analysed with respect to the above-mentioned codes. The coding of each article was carried out manually. Manual coding was preferred as articles required careful reading and identification of relevance, because in many cases theoretical perspectives, conceptualisation and definitions were not explicitly stated.

In order to ensure reliability and the accuracy of the coding process, an independent researcher was employed to read and code each article based on the pre-defined template above. Any differences in the coding and recording were discussed between the researcher and the independent researcher, and articles in question were re-visited until agreement was reached. In the end, a 95% agreement level was reached by both researchers. The content of each individual article was analysed in the following way. Firstly, all contents were arranged with respect to the categories mentioned previously. Next, the content of each category was analysed using tables and matrices. This allowed the emergence of key patterns and counts with the respect to the chosen articles. The above strategy enabled an understanding of the main developments in the field so far.

In addressing the second question related to the SLR (RQ2: What constitutes employee entrepreneurial behaviours in established organisations and what is its nomological network?), a more exploratory approach was adopted using

thematic analysis. Firstly, all articles were read and re-read carefully so as to identify the determinants and consequences of employee entrepreneurial behaviour. Next, an initial level of coding was applied to each article based with respect to the antecedents and consequences of employee entrepreneurial behaviour. Thirdly, each of the descriptors was carefully analysed with respect to meaning and content, and similar descriptors were grouped together to form meso-categories. Next, the specific descriptors were organised into the macro-categories of individual differences and attitudes, job characteristics, internal and external environment, supportive management and leadership which were identified as key determinants of employee entrepreneurial behaviours. At this stage, the researcher was able to assign specific meanings to each of the macro-categories, based on extensive consultation with the existing literature.

Similarly, the main outcomes of employee entrepreneurial behaviour were categorised as either individual or organisational-level outcomes. This was partly due to the absence of specific descriptors and the small number of studies identified in SLR that examined such outcomes. Furthermore, in order to determine the influence of the antecedents and consequence of employee entrepreneurial behaviour, each descriptor in each category was critically analysed to determine whether it had a positive or negative effect. See Table 2.2 below for an example.

Main Category	Definition	Individual Descriptors	Key References
Job Characteristics	Specific aspects and characteristics of an employee's job or role which may or may not motivate them to engage in entrepreneurial behaviour	Autonomy/discretion (+/-), Tenure (-), Free time (-), Networks (+)	De Jong et al. (2015); Kuratko et al. (2005); Hornsby et al. (2009); Zampetakis & Moustakis (2007) Globocnik & Salomo, (2015); Belousova & Gailly (2013); Rigtering & Weitzel (2013); Zampetakis et al. (2009); Zampetakis & Moustakis (2010); Brunåker & Kurvinen (2006)

Table 2.2. SLR Coding Example. Notes. -/+ Indicates whether the study found the descriptor as having either a positive or negative impact on employee entrepreneurial behaviour.

Likewise, a similar approach was used to determine what constitutes employee entrepreneurial behaviour. First, each article was read carefully, with particular focus on the specific conceptualisation of entrepreneurial behaviour adopted by the article. Next, a detailed examination of the methodology and literature review/theoretical background section of each article was carried out, specifically focusing on how employee entrepreneurial behaviour was conceptualised and operationalised in each study. This was done first by assigning micro-descriptors to specific entrepreneurial behaviours mentioned in each study. Finally, each of the micro descriptors were critically analysed and then collated into macro-categories. For example, the micro-descriptors of problem solving and ideation were identified as specific descriptors of macro-category of innovativeness.

2.6 Findings

2.6.1 RQ1: What are the main publication trends, terminologies, research methods and theories used in the literature concerning employee entrepreneurial behaviours?

Compared to ad-hoc reviews of the literature, SLRs are noted for their thoroughness and rigor (Denyer & Neely 2004). Such approaches are particularly relevant, as the researcher sought to develop a detailed understanding of the current state of scholarly knowledge concerning employee entrepreneurial behaviour in established organisations. In trying to understand the first research question, the following thematic codes were used: (a) Year of publication, (b) Citation count, (c) Journal Information, (d) Terminology used, (e) Theoretical frameworks(s) adopted and (f) Method and foci of analysis.

2.6.1.1 Publication and citation distribution.

Codes 1-3 ((a) Year of publication, (b) Citation count and (c) Journal information) were used to analyse the publication history and citation distribution of the 26 selected articles. Figure 2.1 highlights the publication pattern for the 26 selected review articles and suggests that only a limited number of papers have been published on the topic of interest. According to Figure 2.1, there is a slow and steady increase in the number of publications from 2005 onwards. Between 2010 and 2015 emerged as the period when most of the articles were published, with 12

articles in total². Several explanations can be put forward for this trend. Firstly, there has been a growing interest in the concept of Corporate Entrepreneurship for nearly three decades (Narayanan, Yang & Zahra, 2009), which has resulted in the development of several special issues in this period (Phan, Wright, Ucbasaran & Tan, 2009). Such special issues, although not focusing specifically on employee entrepreneurial behaviour, have nevertheless highlighted in their articles the importance of employees in the CE process (Ireland et al., 2009) and may have spurred scholar' interest in the topic. Secondly, the 2013 Special Issue of the International Entrepreneurship and Management Journal featured several studies focusing specifically on employee entrepreneurial behaviour.

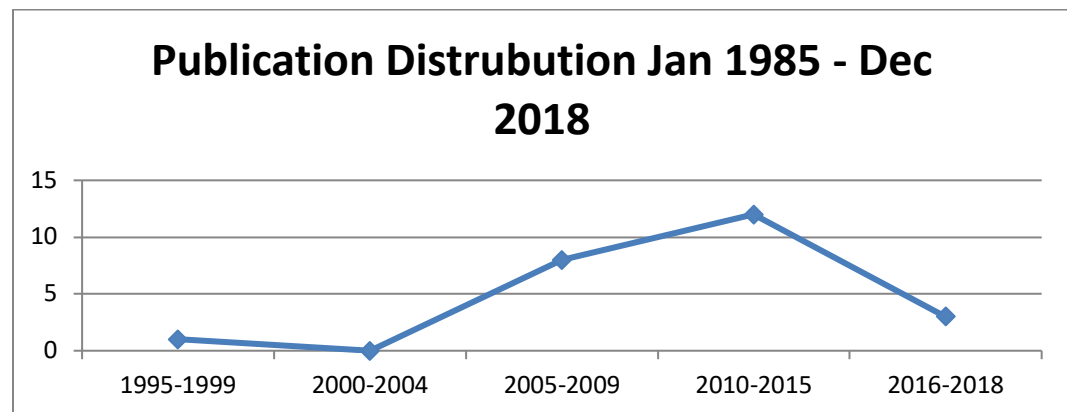


Figure 2.1. Publication History of Reviewed SLR Articles.

A close examination of the 26 articles shows strong regionalisation among the authors, most of whom are from either European or North American

² Note: The SLR included articles with DOI numbers and that were available online and/or as part of journal early cites. Hence, a study might have been made available online in 2015, but might not have been assigned an issue or volume number until 2016 and/or 2017. Hence, such studies were counted as being published in 2015 and not the 2016/2017.

institutions. Consequently, there were few articles which included authors from diverse geographic locations such as Asia or Latin America (see Afsar, Badir, Saeed & Hafeez, 2017; De Clercq, Castañer & Belausteguigoitia, 2011; Lau et al., 2012). Similarly, as indicated by Table 2.3, an overwhelming majority of the journals publishing articles on employee entrepreneurial behaviour are from Europe or North America. The number of citations per article was also analysed. The number of citations per article was identified using the ISI Web of Science database. All citations were current as of 20th December 2017 (see Table 2.4). The most influential article, based on number of citations, was that of Hornsby et al. (2009), having been cited 113 times. The article is influential as it provided empirical confirmation that managers' entrepreneurial behaviour varies according to their organisational positing and that managers may perceive and respond to entrepreneurial environments in differing ways. This top cited article was followed by the work of Pearce et al. (1997) with 66 citations. Pearce et al.'s (1997) article remains influential as it represents the first attempt in the field to develop a specific scale to measure entrepreneurial behaviours of individuals in the workplace. The scale developed by Pearce et al. (1997) has also influenced the conceptualisation and measurement of employee entrepreneurial behaviour by several other articles (e.g. Lau et al., 2012; Zampetakis et al., 2009 Zampetakis & Moustakis, 2007). Finally, Kuratko et al. (2005) was the third most influential article. This study examined the relationships between the corporate environment, managers' entrepreneurial behaviour and the successful implementation of CE actions. In doing so, their study helped to not only validate the Corporate Entrepreneurship

Assessment Instrument (CEAI), (see Hornsby et al., 2002; 2009), but also show which elements of the CEAI specifically influenced employee entrepreneurial behaviour.

Journal	Number of Articles	Country of Journal	Impact Factor	ABS Category
IJM (Int. J. Manpower)	1	European	0.471	HR and Employment Studies
IJHRM (The Int. J. of HRM)	1	North American	2.425	HR and Employment Studies
JOB (J. Vocational Behaviour)	1	North American	3.387	Psychology (Organisational)
JOHP (J. of Occ. Health Psychology)	1	North American	3.766	Psychology (Organisational)
JBV (J. Business Venturing)	2	North American	3.678	Entrepreneurship & Small Business Management
IEMJ (Int. Ent. Mgnt J.)	8	European	0.746	Entrepreneurship & Small Business Management
MCQ (Mgnt Comm. Quarterly)	1	North American	2.085	Organisation Studies
EMJ (European Mgnt. J.)	1	European	1.222	General Management; Ethics & Social Responsibility
JMS (J. Mgnt Studies)	2	European	3.763	General Management; Ethics & Social Responsibility
ET&P (Ent Theory & Practice)	1	North America	3.144	Entrepreneurship & Small Business Management
L&ODJ (Leadership & Org Development J.)	2	European	0.362	Organisation Studies
JEC (J. Enterprising Culture)	1	Asian	0.52	Entrepreneurship & Small Business Management
IJEBR (Int J. Ent. Behaviour & Research)	2	European	1.863	Entrepreneurship & Small Business Management
JOCM (J. Org Change Mgnt)	1	European	0.46	Organisation Studies
JPIM (J. of Product Innovation Mgnt)	1	European	4.305	R&D

Table 2.3. Key Journal Publication Information.

In analysing the journal information (Table 2.3), the 26 articles were examined with respect to ABS categories they appeared in and the impact factors of the journal.

Such an approach provides an overview of the research domains and journals in which authors of employee entrepreneurial behaviour are publishing in as well as the relative impact of the publication outlets. The key publication outlet for studies on employee entrepreneurial behaviour was the US-based, International Entrepreneurship and Management Journal with a total of eight articles. This can be attributed to the aims and scope of the journal, which sets out to deal with studies in entrepreneurship, and the management of entrepreneurial organisations. This appears to be the natural home of employee entrepreneurial behaviour research, as such behaviour is more likely to occur in entrepreneurial and established organisations. Additionally, journals such as the Journal of Management Studies, Journal of Business Venturing and Leadership & Organisational Development Journal and the International Journal of Entrepreneurship & Behaviour Research had two 2 articles each. Surprisingly, although dealing with entrepreneurship in general, Entrepreneurship Theory & Practice had only one article published.

Of the 26 articles, 17 appeared in journals in the subject domain of Entrepreneurship and Small Business Management and Innovation, with another four appearing in the subject domain of Organisation Studies (Brunåker & Kurvinen, 2006; Heinonen & Toivonen, 2008; Rutherford & Holt, 2007; Park et al., 2014). Surprisingly, few articles appeared in the subject domain of General Management (De Clercq et al., 2011; Sieger et al. 2013) or Human Resource Management (Afsar et al., 2017; Zampetakis & Moustakis, 2010). From 2016 onwards, two out of three articles published appeared in the ABS subject areas of Organisational Psychology. This subject area has had a long history of publishing

articles on similar topics and concepts such as Organisational Citizenship Behaviour (OCB) (Oregan, 1998), personal initiative (Frese et al., 1996) or innovative work behaviour (Scott & Bruce, 1994).

Journal impact factors represent one way to assess the quality of a journal. Impact factors (IF) measure the frequency with which the average article in a journal has been cited during a particular period. Typically, a higher IF is regarded as indicating that the journal is of high quality in the field and the articles within the journal are regularly read and cited as part of other research. As can be seen from Table 2.3, the impact factor of the publication outlets ranged from a high impact factor of 4.305 (Journal of Product Innovation Management) to a low impact factor of 0.362 (Leadership & Org Development Journal). Interestingly enough, many of the articles appeared in largely influential and quality journals with relatively high impact factors in their subject domains, such as Journal of Business Venturing (3.678) and Entrepreneurship Theory & Practice (3.144) in the subject domains of Entrepreneurship and Small Business Management, journals in the subject area of General Management such as Journal of Management Studies (3.763) and in Organisational Psychology such as Journal of Vocational Behaviour and Journal (3.387) of Occupational Health Psychology (3.766). Articles appearing in such influential and impactful journals suggests that interest in the topical area will continue to grow.

Overall, the analysis of the publication distributions reveals that employee entrepreneurial behaviour research has gained momentum within the past five years, but the body of research remains limited. Findings also suggest that research

into employee entrepreneurial behaviour remains strongly rooted in the subject domains of Small Business Management and Organisation Studies, with some cross-over into the allied fields of management, innovation studies and organisational psychology. However, given the nature of recent publications, this appears to be changing. Although the body of literature seems grounded in journals which are generally broad in topical scopes, these journals are considered as highly influential within their respective subject domains.

Authors	Number of Citations (Web of Science)	Key Research Question	Focal Construct	Key Findings
Åmo & Kolvereid (2005)	35	What factors cause variation in the innovation behaviour of employees in organisations?	Innovative Behaviour	Employees are likely to engage in innovative behaviour when they have an intrapreneurial personality and there is a firm entrepreneurship strategy in place.
Afsar et al. (2017)	6	How does transactional and transformational leadership styles influence entrepreneurial behaviour?	Entrepreneurial Behaviour	Transformational leadership is positively related to entrepreneurial behaviour only when psychological empowerment is high, whereas transactional leadership has a negative relationship with entrepreneurial behaviour only under these conditions.
Belousova & Gailly (2013)	8	How do managers contribute to firm-level entrepreneurs and how does their contributions change over time?	Dispersed Corporate Entrepreneurship	Entrepreneurial projects are multi-staged processes which requires managerial efforts directed at co-creation. Project success is determined by the achievement of consensus or socially constructed goals which evolve with the project.
Brunåker & Kurvinen (2006)	12	How do middle managers drive organisational change through developing ideas?.	Intrapreneur	Intrapreneurs are not only change agents but self-appointed actors who initiate and drive the process of interpreting events. The intrapreneur's role is proactive.
Croonen et al. (2016)	3	How and why do franchisee owners vary in their entrepreneurial behaviour?	Entrepreneurial Behaviour	Franchisee owners' intrinsic goals, satisfaction with clients and head office, as well as their perception of the extent of local competition, can cause variations in their entrepreneurial behaviour.

De Clerq et al (2011)	27	What factors motivate an individual to sell entrepreneurial initiatives to organisational members?	Entrepreneurial Initiatives	The characteristics of an initiative (e.g. its potential organisational benefits and consistency with current practices) and personal oriented valance significantly predict initiative selling efforts. Additionally, employees who are satisfied with their organisation's direction and practices are also likely to increase their efforts at selling initiatives.
De Jong et al. (2015)	15	Which job characteristics influence individual entrepreneurial behaviour?	Entrepreneurial Behaviour	Employees are more likely to be innovative and proactive when they are given considerable job autonomy.
Globocnik and Salomo (2015)	6	Is boot-legging behaviour influenced by formal management practices?	Boot-Legging Behaviour	Intrapreneurial self-efficacy, strategic autonomy, and rewards for innovation accomplishments foster bootlegging. Front-end formality has a positive effect on bootlegging by increasing intrapreneurial self-efficacy, but it reduces the likelihood that employees will ignore formal structures when promoting their ideas and gathering their own resources to support their bootlegging efforts.
Gawke et al. (2017a)	14	Is there a cyclical relationship between employee intrapreneurial behaviour, personal resources and work engagement?	Intrapreneurial Behaviour	Employee intrapreneurial behaviour positively changed their personal resources over time, and personal resources predicted higher and more stable experiences of work engagement. Additionally, evidence for a positive gain cycle of employee intrapreneurial behaviour, personal resources, and work engagement was found.
Gawke et al. (2018)	1	How does employee's reinforcement sensitivity qualify the relationship among their intrapreneurial behaviour, subjective well-being, and other-rated job performance?	Intrapreneurial Behaviour	Employee intrapreneurial behaviour was found to be positively related to work engagement for employees high in sensitivity to rewards. This in turn was related positively to innovativeness and in-role performance and negatively to work avoidance. Additionally, employee intrapreneurial behaviour related positively to exhaustion for employees high in sensitivity to punishments, which subsequently related positively to work avoidance and negatively to in-role performance.

Heinonen & Toivonen (2008)	6	How does employee's attitude influence management behaviour in a CE setting?	Corporate Entrepreneur	CE in organisations is sparked by self-confident Corporate Entrepreneurs with initiative who challenge the status quo by questioning existing working methods. Bottom up straight forward communication by Corporate Entrepreneurs to managers helps to enhance this process.
Hornsby et al. (2009)	113	Are organisational factors that support entrepreneurial action supportive to all?	Entrepreneurial Actions	Entrepreneurial actions vary with respect to organisational positioning. Specifically work discretion and management support is positive for the entrepreneurial actions of Senior and Middle managers.
Kuratko et al. (2005)	47	How does a firm's corporate environment influence managers' decision to implement entrepreneurial actions?	Entrepreneurial Actions	Corporate environments which allow for greater work discretion and positively reinforce entrepreneurial behaviour, lead to heightened job satisfaction among managers and subsequently increased entrepreneurial actions on their behalf
Lau et al. (2012)	8	What are the key behaviours of entrepreneurial middle managers?	Entrepreneurial Behaviour	Innovativeness, risk taking, change orientation and opportunism emerged as key entrepreneurial behaviours of corporate managers. Innovativeness and risk taking accounted for most of the variation
Moriano et al. (2014)	20	How does managerial leadership styles influence employee entrepreneurial behaviour?	Intrapreneurial Behaviour	The effects of management's leadership style on employee intrapreneurial behaviour is mediated by employees' identification with the organisation

Park et al. (2014)	9	How can organisations increase employee intrapreneurial behaviour?	Intrapreneurship	A strong Organisation-Employee Relationship (OER) can motivate employees to engage in intrapreneurship.
Pearce et al. (1997)	66	Which behaviours distinguish entrepreneurial employees from managerial employees? How do these features influence subordinate's job satisfaction?	Entrepreneurial Behaviour	Entrepreneurial employees can be distinguished from managerial employees via their ability to cut through red tape; develop a strategic vision; create an energetic working environment and by being change oriented. Subordinates are more satisfied with managers who display such behaviours.
Rigtering & Weitzel (2013)	14	How does individual employee behaviour stimulate intrapreneurship?	Intrapreneurial Behaviour	Organisational designs and willingness to provide resources stimulate employee intrapreneurial behaviours. These are enhanced when employees have significant trust in their management. Not all of employee intrapreneurial behaviours are effectively translated into intrapreneurial projects.
Rutherford & Holt (2007)	62	Whether process, individual and contextual factors influence individual and organisational-level CE.	Innovation Behaviour	Employees individual characteristics and supportive management process, rather context influence their innovativeness. Subsequently, employee innovativeness also increases their job satisfaction.
Sebora & Theerapatvong (2010)	49	Which organisational and external environment characteristics influence manager's idea generation, risk taking and proactiveness?	Corporate Entrepreneurship	Internal organisational, firm and external environmental characteristics have differential influences on the types of manager's entrepreneurial behaviour (idea generation, risk taking and proactiveness).

Sieger et al. (2013)	37	Does the absence of formal ownership rights help to align the interests of senior managers with those of owners?	Entrepreneurial Behaviour	Senior managers' entrepreneurial behaviour mediates the relationship between their ownership feelings and company performance. Such behaviour however is determined by the extent of monitoring they experience by management.
Valsania et al. (2016)	16	How does manager's authentic leadership styles influence employee entrepreneurial behaviour?	Intrapreneurial Behaviour	Manager's authentic leadership styles can help employees develop a strong sense of empowerment and identification with the organisation. These can in turn motivate employees to engage in intrapreneurial behaviour.
Wakkee et al. (2010)	46	How does coaching by middle-managers enhance the entrepreneurial behaviour of operational level managers?	Entrepreneurial Behaviour	Both coaching and self-efficacy can enhance entrepreneurial behaviour via reducing role conflicts and through helping employees to realise what they can and cannot do.
Zampetakis & Moustakis (2007)	23	How do organisational, individual and job characteristics influence the entrepreneurial tendency of front-line Greek public servants?	Entrepreneurial Behaviour	Front-line public servants are more likely to engage in entrepreneurial behaviour, when they perceive that management is encouraging their initiatives and sharing vital information with them. Also, department heads have a higher tendency towards entrepreneurial behaviour than other types of employees.
Zampetakis et al. (2009)	11	How does an employee's perceptions of Organisational Support (OS) and their Emotional Intelligence influence their	Entrepreneurial Behaviour	Employees who are emotionally intelligent and perceive that their organisation is supporting them are more likely to engage in entrepreneurial behaviour. However, longer tenured employees tend to have a more negative perception regarding the extent to which their organisations support them, thus curtailing their entrepreneurial behaviour.

		entrepreneurial behaviour?		
Zampetakis & Moustakis (2010)	8	Which factors stimulate entrepreneurial behaviour in the Greek Public sector?	Entrepreneurial Behaviour	Civil servants who had confirmed employment security, were provided with training, rewarded appropriately and whose jobs are regularly rotated reported higher levels of entrepreneurial behaviour.

Table 2.4. Key Research Questions Explored and Findings of SLR Articles.

2.6.1.2 Terminologies used and theoretical perspectives adopted.

Content with respect to (d) Terminology and (e) Theoretical frameworks was analysed to develop an understanding with respect to the key terminology and the theoretical perspectives adopted by the 26 articles. Figure 2.2 reports the findings with respect to the terms used by the 26 articles to refer to employee entrepreneurial behaviour. The term “entrepreneurial behaviour” emerged as the most consistently used term with ten (10) articles using the term. This was followed by the allied term “intrapreneurial behaviour”, with a total of five (5) articles using the term. Further analysis of the terminologies used revealed that these two terms were used most consistently in literature from 2010 onwards. This suggests a move towards convergence of terminologies in the literature. To a lesser degree, terms such as corporate entrepreneurial actions (Kuratko et al., 2005; Hornsby et al., 2009), individual innovativeness” (Åmo & Kolvereid, 2005; Rutherford & Holt, 2007), dispersed corporate entrepreneurship (Belousova & Gailly, 2013), corporate entrepreneur/intrapreneur (Brunåker & Kurvinen, 2006; Heinonen & Toivonen, 2008), corporate entrepreneurship (Sebora & Theerapatvong, 2010) and bootlegging-behaviour (Globocnik & Salomo, 2015) were also identified as being used. However, these appear to be used more sporadically throughout the literature and mostly prior to 2010.

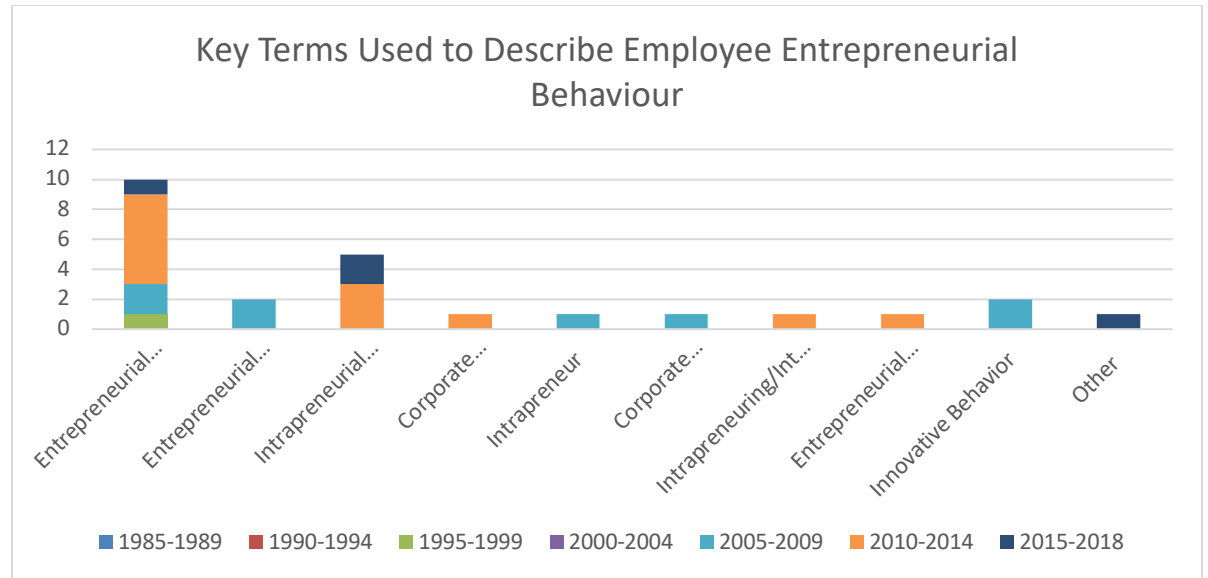


Figure 2.2. Distribution of Key Terms used to Describe Employee Entrepreneurial Behaviour.

With respect to the theoretical frameworks adopted, analysis showed that the 26 articles of the SLR adopted various theoretical frameworks to explain employee entrepreneurial behaviour. Of the 26 articles, only 13 explicitly drew on a theoretical framework. The remaining 13 articles were found not to explicitly state or identify a theoretical framework. The various theories were identified as falling into three broad categories: Exchange, learning and motivational based theories. Exchanged based theories remain some of the most influential conceptual approaches used to explore employee behaviours and were highly evident throughout the various articles in the SLR. Such theories typically included Organisational Support Theory (Eisenberger, Huntington, Hutchison & Sowa, 1986; Zampetakis al., 2009), transformational and transactional leadership theories (Valsania et al., 2016, Moriano et al., 2014), social exchange theory (Rigtering & Weitzel, 2013) and communication theory (Park et al., 2014). Exchanged based

theories were also incorporated by Gawke et al. (2017; 2018) in their studies using the Job Demands – Resources model (JD-R). In recognising the evolving nature of relationships into trusting, loyal, and mutual commitments over time, articles adopting exchanged based theories focused on employees' perceptions and relations with their organisations and how it can influence their entrepreneurial behaviours.

For instance, Zampetakis et al. (2009) used social exchange theory to understand how employees' favourable perceptions of a supportive organisational climate may be reciprocated in the form of individual entrepreneurial actions. Additionally, Valsania et al. (2016) and Moriano et al. (2014) used exchange theory to analyse the relationships between employee's entrepreneurial behaviour and their manager's leadership styles. Broadly, such studies tended to view employee entrepreneurial behaviour as occurring when employees feel and perceive that their organisation cares for their well-being and values their contribution.

Besides exchanged based theories, theories concerning learning were also frequently used by authors to explain employee's entrepreneurial behaviour. Particularly prominent was the use of social learning theory (Bandura 1986) to understand individual differences in employee entrepreneurial behaviour and their motivation to engage in such behaviour. Specifically, various articles drew on theories related to self-efficacy or entrepreneurial self-efficacy to examine how and why employees may choose to engage in entrepreneurial behaviours (Globocnik & Salomo 2015; Rutherford & Holt, 2007; Wakkee et al., 2010). For instance, Wakkee et al. (2010) argued that coaching and mentoring programmes are an

important means through which employees can develop their entrepreneurial self-efficacy, and thus motivate them to engage in entrepreneurial behaviour. Globocnik and Salomo (2015) also identified self-efficacy as an important determinant of the reason why some employees may or may not choose to engage in entrepreneurial behaviour. Such studies have typically argued that entrepreneurial cultures and work environments are important means in raising employee's confidence and positive perceptions of their own skills and abilities to fulfil the demands of entrepreneurial activities. Similarly, Gwake (2017) also used it to understand how entrepreneurial employees develop personal resources such as optimism and sense of self-efficacy from behaving entrepreneurially. Only one article drew on Human Capital theory to identify a range of employee individual entrepreneurial behaviour (Lau et al., 2012). Lau et al. (2012) argued that employees have access to a finite pool of individual resources and competences. Moreover, employees are likely to prioritise activities to which they are willing to allocate resources, and they make behavioural choices about how to spend their resources. Hence, from a Human Capital perspective, individual entrepreneurial behaviours pose different qualities, skills, knowledge and capabilities from that of more general employee or organisational behaviours.

Several articles also drew on motivational based theories to understand employees' individual motivations to engage in entrepreneurial behaviour (De Clerq et al., 2011; Croonen, Brand & Huizingh, 2016; Rutherford & Holt, 2007). For example, De Clerq et al. (2011) and Croonen et al. (2016) drew on expectancy theory to show how the entrepreneurial behaviour of managers is related to their

expectations of organisational strategies and practices. Specifically, they suggest that entrepreneurial employees might be driven by dis-satisfaction with the status quo in organisations. In contrast, Seiger et al., (2013) drew on both the theory of Ownership and the Agency Theory to examine how senior managers' entrepreneurial behaviour may emerge in the absence of formal ownership rights. Similarly, Zampetakis al. (2009) and Rutherford and Holt (2007) used frameworks built around the emotional states of employees in the workplace. They both argued that employees' emotional intelligence (Zampetakiset al., 2009) and positive affect (Rutherford & Holt, 2007) may help differentiate entrepreneurial employees from non-entrepreneurial employees. Similarly, Asfrac et al. (2016) examined how an employee's cognitive state can motivate their entrepreneurial behaviour by influencing the perception of their leaders.

With the exception of Sieger et al. (2013) and Globocnik and Salomo (2015), the other articles in the SLR have not tended to draw upon multiple theoretical perspectives to explain employee entrepreneurial behaviour. This is surprising given that prior research has suggested that entrepreneurial behaviour in organisations emerges through a complex process (Rigtering & Weitzel, 2013), and thus may require multiple theoretical perspectives to explain such behaviours. In sum, findings from the SLR reveal a lack of overarching theoretical frameworks and terminologies used to explain employee entrepreneurial behaviour. This is consistent with the earlier observations by Urbano and Turró (2013) who suggested that despite the CE fields long history in both the Strategic Management and Entrepreneurship literatures, studies in the field fail to draw on relevant theories.

2.6.1.3 Methodologies adopted and sample description.

Table 2.5 provides a summary of the findings regarding the (f) Method and foci of analysis (firm size/level of analysis) of the 26 selected articles. Regarding methodological approaches, only three (Belousova & Gailly, 2013; Brunåker & Kurvinen, Lau's et al. (2012)) have adopted either a qualitative or exploratory approach to studying employee entrepreneurial behaviour, with the remaining 23 articles utilising largely quantitative or confirmatory approaches. Moreover, none of the qualitative or exploratory studies sought to develop a specific theory concerning employee entrepreneurial behaviours. Instead, majority of studies tended to adopt a theory testing approach. Additionally, little evidence was found of studies utilising comparative or longitudinal approaches.

Phan et al. (2009) argued that entrepreneurial processes in established organisations are heterogeneous in nature and occur across various organisational settings. This was also reflected in the analysis of the 26 articles. In particular, a considerable degree of ambiguity in how studies treated organisational type and size (e.g. whether the firm was a SME, medium or large-sized firm, public, private or government firm) was observed. Ten articles did not explicitly state the size of their firms. A further five articles focused specifically on employee entrepreneurial behaviours in medium-sized firms (Zampetakis et al., 2009; Seiger et al., 2013; De Jong et al., 2015; Rutherford & Holt, 2007; Zampetakis & Moustakis, 2007), while four focused on larger-firms (Pearce et al., 1997; Wakkee et al., 2010; Belousova & Gailly, 2013; De Clerq et al., 2011). Such articles also failed to provide specific

criteria as to what constitutes a large or medium-sized enterprise. Only six articles sampled both medium and large sized firms (Globocnik & Salomo, 2015; Moriano et al., 2014; Rigtering & Weitzel, 2013, Sebora & Theerapatvong, 2009; Valsania et al. 2016; Park et al., 2014) as part of their sampling frame. Yet, while scholars have acknowledged that entrepreneurial process in firms can vary with respect to organisational size (Nason et al., 2015), only one article (Sebora & Theerapatvong, 2009) empirically examined whether employee entrepreneurial behaviours mattered with respect to organisational size.

Regarding the foci of entrepreneurial behaviour, eight articles (Brunåker & Kurvinen, 2006; Kuratko, et al., 2009; Sebora & Theerapatvong, 2009; Lau, et al., 2012; De Clerq et al, 2011; Pearce et al., 1997; Seiger et al., 2013) focused specifically on the entrepreneurial behaviour of managerial staff (e.g. lower, middle or senior management). Although employee entrepreneurial behaviour can be expected to vary with respect to managerial levels, only one article explicitly compared such behaviours across different managerial levels (Hornsby et al, 2009). Only four articles focused solely on rank and file employees (Zampetakis et al., 2010; Moriano et al., 2014; Rutherford & Holt, 2007; Heinonen & Toivonen, 2008). The remaining articles sampled both managerial and non-managerial employees, however there was no specific attempt by these articles to make a distinction between the levels of the employees.

Authors	<u>Methodology</u>		<u>Sample Characteristics</u>		<u>Core Dimensions of Entrepreneurial Behaviour Examined</u>
	Method(s) Adopted	Article Type	Size and Type of Firms Sampled	Respondents/Focus	
Åmo & Kolvereid (2005)	Quantitative	Confirmatory	N/A – Various Sectors	All levels	Innovative Behaviour
Afsar et al. (2017)	Quantitative	Confirmatory	N/A – Financial Services sector	All levels	Opportunity recognition, self-development and initiative
Belousova & Gailly (2013)	Qualitative	Explorative	Large – N/A	All levels	Discovering, evaluating, legitimatising and exploiting entrepreneurial opportunities and ideas.
Brunåker & Kurvinen (2006)	Qualitative	Explorative	N/A - Manufacturing	Middle Management	Introducing local initiatives
Croonen et al. (2016)	Quantitative	Confirmatory	N/A – Service sector	Senior Management	Strategic renewal and innovativeness
De Clerq et al (2011)	Quantitative	Confirmatory	Large – Service sector	Managers	Initiative Selling
De Jong et al. (2015)	Quantitative	Confirmatory	Medium – Service sector	All levels	Individual initiative taking, risk taking and innovativeness
Globocnik and Salomo (2015)	Quantitative	Confirmatory	Various sizes and sectors	All levels	Idea Generation
Gawke et al. (2017)	Quantitative	Confirmatory	N/A – Public sector	All levels	Employee venture creation behaviours & employee strategic behaviours (e.g. idea implementation)
Gawke et al. (2018)	Quantitative	Confirmatory	Various sizes & NA	All levels	Employee venture creation behaviours & employee strategic behaviours (e.g. idea implementation)
Heinonen & Toivonen (2008)	Quantitative	Confirmatory	Medium – Public sector	All levels	Supporting the innovative actions of others, inspiring enthusiasm and trust among subordinates, rewarding others for entrepreneurial efforts
Hornsby et al. (2009)	Quantitative	Confirmatory	N/A – Various sectors	Managers	Idea generation
Kuratko et al. (2005)	Quantitative	Confirmatory	N/A – Various sectors	Managers	Number of new ideas proposed and implemented

Lau et al. (2012)	Quantitative	Explorative	N/A - Various sectors	Managers	innovativeness, proactiveness and risk taking and change orientation
Moriano et al. (2014)	Quantitative	Confirmatory	Medium/Large – Various sectors	All levels	Individual proactiveness, risk taking and innovativeness
Pearce et al. (1997)	Quantitative	Confirmatory	Large – Utility Company	Managers	Ability to cut through red tape, developing a strategic vision, creation of an energetic working environment, being change oriented.
Park et al. (2014)	Quantitative	Confirmatory	Medium/Large – Various sectors	All levels	Extent to which employees engage in new businesses, product/service innovation, process/technology innovation and self-renewal
Rigtering & Weitzel (2013)	Quantitative	Confirmatory	SME/Large – Various sectors	All levels	Individual proactiveness, risk taking and innovativeness
Rutherford & Holt (2007)	Quantitative	Confirmatory	Medium – Public sector	All levels	Innovativeness
Seiger et al. (2013)	Quantitative	Confirmatory	Medium – Various sectors	Senior Management	Creating new or reconfiguring existing opportunities, scanning environment for opportunities and threats, recognising, surfacing and generating innovative ideas by observing trends, helping others to behave entrepreneurially
Sebora & Theerapatvong (2010)	Quantitative	Confirmatory	Medium/Large – Manufacturing sector	Middle & Senior Management	Individual proactiveness, risk taking and innovativeness
Valsania et al. (2014)	Quantitative	Confirmatory	Medium/Large – Various sectors	All levels	Individual proactiveness, risk taking and innovativeness
Wakkee et al. (2010)	Quantitative	Confirmatory	Large – Service sector	Middle & Operational level Management	Individual proactiveness, risk taking and innovativeness
Zampetakis & Moustakis (2007)	Quantitative	Confirmatory	N/A – Public sector	Rank and file employees	Developing a strategic vision, creation of an energetic working environment, being change oriented.
Zampetakis et al. (2009)	Quantitative	Confirmatory	N/A – Public sector	All levels	Ability to cut through red tape, developing a strategic vision, creation of

Zampetakis & Moustakis (2010)	Quantitative	Confirmatory	N/A – Public sector	All levels	an energetic working environment, being change oriented. Ability to cut through red tape, developing a strategic vision, creation of an energetic working environment, being change oriented.

Table 2.5. Methodological and Sample Characteristics of SLR Articles. Note. N/A – No information available.

2.6.2 RQ2: What constitutes employee entrepreneurial behaviours in established organisations and what is its nomological network?

In trying to answer the second research question, the following approach was adopted. Firstly, the key findings and conceptualisations of employee entrepreneurial behaviour based on the reviewed articles were summarised (see Tables 2.4 and 2.5). Secondly, the findings of each articles were divided into prominent factors that either enable or constrain employee entrepreneurial behaviour, in order to understand how each of the 26 articles fit into the landscape of employee entrepreneurial behaviour literature. These articles were further organised into the following broad determinants: individual (individual differences and attitudes), job characteristics, management (supportive management and leadership) and environmental (internal and external). Thirdly, the associated outcomes (individual or organisational level) of such behaviour were identified.

2.6.2.1 Conceptualisation and characterisation of employee entrepreneurial behaviour.

Scholars of firm-level entrepreneurship have long called for the content of such entrepreneurial behaviours to be examined at the individual level (Miller, 2011; Krauss et al., 2005). The analysis of the 26 review articles examined in detail how authors have conceptualised and described employee entrepreneurial behaviour. As can be seen from Table 2.5, findings suggest that the employee entrepreneurial

behaviour is a multi-dimensional construct, consisting of three types of behaviours namely: innovativeness, proactiveness and risk-taking. Behaviours related to innovativeness emerged as the most common conceptualised dimension of employee entrepreneurial behaviour among the 26 review articles. This was followed by the behaviour of proactiveness and then individual risk-taking.

According to the 26 review articles, employee innovativeness involved recognising work-related problems and generating novel ideas and solutions to solve them (Åmo & Kolvereid, 2005; Croonen et al., 2016; Hornsby et al., 2009, Kurtako et al., 2005, Rutherford & Holt, 2007; Park et al., 2014; Rigtering & Weitzel, 2013). For instance, Zampetakis and Moustakis (2007; 2010) and Pearce et al. (1997) suggested that innovative employees are apt at solving organisational and work issues by finding official and unofficial ways to work around such problems. Additionally, when faced with increasing competition and rapidly changing conditions, entrepreneurial employees may also propose new ideas that help to transform the organisation (Croonen et al., 2016) or develop and introduce new products and services to meet increasing market demands (Sebora & Theerapatvong, 2010).

Equally important was proactiveness as a form of employee individual entrepreneurial behaviour. According to the 26 review articles, proactiveness at the individual-level included a range of behaviours related to self-initiated and future-orientated actions aimed at changing and improving the situation or oneself. Pearce et al. (1997) and others viewed such behaviour in terms of a strong change orientation (Heinonen & Toivonen, 2008) and the ability to develop a strategic

vision (Zampetakis & Moustakis; 2007, 2010). More recent studies viewed individual proactiveness as employees abilities to recognise and identify entrepreneurial opportunities (De Jong et al., 2015; Lau et al., 2012; Moriano et al., 2014; Rigtering & Weitzel, 2013; Sieger et al., 2013; Wakkee et al., 2010), seeking formal and informal support from others to execute such opportunities, as well as trying to support others entrepreneurial actions (Belousova & Gailly, 2013) by creating entrepreneurial work environments (Sieger et al., 2013; Zampetakis & Moustakis; 2007, 2010). Broadly, such individual proactive behaviours were regarded by the articles as trying to improve internal organisational systems and processes; or improve the fit between the organisation and its external environment.

The review of the 26 articles suggested that in order to behave entrepreneurially, employees must be willing to take risks as part of their jobs and roles. According to the relevant articles, taking risks as part of one's role may involve challenging the existing status quo (Heinonen & Toivonen, 2008) by boldly moving forward with initiatives (Brunåker & Kurvinen, 2006) or deliberately cutting through red tape (Pearce et al., 1997; Zampetakis et al., 2009, Zampetakis & Moustakis, 2007). Such risk-taking behaviours appear quite different from those behaviours at the organisational level which may involve committing resources to unknown environments and ventures (Rauch et al., 2009), as they may take place without the explicit permission of the management.

2.6.2.2 Determinants and consequences of employee entrepreneurial behaviour.

The following section reports on the main determinants of employee entrepreneurial behaviour. Thematic analysis of the 26 review articles identified four broad themes of determinants, namely: individual differences and attitudes, job characteristics, supportive leadership and management, and environmental factors (internal/external). Table 2.6 provides a summary of the main themes and sub-categories, and key references which supported such theme.

Determinant	Definition	Sub Category	Example of References
Individual Differences and Attitudes	Employees' personality, individual characteristics and attributes which may or may not predispose them towards entrepreneurial behaviour	Individual dispositions; Emotional and cognitive states; Positive/Negative attitudes; Self-efficacy	Åmo & Kolveried, (2005); Rutherford & Holt (2007); Wakee et al. (2010); Globocnik & Salomo (2015); Sieger et al. (2013); Zampetakis et al. (2009); Kurtako et al. (2005); Heinonen & Toivonen (2008); Moriano et al. (2014); Afsar et al. (2017); Gwake et al. (2017)
Job Characteristics	Specific aspects and characteristics of an employee's job or role which may or may not motivate them to engage in entrepreneurial behaviour	Autonomy/discretion; Tenure; Free time; Security; Horizontal participation	De Jong et al. (2015); Kuratko et al. (2005); Hornsby et al. (2009); Zampetakis and Moustakis (2007); Globocnik & Salomo, (2015); Belousova & Gailly (2013); Rigtering & Weitzel (2013); Zampetakis et al. (2009); Zampetakis & Moustakis, 2010; Brunåker & Kurvinen (2006); Sieger et al., (2013)
Supportive Leadership and Management	Specific characteristics and/or behaviour/actions of management designed to either directly or indirectly support or encourage employees to engage in entrepreneurial behaviour	Culture; Management support; Leadership; Rewards	Kurtako et al. (2005); Moriano et al. (2014); Rigtering & Weitzel (2013); Valsania et al. (2016); Rutherford & Holt (2007); Wakkee et al. (2010); Zampetakis et al. (2009).
Environmental Factors (External/Internal)	Elements and characteristics of the broader organisational and work environment which may or may not motivate employees to engage in entrepreneurial behaviour	Firm type; Industry type; Resource Endowments; Competitiveness; Communication; Process; Structures; Trust; Organisational culture	Åmo & Kolvereid (2005); Park et al. (2014); Kurtako et al. (2005); Rutherford & Holt (2007); Belousova & Gailly (2013); Moriano et al. (2014); Rigtering & Weitzel (2013); Valsania et al. (2016); Globocnik & Salomo (2015); Heinonen & Toivonen (2008); Zampetakis & Moustakis (2007); Wakkee et al. (2010); De Clercq et al. (2011);

Table 2.6. Key Themes, Findings and References with the Respect to the Determinants of Employee Entrepreneurial Behaviour.

2.6.2.2.1 Individual differences and attitudes.

Prior research has suggested that individual differences matter with respect to entrepreneurial processes. The so-called trait approach assumes that entrepreneurship results from the actions and behaviours of individuals (Baum, Frese & Baron, 2014). Drawing on this line of thinking, several authors have looked at individual differences among employees in order to understand why some may engage in entrepreneurial behaviour and others may not (Busenitz & Barney, 1997; Rauch & Frese, 2007). For instance, employees with intrapreneurial personalities (Åmo & Kolveried, 2005), individuals who are more proactive and risk taking, as well as those with higher levels of self-belief in their own abilities (Rutherford & Holt, 2007; Wakee et al., 2010) are more likely to be motivated to engage in entrepreneurial behaviour. This may be attributed to the notion that such qualities among employees may encourage and give them the confidence to seek out the necessary resources to complete tasks (Kim, Hon & Crant, 2009).

Recently, Sieger et al. (2013) began to move the discussion around individual differences away from personality by looking at senior managers' feelings towards their respective organisations. By introducing the concept of psychological ownership (Van Dyne & Pierce, 2004), Sieger, et al. (2013)

demonstrated that positive feelings of ownership have important attitudinal and behavioural effects, which can positively influence entrepreneurial behaviour. Their findings may help scholars to understand why some employees might or might not engage in entrepreneurial behaviour. Similarly, Afsar et al. (2017) showed that the effect of transformational leadership on employee entrepreneurial behaviour is contingent on employees' feelings of psychological empowerment.

Employees' roles in organisations often involve intense interpersonal interactions, which may be emotionally laden (Baum et al. 2014). Emotions are important for an individual's actions as they capture affective changes which motivate them toward further activity (Foo 2011). In general, positive emotions (passion, positive affect, joy) can influence individual judgment, decision-making, intention, willingness to act entrepreneurially, persuasion, creativity and the ability to recognise and spot opportunities (Foo, 2011). Drawing on this line of thought, Zampetakis et al. (2009) and Rutherford and Holt (2007) found that the ability of employees to deal with stressful situations and remain focused on tasks is an important determinant of their entrepreneurial activities. In contrast, negative emotional states can significantly deter their entrepreneurial behaviour (Rutherford & Holt, 2007).

Findings from the 26 review articles further highlighted the importance of employee positive attitudes in spurring entrepreneurial behaviour. Attitudes refer to the predisposition to respond in a generally favourable or unfavourable manner with respect to the object of the attitude (Ajzen, Timko & White, 1982). Various studies have also examined a range of employee attitudes and how they impact

employee entrepreneurial employee. In general, satisfaction with one's job emerged as a powerful driver of employee entrepreneurial behaviour, as employees who are satisfied with their jobs are more likely to remain committed to their organisations and look for ways to improve the current organisational situation (Kurtako et al., 2005; Heinonen & Toivonen, 2008). Similarly, Moriano et al. (2014) found that employees who positively identified with their respective organisations were also more likely to engage in entrepreneurial behaviour. Findings also suggest that employees who are self-confident of their own abilities (Heinonen & Toivonen, 2008) and who are dissatisfied (De Clercq et al., 2011; Croon et al., 2016) with their organisations' current situation will be more likely to critically question current working and organisational practices. Hence, such employees may look to engage in entrepreneurial behaviour as a means of overcoming work-related problems.

2.6.2.2.2 Job characteristics.

At the job level, the specific design and characteristics of an employee's job is often mentioned as an important antecedent of firm-level entrepreneurship (Hayton, 2005; Hornsby et al., 2002). Through careful consideration, properly designed jobs can motivate entrepreneurial behaviour by varying the tasks that employees perform and providing them opportunities to learn new skills and accumulate new knowledge (Mustafa, Lundmark & Ramos, 2016) and networks (Belousova & Gailly, 2013). The findings from the SLR point to the importance of giving employees significant decision-making latitude as a means of encouraging their entrepreneurial behaviour (De Jong et al., 2015; Kuratko et al., 2005). Such

autonomy and discretion is particularly important for those employees in higher organisational positions (Hornsby et al., 2009; Zampetakis & Moustakis, 2007); as well as for encouraging certain aspects of entrepreneurial behaviour, such as proactivity (De Jong et al., 2015).

In contrast, overly close monitoring can discourage employee's entrepreneurial behaviour by curtailing their pro-organisational attitudes towards the organisation (Seiger et al., 2013). Prior research suggests that employee's free time is necessary to successfully generate entrepreneurial ideas (Hornsby et al., 2002). Contrary to such assumptions, time availability emerged as a significant factor that curtailed employee's entrepreneurial behaviour (George, Kotha, Parikh, Alnuaimi & Bahaj, 2016; Hornsby et al., 2009). Being under significant time pressure may be a necessary condition to stimulate employees to look for alternative and creative means to address organisational problems, cut through-red tape (Pearce et al., 1997) and think outside the box. However, when employees have too much free time, they may not experience the optimal levels of stress necessary to simulate innovativeness and creativity and may also lose their attentional focus (Gorgievski & Hobfoll, 2008).

Scholars have also recognised the significance of personal knowledge, experiences and networks in driving entrepreneurial action (Wiklund & Shepherd, 2003). In this regard, the SLR findings indicated that employees who were a part of jobs and entrepreneurial projects which encouraged horizontal exchanges and knowledge sharing (Rigterin & Weitzel, 2013) were more likely to recognise and exploit new knowledge and opportunities (Belousova & Gailly, 2013). Employees

with longer tenure are expected to have developed the necessary idiosyncratic organisational knowledge, experience and networks necessary to generate novel solutions to problems and implement them (Ng & Feldman, 2013). However, the SLR did not find evidence of longer tenure positively influencing employees' entrepreneurial behaviour (Zampetakis et al., 2009). Two possible reasons may explain this association. Firstly, an important element of entrepreneurial behaviour is taking risks and opening one's self to new experiences (Rigterin & Weitzel, 2013). Hence, longer tenured employees may feel a greater sense of job security (Zampetakis & Moustakis, 2010) and complacency towards the tasks they are doing, and consequently become less motivated to try new ideas which may threaten their job security. Secondly, longer tenured employees may experience difficulties in carrying out individual entrepreneurial activities as they may be less likely to seek out organisational support for their actions (Zampetakis et al., 2009).

2.6.2.2.3 Supportive leadership and management.

The analysis of the 26 review articles demonstrated the critical importance of a supportive management and leadership in influencing employee entrepreneurial behaviour (Hornsby et al., 2009; Kurtako et al., 2005; Zampetaki et al., 2009). Specifically, the findings suggest that top management's positive attitudes towards innovative and entrepreneurial behaviours (Åmo & Kolvereid, 2005; Park et al., 2014) and their willingness to communicate such attitudes to employees (Åmo & Kolvereid, 2005) help to raise employees' awareness and interest in entrepreneurial behaviour. Furthermore, management and leadership can also support employees entrepreneurial behaviour by creating conducive

entrepreneurial internal environments and by providing the necessary structures and resources (Kurtako et al., 2005; Hornsby et al., 2009; Rigtering & Weitzel, 2013; Rutherford & Holt, 2007), such as financial resources, coaching and training activities (Zampetakis & Moustakis, 2010; Wakkee et al., 2010). Ensuring that employee entrepreneurial behaviour is appropriately recognised and rewarded is another way by which management and leadership can signal their support for such behaviour and raise employees expectations regarding such behaviour (Hornsby et al., 2002; De Clercq et al., 2011). Further analysis of the 26 review articles shows that in addition to monetary rewards (Kurtako et al., 2005; Rutherford & Holt, 2007), non-monetary rewards such as training and career development opportunities are also considered as significant enablers of employee entrepreneurial behaviour (Hornsby et al., 2009).

How employees perceive their managers and leaders has also been found to encourage their entrepreneurial behaviours. In particular, four articles in the review found that, ‘people-centric’ leadership styles such as authentic and transformational leadership (Afsar et al. 2017; Moriano et al., 2014; Valsania et al. 2016) served as important intrinsic motivators of employees’ entrepreneurial behaviour by developing their sense of organisational identity and sense of empowerment. In contrast, transactional leadership and managerial styles, which excessively focuses on process and costs, (Moriano et al., 2014) and which closely monitors employees’ behaviour and restricts their autonomy, were found to curb employee entrepreneurial behaviours (Seiger et al., 2013). This may be attributed to the fact that such leadership styles focus on encouraging employees through extrinsic

motivational methods (e.g. rewards and active management-by-expectations), which may discourage employees from engaging in the extra-role behaviours necessary for entrepreneurial behaviour. Additionally, Afsar et al. (2017) further demonstrated that the effects of transformational and transactional leadership on employee entrepreneurial behaviour depends on their sense of psychological empowerment.

6.2.2.2.4 Environmental (internal and external) factors.

In reviewing the 26 relevant articles, little evidence was found with respect to external environmental factors and their influence on employee entrepreneurial behaviour. With regards to external factors, market competitiveness and the type of industry a firm was in, were found to influence employee entrepreneurial behaviour. Specifically, Sehora and Theerapatvong (2010) found that firms operating in the manufacturing industry and with wide market scopes were found to positively influence managers' willingness to take risks with respect to entrepreneurial opportunities. They also showed that manufacturing firms may face more global competition from other types of firms and, hence, their management may be highly motivated to adopt entrepreneurial postures in order to survive in increasingly turbulent environments. This may encourage additional risk taking among employees in order to pursue entrepreneurial opportunities. Similarly, Croonen et al. (2016) demonstrated how market competitiveness can influence employee entrepreneurial behaviour by showing that franchisee owners were likely to respond to intense local competition by being innovative and by introducing

strategic renewal into their enterprise. No further articles were found which investigated external factors and how they influenced employees' entrepreneurial behaviour.

An even smaller number of articles examined specific firm characteristics with respect to how they influence employee entrepreneurial behaviour. With respect to firm characteristics, findings from the review indicate that the type of firm (e.g. profit or non-profit), and whether the firm was an SME or a larger firm, can have differential effects on the entrepreneurial behaviour of employees. For instance, being an SME or a non-profit firm was found to constrain managers' idea generation and proactiveness (Sebora & Theerapatvong, 2010). Given their small size, SMEs may not have the necessary financial slack resources to commit to entrepreneurial initiatives. In contrast, being a larger firm was found to influence the willingness of managers to take entrepreneurial risks. Hence larger firms may be better positioned to absorb the risks associated with employees' entrepreneurial activities as they typically have larger resource endowments.

The internal environment (e.g. work environment and entrepreneurial culture) has been consistently shown to influence individual employees' willingness to engage in entrepreneurial behaviour (Kurtako et al., 2005; Hornsby et al., 2002; Sebora & Theerapatvong, 2010). Findings from the review articles indicate that creating an internal environment highly conducive to entrepreneurial behaviours (Sebora & Theerapatvong, 2010) signals management's commitment to entrepreneurship as a strategy (Åmo & Kolvereid, 2005) and provides an opportunity for employees to step up to the plate. Specifically, findings indicated

that employees who perceive that their organisations are supportive of their entrepreneurial activity (Sebora & Theerapong, 2010; Zampetakis et al., 2009; Zampetakis & Moustakis, 2007) are more likely to be willing and proactive in acting on their entrepreneurial potential.

A particularly important characteristic of an internal environment is open communication between the organisation and employees (Hayton, 2005). Several articles in the review indicated the importance of open and straightforward communication and advocated interactions between employees and managers as a way of encouraging solutions to problems via the development of new ideas (Heinonen & Toivonen, 2008; Park et al., 2014; Zampetakis & Moustakis, 2007). Furthermore, findings also suggested that good internal communication systems within organisations can encourage employees to propose new entrepreneurial initiatives as they are likely to have a better perception of whether their proposed initiatives are strategically useful to the organisation and whether they are consistent with the organisation's current practices (De Clercq et al., 2011). Additionally, open communication and access to managerial information was also found to strengthen employees' trust in management (Rigtering & Weitzel, 2013; Zampetakis & Moustakis, 2007) and their relationship with the organisation (Park et al., 2014). Under such conditions, employees are likely to have a lower perceived personal cost associated with taking personal risks, challenging current practices, devoting time to unproven approaches, persevering in the face of organisational resistance, and enduring the ambiguity and stress that entrepreneurial behaviour can create. Furthermore, once trust is established between management and employees,

management may be more open to the idea of committing financial and non-financial resources to support employees' entrepreneurial activities.

2.6.2.3 Consequences of employee entrepreneurial behaviour.

The following section reports the findings regarding the consequences associated with employee entrepreneurial behaviour. Thematic analysis of the 26 review articles identified two broad outcomes of employee entrepreneurial behaviour, namely: the individual-level outcome and the organisational-level consequences. Table 2.7 provides a summary of the main themes and sub-categories with the key references that supported such consequences.

Outcome	Definition	Sub Category	Example References
Individual-level Consequences	Entrepreneurial behaviour affects individual and other employees pro-organisational attitudes and behaviours, such as engagement, personal resource development and well-being Entrepreneurial behaviour can also positively influence an individual's work-related performances (innovation, in-role performance)	Sub-ordinate Job Satisfaction; Job Satisfaction; Commitment; Turnover; Pro-organisational behaviour; Personal resources	Pearce et al. (1997); Park et al. (2014); Rutherford & Holt (2007). Gawke et al. (2017; 2018)
Organisational – level Consequences	Specific aspects and characteristics of employee entrepreneurial behaviour which impacted team/group/project or organisational outcomes	Performance; Projects; Success; Networking	Brunåker & Kurvinen (2006); Belousova & Gailly (2013); Rigtering & Weitzel (2013); Seiger et al. (2013).

Table 2.7. Key Themes, Findings and References with Respect to the Consequences of Employee Entrepreneurial Behaviour.

2.6.2.3.1 Individual-level consequences of employee entrepreneurial behaviour.

Of the 26 reviewed articles, only a few articles specifically considered the individual-level consequences of employee entrepreneurial behaviour (Gawke et al., 2017, 2018; Pearce et al., 1997; Park et al., 2014; Rutherford & Holt, 2007). In general, the articles suggest that employee entrepreneurial behaviour can strengthen the attitudes of employees and those of others towards the organisation and their job; it may also encourage employees to engage in additional forms of pro-organisational behaviours (Grant, 2000). For instance, Gawke et al. (2017) found employee entrepreneurialism to positively lead to employee engagement by enhancing their personal resources, such as resilience and optimism. Similarly,

Rutherford and Holt (2007) found innovative employees to be more satisfied with their current jobs, more committed to their organisations and less likely to quit. Such findings may be attributed to the fact that such employees may typically have more challenging job roles and may also receive additional recognition for their entrepreneurial efforts from both the management and their fellow employees.

Pearce et al. (1997) reached a similar conclusion when examining the effects of managers' entrepreneurial behaviours on their subordinates' levels of satisfaction. They concluded that subordinates were more satisfied with the level of supervision they got when their managers adopt a more entrepreneurial outlook. This may be due to the notion that entrepreneurially minded managers may work hard to create energetic work environments for their subordinates, assist them in acquiring additional resources as well as in cutting through the level of bureaucracy in their organisations. Employee entrepreneurial behaviour was also found to encourage employees' willingness to engage in additional forms of pro-organisational activities. For instance, Pak et al. (2014) showed that employees who acted entrepreneurially are also more likely to engage in voluntary communicative efforts with regards to seeking out organisational related information. Such employees may also be more willing to share and forward relevant information with their co-workers. However, recent findings by Gawke et al. (2018) have also cast light on the dark side of employee entrepreneurialism. In particular, they found that employee entrepreneurial behaviours can lead to exhaustion among employees who have a high sensitivity towards punishment, which can ultimately lead to work avoidance behaviours and negatively to in-role

performance. Broadly, this suggests that the effects of employee entrepreneurial behaviour can result in positive and significant attitudinal and behavioural changes among employees. Moreover, such changes in attitudes and behaviours among employees can have numerous hidden organisational benefits.

2.6.2.3.2 Organisational-level consequences of employee entrepreneurial behaviour.

Although it seems intuitive that employee entrepreneurial behaviour would be a critical antecedent of firm-level entrepreneurship (Kuratko, 2010), only four articles were found to examine either the organisational (Rigtering & Weitzel, 2013; Seiger et al., 2013) or project-level outcomes of such behaviours (Brunåker & Kurvinen, 2006; Belousova & Gailly, 2013). At the organisational-level, Seiger et al. (2013) showed that senior managers' entrepreneurial behaviour can have a significant impact on how they perceive their firm's performance in relation to their competitors. Unlike managers at other levels, senior managers are well positioned organisationally to frequently recognise, surface, and generate innovative and entrepreneurial ideas (Shepherd, McMullen & Ocasio, 2017) from within and outside the firm, by observing the market and competition. Seiger et al. (2013) also found that the effect of senior managers' entrepreneurial behaviour on their organisation's performance was conditioned on the degree of monitoring by the board.

Only three articles were found to examine the effects of employee entrepreneurial behaviour on corporate entrepreneurial activities. Broadly, these articles suggest that only certain types of employee entrepreneurial behaviour is

likely to affect CE related activities. Rigtering and Weitzel, (2013) modelled the effects of employee entrepreneurial behaviour on intrapreneurial projects. Specifically, they found that only employee innovativeness and proactiveness affected CE initiatives. Similarly, Brunåker and Kurvinen (2006) and Belousova and Gailly (2013) showed that proactive employees and managers alike can ensure the success of local entrepreneurial initiatives through building consensus among various internal stake holders (Belousova & Gailly, 2013), or by personally driving initiatives (Brunåker & Kurvinen, 2006).

2.7 Discussion and Suggestions for Future Research

This chapter set out to address the thesis research objective of providing an overview of the current state of knowledge concerning employee entrepreneurial behaviours in pursuit of Corporate Entrepreneurship (CE). Specifically, the chapter sets out to address the following two research questions. RQ1: What are the main publication trends, terminologies, research methods and theories used in the literature concerning employee entrepreneurial behaviours? and RQ2: What constitutes employee entrepreneurial behaviours in established organisations and what is its nomological network? In seeking to address these research questions, a SLR was conducted which identified 26 relevant articles on the topic of employee entrepreneurial behaviour.

Regarding the first research question, content analysis of the articles revealed that current state of knowledge concerning employee entrepreneurial behaviour remains embryonic, yet interest in the topic is growing rapidly. Most articles in the

field appear to be confined to a limited number of journals mostly within the subject domain of Entrepreneurship and Small Business Management. Despite the relative infancy of the field, majority of the studies in the area have adopted a theory testing approach, rather than a theory building approach, with limited use of theoretical frameworks to explain the emergence of employee entrepreneurial behaviour. This suggests that there is considerable opportunities for future scholars to adopt more exploratory approaches to understand employee entrepreneurial behaviour. There also remains great opportunity to adopt different theories and perspectives from allied fields such as organisational psychology and Human Resource Management (HRM) in order to deepen the field's knowledge. For instance, given that entrepreneurial behaviour emerges through complex interactions between the employee, the organisation and co-workers, theoretical frameworks which account for such complexities, such as Social Exchange Theory (Blau, 1968) and the JD-R model (Bakker & Demerouti, 2007) can provide a useful starting point for understanding both the motivating and demotivating forces behind employee entrepreneurial behaviours and its consequences.

Research question two sought to determine what constitutes employee entrepreneurial behaviour and its corresponding nomological network. Figure 2.3 was derived from the review of the 26 articles and demonstrates the current conceptualisation of employee entrepreneurial behaviour in the field, its current nomological network of determinants and outcomes, and whether they were found to have a positive or negative influence on such behaviour.

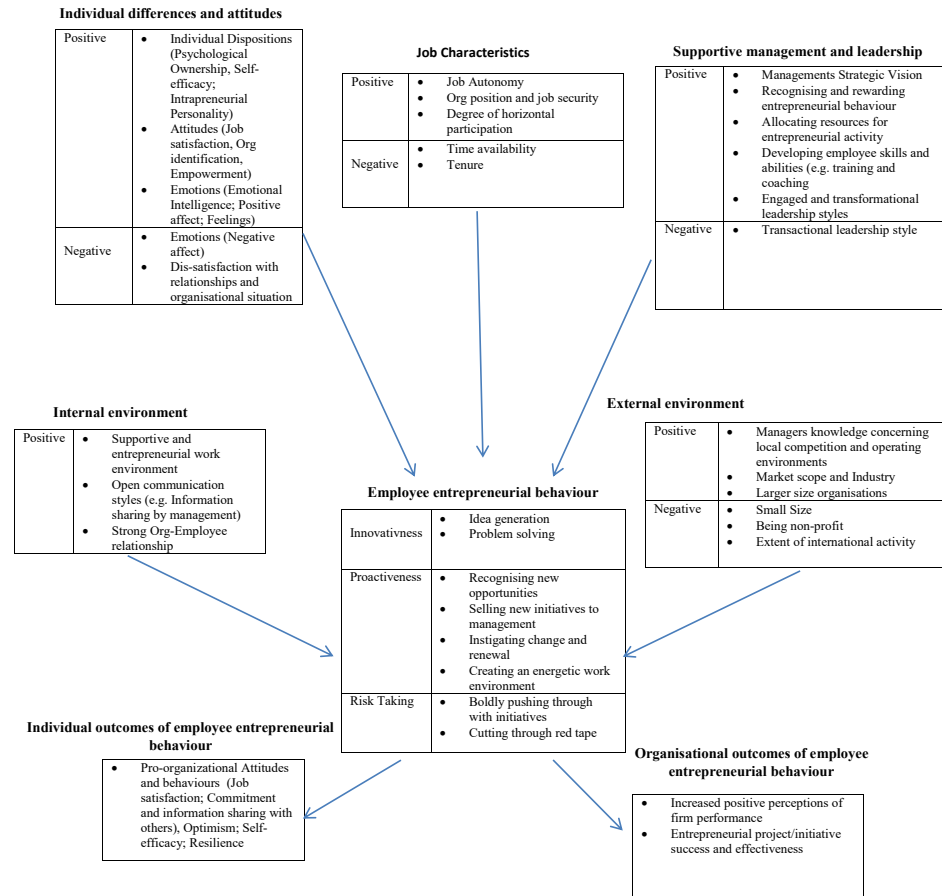


Figure 2.3. Integrative Framework of the Determinants and Consequences of Employee Entrepreneurial Behaviour.

Regarding the issue of what constitutes employee entrepreneurial behaviour, the review emphasised the need for future research to properly distinguish employee entrepreneurial behaviours from firm-level entrepreneurial behaviours. The SLR identified three broad behaviours which constitute employee entrepreneurial behaviour: innovativeness, proactivity and a willingness to take individual risks. On the surface, such behaviours appear to be consistent with that of firm-level entrepreneurial characteristics, and specifically the construct of Entrepreneurial Orientation (EO) and its associated dimensions of innovativeness, proactiveness and risk taking. However, a deeper examination of the articles and the

conceptualisation of the above dimensions suggest that they were quite different from that of the firm-level dimensions. For example, innovativeness at the firm-level involves the redesigning of existing business models or the commercialisation of new ideas. Yet, at the employee-level, innovativeness may involve an employee's proactive efforts in identifying market opportunities and in proposing new ideas to help solve existing organisational related problems. Similarly, the ability for organisations to discover and exploit opportunities may be highly dependent on an employee's willingness to introduce new ideas and innovations into the organisation by taking personal risks to bypass authority and act independently.

Existing research in the area has tended to either identify three (De Jong et al., 2015), four (Lau et al., 2012; Pearce et al., 1997) or five key dimensions (Neessen et al., 2018). For instance, Lau et al. (2012) identified four dimensions (innovativeness, proactiveness, risk taking and networking), while Neessen's et al. (2018) recent SLR identified five dimensions (innovativeness, proactiveness, and opportunity recognition/exploitation, risk taking and networking). The findings from this SLR serve to confirm such findings, especially concerning the centrality of innovativeness, proactiveness and risk-taking as core dimensions of employee entrepreneurial behaviour. Although this particular SLR did not specifically identify opportunity recognition/exploitation or networking as core dimensions, such behaviours were considered as forming a part of the broader behaviour of innovativeness and proactiveness. For example, the SLR found recognising the need of new product/services as part of being innovative. Similarly, networking

behaviour was considered to form part of proactiveness, in that employees will need to convince management of their ideas and/or to build an environment conducive for entrepreneurial behaviour. Such actions would require a certain degree of networking.

Based on the content analysis of the 26 review articles, a working definition of employee entrepreneurial behaviour was also formulated. Accordingly, the SLR led the researcher to define employee entrepreneurial behaviour as “the extent to which individual employees proactively engage in actions and practices related to the discovery, evaluation and exploitation of entrepreneurial opportunities at work”. This definition is based on the broader definitions of entrepreneurship and the notions of opportunity recognition and opportunity exploitation (Shane & Venkataraman, 2000), which is similar to that of De Jong et al. (2015). Moreover, given the lack of a clear definition and the huge array of individual behaviours which can be construed as entrepreneurial in nature, a sufficiently broad definition is warranted so as to avoid excluding important behaviours that may otherwise go undetected. Evidence from the SLR suggests that such behaviour should ideally be viewed as a challenging type of extra-role behaviours (Oregon, 1988), which are largely self-initiated and which may or may not form part of an employees’ job description. Accordingly, such behaviour may be controversial if performed without organisational and managerial sanctions (Wakkee et al., 2010), thereby leading to some risk for the individual or their organisation

With regards to the nomological network of employee entrepreneurial behaviour, analysis of the 26 review articles suggests that considerable scholarly

attention has been devoted to examining the determinants of such behaviour. In particular, the SLR highlighted how the organisational context and managers play an influential role in shaping employees' entrepreneurial activity by developing and sustaining entrepreneurially friendly structures and processes. Further analysis of the 26 SLR article suggests that in developing and sustaining entrepreneurial friendly structures and processes, organisations and managers alike may help to develop the entrepreneurial self-efficacy of employees, thereby encouraging them to exhibit extra-role behaviours, such as experimenting with new ideas and initiatives and/or challenging established organisational norms.

Despite their well-known influence on employee outcomes and performance, the SLR suggests that studies examining the characteristics of an employee's job on their entrepreneurial behaviour remain particularly limited. Moreover, the SLR further demonstrated the inconsistency in findings with respect to specific job characteristics and employee entrepreneurial behaviour. For example, several studies have established a strong relationship between job autonomy and/or work discretion and employee entrepreneurial behaviour (De Jong et al., 2015; Hornsby et al., 2009; Kuratko et al., 2005). Yet, despite the supposed benefits of free-time (Kurtako et al., 2005) on experimentation and ideation, no study was able to establish a relationship between free-time and employee entrepreneurial behaviour. The above findings not only help to deepen and further clarify the role of employee job characteristics on employee entrepreneurial behaviour, but also suggest that further empirical work is needed to

examine the differential effects of job characteristics on employee entrepreneurial behaviour.

In particular, the researcher noticed that current studies in the SLR have tended to treat job characteristics as largely job resources. Demerouti et al. (2001) suggested that job resources can act as motivational factors for employees by reducing the costs associated with work and by helping employees to cope with the demands of work. However, while studies in the SLR have tended to focus on job resources (e.g. autonomy, management support), little attention has been paid to examining the role of job demands, even though some studies in the SLR have described employee entrepreneurial behaviour as a rather challenging and demanding form of work (Moriano et al., 2014; Rigtering & Weitzel, 2013). For instance, specific job demands that an employee may face, such as uncertainty and stress, could potentially inhibit their entrepreneurial behaviour. Hence, further research is needed to better understand the impact of job demands on employee entrepreneurial behaviour.

Findings from the SLR suggest that a combination of certain job characteristic and organisational factors needs to be in place for employee entrepreneurial behaviour to emerge (Hornsby et al. 2002; Kuratko et al., 2005). For example, Hornsby et al. (2002) emphasised the need to have in place, work discretion alongside a supportive management and access to resources. Similarly, Rutherford and Holt (2007) further highlighted the importance of job autonomy and an organisational environment characterised by open communication to foster employee entrepreneurialism. While both job characteristics and organisational

factors are important, they may still not sufficiently explain why and when an employee may choose to behave entrepreneurially. In this respect, understanding the effect of individual differences and dispositions is particularly worthwhile. The SLR identified a number of studies which have investigated a range of dispositional traits, values, and attitudes alongside job characteristics and organisational factors, which may encourage an employee's entrepreneurial behaviour (Heinonen & Toivonen, 2008; Rutherford, & Holt, 2007). Much of the research in this area has focused on differences in individual dispositions, such as either positive or negative affect (Rutherford, & Holt, 2007) and self-efficacy (Wankee et al., 2010). Such findings are consistent with the large body of literature which has generally shown such individual dispositions to influence a wide range of pro-organisational attitudes and behaviours (Bang & Reio Jr, 2017; Orth & Volmer, 2017)

The SLR also highlighted a growing trend towards understanding the role of feelings (Sieger et al., 2013) and emotions (Zampetaki et al., 2009) in fostering employee entrepreneurial behaviour. Such research has generally suggested that when employees develop strong feelings of attachment towards an object like their organisation, or have cordial relations with fellow employees, they are likely to be motivated to engage in extra-role behaviours. Besides having positive emotions and feelings towards their organisation and/or fellow employees, employees may also have positive views and attitudes towards their jobs. Currently, a small number of studies in the SLR have only focused on employee's satisfaction with their job (Kurtako et al., 2005). Generally, it has been suggested that individual orientations can act as important sources of internal motivation and have been positively linked

to a number of pro-organisational behaviours, such as innovativeness (Zhang & Bartol, 2010). For instance, Afsar et al. (2017) focused on the concept of psychological empowerment (PE) as a form of intrinsic task motivation and how it influences employee entrepreneurial behaviour. Yet, as observed in the review, there continues to be a lack of knowledge and empirical evidence concerning how employee's individual orientations and attitudes towards their jobs/role may influence their entrepreneurial behaviour. Specifically, little is known regarding how employees PE may interact with other job-related characteristics in influencing entrepreneurial behaviour.

Compared to research on the determinants of employee entrepreneurial behaviour, research on the outcomes of employee entrepreneurial behaviour, particularly at the individual level, also remains lacking. Broadly, studies in the SLR suggest that employee entrepreneurial behaviour can have a positive effect on a number of pro-organisational attitudes and behaviours such as information sharing (Park et al., 2014), increased job satisfaction and reduced turnover intentions (Rutherford & Holt, 2007). The limited number of studies in the area identified by the SLR suggests that there is considerable need to investigate the beneficial effects of employee entrepreneurial behaviour on several different pro-organisational behaviours and attitudes. Within the realm of organisational psychology, there has been a growing scholarly interest in the concept of work engagement (Bakker, Schaufeli, Leiter & Taris, 2008). Employees who are engaged are more likely to have higher levels of energy and motivation towards tasks (Demerouti, Mostert & Bakker; Schaufeli, 2010) and are also more likely to be

better performers in their roles (Christian, Garza & Slaughter, 2012). The SLR revealed mixed findings with respect to employee entrepreneurial behaviour and engagement at work (Gawke et al., 2017; 2018). For instance, while Gawke et al. (2017) showed a positive association between employee entrepreneurialism and work engagement, Gawke et al. (2018) also found that employee entrepreneurialism can lead to burnout over time. Given such inconsistencies in the findings, further investigation is needed to understand how and when employee entrepreneurial behaviour can positively influence their work engagement.

Employee entrepreneurial behaviour may be considered as a form of discretionary behaviour, as it occurs outside of an employee's normal job scope (Moriano et al., 2014) and often involves non-routine and challenging activities. Such behaviour may nevertheless also be viewed by some employees as an enriching experience and also an opportunity to develop unique skills and abilities. This is consistent with the suggestion by Honig (2001) that entrepreneurially orientated individuals are likely to gain new insights, knowledge and experiences through their entrepreneurial actions. Therefore, by engaging in entrepreneurial behaviour, employees are more likely to grow by developing specific personal resources. Yet, prior research into the outcomes of employee entrepreneurial behaviour has remained largely lacking regarding the developmental outcomes associated with employee's entrepreneurial behaviour and how it may influence their engagement. Hence, further research is needed to better understand which personal resources employees develop as a result of their entrepreneurial behaviour.

Table 2.8 below briefly summarises the current state of knowledge and suggestions for future research, which emerged from the SLRs findings.

Topical Area	Current Knowledge	Future Research Needs
Conceptualisation of employee entrepreneurial behaviour and theoretical frameworks.	• Few specific theoretical frameworks adopted • Weak consensus of what entrepreneurial behaviour is • Narrow set of dimensions/components identified/examined • Scale development remains limited to the adoption of established scales	• Motivational based theories to understand the intrinsic and extrinsic drivers of employee entrepreneurial behaviours. • How do social and relational exchanges influence the ability and capacity of employees' entrepreneurial behaviour? • Weak consensus of what entrepreneurial behaviour is • Narrow set of dimensions/components identified/examined • Specific employee entrepreneurial behaviour measurement instruments need to be developed.
Drivers of employee entrepreneurial behaviour.	• Heavy focus on organisational antecedents such as Management support and organisational culture • Role of individual differences not clear • Simplistic models which do not capture adequately the complex process	• Do job demands also influence employee entrepreneurial behaviour? • How does an individual's orientation towards their job influence their entrepreneurial behaviour? • The differential effect of specific job, organisational and external factors on the different dimensions of employee entrepreneurial behaviour need to be explored.

Outcomes of employee entrepreneurial behaviour.	Limited empirical evidence of the outcomes of employee entrepreneurial behaviours	- In what ways does employee entrepreneurial behaviour positively/negatively influence individual attitudes and organisational outcomes? - How do employees develop specific personal resources from behaving entrepreneurially at work?

Table 2.8. Summary of Key Findings from SLR and Suggestions for Future Research.

2.8 Chapter Summary

This chapter set out to provide an overview of the field of employee entrepreneurial behaviour. In order to achieve this aim, the researcher carried out a systematic review of the literature. Following the principals outlined by Tranfield et al. (2003), 26 relevant articles were identified for further analysis. Overall, findings from the SLR suggest that the field is slowly emerging. Moreover, the SLR also found that considerable attention has been devoted to understanding the contextual and organisational determinants of employee entrepreneurial behaviour. Subsequently, greater scholarly attention is warranted in order to better understand how specific job characteristics and employee attitudes towards their jobs might influence their entrepreneurial behaviour. Similarly, the SLR also identified the need to better understand how entrepreneurial behaviours might influence individual attitudes such as commitment and engagement.

CHAPTER THREE: Theoretical Framework

3. Chapter Overview

This chapter builds on the findings from the Systematic Literature Review (SLR) (chapter 2). Specifically, the chapter examines common theories of job design and motivation and how they can help to explain employee proactive and discretionary behaviours. The chapter focuses specifically on the Job Demands –Resources (JD-R) model, as it is used as the primary theoretical framework to understand both the determinants and consequences of employee entrepreneurial behaviour. The chapter begins with a working definition and conceptualisation of employee entrepreneurial behaviour. Next, the chapter discusses two of the most influential theories of job design and how they enhance the understanding of the consequences and determinants of employee entrepreneurial behaviour. Particular attention is devoted to key assumptions behind the JD-R model and their relationship to the determinants and consequences of employee entrepreneurial behaviour.

The JD-R model has been used extensively to examine the determinants and outcomes of a range of employee proactive behaviours, such as innovative work behaviour (Dediu, Leka & Jain, 2018), personal initiative taking (Hakanen, Perhoniemi & Toppinen-Tanner, 2008), job-crafting (Tims et al., 2012), extra-role behaviour (Albrech, 2011) and engagement (Bakker et al., 2011). The current thesis draws on the JD-R model in two specific ways to examine both the determinants

and consequences of employee entrepreneurial behaviour. Firstly, the thesis utilises the JD-R model to examine the determinants of employee entrepreneurial behaviour. Specifically, the thesis considers the role of job demands and job resources, and their interactions with personal resources in stimulating employee entrepreneurial behaviour. Both job autonomy and task variety are treated as specific job resources. Chapter 4 identified the concept of Psychological Empowerment (PE) as an important job orientation and determinant of employee entrepreneurial behaviour. Therefore, the concept of PE is treated as a personal resource in the JD-R model.

Secondly, the JD-R model has been used to examine how employee entrepreneurial behaviour affects their engagement (Gawke et al., 2017). The thesis focuses on the types of personal resources that are developed as a result of employee entrepreneurial behaviours, and which can affect their engagement at work. Drawing on findings from chapter 2, employee entrepreneurial behaviour is conceptualised as a particular type of job demand. This view is consistent with recent conceptualisation by Gawke et al. (2017; 2018). Figure 3.1 provides a conceptual overview of the proposed theoretical model used in the thesis.

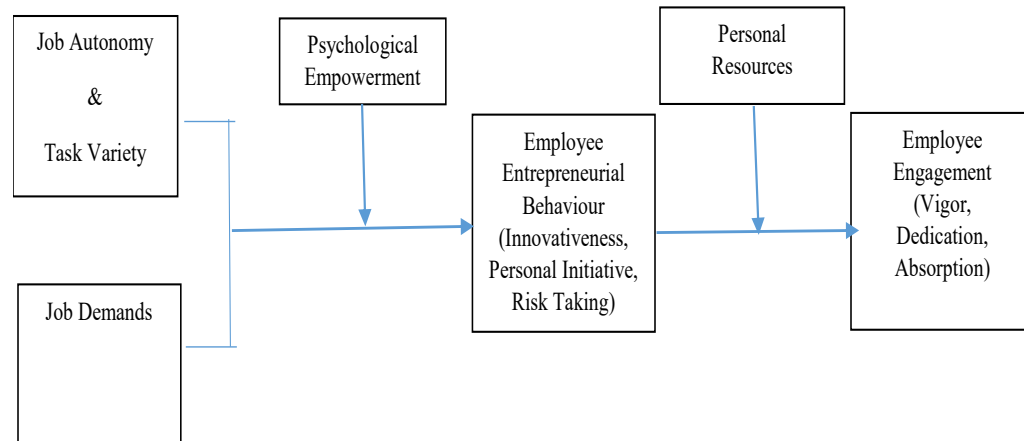


Figure 3.1. Conceptual Model of Proposed Relationships in the Thesis.

3.1 Employee Entrepreneurial Behaviour

The capacity of an organisation's employees to positively contribute to its growth and development requires more than simply engaging effectively in in-role behaviours and completing assigned tasks and objectives (Snape & Redman, 2010). Van Dyne and LePine (1998) asserted that besides performing prescribed in-role behaviours, employees' willingness to engage in voluntary extra-role behaviours may be particularly useful in simulating and sustaining organisational development and evolution. According to Bosma, Wennekers and Amorós (2012), the entrepreneurial behaviour of employees constitutes a significant form and type of entrepreneurial activity, which has largely been overlooked by official statistics. Such entrepreneurial activity is critical for the survival and development of organisations. Ireland et al. (2009) reinforced this notion by suggesting that the entrepreneurial behaviours of organisational members across all levels can serve as a critical antecedent to firm-level entrepreneurship. Numerous studies have thus

demonstrated how the entrepreneurial behaviour of employees has contributed to new product design (Marvel et al., 2007), implementation of ideas (Hornsby et al., 2009) and creation of new ventures (Belousova & Gailly, 2013; Blanka, 2018; Floyd & Lane, 2000)

While employee entrepreneurial behaviour may be found throughout an organisation, such behaviours are likely to vary, depending on an individuals' role within the hierarchy of the organisation (Hornsby et al., 2009; Mustafa, Martin & Hughes, 2016). For instance, senior-level managers are said to contribute to CE through their willingness and ability to synthesise information and spot entrepreneurial opportunities (Sieger et al., 2013). They are also likely to play a crucial role in creating and implementing organisational initiatives designed to support a pro-entrepreneurship organisational architecture (Ireland et al., 2009). Similarly, the unique organisational positioning of middle-managers make them particularly influential in collecting and disseminating knowledge (Mustafa, Lundmark & Ramos, 2016), as well as in endorsing, refining and shepherding entrepreneurial opportunities through the acquisition and deployment of necessary resources (Kuratko et al., 2005). Contrastingly, both junior-level managers and non-managerial employees contribute to CE by deviating from work norms and experimenting with new ideas and resources provided by the organisation in order to exploit emergent opportunities (Belousova & Gailly, 2013; Globocnik & Salomo, 2015).

While there continues to be growing scholarly interest in employees entrepreneurial behaviours (Mustafa, Gavin & Hughes, 2018), the current literature

on the concept remains fragmented. Particularly lacking is agreement concerning terminology and the conceptualisation of entrepreneurial behaviour (Mustafa, Gavin & Hughes, 2018). Regarding terminology, scholars have referred to the concept using a variety of terms such as ‘entrepreneurial behaviour’ and/or ‘intrapreneurial behaviour’ (Mustafa, Gavin & Hughes, 2018). Although both equate employee entrepreneurship with an organisation, the differing terms both approach such behaviour from different perspectives.

The term “intrapreneurial behaviour” refers to the ‘bottom-up’ self-initiated behaviours of employees which results in them innovating and seeking out business opportunities that benefit the organisation (Antoncic & Hisrich 2001; Rigtering & Weitzel, 2013). Specifically, such behaviour is said to constitute a challenging type of extra-role behaviour and is thus considered to occur outside of one’s job description and organisational policies (De Jong & Wennekers, 2008). In contrast, the term ‘entrepreneurial behaviour’ has been used to situate employee entrepreneurial behaviour within the broader CE literature. Employee entrepreneurial behaviour is thus broadly viewed as the discovery or development and exploitation of previously unnoticed entrepreneurial opportunities (Kuratko, 2010; Mustafa, Martin & Hughes, 2016; Shane & Venkataraman, 2000; Sieger et al., 2013; Smith & Di Gregorio, 2002). This view recognises that employees’ contributions to CE process may emerge as a result of either individual spontaneous behaviours (Amo 2010; Rigtering & Weitzel 2013) or as a part of planned, promoted, and monitored actions by the organisation (Sharma & Chrisman, 1999).

3.2 Conceptualising Employee Entrepreneurial Behaviour

Both the terms ‘entrepreneurial’ and ‘intrapreneurial’ have been used interchangeably in the literature, leading to significant confusion. However, in this thesis, the researcher adopted the term entrepreneurial behaviour. This is in part motivated by the idea that entrepreneurial behaviour can incorporate a broad array of behaviours, which may be either discretionary or self-initiated in nature and/or may be induced more formally through organisational policies (Gawke et al., 2019). Additionally, this view also considers entrepreneurial behaviour as not only a challenging form of extra-role behaviour but also a proactive type of behaviour. Within the literature, two broad approaches have been utilised to conceptualise employee entrepreneurial behaviour (Blanka, 2018; Gawke et al., 2017; 2019; Mustafa, Gavin & Hughes, 2018).

The first approach conceptualises it in terms of an employee’s actual and intended entrepreneurial contributions towards their organisations (Tietz & Parker, 2012; Urbano, Alvarez, & Turró, 2013). For example, Hornsby et al. (2009) examined the number of ideas generated and implemented, while Urbano et al. (2013) examined employees’ intentions to start new ventures within their respective organisations. Studies in this stream have tended to examine employee entrepreneurial behaviour using a single indicator (e.g., Stam, 2013), such as examining whether employees are willing to display entrepreneurial or intrapreneurial intentions and/or whether employees have been part of

entrepreneurial/intrapreneurial initiatives in the organisation (Urbano & Turró , 2013).

The second approach adopts a behavioural-based perspective of employee entrepreneurial behaviour. This approach recognises that employees may engage in a variety of agentic, discretionary and strategic behaviours which contribute to CE, such as supporting others, ideation, cutting through red-tape, taking risks and pursuing opportunities (Lau et al., 2012; Mustafa, Martin & Hughes, 2016; Seiger et al., 2013; Zampetakis et al., 2009). Hence, this approach conceptualised employee entrepreneurial behaviour as a higher order construct reflecting the specific orientations of personal initiative, individual risk taking, and innovativeness (De Jong et al., 2015; Rigtering & Weitzel, 2013; Valsania et al., 2016). Such a conceptualisation is consistent with the broader firm-level construct of Entrepreneurial Orientation (EO) which views CE as innovative, proactive and risk taking behaviours (Covin and Slevin 1989; Rauch et al. 2009).

This thesis subscribes to the second view, and thus is in-line with De Jong et al. (2015) and Lau et al. (2012), conceptualisations of employee entrepreneurial behaviour as a higher order construct consisting of three core dimensions, namely innovativeness, personal initiative and risk taking. There are several benefits to adopting this behavioural-based approach. Firstly, compared to the dichotomous-indicators approach, the behavioural-based approach recognises that employee entrepreneurial behaviours may involve a broad array of individual and/or group-level behaviours (Mustafa, Martin & Hughes, 2016; Sieger et al., 2013) which may or may not manifest themselves differently from firm-level entrepreneurial

behaviours (De Jong et al., 2015). For instance, within organisations, employee entrepreneurial behaviours may include new product development, organisational improvements or work role innovations (De Jong et al., 2015). However, focusing on dichotomous factors such as engagement in new firm formation and/or self-employment may run the risk of omitting behaviours unique to employee entrepreneurialism (Hughes et al., 2018; Mustafa, Gavin & Hughes, 2018).

Secondly, by recognising that employee entrepreneurial behaviour may occur with or without official mandates or supervisory control (Globocnik & Salomo, 2015), the behavioural-based approach not only permits the concept to be situated in the broader discretionary and proactive behaviour literatures, but also differentiates it from similar concepts in the literature, such as Organisational Citizenship Behaviour (OCB), innovative work behaviour and job crafting (Gawke et al., 2019; Parker & Collins, 2010). For instance, while considered a discretionary and proactive form of behaviour, employee entrepreneurial behaviour differs from the OCB (Organ, 1988) in that it not only promotes the effective functioning of an organisation but can also lead to the development of new products/services and pursuit of new opportunities. Also compared to innovative work behaviour (Scott & Bruce, 1994) which focuses on behaviours such as ideation and idea implementation, employee entrepreneurial behaviour may also include behaviours and actions that help organisations in taking risks in pursuing opportunities (Janssen, 2000). Finally, with respect to job crafting (Tims et al., 2012) entrepreneurial behaviour may include behaviours that can result in positive

changes with regards to how a firm fit with its external environment (Gawke et al., 2018)

Finally, the behavioural-based approach also permits the theoretical advancement of the field, especially when it comes to examining the determinants and consequences of employee entrepreneurial behaviour. Therefore, in this thesis, employee entrepreneurial behaviour is defined along the lines of De Jong's et al. (2015, p. 982) conceptualisation and the findings from the SLR in chapter 2. Hence employee entrepreneurial behaviour is defined as the extent to which individual employees proactively engage in actions and practices related to the discovery, evaluation and exploitation of entrepreneurial opportunities at work.

3.3 Theories of Job Design and Motivation

Scholars of organisational psychology have long been interested in understanding how a range of individual factors and work or job-related conditions can influence individual work outcomes and well-being (Kanfer & Chen, 2016). The field has drawn on a range of theories to describe how and why employees may remain motivated in their organisations. Considerable attention has been focused on examining the specific attributes and characteristics of an employee's job and how they motivate their individual performance (Kanfer & Chen, 2016; Kanfer, Frese & Johnson, 2017). Two of the most common theories are the Job Characteristics Model (JCM), (Fried & Ferris, 1987; Herzberg, Mausner, & Snyderman, 1959; Hackman & Oldham, 1976) and the Job Demands – Resources model (Bakker, Demerouti & Sanz-Vergel, 2014; Demerouti & Bakker, 2011).

Both these models recognise the intrinsic and extrinsic motivational aspects inherent in the design and characteristics of an individual's job (Loher, Noe, Moeller & Fitzgerald, 1985).

3.3.1 Job Demands – Job Resources (JD-R) Model.

Recent meta-analysis have highlighted the importance of various job characteristics as drivers of employee entrepreneurial behaviours (Blanka, 2018; Mustafa, Gavin & Hughes, 2018). Similarly, a small number of studies have also demonstrated how an employee's entrepreneurial behaviour and personal attributes can influence their motivational states at work (Gawke et al., 2017; 2018). As a core objective of this thesis, it was deemed appropriate to draw upon one of the most popular theoretical models of job design and employee well-being; Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007). Grounded in the Social Exchange Theory (SET) (Cropanzano & Mitchell, 2005), the JD-R model has developed from existing job design models, such as the Job Demands-Control (JDC) model (Karasek, 1979), Job Demands Control-Support (JD-CS) (Johnson & Hall, 1988) while also incorporating elements of the JCM (Hackman & Oldham, 1976).

Over the past 15 years, the JD-R model has evolved significantly as a result of several new theoretical additions (Demerouti, et al., 2001). Broadly, the JD-R model offers a solid, yet flexible, framework to analyse the demands and resources inherent among different types of jobs (Bakker & Demerouti, 2007) and their effect

on employee health and motivation. In this thesis, the JD-R model is utilised to understand both the determinants and consequences of employee entrepreneurial behaviour, and thus focuses on the motivational process contained within the theory.

Several propositions underpin the JD-R model, some of which are relevant to the objectives of this thesis. The JD-R model has developed through the integration of two well established, yet independent, streams of research. The first is on stress (Maslach, Schaufeli & Leiter, 2001) and the second is on motivation (Bakker et al., 2014). Within the theory is the implicit assumption that each job has a unique set of job demands, which can be considered as initiators of a health impairment process, as well as job resources, which can be considered as initiators of a motivational process (Bakker et al., 2014; Demerouti et al., 2001). A core proposition of the model is that jobs which involve employees working with things, information and/or people can be considered as having two broad categories of working conditions, namely job demands and job resources (Bakker & Demerouti, 2007).

Job demands refer to the physical, psychological, social, or organisational aspects of the job which require sustained physical and/or psychological (cognitive and emotional) effort or skills (Martin, 2007). Examples include time and emotional pressures (De Spiegelaere, Van Gyes, Vandekerckhove & Hootegeem, 2012), unfavourable physical environment and irregular working hours (Demerouti et al., 2001). When the demands for meeting those work conditions require sustained effort from which the employees experience little recovery, job demands may

become job stressors (Meijman, Mulder, Drenth, Thierry & de Wolff, 1998). Thus, if left unchecked, job demands may lead to certain physiological and/or psychological costs (Bakker & Demerouti, 2007).

Recent developments in the JD-R model have introduced the concept of ‘loss spirals’ (Demerouti, Bakker & Bulters, 2004), which suggests that not only does job demands cause strain, but employees experiencing strain are also likely to perceive and create additional job demands over time (Demerouti et al., 2009; Zapf, Dormann, & Frese, 1996). Therefore, employees with excessive job demands and stress may enter into a loss spiral wherein over time they are likely to perceive and feel increased job demands, hence leading to increased burn-out (Bakker & Costa, 2014; Demerouti, Le Blanc, Bakker, Schaufeli & Hox, 2009). Several studies have also suggested that job demands can be further classified as either hindrances or challenges (LePine, Podsakoff & LePine, 2005). When viewed as a hindrance, job demands are related to the health impairment process of employees. In contrast, the challenge view of job demands, links them closely to employee motivational processes.

Besides job demands, each job also has resources. Bakker and Demerouti (2007) referred to job resources as the physical, psychological, social, or organisational aspects of the job that are functional in achieving work goals. Examples include autonomy, skill variety, performance feedback, and opportunities for growth. The JD-R model suggests that job resources can help employees to cope with and reduce their job demands and their associated physiological and psychological costs (Bakker & Demerouti, 2007). Job resources

may also stimulate individual employee growth, learning, and development (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2009). Hence, job resources are not only important for employees to be able to deal with their job demands, they are also important on their own in motivating employee behaviours. At the task-level, the role of job resources corresponds strongly with Hackman and Oldham's (1976) JCM. At a broader level, the role of job resources is closely aligned with that of conservation of resources (COR) theory (Hobfoll, 2001). According to Hobfoll (2001), individuals are motivated to direct their efforts to the maintenance and accumulation of resources. Therefore, resources can be valued in their own right or because they represent a means to achieve or protect other valued resources.

The JD-R model also stipulates under what conditions job resources are particularly beneficial and motivational for employees. For instance, it proposes that job resources are particularly influential with respect to employee motivation when job demands are high (Bakker, Hakanen, Demerouti & Xanthopoulou, 2007; Hakanen et al., 2008). Such assumptions are consistent with COR theory (Hobfoll, 2001) which suggests that resources gain their motivating potential and become particularly useful when needed. Karasek (1979) referred to jobs which simultaneously have high demands and have high resources as active jobs which are particularly motivational in nature as they can challenge employees to learn new things on the job and motivate them to use new behaviours (Bakker et al., 2007; Hakanen, Bakker, & Demerouti, 2005).

The JD-R model also takes into consideration interactions between job demands and resources (Bakker & Demerouti, 2007). Specifically, the JD-R model

states that job resources can buffer the impact of job demands on strain (Xanthopoulou et al., 2007; Bakker & Demerouti, 2017). In proposing the buffering hypothesis, Kahn and Byosiére (1992) suggested that the specific features of an employees' work or job environment, along with individual attributes, can buffer the effects of a stressor. This is likely to occur because buffering variables can alter the perceptions and cognitions evoked by stressors, moderate responses that follow the appraisal process, and/or reduce the health-damaging consequences of such responses (Kahn & Byosiére, 1992). Numerous studies have confirmed this (Bakker, Van Veldhoven & Xanthopoulou, 2010). For instance, Xanthopoulou et al. (2007) showed how different types of job resources can buffer the effects of specific job demands on burnout among home care professionals. Similarly, Bakker, Van Veldhoven and Xanthopoulou (2010) demonstrated how employees with many job resources are able to better cope with demands of their job. The findings also show how different combinations of job demands and job resources can predict strain in various contexts (Bakker & Demerouti, 2017).

A key premise of the JD-R model is the differing roles that underlying psychological processes or pathway play in the development of either job-related strain or motivation (Bakker & Demerouti, 2008). The first, or health impairment pathway, states that jobs that are highly demanding in nature are likely to negatively impact employee's well-being by straining their mental and physical resources (Bakker, Demerouti & Schaufeli, 2003). Thus, higher levels of job demands lead to high levels of strain, which in turn can lead to burnout (Maslach et al., 2001) and health problems (general health and repetitive strain injury) (Demerouti et al.,

2001). The second, or motivational pathway, argues that high levels of job resources can lead to positive outcomes such as higher individual performance, whereas their absence leads to cynicism towards one's work (Demerouti et al., 2001; Schaufeli, Bakker & Van Rhenen, 2009). Within this pathway, job resources beneficial effects on performance occur largely through work engagement (Bakker & Demerouti, 2017). Prior research has shown how the motivational process helps employees to remain focused on work tasks and become goal orientated. Moreover, engaged employees have also been found to have the sufficient energy to perform well on demanding tasks because they could focus all their attention to the task (Hopstaken, van der Linden, Bakker & Kompier, 2015).

Studies have shown the existence of such pathways either acting individually or simultaneously (Bakker, Demerouti & Verbeke, 2004; Hakanen, Schaufeli & Ahola, 2008). In this thesis, the focus is on the motivational pathways embedded, as this relates most directly to the issue of how and why employee entrepreneurial behaviour emerges, and how entrepreneurial employees remain engaged at work.

3.3.2 Role of personal resources in the JD-R Model.

An important advancement to the JD-R model has been the incorporation of personal resources to the model (Xanthopoulou et al., 2007). Initially, the JD-R model had mostly focused on characteristics of the work environment. Such an approach however has overlooked the notion that much of employee behaviour in organisational settings may occur via the interactions of personal and

organisational-level factors (Oldham & Cummings, 1996). Personal resources refer to “positive self-evaluations that are linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully” (Bakker & Demerouti, 2008, p.5). Concepts such as self-esteem, self-efficacy, resilience, optimism and psychological capital have typically been identified as personal resources (Van Wingerden, Derks, & Bakker, 2017; Xanthopoulou et al., 2007). Prior research has identified five roles that personal resources play as part of the JD-R model (Bakker & Demerouti, 2017; Schaufeli & Taris, 2014).

Firstly, as personal resources are defined in terms of resilience and control, they are expected to have a direct effect on reducing burnout and increasing employee engagement (Prieto, Soria, Martínez & Schaufeli, 2008). For instance, Xanthopoulou et al. (2009) showed personal resources to predict work engagement next to job resources, while Xanthopoulou et al. (2007) found work engagement to predict personal resources over time. Such findings are consistent with the notion of gain-cycles as they highlight the interplay between resources (job and personal) and engagement over time (Salanova, Schaufeli, Xanthopoulou & Bakker, 2010).

Secondly, personal resources may moderate the relationship between job characteristics and well-being (Van den Broeck et al., 2011). Accordingly, personal resources are thought to buffer the negative effects of job demands on burnout and exacerbate positive effects of job resources on engagement (Brenninkmeijer, Demerouti, Le Blanc, & Van Emmerik, 2010; Xanthopoulou et al., 2007). For instance, Mañkikangas and Kinnunen (2003) found the personal resources of self-esteem and optimism to moderate the relationship between job demands and

psychological distress, while Bakker and Sanz-Vergel (2013) found self-efficacy and optimism to be positively related to work engagement under challenging job demands. Such findings are consistent with COR theory (Hobfoll, 2001) which suggests that employees will tend to strive to build and protect a resource pool which can help them to cope with the negative effects of job demands (Xanthopoulou et al., 2009).

The third role of personal resources in JD-R model suggests that they mediate the relationship between job characteristics and employee wellbeing (Bakker & Demerouti, 2017). In the development of COR theory, Hobfoll (2001) proposed the individuals tend to accumulate resources over time. Hence, employees in resourceful workplace environments are likely to develop feelings of self-confidence and optimism about their work, which in turn will be positively related to their engagement at work (Xanthopoulou et al., 2007). Several cross-sectional studies have supported this view (Vink, Ouwenel & Le Blanc; 2011; Van den Broeck, Vansteenkiste, De Witte & Lens, 2008) as well as longitudinal studies which have shown the mediating effects of personal resources, thereby suggesting the existence of positive gain spirals in which various personal resources play a central role (Simbula, Guglielmi, & Schaufeli, 2011; Xanthopoulou et al., 2009).

The fourth role of personal resources suggest that they can influence the perception of job characteristics. According to Social Cognitive Theory (Bandura, 1997), specific personal resources are likely to shape how individuals perceive, understand and react to their environmental circumstances which also includes their job characteristics. The capacity of employees' personal resources to shape their

perceptions of their work characteristics is in turn likely to influence their positive attitudes towards work (Judge, Bono & Locke, 2000). Such a view has been supported by Xanthopoulou et al. (2007) who found that job resources mediated the relationship between personal resources and work engagement.

Finally, personal resources are theorised to sometimes play the role of a third variable (Schaufeli & Taris, 2014). Hence, personal resources are expected to explain the relationship between specific job characteristics and employee well-being. For example, partial support for this was provided by Bakker, Boyd, Dollard, Gillespie, Winefield and Stough (2010) who found extraversion to be positively related to job resources and to organisational commitment.

In this thesis, personal resources are theorised as playing a moderating role, in that they are expected to enhance the effects of job resources on employee entrepreneurial behaviour. Additionally, personal resources are also expected to buffer the expected negative effects of job demands of employee entrepreneurial behaviour on engagement.

3.4 Understanding Employee Entrepreneurial Behaviour from the JD-R Model Perspective

3.4.1 Job demands and job resources as predictors of employee entrepreneurial behaviour.

In this thesis, job autonomy and task variety were conceptualised as job resources. Numerous studies have found job autonomy to be a predictor of employee entrepreneurial behaviour (De Jong et al., 2015; Hornsby et al., 2009; Kuratko et al., 2005), innovative work behaviours (Dediu et al., 2018; De Spiegelaere, Van Gyes, De Witte, Niesen & Van Hootegem, 2014), personal initiative (Kalshoven, Den Hartog & de Hoogh, 2013) and risk taking (De Jong et al., 2015). According to Hackman and Oldham (1976, p. 258), job autonomy refers to “the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out”. Job autonomy is likely to influence employee entrepreneurial behaviour either directly or indirectly. Directly, job autonomy is expected to raise employee’s perceived capability and willingness to engage in entrepreneurial behaviours via increasing their self-expectations. Employees who perceive themselves as having increased job autonomy are more likely to feel that they have control over how they go about their jobs. Overall, this may lead to an employee developing more self-efficacy in their job (Parker, 1998), which may result in employees using their personal initiative to complete tasks, identify opportunities and threats and/or propose and implement new ideas (Axtell,

Holman, Unsworth, Wall, Waterson & Harrington, 2000; De Jong et al., 2015). Indirectly, job autonomy can enhance an employees' sense of felt responsibility and flexible role orientation. Together, these can motivate employees to be more engaged in their roles and to positively bring about changes into their workplace by proposing new ideas freely and/or sharing knowledge and ideas with others (Cabrera, Collins, & Salgado, 2006).

Task variety is often defined as the extent to which an employee's job requires them to perform a broad array of tasks (Morgeson & Humphrey, 2006). Task variety may influence employee entrepreneurial behaviour via three key ways (De Jong et al., 2015). Firstly, an important motivational aspect of increased task variety is that it can enhance an employee's experience of meaningfulness of the work (Agarwal & Ramaswami, 1993). This in turn may increase an employee's perceptions that they can bring about positive changes in their work (Parker & Collins, 2010) and thereby stimulate them to become more involved in thinking about and proposing new ideas. Secondly, task variety can provide employees with the opportunity to master specific work experiences and develop a broad range of capabilities and social ties (Parker, 1998). Hence, employees with increased task variety may also experience an increased sense of proactive envisioning (Parker, Bindl & Strauss, 2010), which in turn may prompt them to develop specific skills and to seek ways to overcome barriers associated with their entrepreneurial behaviours (De Jong et al., 2015; Parker et al., 2006). Finally, through increasing the breadth of activities that employees are involved in (Axtell & Parker, 2003), task variety also provides opportunities for employees to interpret and position their

work in the broader work context. According to Frese et al. (1996), this may motivate employees to develop ideas and initiatives in order to bring about positive changes to work-related products or processes (De Jong et al., 2015).

Within the JD-R model, job demands have been referred to as specific aspects of an employee's work that requires effort, and therefore are associated with physical and psychological costs (Bakker & Demerouti, 2017). However, the role of job demands in influencing employee entrepreneurial behaviours remains unclear and under explored. Some studies have suggested that particular job demands, such as time pressures and emotional pressures, role conflict, role overload, and role ambiguity (Cavanaugh, Boswell, Roehling, & Boudreau, 2000), can have detrimental effects on an employee's ability to take personal initiatives, develop and propose new ideas (Huhtala & Parzefall, 2007), and achieve valued work goals (Cavanaugh et al., 2000). Both Huhtala and Parzefall (2007) and De Spiegelaere et al. (2012) concluded that employee innovativeness was reduced under conditions of high job demands and low job resources. Additionally, excessive job demands may negatively influence an employee's work life balance. For instance, James (2011) found that overworked employees were less likely to be innovative as they were likely to experience increased stress, break downs in communication channels and impeded cooperation between colleagues.

In contrast to the hindrance perspective (Bakker & Demerouti, 2017), job demands may also motivate employees (LePine et al., 2005). Examples of challenge stressors include high levels of workload, time pressure, and responsibility (McCauley, Ruderman, Ohlott, & Morrow, 1994). Such job demands

may be viewed by employees in some circumstances as a rewarding aspect of one's job and are thus well worth the discomfort (Bakker & Sanz-Vergel, 2013; Dediu et al., 2018). Employees who experience such job demands may be motivated to take personal initiative and risks to propose new ideas and solutions to change their workplace circumstances. Furthermore, challenging job demands may also encourage employees to proactively search for new opportunities in their immediate work environments. Considering the above arguments, and the fact that the relationship between job demands and employee entrepreneurial behaviour remains unclear, this thesis sought to add to the understanding of this complex relationship. In light of this uncertainty, the researcher sought a broad conceptualisation of job demands, which encompass factors associated with an employee's efforts, skill requirements and physical and/or psychological costs. Such a conceptualisation also permits job demands to be considered as either a hindrance or challenge.

3.4.2 Psychological Empowerment (PE) as a moderator between job demands, job resources and employee entrepreneurial behaviour.

Personal resources represent a set of characteristics that form an individual's self-beliefs about their ability to control and impact upon the environment (Hobfoll, 2001). Research has highlighted how one's own positive self-evaluations plays an important role in motivating how they view their own capabilities (Bandura, 1997;

Judge, Locke, Durham & Kluger, 1998). Personal resources may play an important role in the psychological mechanisms underpinning the emergence of employee entrepreneurial behaviours (Gawke et al., 2017). Personal resources such as self-efficacy, organisation-based self-esteem, active coping behaviour, and optimism have been found to positively impact employees' levels of engagement (Bakker & Leiter, 2010; Xanthopoulou et al., 2009). In this thesis, the focus is on Psychological Empowerment (PE) as a personal resource.

Psychological Empowerment (PE) has been defined as an individual's active orientation toward their work role reflecting the motivation and belief in their ability to shape their work role and context (Spreitzer, 1995). This intrinsic motivation is manifested in four job-related cognitions namely: meaning, competence, self-determination, and impact (Thomas & Velthouse, 1990). Self-determination refers to the sense of control and choice that an individual has with respect to their work behaviours and choices. Impact refers to the extent that an individual's actions and performance may influence the results and outcomes of an organisation's strategy or intentions, while competence refers to an individual's cognitive assessment in relation to the necessary skills and competencies necessary to complete their work. Finally, meaning refers to an individual's assessment of their purpose at work and is often dependent on their own value systems. Seibert, Wang and Courtright (2011) showed the four cognitions needed to contribute to an overall and unitary second-order PE construct. Hence, a lower or higher level on one dimension might change the overall constellation and the whole experience might be affected disproportionately. In fact, studies have

suggested possible interactive effects among the dimensions of PE (Singh & Sarker, 2012). Additionally, the four cognitions of PE suggest that it can be treated as not only a job resource, but also a personal resource (Messmann et al., 2017), as they broadly pertain to an individual's self-beliefs about their ability to control and impact upon the environment (Hobfoll, 2001).

Empowerment theorists have described PE as an important mechanism through which contextual and job-related factors can influence employee attitudes and behaviours (Maynard, Gilson & Mathieu, 2012; Spreitzer, 1995; Spreitzer, Kizilos & Nason, 1997). In particular, it was argued that psychologically empowered employees are more likely to consider their work as meaningful and see themselves as proficient enough and as having the sufficient autonomy to influence their work in significant ways (Spreitzer, 1995). Prior research has linked PE positively to employee innovativeness (Knol & Van Linge, 2009; Messmann et al., 2017; Pieterse et al., 2010; Spreitzer, 1995) and personal initiative (Frese et al., 1996; Hong et al., 2016). Afsar et al. (2017) also considered the moderating effects of PE with respect to transformational and transactional leadership, and employee entrepreneurial behaviour. Their findings demonstrated that employees are likely to engage in higher levels of entrepreneurial behaviour when they feel empowered, respected, when they experience a certain degree of autonomy and meaning in their job, and when their leaders are perceived as being strong. Despite such evidence, how an employee's PE affects their job resources and demands and ultimately their entrepreneurial behaviour remains ill understood. Hence, this thesis proposes that

PE might buffer and/or attenuate the effects of job demands and attenuate the positive effects of job resources on employee entrepreneurial behaviour

As a personal resource, PE may help employees cope with possible demands of their jobs. From a COR theory (Hobfoll, 2001) perspective, psychologically empowered employees may perceive themselves as being better able to control the demanding nature of their jobs through having the self-belief and confidence to allocate specific resources to better react to specific job demands. Specifically, employees may feel self-determined to successfully complete specific objectives, despite the high demands of their job, because they perceive themselves as having the necessary abilities and skills to do so (Ryan & Deci, 2000; Spreitzer, 1995). In such circumstances, psychologically empowered employees may seek better ways to allocate their time and or seek out other resources to help them achieve particular tasks. Moreover, psychologically empowered employees may also seek out alternate means to augment existing working methods (Wiese, Freund, & Baltes, 2000) as a means of mitigating the excessive demands of their jobs. Such actions may not only help employees to reduce the stress arising from the demands of their job, but may also allow them sufficient physical and psychological space and time to devote their attentions towards identifying specific opportunities and threats in the workplace, and/or proposing new ideas and initiatives.

Psychological empowerment may also enhance the potential positive effects job demands have on employee entrepreneurial behaviour. Psychologically empowered employees may view challenging job demands in a positive manner and use them as opportunities to behave entrepreneurially. For example, impact is

associated with high performance and an absence of withdrawal in difficult situations (Cropanzano, Rupp & Byrn, 2003). Hence, psychologically empowered employees may view increased time pressures and responsibilities as a means through which they can personally impact upon a system in which they are embedded and positively influence outcomes (Spreitzer et al., 1997). In such situations, psychologically empowered employees may take personal risks and initiatives in order to see through ideas and opportunities. Similarly, self-determination, a key dimension of PE, refers to the sense of autonomy in initiating and regulating one's work (Deci, Connell, & Ryan, 1989). As a sense of self-determination involves learning, interest, and resilience in the face of adversity (Deci et al., 1989; Ryan & Deci, 2000), psychologically empowered employees may see challenging job demands as opportunities to personally learn and grow. Hence, they may use such opportunities to engage in creative and innovative pursuits as part of their job. Meaning which refers to the value of a task goal or purpose with respect to an individual's own ideals or standards can represent a form of intrinsic interest in a task, and congruence between one's work and their own values (Brief & Nord, 1990; Hackman & Oldham, 1980). Accordingly, psychologically empowered employees may view challenging job demands as being highly congruent with their own work goals and values. Hence, specific job demands such as increased work-load and time-pressures may be viewed as opportunities to prove one's self in the work place and to also differentiate one's self from others. Psychologically empowered employees in such situations may

take personal initiatives and risk and/or propose new ideas and solutions and ideas to client and organisational problems.

Psychological empowerment may also enhance the positive effects of job autonomy and task variety on employee entrepreneurial behaviour. A well-established stream of research has indicated how job autonomy may influence individual creativity, innovation performance and entrepreneurialism (see Cabrera, Collins, & Salgado, 2006; De Spiegelaere et al., 2012; Kuratko et al., 2005; Ramamoorthy, Flood, Slattery & Sardesai, 2005). Job autonomy may be considered as form of external or structural control provided by the organisation. Psychologically empowered employees may perceive themselves as having a strong sense of internal control as they have positive feelings towards the significance of their self-efficacy, autonomy and work effects (Spector, 1982). Therefore, when provided with job autonomy, psychologically empowered employees may be better motivated to perform with confidence and commitment, take initiative in generating new ideas and have greater enthusiasm in identifying new opportunities or supporting others (Li, Wei, Ren & Di, 2015).

Additionally, prior studies have shown that a high degree of task variety makes employees' work-related goals achievable and also contribute to their personal growth (Morf, Feierabend & Staffebach, 2017). Humphrey, Nahrgang and Morgeson (2007) suggested that a high degree of task variety can offer employees valuable opportunities to use different skills, gain organisational knowledge by serving across multiple organisational functions and to foster on-the-job learning and meaningfulness with respect to their job (Van den Broeck et al.,

2008; Van Ruysseveldt, Verboon & Smulders, 2011). Therefore, task variety can serve as an important source of internal work motivation (Hackman & Oldham, 1976) as it may enable employees to remain interested in a particular task and therefore meet performance demands (Settoon & Mossholder, 2002). This thesis proposes that PE may enhance the expected positive effects of task variety on employees' entrepreneurial behaviour in the following ways, task variety provides opportunities for employees to use a variety of skills which enables them to be involved in completing tasks from the beginning to the end. Psychologically empowered employees may experience greater personal meaning from the tasks they are involved in. Such individuals may use the task variety in their jobs to propose new ideas. Given that completing a number of different tasks requires the employee to utilise and invest in different skills and capabilities, psychologically empowered employees may also draw on their enhanced feelings of the impact and self-determination to use their personal initiatives and take risks in order to identify new opportunities.

3.5 Outcomes of Employee Entrepreneurial Behaviour: Entrepreneurial Behaviour as a Job Demand and its Effect on Engagement at Work

The last decade has seen an increase in scholarly interest in the concept of engagement (Schaufeli et al., 2010). Schaufeli and Bakker (2004) defined engagement as an active, positive work-related state which is characterised by vigor, dedication, and absorption. Vigor refers to high energy and mental resilience

while working, while dedication refers to being intensely involved in work tasks and experiencing an associated sense of significance, enthusiasm, challenge. Absorption on the other hand refers to a state of full concentration on work and positive engrossment in it (Schaufeli & Bakker, 2004, p. 15). Engagement can be considered as a distinct concept from burnout (Maslach & Jackson, 1981) in that it is not a momentary state of mind which is persistent and is also not directly focused on a particular object, event, individual or behaviour (Bakker & Demerouti, 2017, p. 274). As an energising and motivating force (Demerouti et al., 2010; Schaufeli, Salanova, González-Romá, & Bakker, 2002), engagement has been positively associated with employee well-being and performance (Christian et al. 2011), as well as a range of organisational and individual-level outcomes (Salanova, Agut & Peiró, 2005). In this thesis, engaged employees are considered essential to the successful development and implementation of organisational-level entrepreneurship (Belousova & Gailly, 2013; Gawke et al., 2017; 2019).

Previous literature on employee engagement has drawn on the JD-R model and the motivational pathways embedded within it, to demonstrate how employees remain engaged at work (Bakker & Demerouti, 2017). Consequently, a range of job and personal resources, as well as job demands, have been investigated as possible antecedents of employees' engagement (Bakker et al., 2014; Hakanen et al., 2008a). Some examples include social, supervisor and organisational support (Orgambidez-Ramos & de Almeida, 2017) and job autonomy (Zhang, Jex, Peng & Wang, 2017) as job resources and optimism, self-efficacy and resilience (Van Wingerden et al., 2017) as personal resources.

Although studies have proposed job and personal resources as significant determinants of employee engagement (see Bakker et al., 2004), this thesis also considers the role of job demands in motivating employee engagement. Specifically, employee entrepreneurial behaviour is conceptualised as a challenging type of job demands. Employee entrepreneurial behaviour consists of an individual's discretionary and proactive actions which occur outside the norm of the individual's job (De Jong et al., 2015). Hence, engaging in entrepreneurial behaviour may require an employee to utilise and learn a variety of new skills and knowledge (Gawke et al., 2017). For example, Amabile (1985) and Devloo, Anseel, De Beuckelaer and Salanova (2015) argued that the creative and innovative endeavours of employees represent non-routine and challenging activities, which in turn can intrinsically motivate an employee by satisfying their psychological needs of autonomy, competence and relatedness (Strauss, Griffin, Parker & Mason, 2015). Additionally, Belousova and Gailly (2013) and others have further pointed out that there may be considerable, psychological, and emotional benefits arising from behaving entrepreneurially in the workplace (Parker & Collins 2010; Stevenson & Jarillo, 2007). Collectively, such characteristics associated with employee entrepreneurial behaviours suggest that they may be considered as a challenging type of job demand, which has motivational implications.

Consistent with the motivational pathway perspective of the JD-R model, employee entrepreneurial behaviours can influence employee performance through increased engagement (Gawke et al., 2017; 2018). Prior research has suggested that through entrepreneurialism, employees may experience a heightened sense of

enrichment, motivation and enthusiasm towards their work (Marvel et al. 2007). Through engaging in entrepreneurial behaviour, employees may be provided with ample opportunities to learn new skills and capabilities, which in turn can lead to personal goal attainment. For example, because of their entrepreneurialism, employees may be involved in proactively conceptualising, developing and pursuing new ideas for products/services (McFadzean, O'Loughlin & Shaw, 2005). Gawke et al. (2017) argued that such an action may lead an employee to experience positive affect (Bandura, 1997), increased vigor at work and an increased capacity to handle job requirements more effectively (Kanfer, 1990). Similarly, an employees' entrepreneurial behaviour may not only result in them learning skills and abilities, it may also afford them significant opportunities to be involved in a wide range of new tasks (Gawke et al., 2017; 2018). Performing a wide variety of tasks may lead employees to experience greater immersion (e.g. absorption), enthusiasm and dedication at work (Bakker & Demerouti, 2017). Ultimately, through such experiences, entrepreneurial activity may increase as high levels of employee immersion and dedication are likely to allow employees to expend more discretionary efforts and capitalise on created opportunities (Gawke et al., 2018). The following section considers the mechanisms through which employee entrepreneurial behaviour can influence employee engagement.

3.6 The Role of Personal Resources in the Employee Entrepreneurial Behaviour and Engagement at Work Relationship

Sustaining employee engagement remains a significant priority for organisations. According to the JD-R model, employees can mobilise and develop their own job and personal resources at work through their individual work behaviours, which in turn can positively influence their affective and motivational states (e.g. work engagement). Studies have examined the association between personal resources and employee engagement. For instance, Xanthopoulou, Bakker and Fischbach (2013) found self-efficacy, and not optimism, to be positively related to employee engagement. Similarly, in a longitudinal diary based study, Bakker and SanzVergel (2013) showed how weekly self-efficacy and optimism were related positively to work engagement. Karatepe and Olugbade (2009) found the personal resource of competitiveness to positively impact employee's engagement.

Personal resources may help to explain why and how employees differ in their levels of engagement. As personal resources influence employees' appraisals of their immediate work environment and how they interact with others, they can be particularly helpful in helping employees to mitigate the negative effects of changes in their work environment on their levels of work engagement (Mäkikangas et al., 2013; Xanthopoulou et al., 2007). The process by which this occurs can be explained through Conservation of Resource (COR) theory (Hobfoll,

1989; 2001). COR theory postulates that employees are likely to undertake activities that facilitate protection and development of valued personal resources (Hobfoll, 1989). Therefore, as employees accumulate resources through their work roles, they become less vulnerable to future resources loss, more capable of gaining other resources and experiencing enhanced well-being (Hobfoll, 2001). According to Gorgievski and Hobfoll (2008), the relationship between activities and resources is not linear, but rather reciprocal, in that resource gains are likely to increase future resource gains. In fact, longitudinal findings have shown the proactive work behaviour of employees such as job-crafting (Van den Heuvel, Demerouti, and Peeters, 2015) to lead to an increase in their personal resources. Hence, both the JD-R and COR theory suggest that through their entrepreneurialism, employees can experience positive affect and motivation. This in turn can encourage employees to mobilise and develop their own job and personal resources at work, thereby increasing one's work engagement (Gorgievski & Hobfoll, 2008).

Studies have identified a range of personal resources which can influence employee engagement (Halbesleben, 2010; Xanthopoulou et al., 2009). Recently, Gawke et al. (2017) examined how employee entrepreneurialism can influence their work engagement. Specifically, they examined how through entrepreneurialism, employees can grow and develop personal resources such as ego-resilience, optimism, and self-efficacy over time, which in turn can lead to higher levels of work engagement. Despite the positive association between employee entrepreneurial behaviour and engagement (Gawke et al., 2017), understanding of the underlying mechanism behind this relationship remains limited. Employee entrepreneurial

behaviour is often the result of complex interactions between the employee, the organisation and co-workers. Moreover, employees are often likely to experience difficulties (Antoncic & Hisrich, 2001; Stopford & Baden-Fuller, 1994) while engaged in entrepreneurial behaviour, or while taking part in entrepreneurial projects. In overcoming such situations and in continuing to function as effective members of the organisation, entrepreneurial employees may need to have more than just resilience, optimism, and self-efficacy. In particular, they may need very specific personal resources to help them deal with rapid environmental and organisational challenges associated with entrepreneurial behaviour. For example, Rigterin and Weitzel, (2013) demonstrated that entrepreneurial employees need to have the trust and confidence of management, while Belousova and Gailly (2013) identified skills and abilities such as social capital in order to pull together and manage individuals from various departments. Hence, further exploration is needed to understand the different types of personal resource that may arise as a result of employee entrepreneurial behaviours.

3.7. Chapter Summary

Building on from chapter 2, this chapter provided a working conceptualisation of employee entrepreneurial behaviour. In particular, the chapter further highlighted the importance of adopting a broad based behavioural-based approach to defining and conceptualising employee entrepreneurial behaviour. Employee entrepreneurial behaviour was conceptualised as a higher order construct

consisting of three core dimensions, namely innovativeness, personal initiative and risk taking.

The chapter also discussed how two of the most prominent theories of job design (JCM and JD-R model) can facilitate understanding of the consequences and determinants of employee entrepreneurial behaviour. Specifically, JD-R model was used to demonstrate how it can be applied to understand both the determinants and consequences of employee entrepreneurial behaviour. Both job autonomy and task variety were conceptualised as specific job resources, while Psychological Empowerment (PE) was conceptualised as a personal resource. Such factors along with job demands were used to explain how employee entrepreneurial behaviour may emerge in organisations. The chapter also conceptualised employee entrepreneurial behaviour as a challenging type of job demand in order to understand how it may influence employee engagement. It was also proposed that personal resources might play an important role in this process.

CHAPTER FOUR:

Methodological Overview of Empirical Chapters

4 Chapter Overview

Chapter 4 provides an overview of the chosen research designs for each of the empirical studies. The chapter seeks to explain the methodological rationale adopted for each study, the approximate sequence and timeline for each study, the participant selection and sampling techniques used, as well as the data collection and analysis techniques used in each study. The chapter ends with a brief description of the research ethics protocols adopted.

4.1 Research Design Rationale and Time-line

4.1.1 Thesis methodological rationale.

According to Creswell (2014), research design refers to the broad strategy that a researcher utilises to integrate the various components of a study in a logical and coherent manner. A good research design ‘ensures that the evidence obtained enables the researcher to answer the initial question(s) as unambiguously as possible’ (De Vaus, 2001, p. 9). Ideally, research designs should have a close relationship with the nature and type of questions the researcher seeks to address. Howe (1988) highlighted the problem of researchers tending to view epistemology and method as synonymous. Such a

view can be problematic as epistemology does not necessarily have to dictate to the researcher the use of specific data collection and analysis techniques (Onwuegbuzie & Leech, 2005).

The great quantitative–qualitative paradigm wars have led to the evolution of three major schools of thought with respect to research design: purists, situationalists and pragmatists. Each school of thought has differing opinions regarding the extent to which quantitative and qualitative methods can co-exist or be integrated with one another (Bryman, Bresnen, Beardsworth & Keil, 1988). Given the exploratory nature of the thesis, a pragmatic research design approach was chosen to investigate the phenomenon of interest. Proponents of the pragmatic school of thought do not insist on a strict dichotomy between quantitative methods (entirely positivist) or qualitative methods (mostly hermeneutic) (Cook & Reichardt, 1979). Instead, pragmatists believe that ultimately the research objectives or questions should drive the research method. This is born out of the notion that epistemological purity does not get research done (Miles & Huberman, 1984). Subscribers of this view advocate the integration of various methods within a single study in order to get the most out of research outcomes (Creswell, 2014).

4.1.2 Data collection timeline.

The thesis's empirical chapters comprise of a Systematic Literature Review (SLR), nine (9) interviews, a quantitative survey and a single in-depth case study consisting of 11 interviews with entrepreneurial and innovative employees. Each study was built on the previous studies through the identification of research gaps and key findings. Figure 4.1 below demonstrates the time spent on data collection for each of the empirical chapters and how they

are inter-related. As per Figure 4.1 below, the thesis began with study 1, the Systematic Literature Review (SLR) of employee entrepreneurial behaviour. The 26 articles reviewed formed, not only the core of chapter 2, but also the emergent integrative framework from the chapter, which helped the researcher to identify gaps in the literature and areas for further exploration in the thesis. Findings from the SLR helped the researcher to identify the need to further investigate the individual consequences of employee entrepreneurial behaviour and how they can lead to engagement at work, as well as how employee's attitudes towards their job can intrinsically motivate them to engage in entrepreneurial behaviour. Therefore, study 2 which examined how employee's orientations towards their jobs can influence their entrepreneurial behaviour was conceived and developed. Similarly, from the SLR (study 1), the researcher also conceived and developed study 4, which investigated how employees' entrepreneurial behaviour influences their engagement at work. Finally, study 3, a quantitative survey, was developed, based on the findings from the SLR (study 1) and study 2.

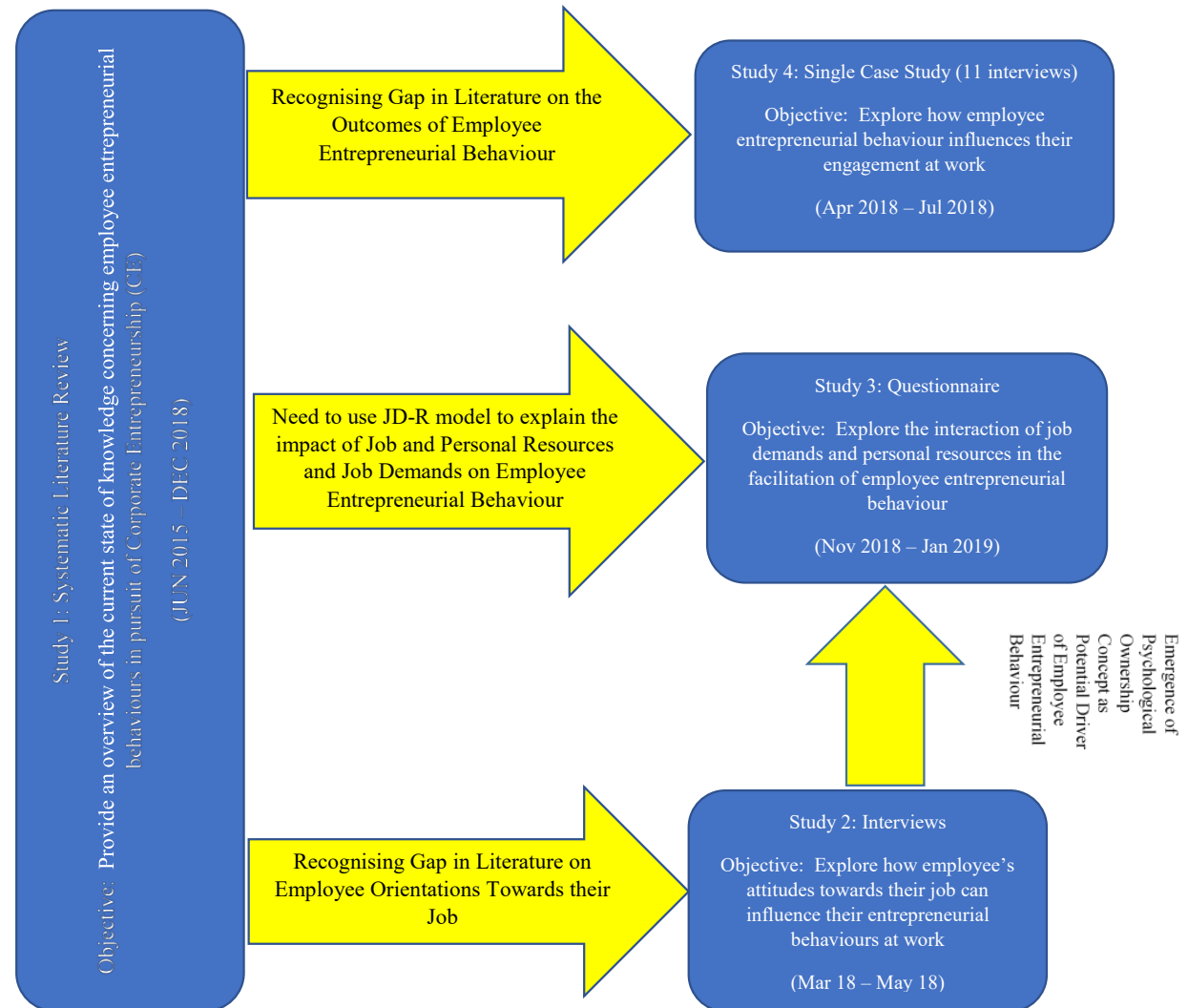


Figure 4.1. Flow and Sequence of Studies as Part of the Thesis.

Based on Figure 4.1, data collection took approximately two years to complete. Some of the data collection activities were carried out independently (e.g. study 1), while others were collected after analysing the findings of the previous studies. For example, the data for study 1 (SLR) was collected first and analysed between June 2015 and December 2017. Subsequently, in December of 2018, the researcher updated the SLR with more recent studies that emerged. Study 2 was conceived and developed between March and May 2018. Data collection and analysis for Study 4 was carried out between April and May of 2018. Specifically, once the data for study 2 was collected and analysed, the conceptualisation, development and implementation of Study 3 began. This was conducted from December 2018 to January 2019, after data collection for studies 1, 2 and 4 were completed.

4.2 Methodological Rationale for Study 2, 3 and 4

The following section provides a description of the rationale for each of the studies, the method adopted, a description of the participants/sample and their selection, and how the data was analysed. The details on how the SLR was conceptualised and conducted can be found in chapter 2.

4.3 Study 2 Objectives

Study 2 built on the gaps identified in the SLR from study 1. Study 1 highlighted the dearth of knowledge and empirical evidence on the influence of employees' orientations towards their jobs and how this can influence their

entrepreneurial behaviour. In particular, the SLR noted that much of the existing work on employee entrepreneurial behaviour has focused on specific characteristics of employees' job (e.g. amount of free time, discretion, job security). Consequently, little is known with regards to employee attitudes towards their jobs and how it can serve as an intrinsic motivator of entrepreneurial behaviour. Therefore study 2 sought to explore how employees' attitudes towards their job can influence their entrepreneurial behaviours at work.

RQ1: How does an employees' active orientation towards their work influence their entrepreneurial behaviour?

4.3.1 Methodological rationale for study 2.

Although Levitt, Motulsky, Wertz, Morrow and Ponterotto (2017) stated that qualitative studies continue to remain a minority in organisational psychology research, their appeal nevertheless continues to grow. Compared to more traditional quantitative approaches, qualitative approaches focus on generating unique knowledge about the nature of experiences and social processes (Fine, 2013). This is especially important when trying to understand how and why employees may choose to behave in a certain manner and the consequences of their behaviour. It is also important in topical areas where there is a dearth of empirical evidence and paucity of knowledge. Osbeck (2014) argued that qualitative approaches may be well suited to studies in psychology because of the iterative nature of such methods, in which data are analysed and meanings generated in a fruitful and recursive manner. Such a process serves as

an important means through which new insights and knowledge about psychological life and process can be gained (Rennie, 2012).

Study 2 focused on understanding how employee's active orientations towards their job influences their entrepreneurial behaviour. An exploratory qualitative approach using semi-structured interviews was deemed appropriate. Such an approach serves as a powerful means of understanding employees' intrinsic motivations towards entrepreneurial behaviour and how participants made sense of their work environment.

4.3.2 Participant selection and profile for study 2.

It was impossible for the researcher to approach all individual employees due to tight time constraints and the location of the institutions. A criterion-based purposeful sampling strategy was used to identify and select potential participants for the study. According to Patton (2002), criterion-based sampling involves reviewing and studying 'all cases that meet some predetermined criterion of importance' (p. 238). The following three criteria were used to identify and select potential participants for study 2:

1. Each participant was engaged in full-time employment at the time of selection. This criterion was included as the researcher was only interested in the entrepreneurial behaviour of employees who were working for an organisation. Although the researcher recognises that individuals who are not in full-time employment may choose to display entrepreneurial behaviour by starting their enterprise, it is beyond the scope and aim of this thesis.

2. Participants must be involved in some form of knowledge work and/or work in knowledge intensive organisations. Compared to manual labourers or those individuals that work in manufacturing or construction related roles, knowledge-workers primarily use their intellect in a non-routine nature, and their work often involves the creation and utilisation of knowledge and skills (Hislop, 2005). Moreover, knowledge work also offers some scope for individuals to take individual actions, thus allowing more scope for creative, entrepreneurial and innovative behaviours to emerge. Hence, lawyers, consultants, IT/software designers, advertising executives, accountants, scientists/engineers, and architects, may be classed as knowledge-workers.

3. The participant must be currently involved in some form of entrepreneurial activity in their workplace. The researcher took a broad view of entrepreneurial activity in the workplace and considered it as consisting of introducing or developing new ideas for products and services, solving organisational related problems, expanding the organisation's operations both domestically and internationally, proposing and implementing changes that resulted in organisational improvements. This criterion is important as the study sought to understand the effects of employees' attitudes on their jobs and their entrepreneurial behaviours.

The following process was used to identify and select potential participants. Firstly, the researcher contacted students who were part of a prestigious MBA programme in Kuala Lumpur, Malaysia, to ascertain if they met the abovementioned criteria. Prior research on employee entrepreneurial behaviour

has used samples of MBA and executive education students (Hornsby et al., 2002; 2009). MBA and executive education students are considered more likely to be in organisational positions which require entrepreneurial behaviours. Secondly, the researcher drew on personal and social networks in Kuala Lumpur to identify participants who fit the abovementioned criteria. The search strategy yielded a total of 13 potential participants who met the above-mentioned criteria and who were willing to partake in the study. The final selection of participants was determined by taking into account the diversity of participants with respect to their demographic factors, backgrounds and work histories, as well the specific nature of their work and the industry they belonged. This step was deemed necessary, as prior research has suggested that entrepreneurial behaviour may vary with respect to a variety of personal demographic and job specific factors (Hornsby et al., 2009). After careful consideration to ensure sufficient diversity, four individuals were excluded from the sample, thereby leaving a total of 9 participants. Table 4.1 provides a brief profile of the 9 participants. A more detailed profile of the participants can be found in chapter 5.

Respondent	Gender	Current Role	Industry
1	M	Head of regional development	Services – Telecommunications
2	M	Cyber-security consultant	Services – Information Technology
3	F	Procurement manager at family business	Manufacturing - Construction
4	M	Regional HR manager	Manufacturing -Textile
5	F	Trade marketer	Services -Pharmaceutical
6	M	Entrepreneur in residence at incubator	Services - IT
7	M	Lecturer	Services - Education
8	M	Plant manager	Manufacturing - Pharmaceuticals
9	M	Team manager of partnerships division	Services – Health/Government

Table 4.1. Basic Profile of Participants for Study 2.

4.3.3 Data collection for study 2.

Data was collected through in-depth face-to-face interviews. Interviews are particularly useful for exploration purposes (Creswell, 2014). All interviews were conducted in English and took place at the participants' workplace. On average, each interview lasted for about 65 minutes and was audio-recorded. A semi-structured interview protocol was used for each interview to understand the participants' perspectives about their personal experiences. Semi-structured interview protocol ensures that similar topics are covered among participants and also gives participants an opportunity to speak freely and elaborate on their answers and comment on other emergent issues of interest.

The semi-structured interview protocol was developed in the following way. Firstly, in consultation with the literature, the researcher developed a series of broad questions based on the topics of employee entrepreneurial behaviour, work/role attitudes and orientations. Next, the researcher developed an interview protocol and tested it on two Masters students in business to ascertain the flow of the questions and determine whether the questions were understandable. Feedback received from the students was then used to amend the interview questions. Subsequently, the researcher re-administered the amended interview protocol to three of the four participants whom were excluded from the main study. This led to even more feedback which was incorporated into the interview protocol questions.

The interview protocol consisted of four parts. Part 1 asked specific questions about the participant's background and work history. Part 2 asked participants to reflect on and describe the type of work they performed. Part 3 focused on understanding the participant's general attitudes, views and feelings

towards their job and part 4 focused on how their attitudes influenced their performance and actions in their current roles. At all times, the researcher avoided using technical or academic jargon during the interview. For example, rather than referring specifically to entrepreneurial behaviour, the researcher asked participants to consider and reflect upon how they identified opportunities in their workplace and/or introduced new ideas to solve workplace issues. Participants were constantly encouraged to reflect on and elaborate upon their responses where possible. During such questions, participants were also asked to consider how their attitudes towards their role/work affected their behaviour. Table 4.2 shows examples of some of questions used in the interviews and the rationale behind them.

Interview Protocol Part	Example Question	Question Rationale
I	Please describe yourself with respect to your educational background and work history?	This question was used to obtain background information about the participants.
II	Can you briefly describe the organisation/company you work for?	These questions were used to get an overview of the working conditions and added further contextualisation to entrepreneurial behaviour of the participants.
	How do you feel about the work you currently do?	
	Would you recommend others to work there why or why not?	
III	Can you describe and/or explain the work/role you currently perform? How interesting and challenging do you find your current work/role?	These set of questions helped the researcher to collect information about the nature and scope of the participant's work, as well as to indicate any entrepreneurial behaviours they have engaged in during their current work.
	What actions and behaviours have you done to successfully perform in your current work/role?	
IV	Please describe your attitudes and feelings towards your current role?	These set of questions allowed the researcher to understand participants' feelings and general attitudes towards their work, what aspects of their work they found motivating, and how and why their work/role impacted their entrepreneurial behaviour.
	How motivating/de-motivating do you find your current work, why or why-not?	
	How does your current role/work motivate you in identifying opportunities at work or solving organisational related issues/problems?	

Table 4.2. Example Interview Questions and Interview Protocol Structure for Study 2.

During the interviews, extensive field notes were also made and compiled. Such notes were later revisited in order to help contextualise and illuminate the participant's responses to the questions.

4.3.4 Data analysis strategy for study 2.

Firstly, the researcher listened to all the audio recordings of the interviews several times. This gave the researcher a high degree of familiarity with the interviews and the participants. Next, all the recordings were transcribed verbatim. In order to double check the accuracy of the transcription, the researcher gave random samples of three recordings to an independent researcher to transcribe. The transcriptions of both the researcher and the independent researcher were compared for similarity using Turnitin¹. A similarity index of 98.3% was achieved indicating a fair degree of confidence in the accuracy of the transcription process.

The researcher adhered to Braun and Clarke's (2006) principles for conducting thematic analysis in order to identify important patterns and themes in the data. All the transcripts were individually read and then coded individually using the coding scheme developed by the researcher. During the coding phase, great care was taken to ensure that the coding labels assigned to relevant sections of the text were analytically relevant. Hence, single word coding labels were avoided where possible. Specifically, individual transcripts were searched for evidence on the ways in which participants' attitudes towards their role influenced any of their entrepreneurial behaviours. For example, the researcher coded the sample text below as 'management providing authority' rather than simply coding it as 'authority' or 'discretion'. In using a more detailed label, the researcher was able to capture both the action as well as the

¹ Turnitin is an originality checking and plagiarism prevention service that checks one's writing for citation mistakes or inappropriate copying via generating a similarity index score. Turnitin can also be used to compare the similarity of one piece of text with that of another. In this case a higher similarity index score indicates that a piece of text has a high degree of similarity with another piece of text.

participant's feelings towards the action being described. This allowed for a more exhaustive coding of the interview transcripts.

“our mission, our CEO’s leadership team makes sure that everyone knows that we are clear in the direction moving forward in any of the leadership campaigns that we are embarking on. And then we are pretty much empowered to make decisions, just as long as we keep the angle in mind.” [management providing authority] (Participant 1 – Male - Study 2)

After the initial coding of the transcripts, the individually coded labels were clustered into various descriptors. For instance, the coding labels of ‘management providing authority’, ‘positional/role discretion’ and ‘individual responsibility’ were deemed descriptors of the various forms of formalised authority that the participants had in their jobs. Such descriptors were then analysed and compared with one another to determine the formation of micro-level descriptors. At this stage, individual meanings were assigned to each of descriptors and evidence was sought to understand the impact of such meanings on participants’ entrepreneurial behaviour. In relation to the example above, the micro-descriptors of authority (formal), authority (informal) and lack of authority were then assigned to a meso-level category called ‘discretion’. A re-examination of the individual codes in relation to discretion showed that it referred to employees’ sense of freedom to make critical decisions regarding their work and having responsibility for outcomes.

Finally, each of the meso-level categories were clustered into macro themes. In total, three macro-themes (Self-determination, Realising the

significance of one's work and Possessing Specific Capabilities and Skills) emerged from the data. To ensure reliability and validity in the analytical processes, the researcher constantly went back and forth between the emergent themes across all levels (micro-meso and macro) and the existing literature in an attempt to theorise the significance of the established patterns and their broader meanings with respect to employees' entrepreneurial behaviour. The macro and meso-themes developed all had either positive or negative implications for employees' entrepreneurial behaviour and represented important ways in which the participants viewed their work and how it motivated them towards entrepreneurialism. At this stage the researcher felt confident that the main themes had important implications for participants' entrepreneurial behaviour. Moreover, the developed themes also tended to mirror established concepts in the existing literature.

4.3.5 Summary of key findings for study 2.

Study 2 investigated how the work/role orientations of employees influence their entrepreneurial behaviour. Using the techniques outlined by Braun and Clarke (2006), three major themes in the data were identified, namely: Self-determination, Realising the significance of one's work and Possessing Specific Capabilities and Skills. In comparing the emergent themes in the data to the existing literature, it became evident that the three identified themes closely mapped on to the established construct of Psychological Empowerment (PE) (Spreitzer et al., 1999). Psychological empowerment has been described as an increased intrinsic task motivation manifested in a set of four cognitions reflecting an individual's orientation to his or her work role. The

four cognitions include: meaning, competence, self-determination and impact (Thomas & Velthouse, 1990). Numerous studies have linked the concept of psychological empowerment to positive proactive behaviours such as employee innovativeness (Bysted, 2013; Pieterse, Van Knippenberg, Schippers & Stam, 2010) and recently entrepreneurial behaviour (Afsar et al., 2017). Broadly, the findings from study 2 suggest that psychologically empowered employees are able to engage in entrepreneurial behaviour, act independently and have high commitment to their organisation. This is possible because they are likely to find more meaning in their entrepreneurial behaviour, believe they are in control of the work they do and display a level of confidence in their skills and capacity to act entrepreneurially as well as feel that their entrepreneurial behaviour has the potential to make a difference

4.4 Study 3 Objectives

Study 3 builds on the findings from study 2 and the gap identified in study 1 regarding the lack of research on employee attitudes towards their work and its effect on their entrepreneurial behaviour. Findings from study 2 suggested that the concept of PE (Spreitzer et al., 1999) may be an important means for understanding why some employees may or may not choose to behave entrepreneurially. While the concept has been examined empirically with respect to its influence on employee innovative work behaviour (Bysted, 2013; Pieterse et al., 2010), its application with respect to the broader concept of employee entrepreneurial behaviour remains limited (Asfar et al., 2017). Establishing an empirical link between the two concepts will also help to partially confirm the findings of study 2. Study 2 also draws on the JD-R model

(Bakker & Demerouti, 2007) to investigate the interactions between employees' job demands and job resources (job autonomy and task variety) and their personal resources (Psychological Empowerment) in facilitating their entrepreneurial behaviour.

RQ: Does employee Psychological Empowerment (PE) moderate the relationship between their Job Demands, Job Resources (job autonomy and task variety) and their entrepreneurial behaviour?

4.4.1 Methodological rationale for study 3.

Study 3 sought to understand the specific personal and job-related factors which influence employee entrepreneurial behaviour. Hence, a confirmatory and theory testing approach was adopted. Given the nature of the research question, a quantitative methodology utilising a cross-sectional survey design was adopted. Cross-sectional survey designs have long been used to examine the determinants of employee entrepreneurial behaviour (Hornsby et al., 2009). For instance, in a recent overview of the field of employee entrepreneurial behaviour, Mustafa, Gavin and Hughes (2018) identified that 24 out of the 26 major studies in the field adopted a cross-sectional survey design. Quantitative methods have also been predominantly used in studies utilising the concepts of PE (Spreitzer et al., 1999; Wang & Lee, 2009) and job demands (Schaufeli & Bakker, 2004). Moreover, quantitative methods are considered appropriate as they can help to determine whether the proposed relationships between the key concepts are significant or not.

4.4.2 Sample selection for study 3.

A non-probability sampling technique was used to obtain data for Study 3. Specifically, purposive sampling strategy was used, given the unique characteristics of the target sample; knowledge-workers in knowledge intensive organisations. The continued growth and dominance of the knowledge-based economy has increased the importance of intangible assets such as knowledge, creativity, and human capital (Joo, Park & Lim, 2016). Knowledge work is being increasingly seen as an important means through which individual employees can achieve higher productivity and performance and through which organisations can be innovative (Smith, Collins & Clark, 2005). Knowledge-workers can be differentiated from other types of workers such as those in labourer or agricultural roles, due to their high levels of formal education and skills (Clark, 2004). Moreover, as knowledge work requires the application of knowledge (Davenport, 2005), it is likely to foster higher levels of intrinsic motivation compared to those with simpler routine jobs (Oldham & Cummings, 1996).

Knowledge-workers are typically employed in knowledge-intensive organisations, which are described as ‘companies where most work can be said to be of an intellectual nature and where well-qualified employees form the major part of the workforce’ (Alvesson, 2000, p. 1101). Such firms and workers are prolific in the service industry and service-related jobs. Not surprisingly, various scholars have examined the entrepreneurial and innovative behaviours of knowledge-workers (De Jong & Den Hartog, 2007; Mustafa, Martin & Hughes, 2016). Study 3 sought respondents who fit broadly into the following

two criteria: (a) full-time employees and/or (b) employees employed within the service industry or service-related jobs/roles. Such a broad sampling approach would ensure sufficient diversity with respect to demographic, organisational and positional factors, which might affect employee's entrepreneurial behaviour.

The online crowdsourcing platform Prolific was used to recruit knowledge-workers for the study. Prolific is a recently established online platform dedicated to the recruitment of research participants (Palan & Schittera, 2018). A growing number of studies in the field of economics (Marreiros, Tonin, Vlassopoulos & Schraefel, 2017) and psychology (Callan, Kim, Gheorghiu & Matthews, 2016) have used samples drawn from Prolific. Several recent studies have been conducted examining the advantages and/or disadvantages of Prolific and other crowdsourcing platforms in research. In fact, Peer, Brandimarte, Samat and Acquisti (2017) concluded that:

“[Prolific] provides data quality that is comparable or not significantly different than MTurk's, and [Prolific's] participants seem to be more naïve to common experimental research tasks, and offer a more diverse population in terms of geographical location, ethnicity, etc. This suggests [...] [that] researchers who prefer naivety and diversity in their sample, could turn to [Prolific] if they are willing to wait some more for data collection to complete (depending on sample size)” (p.161).

A particular advantage of Prolific is that it allows researchers to set up specific recruitment criteria prior to the selection of participants. Such an option is particularly useful for the researcher in ensuring that criteria (a) and (b) (see

above) were met and potential participants from industries such as manufacturing, agriculture and construction/building may be excluded from the study, as they are less likely to be involved in or associated with knowledge work. An online questionnaire using Qualtrics was distributed to participants recruited via Prolific between November and December of 2018.

A potential issue with using participant recruitment services is the possibility of inaccurate or biased responses. In order to mitigate this issue, the researcher used the following steps: Firstly, the online questionnaire used for Study 3 contained a series of Attentional Checks or Instructional Manipulation Checks (IMCs) in order to determine whether participants were paying attention to the study questions or not (Oppenheimer, Meyvis & Davidenko, 2009). In the case of study 3, five Attentional Check questions were distributed randomly throughout the entire survey. Examples of these questions include “I pretend I am a good listener, no matter who I’m, talking to” and “I am always courteous even to people who are disagreeable”. Participants’ responses to the questions helped the researcher to determine whether the participant was paying attention to the questions posed or not. Specifically, participants who failed three out of the five attention questions were deemed as not paying attention and their surveys were excluded from the sample. Secondly, the researcher looked at the average response time per participant in the study. Pre-testing of the survey instrument (discussed later in the section) suggested that the average response time for participants was approximately 11 minutes. As a rough guide, the researcher examined participants’ responses and sought to remove any responses which were unusually quick in their response times. For example, 6

participants had response times below 2.5 minutes. Such responses were removed.

4.4.2.1 Sample and sample description for study 3.

Due to resource and time constraints, the researcher set a target sample of 400 respondents from Prolific. Respondents were given one month to complete the survey. By the conclusion of the one-month period, the researcher received a total of 341 completed surveys. Initial screening of the data revealed 8 incomplete responses which were subsequently removed. Next, the researcher checked the IMC's answered by each of the respondents. The researcher identified 6 respondents who scored less than three out of five IMCs. The responses of these 6 respondents were removed from the survey. Finally, the researcher examined the time it took for respondents to complete the survey. In particular, those below 2.5 minutes were also removed as it was observed that the responses below 2.5 minutes tended to miss specific items and/or tended to mostly indicate middle of range responses to most if not all items. This led to the removal of a further 6 respondents. This left a final sample of 321 useable responses representing a 80.2% response rate.

As can be seen from Figure 4.2, 60.1% of the respondents were female. The mean age for the respondents was 35.11 years (s.d. 9.49). The average length of tenure for respondents was 6.93 years (s.d. 6.89).

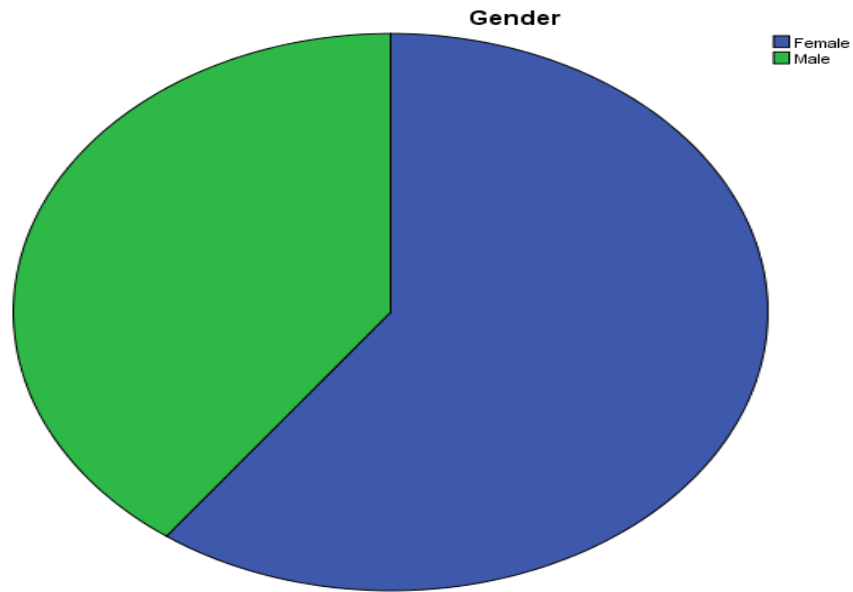


Figure 4.2. Gender Profile of Respondents.

Regarding respondent's educational attainment, Figure 4.3 shows that 46.4% held a Bachelor's Degree, while only 22.4% held a Masters Degree. Similarly, 24% held a basic High-School Certificate or Diploma.

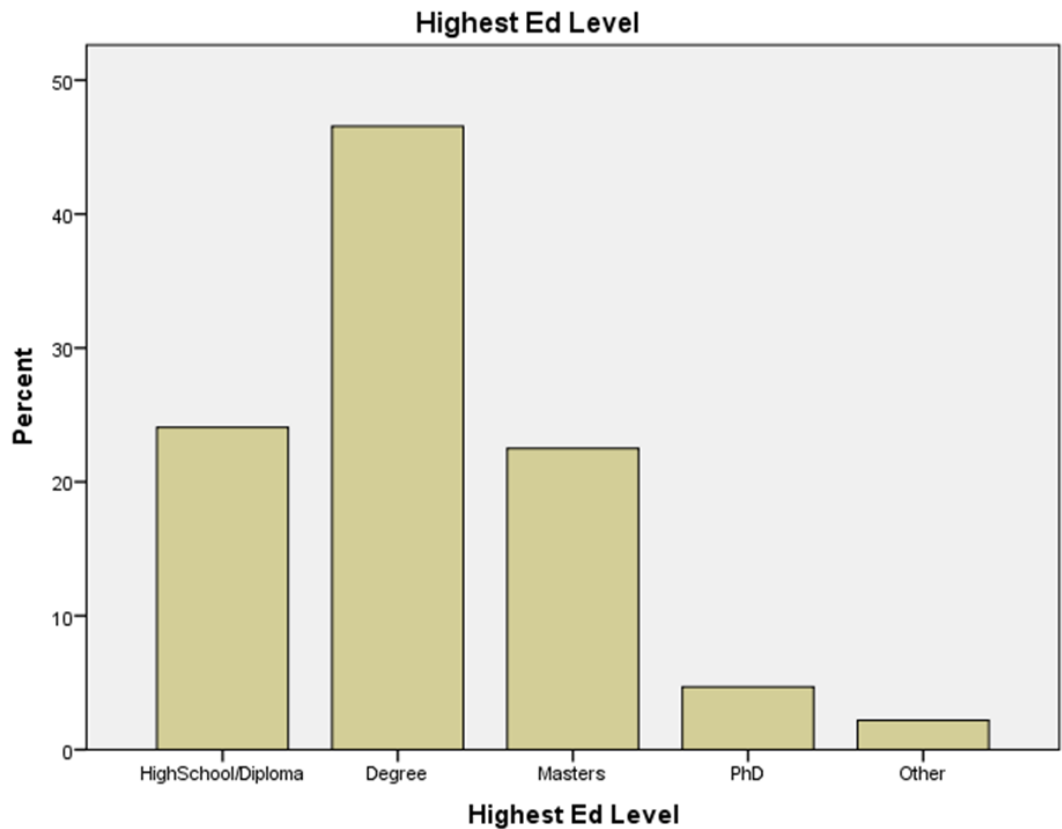


Figure 4.3. Respondents Educational Profiles.

Interesting features were also observed with respect to the respondents' work and organisational characteristics. Majority (44.67%) of respondents indicated that they were working in large organisations with 500 or more employees. 19.3% stated that they were working in organisations with less than 50 employees, while 11.8% indicated that they were working in organisations with 100 to 249 employees. The above suggests a good distribution with respect to organisational sizes. As shown in Figure 4.4, majority of respondents (34.0%) held either Junior or Team management positions. 27.1% of respondents indicated that they held positions of a rank-and-file employee, while a further 25.2% indicated that they were middle-managers.

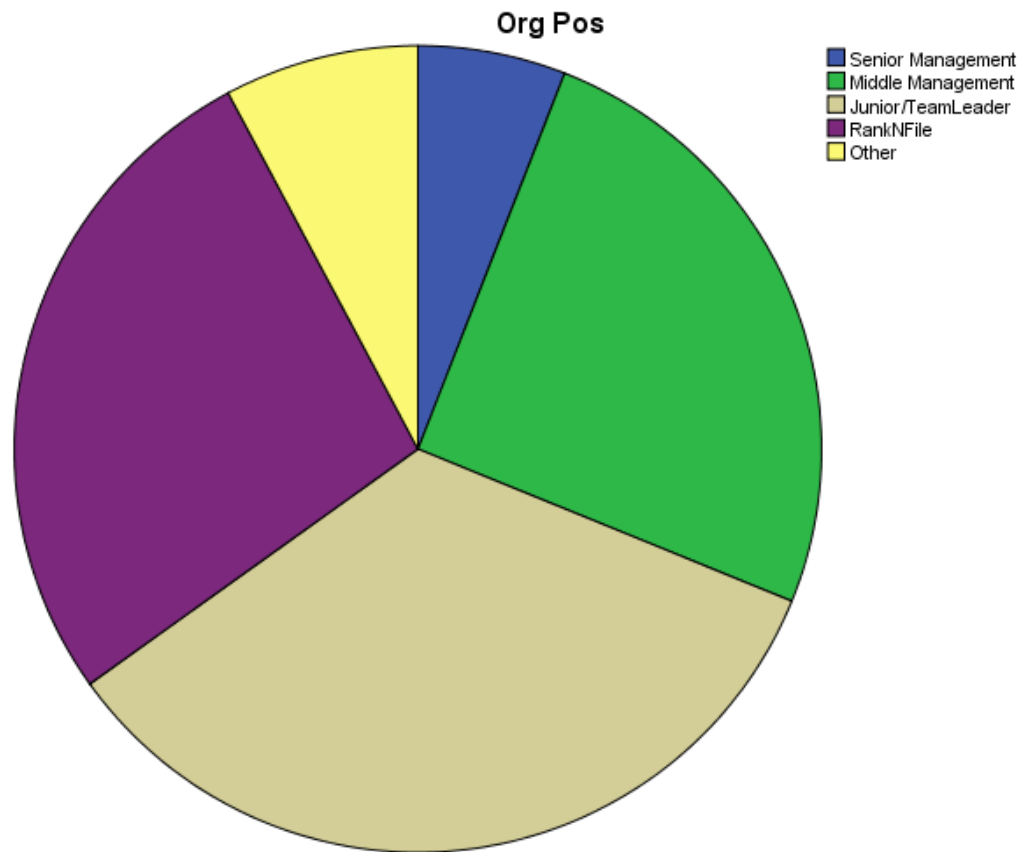


Figure 4.4. Organisational Positioning of Respondents.

Respondents were also asked about the basic characteristics of their work. When asked to indicate the nature or the type of work respondents were involved in, 32.1% indicated that they were involved in either clerical or administrative type of work. This was followed by 21.5% who indicated that they were involved in some sort of professional work (e.g. lawyers, accountants, consultants, designers, computing/IT). Finally, majority of respondents (60.7%) indicated that their work involved either a moderate or a lot of innovation and creativity on daily basis (see Figure 4.5).

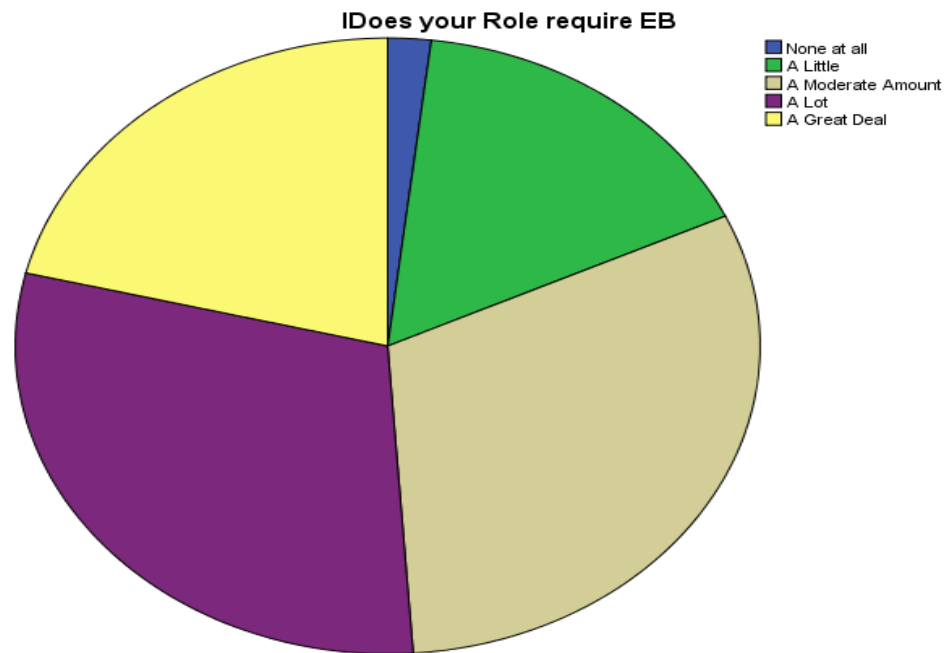


Figure 4.5. Extent to which Respondents' Role Requires Innovativeness and Creativity on a Daily Basis.

4.4.2.2 Survey instrument development for study 3

The questionnaire instrument consisted of four parts. Part 1 consisted of background questions, part 2 consisted of questions related to entrepreneurial behaviour and part 3 consisted of questions related to participants' attitudes towards their role and the characteristics of their job. Finally, part 4 consisted of questions related to participants' attitudes towards their organisation. All items were taken from established measures in the literature with minor adaptations to the wording in order to fit the context of the study.

Prior to distribution of the questionnaire, a pre-test of it was carried out on a small sample of 15 respondents. The pre-test was used to evaluate the flow, the understandability of the questionnaire items and, in general, approximately how long the questionnaire took to complete. After the pre-test, some minor

modifications were made to the wording of some questions and the flow of questionnaire.

4.4.3 Measures adopted in study 3.

4.4.3.1 *Employee entrepreneurial behaviour.*

Employee Entrepreneurial Behaviour (EB) was conceptualised as a higher order multi-dimensional construct consisting of three broad behaviours, innovativeness, proactiveness and risk taking. Respondents were asked to rate the extent to which they engaged in entrepreneurial behaviours using items from De Jong et al's (2015) measure of entrepreneurial behaviour. All items were rated on a 5-point Likert scale ranging from 1 (Never) to 5 (A great deal).

Employee Innovativeness was measured using three items from Scott and Bruce (1994). Example items included "Generate creative ideas and solutions to problems/issues" and "Promote and champion ideas to others". The Cronbach Alpha for the dimension was 0.78. Employee Personal Initiative was measured using three items adapted from Parker and Collins's (2010) Personal Initiative scale. Example items include "Successfully sell issues and initiatives to others/management" and "Identify long term opportunities and threats for your organisation". The Cronbach Alpha for the Personal Initiative dimension was 0.79. Employee Risk Taking was measured using 3 items adapted from De Jong et al. (2015). Example items included "Act first and then ask for approval, even if it would annoy other people" and "Take risks as part of your job". The Cronbach Alpha for the risk-taking dimension was 0.80. All items were

summed up to form individual sub-scales. Also, all individual sub-scales were then summed up to form an overall measure of employee entrepreneurial behaviour. The Cronbach Alpha for the entire scale was 0.86.

4.4.3.2 *Psychological Empowerment (PE).*

Spreitzer's (1995) twelve (12) item scale was used to measure employee's Psychological Empowerment. The scale consists of four dimensions assessing the work-related perceptions of Competence, Self-Determination, Meaning and Impact. Each dimension consists of three (3) items. Example items include "The work I do is very important to me" - Meaning, "I am confident about my ability to do my job" – Competence, "I can decide on my own how to go about doing my work" - Self-determination and "I have significant influence over what happens in my department" – Impact. As per Spreitzers' (1995) recommendations, all items per dimension were summed and each dimension was further summed into an overall PE score. All items were measured on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Cronbach Alpha for the scale was 0.89.

4.4.3.3 *Job demands.*

Janssen's (2000) 8 item scale was used to measure job demands. The scale assesses demanding aspects of one's job, such as the perceived amount and pace of work, the required effort, and the perceived pressure. Example items include "I have to work fast", "I have to deal with a backlog of work" and "I have to work extra hard to finish a task". All items were measured on a 5-point

Likert scale ranging from 1 (Never) to 5 (Always). Cronbach Alpha for the scale was 0.86.

4.4.3.4 *Job resources (task variety and job autonomy).*

Both job autonomy and task variety were measured using 3-items each from Morgeson and Humphrey's (2006) Work Design Questionnaire (WDQ). All items were measured on a 5-point Likert scale ranging from 1 (Never) to 5 (Always). Example items for job autonomy include "Provides you with significant autonomy in making decisions" and "Require the performance of a wide range of tasks" for task variety. The Cronbach Alpha for job autonomy was 0.90 and 0.91 for task variety.

4.4.3.5 *Control variables.*

The study controlled for common antecedents of employees entrepreneurial behaviour. Two of the most common antecedents of such behaviour are tenure and organisational positioning. Consistent with Ng and Feldman (2013, p. 588) and others, study 3 defined tenure as the "the length of employment in an organisation" (De Jong et al., 2015, p. 946). Specifically, the researcher subscribed to the notion that employees will experience dynamic and innovation-relevant job demands as a function of tenure, which represents the contexts in which entrepreneurial behaviour plays out (Woods et al., 2018). Accordingly, tenure was measured as the number of full-time working years in the organisation.

Employees' organisational positioning was also measured as a control variable. Prior research has shown that employee entrepreneurial behaviour can vary with respect to their organisational positioning (Hornsby et al., 2009;

Mustafa, Martin and Hughes, 2016). Therefore, organisational positioning was measured as a categorical variable. Based on prior research, four-specific organisational-levels were identified and used (Hornsby et al., 2009), namely; (1) Senior-Management, (2) Middle-Management, (3) Junior/Team/Front-line Management and (4) Rank-and-file employee.

Employees' proactive personality was used as a control variable. Prior research has suggested a positive association between employee proactive personality and innovativeness (Parker & Collins, 2010), success of new ventures (Rauch & Frese, 2007) as well as their entrepreneurial behaviour (De Jong et al., 2015). According to Bateman and Crant (1993), a proactive personality refers to an individual trait that encourages individuals to take action in order to influence their environment and bring about change. Study 3 used the 5-item shortened version of Bateman and Crant's (1993) Proactive Personality Questionnaire. The shortened version has been used previously by Kickul and Gundry (2002) to examine managers' prospecting behaviour in relation to small firm innovation. Example items included "Nothing is more exciting than seeing my ideas turn into reality" and "I can spot a good opportunity long before others can". All items were measured on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The Cronbach Alpha for the scale was 0.86

4.4.4 Data analysis strategy for study 3.

A combination of descriptive and inferential statistical techniques was used to analyse the collected survey responses. Descriptive statistics consisted of means, standard deviations (s.d.) and percentages which were primarily used

to summarise key information of respondents. The researcher also carried out Confirmatory Factor Analysis (CFA) with maximum likelihood estimation and unrelated error terms, in order to confirm the existing factor structure of the established scales.

Inferential statistical analyses were then used to explore the relationships between the variables in this study based on the data collected via the questionnaires. All analysis was carried out using IBM Statistics Package for Social Sciences (SPSS) version 20. With respect to data analytical techniques, the researcher followed the guidelines and principals established by Field's (2000), using the process macro to examine moderation effects. For the purposes of Study 3, the threshold for statistical significance in this study was set to below 0.05 level ($p < .05$). Hence, any relationships that have a significance above 0.05 maybe be considered as statistically significant. This threshold is consistent with existing studies in the topical areas.

4.4.5 Summary of key findings for study 3

Based on analysis of the 321 responses and controlling for the effects of tenure, proactive personality and job levels, only job autonomy and job demands were found to have significant positive relationship with employee entrepreneurial behaviour. However, PE was found to moderate the relationship between both task variety and job autonomy and employee entrepreneurial behaviour.

Regarding the ideation dimension, after controlling for the effects of tenure, proactive personality and job levels, both job autonomy and task variety were found to have significant effects. Psychological Empowerment (PE) was

found to moderate the relationship between both task variety and job autonomy and ideation. With respect to the personal initiative dimension, after controlling for the effects of tenure, proactive personality and job levels, both job demands and PE were found to have significant direct effects. Psychological Empowerment (PE) was found to have no significant moderating effects with respect to either job demands, job autonomy or task variety. Finally, controlling for the effects of tenure, proactive personality and job levels, both job autonomy and job demands were found to have a significant positive relationship with risk taking. Yet, PE was found to have no significant moderating effects with respect to either job autonomy and job demands or task variety. The findings show how job demands, job resources (job autonomy and task variety) and personal resources (PE) can have differential effects on the various dimensions of employees' entrepreneurial behaviour.

4.5 Study 4 Objectives

Study 4 builds on the gaps identified in study 1 regarding the need to better understand the positive psychological benefits associated with behaving entrepreneurially in organisations. In line with recent calls in the literature to use process-oriented studies focused on the positive consequences of employee entrepreneurial behaviours (Belousova & Gailly, 2013; Dess et al., 2003; Sieger et al., 2013), this study focused on the effects of employee entrepreneurial behaviours on their engagement. Recently Gawke et al. (2017) demonstrated that an employee's entrepreneurial behaviour can positively influence their work engagement. However, despite drawing on the JD-R model, their study focused only on a limited set of generic personal resources that influence the

employee entrepreneurial behaviour and work engagement relationship. Hence, further investigation is needed to uncover additional personal resources, which may be unique to entrepreneurial employees that may influence their work engagement.

RQ: What personal resources arise from being entrepreneurial at work that positively influence employee work engagement?

4.5.1 Methodological rationale for study 4.

The field of entrepreneurship has also been long reliant on the use of quantitative methods grounded in a positivist epistemology (Suddaby et al. 2015). According to several scholars, the lack of qualitative approaches has meant that the field has not progressed in developing an indigenous theory of entrepreneurship as it has largely failed to generate a defining theoretical question on what Kuhn (1970) would describe as a core puzzle of entrepreneurship (Suddaby et al., 2015). This has subsequently led scholars to call for the further adoption of qualitative methodologies to understand entrepreneurial process and outcomes (Zahra & Wright, 2011).

In line with the research objectives of study 4, a single-case design method was adopted, which focused on the experiences of entrepreneurial employees in a particular organisation. Qualitative methods are considered powerful methods to describe, decode, and advance the understanding of intertwined past, present, or future eclectic data (facts, activities, actors' actions, decisions, or representations) (Creswell, 2014). More importantly, the study's aims and objectives necessitated a flexible research method which allowed for

an in-depth study of the given phenomenon, mobilising creative ways of producing and analysing empirical data (Neergaard & Ulhøi, 2007).

A particular advantage of the case study approach is that it allows the researcher to take into account the richness of context (Yin, 2003). Yin (2003, p.14 - 15) explained that cases are ideal to examine issues in real-life contexts because “[the] case study contributes uniquely to our knowledge of individual, organisational, social, and political phenomena” and “the distinctive need for case studies arises out of the desire to understand complex social phenomena”. Indeed, entrepreneurial behaviour does not occur in a vacuum, and thus, an in-depth, engaged investigation in a real-life context is needed in order to capture such complexity, especially with regards to how such behaviour comes about and what influences it. In conducting case studies, a researcher needs to consider whether to adopt a single or multiple case study design (Yin, 2003). A particular advantage of a single case study design (Yin, 2003) is that it allows the researcher to focus on specific decision-making processes and interpretations of a specific event by taking into account the richness of context (Stake, 1995). Based on such a consideration, the researcher adopted a single case study design (Yin, 2003).

4.5.2 Case and participant selection for study 4.

Due to the need to study employee entrepreneurial behaviour in established organisational settings, a purposive sampling strategy (Patton, 1990) was adopted. A particular advantage of purposeful sampling is that it allows the selection of instrumental and unique cases. In order to study employee entrepreneurial behaviour, organisations with rich entrepreneurial histories and cultures were sought, as such organisations are more likely to

employ entrepreneurially minded employees and/or have roles that require innovativeness. Particularly challenging for the researcher was identifying established organisations with such conditions and ones that also had a sufficient pool of entrepreneurially minded and active entrepreneurial projects/initiatives taking place.

After much consideration, it was considered appropriate to focus on employees in corporate incubators. Corporate incubators are specialised corporate units that hatch new businesses by providing physical resources and support (Colombo & Delmastro, 2002). They also play an instrumental role in supporting the commercialisation of promising ideas or technology from either internal employees or external entrepreneurs. Such entities are often profit-driven, and many have entrepreneurial cultures, structures and processes in place which are designed to actively encourage employees to behave entrepreneurially as part of their daily roles. Hence, such organisations may be considered as ideal sites to study employee entrepreneurial behaviour and its consequences.

Currently, there is no comprehensive national list of corporate incubators in Malaysia. In trying to identify potential corporate incubators for the study, the researcher actively attended several start-up workshops/conferences and/or ideation/hackathons organised in Malaysia. Through these events, the researcher was able to identify several prominent corporations and incubators in Malaysia which play an active and leading role in promoting and supporting entrepreneurial start-ups.

After attending several of such events and networking parties, the researcher developed a list of 16 corporate incubators. Next, the researcher

conducted a background investigation into the 16 corporate incubators via secondary and online sources such as websites and newspaper articles. Majority of the 16 corporate incubators identified remained small-scale in size and operations, and thus they employed a small number of staff who were mostly in administrative roles or duties (e.g. marketer, legal aid or receptionist). The researcher was able to identify 4 medium to large sized corporate incubators. These corporate incubators were considered as more ideal sites for studying entrepreneurial behaviour, as they had the following characteristics:

- (a) Had strong reputations for supporting and developing start-ups in the region;
- (b) Employed a significant number of employees in various roles and functions;
- (c) Were known to attract and employ relatively innovative and entrepreneurial employees; and
- (d) Had access to the necessary and sufficient resources to sustain employees' entrepreneurial initiatives.

After identifying the four potential cases, the researcher approached the top management of each of the corporate incubators and explained the purpose of the study. After extensive discussions with the firms' top management, two corporate incubators declined from participating in the study. One corporate incubator only gave permission to talk to administrative staff and non-managerial staff. As this was deemed inadequate for the requirements of the study, the case firm was dropped. Thus, only one case firm fit the criteria and was willing to cooperate with the researcher.

4.5.2.1 *The case firm.*

The empirical setting for this study consisted of the Digital Services arm of a large Malaysian telecommunications conglomerate with an extensive presence across Asia. With revenue of approximately USD 4.52 billion in 2016, the conglomerate has over three hundred (300) Million subscribers and employs close to 25,000 employees across ten (10) countries throughout the Southeast and South Asia regions. In an effort to increase its digital footprint in the region by 2020, the conglomerate launched an independent entity called Digital Services. As an autonomous entity within the conglomerate, Digital Services aims to position itself as a leading digital enterprise throughout the region via various strategic transformation initiatives and investments into technology startups. As of late 2016, Digital Services had roughly 110 employees, more than thirty (30) active investments in technology businesses and launched thirteen (13) internally developed digital products.

Digital Services seeks to drive innovation, entrepreneurship and digital initiatives through a three (3) staged process. Stage one (1) involves cultivating new ideas and conducting experiments of various business models while fostering strategic partnerships with innovative ecosystem players. Stage two (2) involves incubating new business ideas and launching new ventures across the company's footprint. Existing businesses will also undergo a business model refinement process in addressing new customer demands and exploring new verticals to strengthen the firm's position in the digital ecosystem. Finally, Stage three (3) involves capturing inherent value of investee companies through

product monetisation, attracting potential investors to co-invest in portfolio companies and exits.

In trying to achieve its goals, Digital Services has sought to establish a conducive corporate culture which emphasises entrepreneurial and innovative mind-sets. Accordingly, Digital Services has placed considerable effort in emphasising the six (6) core values of 'disrupt, disrupt, disrupt,' 'act now,' 'be humble and team up,' 'have fun and do good,' 'be bold and dream big' and 'fail, to learn.'. In trying to emphasis these values, Digital Services ensures that employees work in an open space environment to spur conversations and spontaneous ideas. Additionally, performance bonuses are not entirely based on only financial deliverables, and employees are rarely penalised for failures. Instead, employees are actively encouraged by management to experiment, learn, and take calculated risks.

Despite such positive attributes, the case firm has recently been identified in the local media as having a highly male and chauvinistic culture. This was attributed to its entrepreneurial culture which emphasized a 'win at all cost' attitude among the male and in particular project leads and management. As a result, several talented female employees in promising managerial positions had left the case firm because of its aggressive culture.

4.5.2.2 *Participants.*

A particular advantage of the single case study design is that it enables the researcher to examine particular sub-units which are situated within a larger case. In this study, sub-units were deemed as individual entrepreneurial employees. Examining the entrepreneurial behaviour of individual employees

within a larger organisation allowed the researcher to explore individual cases, while also considering the influences of organisational factors and process on the outcomes of the employee's entrepreneurial behaviour.

Entrepreneurial and innovative employees were chosen as key informants because it was deemed that such employees (a) would have an established history of such behaviour(s), (b) are likely to face considerable demands and challenges with respect to the nature of their work and (c) to overcome and manage such challenges and demands, such employees need to have specific individuals skills, attributes and characteristics. A multi-step convenience sampling strategy was used to identify and select the key informants. Firstly, in consultation with the existing literature, the researcher developed a working definition of employee entrepreneurial behaviour based on specific characteristics identified by De Jong et al., (2015) and in study 1. For the purposes of study 4, entrepreneurial employees were described as employees who 'proactively engage in the creation, introduction, and application of entrepreneurial and innovative opportunities at work'.

Next, the researcher approached the top management of the case firm in May 2018, asking them to identify individual employees in the organisation who were known for their entrepreneurial and innovative activities and generally fit the mentioned description of entrepreneurial employees. With the support of top management and the corporate incubator's HR department, a total of 19 employees who broadly fit the above description were identified. The researcher also sought to corroborate top managements list of individual employees by randomly asking employees about their opinions on entrepreneurial and innovative employees. This process led to the identification

of a further two individuals, and also served to confirm management's list of people.

Next, internal reports and communicate regarding new product development and the development of new ventures were also examined to provide further corroboration. This process took three weeks to complete. After this process, three employees were eliminated from the list of 21 employees, as they \ did not fit the description. Thirdly, the researcher approached each of the 18 employees and explained to them the purpose of the study. The researcher also used this as an opportunity to briefly interview each employee about their work in the organisation and what they had been responsible for, in terms of entrepreneurial initiatives. In the end, only 11 of the 18 identified individuals agreed to participate in the study. Table 4.3 provides a basic profile of the 11 participants. All selected participants were male, as no female participants were identified by the case firm as entrepreneurial and innovative in nature. This can be attributed to following. Firstly, the case firm has gender imbalance with respect to its workforce, in that majority of the employees are males, and this particularly the case for managerial positions and project leads. Secondly, majority of the female employees were identified in support roles, such as general administration, marketing or HR. Traditionally, such roles are quite distinct from more project and client management roles, hence opportunities to engage in entrepreneurial and innovative activities were more limited. Finally, it can also be attributed to the cultural norms in Malaysia, which is known as highly patriarchal society wherein females are encouraged to be subservient to males in the workplace.

Participant	Organisational Tenure (years)	Job Scope/Role in the Organisation	Organisational Position
1	2	Deals one-on-one with clients to detect and solve their problems related to software and databases	Rank & File
2	3	Heads a small team designated with designing and delivering new initiatives internally to improve existing systems and processes	Middle- Management
3	1.5	Responsible for engaging with external stakeholders locally and across the region, to seek out and develop new business opportunities	Middle- Management
4	8	Head of division responsible for designing and delivering innovations throughout Digital Services	Senior- Management
5	3	Head of Corporate Development responsible for identifying and exploiting new investment opportunities for Digital Services	Senior- Management
6	4	Part of emerging projects team and is responsible for developing customised solutions for client's existing problems	Middle- Management
7	4	Leads a dynamic product development team responsible for setting up new product platforms and online products	Junior- Management
8	7	Part of product development team responsible for developing new products and re-designing and improving existing ones in the market	Junior- Management
9	3	Part of new product development team and is responsible for developing new products for online use	Team-Leader
10	4	Part of business development team and is responsible for managing relations with suppliers and developing new investment opportunities in commodity products.	Middle- Management
11	3	Heads special projects team tasked with launching new products in emerging markets and marketing them	Team-Leader

Table 4.3. Basic Profile of Participants in Study 4.

4.5.3 Data collection.

An advantage of the case study method is that it allows for opportunity to collect data from multiple sources. In this particular study, data was collected from two sources. Firstly, primary data was collected through a series of 11 in-depth semi-structured interviews with participants. Initial interviews were face-to-face and were conducted in the participants' place of work. Each interview lasted between 1.5 – 2 hours and was recorded digitally. Extensive field notes were also taken by the researcher during each interview.

All interviews followed a semi-structured interview protocol developed specifically for this study by the researcher. The researcher was mindful of developing questions which did not include technical or academic jargon as this might lead to bias or confuse participants. Hence, an initial interview protocol was pilot tested on two MBA students and one entrepreneur from Kuala Lumpur. The feedback received from these individuals proved instrumental in re-drafting the wording and the structure of interview questions and protocol.

The interview protocol consisted of seven parts. Part I focused on the participants' background, while Parts II and VI sought to understand participants' general attitudes towards their work, Part III asked participants to describe their work and the entrepreneurial/innovative projects/initiatives they took part in. Part IV focused specifically on how the personal resources of participants developed. Finally, Part VII sought to understand the general working conditions in participants' organisation. Participants were constantly encouraged to reflect on and elaborate upon their responses to the question

posed and/or the emergent issues talked about which they considered important. The researcher also conducted a small number of follow up interviews with some participants via email. This was for further clarification on points raised during the interviews. Table 4.4 provides some examples of some questions and the rationale behind them.

Interview Protocol Part	Example Question	Question Rationale
I	Can you please describe yourself with respect to your educational background and work histories?	This question was used to obtain background information on the participants.
II	Can you explain and describe the types of innovative and entrepreneurial projects you have been involved in as part of your work/role?	This question was used to get an overview of the participants' entrepreneurial behaviour.
III	What role did you play? How did you ensure the project was completed? How do you feel about the work you perform and/or the projects you are a part of?	These questions sought to develop an understanding of the participants' general attitude towards their work and the extent to which they are engaged in their work.
IV	To what extent do you think you are engaged/involved with your work? What personal challenges did you face when you were a part of entrepreneurial projects?	This set of questions helped the researcher to collect information about the challenges and demands faced by the employees in their workplace.
	How have you sought to overcome some of the challenges?	
	How have you personally learnt and/or developed from being a part of entrepreneurial projects?	These questions focused on understanding how individual participants overcome the challenges associated with being part of entrepreneurial projects/initiatives.
VI	Can you describe or explain how and why you remain engaged in your role. What personal skills or abilities do you feel you possess that help you to remain committed and engaged at work?	This set of questions enabled the researcher to understand participants' motivations towards being engaged and how they remain so.
VII	Can you describe the working conditions in your organisation? How does your organisation try to support or motivate you in your role?	This set of questions sought to understand the working conditions in the participants' respective organisations.

Table 4.4. Example Interview Questions and Interview Protocol Structure for Study 4.

The researcher also collected secondary data from a range of sources. These secondary sources included internal product development reports, firm brochures, policy documents, the firms' websites, and in some instances, media packs and news clippings. Such information helped to further contextualise the responses from participants and also helped to triangulate and reconfirm interview responses.

4.5.4 Data analysis.

The following steps were used in the analysis of the collected data. Firstly, all interviews were transcribed verbatim by the researcher. An independent researcher also transcribed three randomly selected interviews. The transcriptions of the researcher and the independent researcher were compared for similarity using Turnitin. A similarity index of 95.7% was achieved indicating a fair degree of confidence in the accuracy of the transcription process.

Next, the researcher read and re-read each transcript carefully to look for examples and descriptors concerning conditions in the case firm. Thirdly, using the interview and the secondary data, the researcher compiled an individualised case history of the selected case firm, with respect to its objectives/mission, key developments in its history, significant entrepreneurial activity/initiatives and how it went about supporting and motivating its employees to behave entrepreneurially. Additionally, participants' responses to Part II and VII of the interviews was also used to provide a description of the working conditions at the case firm.

Braun and Clarke's (2006) recommendations concerning thematic analysis was adhered to in trying to answer the research question. Firstly, each of the 11 transcripts were carefully read, and initial codes based around the research questions were assigned to interesting features of the data in a systematic fashion. Specifically, the researcher focused on the key experiences and skills/knowledge that the employees gained through their entrepreneurial behaviour, and how it influenced their engagement at work, through developing specific descriptor labels. For example, the following piece of text was coded as 'motivation through being persistent'

"I would say thick skin, you will hear more No's and very very rarely a yes from clients or management regarding your ideas. It's this thick sick and constantly believing that I can get through as I have the skills and confidence to do so that keeps me going in this role." (Participant 4 – Male - Study 4)

Next, the researcher formulated meso-themes by collating the specific descriptors. For instance, in the above example, Motivation by being persistent was deemed as forming part of the meso-theme of Resilience. At this stage, the researcher began to apply the JD-R model and the definition of personal resources within it, in order to determine whether the emergent meso-themes were consistent with the definition of personal resources in the literature. It also helped to give meaning to the meso-themes that emerged. Personal resources were defined as "positive self-evaluations that are linked to resiliency, and refer to individuals' sense of their ability to control and impact upon their environment successfully" (Bakker & Demerouti, 2008, p.5). The researcher

described the meso-theme of Resilience as ‘the willingness to invest effort in their entrepreneurial role at work, and the willingness to persist through with entrepreneurial efforts in the face of difficulties. Consequently, this also helped the researcher to narrow the list of meso-themes developed as it led to some sub-categories being excluded as they did not fit the definition and conceptualisation of personal resources. For instance, management commitment and support emerged as an important meso-theme. However, as this refers to a management or job – resource and not personal resources, they were excluded from further analysis.

At this point, the researcher also compared the meso-themes with the case history developed earlier and the description of the working conditions within the case firm. This enabled the researcher to further contextualise the development of personal resources by participants and added further meaning to their actions. Finally, each of the meso-themes were clustered into macro-themes. In total, three macro-themes, Formation of an Entrepreneurial Self, Entrepreneurial Learning, Being Optimistic about Entrepreneurial Activity, emerged from the data.

4.5.4 Summary of key findings for study 3.

Analysis of the data provided fresh insights into the personal resource entrepreneurial employees developed while behaving entrepreneurially, and which encourage their engagement at work. Specifically, Formation of an Entrepreneurial Self, Entrepreneurial Learning, Being Optimistic about Entrepreneurial Activity all emerged as significant personal resources that

entrepreneurial employees developed from their behaviour. Such resources were highly personalised in nature, and developed over time as a result of their entrepreneurialism. Moreover, each of the personal resources were deemed as important by participants in being able to effectively function in their current roles. Additionally, many participants viewed the development of such resources as positive developments associated with their entrepreneurial behaviour. In fact, for many, such resources also represented a strong form of intrinsic motivation, thus encouraging them to continue on in their entrepreneurial endeavour despite significant challenges.

4.6 Ethical Considerations

With the exception of study 1 (SLR), all studies were granted ethical clearance from the Faculty of Arts and Social Sciences Research Ethics Sub-Committee, University of Nottingham Malaysia. The ethical clearances for each of the studies covered the following areas:

4.6.1 Informed consent.

All participants and respondents were provided with a consent form prior to participating in the studies. Each consent form clearly explained to the participants the overall aim of the study they were about to participate in, what would be required of their participation and any potential personal/social and/or financial consequences of their participation. Participants were also informed clearly that they were free to withdraw their participation from the study at any point in time they felt necessary to do so. Both interview and survey responses only commenced once the participant signed a physical copy of the consent

form (for participants being interviewed) and/or clicked ‘agreed’ and ‘proceed’ for respondents of the online questionnaire.

4.6.2 Voluntary participation.

All participants were informed prior to the start of their participation in the study that participation was on a voluntary basis. They were also clearly informed by the researcher and the consent form that there would be no negative consequences should they choose to withdraw their participation from the study.

4.5.3 Privacy and confidentiality.

Great care was taken by the researcher to ensure that no personally identifiable information was collected from participants/respondents during the survey and/or the interviews. Additionally, all data was kept under lock and key. This helped to ensure that participants’ anonymity and confidentiality was maintained.

4.7 Chapter Summary

Chapter 4 explained the methodological rationale for each of the empirical studies in the thesis. The chapter also explained in detail how the data for each particular study was collected and analysed. In keeping with the pragmatic research design (Bryman et al., 1988), the thesis used both qualitative and quantitative approaches to address the broad research objectives of identifying the determinants and consequences of employee entrepreneurial behaviour. Additionally, the thesis also drew on a number of different samples

for each particular study. Table 4.5 below provides a brief summary of the main research question(s) for each study, the methodological choice and the sample.

Study	Research Question(s) and/or Objectives	Method Utilised	Sample
2	How does an employees' active orientation towards their work influence their entrepreneurial behaviour?	Qualitative – Semi-structured interviews	9 Knowledge-workers across various industries and job roles.
3	Does employee Psychological Empowerment (PE) moderate the relationship between their Job demands, Job resources (job autonomy and task variety) and their entrepreneurial behaviour?	Quantitative – Cross-sectional Survey	321 Knowledge-workers from knowledge intensive companies.
4	What personal resources arise from being entrepreneurial at work that positively influence employee work engagement?	Qualitative – Single Case Study	11 entrepreneurial and innovative employees in a corporate incubator, corporate documents and reports.

Table 4.5. Summary of Main Empirical Studies, Chosen Methodology and Sample.

CHAPTER FIVE: Empirical Study 2

5 Chapter Overview

This chapter reports the findings of an investigation into how the work/role orientations of employees may influence their entrepreneurial behaviours. Specifically, the chapter sought to address the following research question:

RQ: How does an employee's active orientation towards their work influence their entrepreneurial behaviour?

Data was drawn from nine semi-structured interviews with employees across a range of occupations and age groups. Figure 5.1 shows the major and sub-themes that emerged from the data. Table 5.1 and 5.2 provide an overview of the coding structure for the data and a detailed profile of the nine participants. How the nine participants were recruited for the study and how the data was analysed can be found in chapter 4.

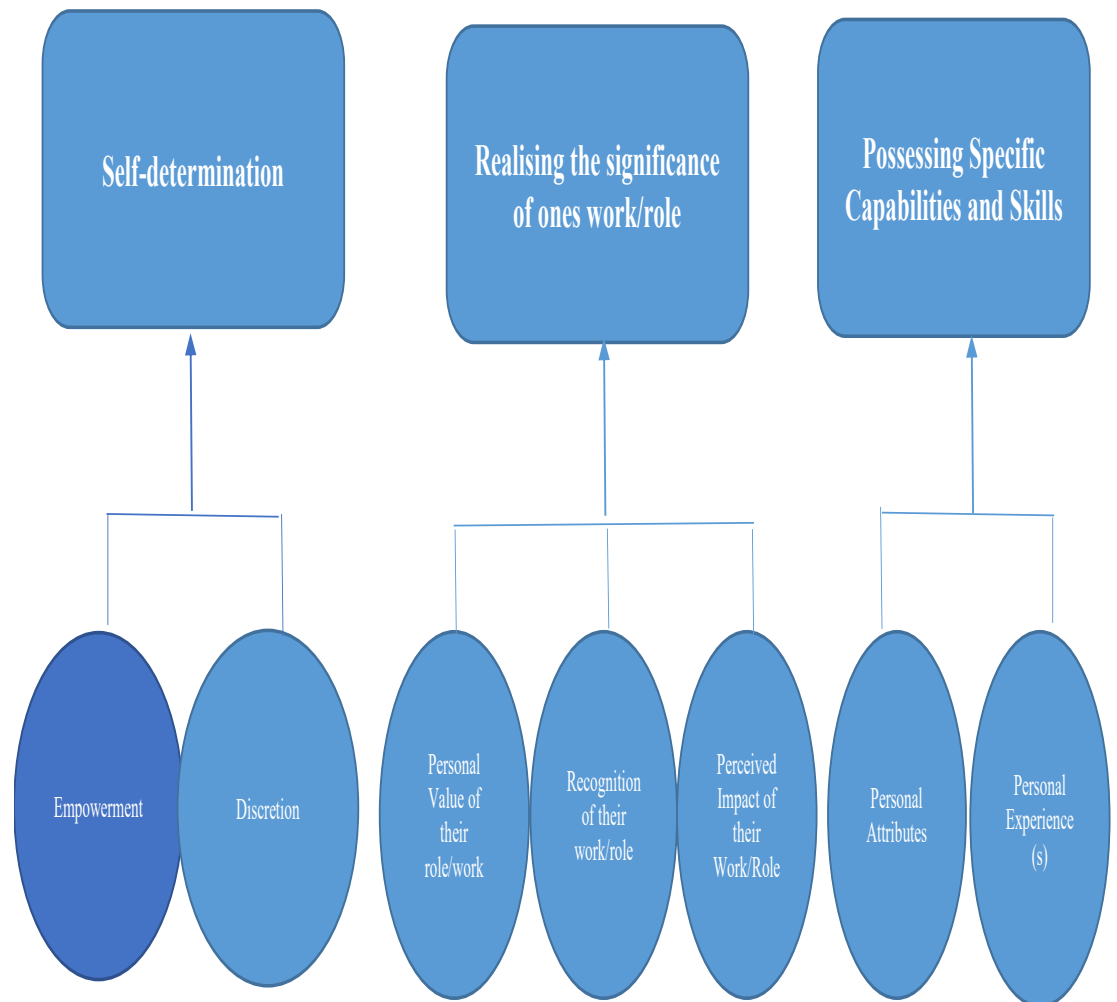


Figure 5.1. Key Emergent Themes from Study 2.

Macro Theme	Meso-Theme	Micro-Theme	Descriptors	Examples
Self-determination - The feeling and confidence that employees can recognise opportunities or problems at work, and have the freedom to choose how to initiate and carry out tasks in order to exploit and address the problems.	Discretion – Employees’ sense of freedom to make critical decisions regarding their work and having responsibility for outcomes. (SD1)	Authority (Formalised)	Management providing authority; Positional/role autonomy and responsibility,	P1, P4, P5, P7, P9
		(SD1FA)		
		Authority (Informal)	Need for speedy decision making; Freedom and/or opportunity to organise activities around work/role	P1, P3, P5
	Empowerment – A sense of confidence in the employee to make decisions and take opportunities in their role (SD2)	(SD1IF)		
		Authority (Lack)	Controlling management; Organisational systems and process (restrictive)	P3, P6
(SD)		(SD1-R-Aut)		
		Culture of empowerment	Having voice recognised/heard; Taking initiatives;	P1, P8, , P7, P9
		(SD2CE)		
		Confidence (Lack of)	Little previous experience in similar role; Authority challenged	P3, P6, P5
		(SD2R-Em)		

Realising the significance of one's work/role – A feeling and sense that employees' work/role is both personally and organisationally valuable and impactful. (RS)	Personal Value of their role/work – Belief that one's work is consistent with their own goals/values/expectations	Growth and development (ME1GD)	Challenging nature of work/role; Learning and development	P1, P4, P7, P8, P9
	(RS1)	Positive values and attitudes towards and with role/work (RS1PM)	Confidence; Sense of achievement; Personally meaningful	P1, P3, P2, P4, P5, P6, P7, P8, P9
	Perceived Impact of their Work/Role – Employees believe that their role/work activity positively impacts the organisation/clients/ and fellow employees.	Making a difference (RS2MD)	Helping clients; Helping community	P1, P2, P6, P7, P8, P9
	(RS2)	Positive contribution (RS2PC)	Improving organisational process/systems; Seeing bigger impact	P1, P3, P2, P4, P5, P6, P8, P9
	Recognition of their work/role – Employees feel that their role/work is valued and appropriately recognised by the organisation.	Acknowledgement (RS3A)	Voice; Formal recognition	P2, P1, P5, P7, P8, P9
	(RS3)	Acknowledgement (Non) (RS3N-R)	Not being recognised for entrepreneurial efforts	P3, P6, P7

Possessing Specific Capabilities and Skills – Confidence in that one possess the sufficient skills and abilities to carry out their work/role easily. (C&S)	Personal Attributes – Confidence in one’s skills, capabilities and attitudes deemed necessary to carry out their work/role (C&S1)	Skills and competence (C&S1PA)	Open-minded-curious-thinking styles; Problem solving.	P1, P2, P4, P5, P6, P7, P8
		Positive attitude/mind-sets (C&S1P)	Proactive attitude; Passion; Positivism	P1, P5, P6, P7, P9
		Relational skills (C&S1Rel)	Understanding and relating to others, Managing/leading, Communicating;	P1, P2, P4, P6, P7, P8 P9
	Personal Experience(s) – Employees’ ability to draw on past knowledge and experiences and apply them to their current work/role (C&S2)	Prior knowledge (EC2-PK)	Formal education,	P1, P2, P4,
		Ability and capacity to learn from current and past experiences (C&S2LK)	Experience and knowledge (Previous); Learning on the job.	P1, P6, P7, P8, P9
		Confidence (lack of) (C&2L-ExLK (Lack of experience and confidence)	Prior experience and knowledge (lack off)	P3, P5, P8

Table 5.1. Thematic Coding Structure for Study 2.

Participant	Gender	Background	Tenure and current role	Industry	Example of innovative or entrepreneurial behaviour in role
1	M	MBA, with experience in marketing and product development	Head of regional development – 9 years	Services/Telco	Over the years has been able to identify and act upon lucrative investment opportunities in the Southeast Asia region. Responsible for designing and developing new products/services and setting up operations in foreign markets.
2	M	Masters in IT and Entrepreneurship	Cyber-security consultant – 3 years	Services/ IT	Respondent regularly solves client related issues/problems, has developed and implemented malware early detection software which has opened up a new revenue stream for organisation
3	F	MBA – Prior experience in retail industry in Europe	Procurement manager at family business – 6 years	Manufacturing/ Construction	Regularly responsible for solving work-place issues concerning the purchasing of materials. Known in the firm for developing innovative solutions to the firm's manufacturing and transport operations.
4	M	Masters in Management – Management experience in hotel industry	Regional HR manager – 2 years	Manufacturing/Textile	Introduced several process innovations into the firm, designed at overhauling their HR practices (recruiting and employee relations), have resulted increased profitability for the company.
5	F	Bachelors in Science – Professional pharmacist in the past	Trade marketer – 1.5 years	Services/Pharmaceutical	Developing new markets and clients in the Southeast Asian region; developed and implemented new product line of

6	M	Masters in Banking and Finance industry experience; start up founder too	Entrepreneur in residence at incubator – 2 years	Services /IT	Developed, launched and ran 3 successful new ventures in the incubator for digital financial solutions.
7	M	Masters in Education: - Extensive history and background in all forms of education sector	Lecturer – 4 years	Services/Education	Developing and managing the internationalisation of new programmes. Developed new initiatives aimed at improving teaching among fellow staff
8	M	Bachelor of Science – Pharmaceutical industry experience	Plant manager – 6 years	Manufacturing - Pharmaceuticals	Experimenting with new chemical procedures and process; recently has been recognised for introducing new innovative processing techniques for synthesis of materials and developing new solutions for firm's new clients.
9	M	Bachelors of Business – Previous experience in marketing	Team manager of partnerships division – 4 years	Services – Health/Government	Developed several new national level health initiatives; recognised for developing new services to improving existing partnership and process within the division.

Table 5.2. Profile of Study 2 Participants.

5.1 Major Theme 1: Self-determination

Entrepreneurial behaviours often require employees to have sufficient discretion and autonomy in their roles in order to take advantage of emergent opportunities. This is consistent with the notion that individual discretion/autonomy is central in motivating employees to intrinsically engage in risky behaviours. Consequently, a major theme to emerge from the interviews was the centrality of self-determination in motivating employees to engage in entrepreneurial and innovative behaviours. On one hand, participants viewed self-determination as a general feeling of confidence in their freedom to choose between initiating, carrying out work tasks and the authority to exploit opportunities in their role. On the other hand, they viewed it as their freedom to tackle work-place problems/issues. Examination of the data further revealed two important sub-themes that influenced employees' self-determination, namely amount of discretion and feelings of Empowerment.

5.1.1 Sub-theme 1: Discretion.

Discretion was described by participants as the actual and perceived sense of power and authority which enabled them to make critical decisions with respect to their work. Two important types of discretion were identified by participants: discretion arising from formalised authority and discretion from informal authority.

5.1.1.1 Formalised authority.

Participants acquired formalised authority either through it being conferred onto them directly by management or through the specific role/position they had in the organisation. Participant 1, a manager responsible for continuous investments in growth opportunities in the Southeast Asia region, mentioned the importance of being given managerial support and authority to take advantage of emergent opportunities in the region.

“We operate in a flat organisation, which means that everyone functionally responds to the CEO. But administratively we have a direct reporting line to our supervisors, so having said that, we know what our scope of work, we know what is our angle, our mission, our CEO’s leadership team makes sure that everyone knows that we are clear in the direction moving forward in any of the leadership campaigns that we are embarking on. And then we are pretty much given the power and authority to make decisions, just as long as we keep the angle in mind.” (Participant 1- Male, Middle-Manager).

Participant 7 also mentioned how his position gave him considerable freedom and latitude to experiment with new ideas and initiatives.

“This present position I have got there is a fair amount of autonomy granted to me by the board. A fair amount of recognition for my abilities to act independently, so I feel comfortable with that.” (Participant 7 – Male, Educator).

At times formalised authority also allowed participants in specific roles to deal with organisational problems such as high absenteeism of employees. Participant 4 shared how his position as HR manager helps him to create innovative ways to deal with errant employees.

“The culture here is about attacking problems and issues very quickly and with little fuss. I’m at the ground-level, it’s very difficult to do what you plan sometimes, and things come up unexpectedly, like employees sleeping on the job or not doing what they have to. This costs the company dearly in lost hours and revenue. My position and the culture around here gives me the power to solve such employee related issues” (Participant 4 - Male, HR Manager).

This was also conveyed by participant 3 whose role as a Senior Procurement Manager for a large steel manufacturer requires her to solve daily workplace and client problems. She recognises how her role puts her in a position to take charge of issues and exploit emergent opportunities.

“In Malaysia we have lots of public holidays. So our stockist was using that as an excuse, yet at the same time, if we can’t clear things at the port then we get charged. And the stockist was aware of that and said that we can’t do anything about it. So for me, our only solution was to hire our own lorries but I didn’t want us to bear the cost. So I told the stockist that this is your fault, so we will hire our own lorries but you will defray the cost because this is your responsibility and I need the material to arrive on time. Ah I didn’t really consult with my boss, which I am supposed to do. All I knew was that we needed the material, and this is what needed to be done. So, I made the decision then

and there, we took the opportunity. My team trusts that I have to make such calls time-to-time.” (Participant 3 - Female, Senior Procurement Manager).

5.1.1.2 Informal authority.

Participants also indicated that they also gained a significant amount of discretion in their roles, from informal sources such as the very nature of their work. Many participants described that within their roles there was a strong need to make quick decisions in order to take advantage of opportunities and/or informal work practices which allowed them freedom to organise their work. For example, in order to perform well in her role, participant 5 needs to regularly travel to meet clients and actively think on the spot regarding creative solutions to clients’ marketing and sales issues.

“Yeah so I mean like it’s kind of flexible in terms of timing around here (organisation). When we work so let’s say I prefer working in the morning rather than night because yeah, those things rather, because our company, my company sorry does give me the flexibility in terms of how to do things. So I can go in early and I can leave early, things like that.” (Participant 5 - Female, Sales and Marketing Manager).

The ability to make decisions regarding how she manages her work schedule opens doors for participant 5 to pursue creative ways of helping clients. In many ways, discretion was embedded in her organisation’s culture. Participant 1 also mentioned how his organisation’s core principles and values, which include being disruptive and innovative, empowered people to be more entrepreneurial.

“we know that our aspiration, or our end goal is to basically be the number 1 digital brand within our foot print, so and so having said that, having come back to the core examples as our guiding principle the first core value is basically to disrupt, the second core value is to dream big and be bold. Based on the second, these two core values we feel that hey you know what let’s just do it, let’s just do it. And basically that’s what we did, so we developed the whole brand and we launched social media channels, so on and so forth, and yeah we are still learning whether or not that is effective, but yet the whole point is that we feel we have the decision making power to make these sort of decisions. Because we are guided by our core values and also we the end goal in mind, and it’s part of our company culture.” (Participant 1- Male, Middle Manager).

5.1.1.3 Lack of authority.

The lack of authority can serve as a hindrance for people to behave entrepreneurially. For participants 3 and 6, strict organisational systems, processes and cultural hierarchies restricts their ability to make decisions without seeking approval from authorities. Participant 6 shared how his organisation is driven by a traditional command and control culture which makes it extremely difficult for him to think outside the box or pursue discretionary actions.

“If we were to take an investment from you know in terms of getting capital and outing it into the venture...those investments would be under the scope of tight

contractual terms, i.e. information rights would be disseminated on a monthly basis. There would be a quarterly strategic board meeting, discuss strategy, there would be expectations around involvement, issues around management. I would say efficient manner, the change in replicating that in a corporate environment is that now the investor is sort of your manager and now what happens is that the level of micro-management becomes frankly dysfunctional unless clear terms of reference are set out which is something that very seldom happens. It is very difficult to say to the manager lets meet once a month and let's have a strategic meeting once a quarter. Which is in entrepreneurs terms enough time to basically go test exams, break a few things, make a few mistakes, come back, solve it and come back with results. You can't do that with a weekly cycle, and that is something that is I think is a challenge and something that entrepreneurs and corporate need to solve" (Participant 6 - Male, Corporate Innovator).

Likewise, participant 3's authority to take action over key issues and to solve problems is often challenged by cultural attitudes towards females in positions of authority. Although she was expected to develop innovative engineering solutions to often complex problems, she was often undermined because of her gender and lack of experience.

"I am a female, I am often undermined. That is one. Second, because I am new, I am not taken seriously enough as I would be if I was a more experienced manager. My staff will always be critical with anything I try that is new, even

though it's supposed to improve the company and how they work" (Participant 3 - Female, Senior Procurement Manager).

5.1.2 Sub-theme 2: Empowerment.

A sense of empowerment was described by participants as a strong belief in their ability to make key decisions and take opportunities in their roles. Participants' sense of confidence (or lack of confidence) allowed them to galvanise their belief that they can pursue entrepreneurial behaviours and find success.

5.1.2.1 Confidence.

Feelings of confidence encouraged participants to take personal initiatives with respect to critical tasks or to have their voices recognised by subordinates and peers. This was highlighted by participant 5 who described how lack of self-confidence can spell the difference between having your idea accepted or not. According to her, lack of self-confidence can at times push her to be hesitant in proposing new ideas or innovative solutions due to fears of being discredited and rejected.

"You really have to look and feel confident when trying to sell your new idea to the client, because the client will often not believe you. They will know and sense if you know what you are talking about." (Participant 5 - Female, Sales and Marketing Manager).

This sentiment was also shared by participant 3 who felt compelled to consult with colleagues about her ideas and solutions to client problems, because she feels she lacks the necessary knowledge. Moreover, participant 3

also reported that such experiences have made her doubt her own abilities in the role, and sometimes makes her to feel that she is too reliant on others.

“Often, I am not very confident, I just doubt myself, my knowledge and experience her also let me down. I’m constantly asking others for advice and seeking approval from my boss for my actions. It’s not like me usually, and I don’t feel like my usual creative self.” (Participant 3 - Female, Senior Procurement Manager).

5.1.2.2 Empowering organisational cultures.

A sense of empowerment may be fuelled by a company culture that actively promotes employee empowerment. As shared by participants 1 and 8, organisations can foster confidence by inspiring employees to try new ideas and experiment.

“We have a core value of this, so it is fail come to learn. Right which means that, right we are empowered to conduct experiments of our own no matter what the outcome is it isn’t going to matter the KPI, but in fact you will be regarded highly in this organisation if you fail. So yeah that the sort of culture that we have here so that gives me the confidence.” (Participant 1- Male, Middle-Manager).

Participant 8 expressed a similar point with participant 1 regarding his firms’ culture of empowerment.

“Basically the value and the behaviour that is stated in my company is to encourage empowerment and innovative. Within your role, you have some

sort of capacity to organise, to be creative in what you propose. So, when I encountered a testing problem that will impact our key client, I knew this was a serious issue that had to be solved. I also knew that management expected us to reach solutions to such problems on our own. So I proposed this prototype device, which fixed the issue. I didn't need to consult anyone at the time, just the CEO when the final prototype was done." (Participant 8 - Male, Lab and Operations Technician).

Some of the participants' organisations gave them the 'room to be creative' in their roles which in turn fueled their confidence. Such was the case with participant 9 who described how being given room to pursue creative endeavors encouraged him to behave entrepreneurially, especially in highly dynamic and fast paced situations.

"So there could be a lot of situations on the ground where a service provider does not appear, or there is an over-flow of capacity etc. Normally, as a manager I would have been frantic calling my superiors etc for advice and what to do next, but here (the company) the onus is on you to solve such issues. If you can do it by being creative, even better. So this is encouraging, it gives me the peace of mind and confidence to try different and new things." (Participant 9 - Male, Middle-Manager).

Empowering cultures are not just about finding support for one's ideas but also being able to receive feedback from others and take criticism without feeling disheartened.

“I suppose to offer criticisms of others ideas or workplace practices. To also take direct and bold actions even if getting my voice heard about key issues that affect my department and the work we do. This is when I feel I have the most confidence in this role and the work I do.” (Participant 7 - Male, Educator).

5.2 Major Theme 2: Realising the Significance of One’s Work

Participants revealed how their feelings regarding the significance of their work served as an important personal motivator to their entrepreneurial behaviour. Significance was described as a feeling or sense that participants current role or work had personal meaning to them and that they felt that they were having a positive impact on the organisation and society around them through their work. Specifically, participants who recognised the significance of their work were found to be more willing to take individual risks in proposing new ideas and solutions, being proactive in developing novel and unique ideas and, at times, being willing to challenge established organisational norms and processes to push forward with bold new ideas. Examination of the data further revealed two important sub-themes which influenced participants’ realisation of the significance of their work, namely the personal value, impactfulness and recognition of their work.

5.2.1 Sub-theme 1: Personal valuableness of entrepreneurial employees’ work.

Participants described personal valuableness as a belief that their work was consistent and strongly aligned with their own goals, values and expectations.

Underlying this sub theme is the feeling of personal growth and development and a positive attitude towards their current work.

5.2.1.1 *Personal growth and development.*

Entrepreneurial behaviour can be a challenging and demanding work. The interview data suggests that participants' feeling that their work was giving them the opportunity to learn and grow was found to influence their entrepreneurial behaviour. The role of participant 1 puts him in a position where he is actively identifies and invests in new start-up opportunities in emerging markets. He feels that this has led to his personal growth and development which motivates him to seek new knowledge and develop new solutions that work best in such markets.

“The entire process stretches you, it will stretch you to the max and that’s what you basically get to learn and experience from it... a lot more in that entire day to day process. So that also motives me to think more about the future, what solutions I can come up with that are novel to these markets I serve.”
(Participant 1- Male, Middle-Manager).

Similarly, participant 4 also described how his work allowed him to grow and develop personally, particularly with respect to dealing with difficult situations. This also encouraged him to think of creative solutions to complex issues in difficult work situations.

“I enjoy the job, I enjoy my time in the industry, it is very challenging for me. What I have done so far I have enjoyed, I think the challenge is good, working

with people so closely and managing their issues was something I was lacking in the past. The job, has taught me how to cope, it gave me perspective a new attitude and a motivation to do things differently in such situations in the future.” (Participant 4 - Male, HR Manager).

Additionally, participant 8 also had the opportunity to learn personally from his current role. Specifically, participant 8 was able to gain new knowledge and skills in dealing with others by working in new start-up environment. Such knowledge has also encouraged him to behave entrepreneurially.

“Fulfilling to me I am learning everyday- because firstly it is new environment from a start-up to getting it GMP, so I think that in terms of knowledge I am gaining every day and I am feeling that it is fulfilling. Secondly, I’m developing all these different skills sets, in particular thinking more critically and being more competent to approach and work with other people and different teams. I get all this from the collaboration with different units, different function of the sight and working with people, resolving the issue.” (Participant 8 - Male, Lab and Operations Technician).

5.2.1.2 Positive attitude-mindset.

Participants identified having a positive mind-set and attitude towards their own work as motivators for them to behave entrepreneurially. A positive mind-set allowed participants to see the bigger picture and serve as an important motivator in developing creative and innovative solutions. The positive mind-

set of participant 2 inspired him to think of creative solutions to protecting customers from computer viruses and malware.

“Well I am an analysts... to me it’s ...protecting people from bad guys. That is fundamentally what that means to me. So it’s not just the description of the job...analyse, categorise create or write detections that sort of thing. It is more than just the role description. It goes beyond that into the understanding that this is about providing safety and privacy to people who you know want to be online and have you know democracy, kind of thing.”

(Participant 2 - Male, I.T Risk and Recovery Analyst).

This positive mind-set is akin to a high level of personal pride for their roles which not only serves a personal benefit but also motivates the interviewees to pursue interests beyond their own. For example, participant 5 reported the high-level of personal pride for her role in leading the launch of new products in international markets. She described how this has encouraged her to tackle exiting problems with new ideas and new ways of thinking.

“To me it’s actually more of the pride, once you complete the launching of new product... so I use this experience, this high I feel and pride from it to keep me going. So recently I revisited some products I launched previously, and I started to look into new ways of advertising and promoting them in the markets.”

(Participant 5 - Female, Sales and Marketing Manager).

Similarly, participant 3's positive attitude towards her work has motivated her to introduce small scale innovative solutions to common workplace administrative issues despite others not being as motivated as her.

“So I feel the need to always find solutions to our workplace issues, no matter how small they appear to be.... Like looking at new ways of de-cluttering the office space and implanting new systems to improve working efficiency. I would do such things because nobody else is doing it, but they give me personal satisfaction and confidence that I tackle bigger things in the future, that's important to me.” (Participant 3 - Female, Senior Procurement Manager).

5.2.2 Sub-theme 2: Perceived impact of entrepreneurial employees' work.

Impactfulness was described by participants as the extent to which they observed and felt that their work brought about positive changes to those around them including society, and their organisations more specifically. All participants felt that a sense of impactfulness was an important driving force in their determination to behave entrepreneurially in their work. Interview data revealed that participants' sense of impactfulness was determined by the extent to which they perceived their current work as making a difference to society, clients, others and as having a positive organisational contribution.

5.2.2.1 Making a difference to society/clients/others.

The interview data suggests that when participants perceived that their work was making an observable difference, such as improving the current situation

of those immediately around them, they tend to also be more entrepreneurial in their roles.

Participant 1 is in charge of growing his company's e-commerce and banking arms in the under-developed markets of Southeast Asia. He is familiar with experimenting with several innovative solutions to provide e-commerce micro-enterprises in Southeast Asia. As a result of his work, he believes that he has in some small way improved the daily lives of his clients.

“So I get feedback from our mobile audit merchants that it has increased our sales tremendously and therefore we can buy more stuff for our kids and so on and so forth. So yeah that's a really motivating factor to keep going and be more innovative.” (Participant 1- Male, Middle-Manager).

Similarly, participant 6 mentioned how it is important for him to be able to serve the needs of his clients/customers first, rather than purely corporate with management. This has motivated him accordingly to continue to explore entrepreneurial opportunities.

“I mean for me, I sort of left my first corporate stint. You know I started my own company simply because I wanted to personally drive the impacts that I want to have in financial services. My focus has all been about little bit sort of fuck the banks mentality. How can I do that in a new corporate setting? Being innovative, attentive to customer needs more. So now what fuels me is building products that serve people. Building products that help people. Building from a customer first or just a language thing... personally it is all around building

and building things. What is possible, technologies, on all those solid platforms that impact people?” (Participant 6 - Male, Corporate Innovator).

Besides making a difference to clients/customers directly, sensing and believing that their work could also make a difference to the wider society or community was also identified as an underlying characteristic of impactfulness by some participants. Participant 9 has a broad appreciation of how the innovative solutions to community health he comes up with are improving the health of locals and leading to positive behavioural changes.

“Because my job makes me think about how I can promote health, and in the long run, we have a master plan to see how we engage Singaporeans to live a healthier lifestyle. So right now, the government is going more upstream so that people don’t have to go to the hospital. So when we see numbers or we see a paradigm shift in the mindset, then maybe we see a shift in numbers of people taking more actions or empowerment in their lives than that is where the positive impact I feel comes from.” (Participant 9 - Male, Middle-Manager).

For participant 8, being involved in a role that allows him to address issues related to bottlenecks in the production process gives him a reassurance that he is making a difference in the lives of others in the community. This encourages him to keep doing what he is doing and designing and developing more friendly personal medical devices.

“Before I was in QC (quality control) role, in which is a chemistry testing, it is wet chemistry testing, and this is totally different in the sense of developing new innovative products. I’m actually glad I would say in general that I am in this

new role, designing and developing,, because pharmaceutical industry it is an industry that helps the patient and I need- I think that the patient's needs to have good quality drug and affordable drug so that they can have a quality life and so in terms of performing I am actually ensuring that these patients are getting the right quality drug.” (Participant 8 - Male, Lab and Operations Technician).

5.2.2.2 Positive organisational contribution.

Participants also described how observing the visible positive impact of their work on the organisation they work for bolstered their desire to keep pursuing entrepreneurial ideas. For example, participant 4 introduced a new employee tracking and management system which led to the reduction of costs and increased productivity. In doing so, he felt more encouraged to engage in new challenges and make his organisation more efficient.

“I introduced a biometric system, before that day was you know like a manual attendance, so there we found some people like night shift just go and sleep somewhere like there in the street. So there you can, but you cannot always monitor, you have to be on the actual, you know not like the actual thing. So I started like a biometric system where every three hours, once you have to go, like you know the worker have to go and give his identity, some sort of thing that keeps track of their working. Started to keep some analysis of start their work. I had a team of quality and control where I had some members to describe about their efficiency and what sort of production they are giving. So these things I did... trying to reduce labour cost and productivity that was my goal. By end of one year, I think my first year, we reduced the percent of our labour cost and increased productivity.” (Participant 4 - Male, HR Manager).

As a Risk and Recovery Analyst, participant 2 is also acutely aware of how his role can positively impact the organisation. Recognising that he can make a positive contribution to the organisation's success, he actively pursues innovative and quick solutions to client needs.

“For example, there is a malware outbreak somewhere a hacker... is trying to hack into one of our clients with anti-virus software, if I am at the office and I am not able to identify and think of quick solution to this trend or pattern on this client or in this part of the world, and that escapes me, what will happen in the end is that they will demand compensation and the might demand for all kinds of things and that would tell eventually on our intelligible assets, the good will that people have towards the company they might begin to doubt that, you have to pay out all types of compensation, and that will cost the company financially.” (Participant 2 - Male, I.T Risk and Recovery Analyst).

By developing a deep understanding of how their roles impact the organisation, the participants felt more compelled to identify inefficiencies within existing processes. For example, participant 5 recognises how she can make a positive impact to her organisation especially in improving existing stock management processes and thus actively pursuing innovative approaches to tackling the issue.

“So in the past, we do have stocktake every probably few months. So I thought of a way of improving this out-dated process. Starting it a month earlier, by

preparing everything and computer logging it. Now we don't have to do it last minute, and it's less likely to affect our business because you will still have to do your stocktake that day. So now, our organisation doesn't waste too much time on slow process like this, it speeds up certain work help which helps our sales managers to gain more profit, more sales, by launching a product earlier.” (Participant 5 - Female, Sales and Marketing Manager).

Consequently, knowing about the potential impact of his actions has encouraged participant 9 to explore new approaches to dealing with external clients.

“Every solution that I try to come up with I will always find what I was, I will try to understand what that actual problem is and I will try to understand what the previous solutions are done to try and rectify and work with them to create a solution by sometimes brining in partners, and sometimes suggesting ideas to my colleagues....The old way we were engaging with partners, was problematic. Process too slow, cumbersome and un-imaginative, we got little value for money from partners and customers complained. So I started to asked all the fundamental questions of what are we doing, do we need to do this, whether we can, can we try to do something else, and I really pushed myself against the wall until I had a hard look at the way we work with partners. So now we revamped this process streamlined it, made it more transparent and accountable. It was a new approach, we managed to bring in the different departments to see how they can add value to these new initiatives.” (Participant 9 - Male, Middle Manager).

5.2.3 Sub-theme 3: Recognition of entrepreneurial employees' work.

Interview data also identified participants' feelings of recognition from their organisation and peers as an important source of meaningfulness. Acknowledgements, whether formal or informal, and/or the lack of acknowledgement emerged as central constructs underlying this sub-theme.

5.2.3.1 Acknowledgement (formal/informal).

Formal acknowledgement was identified as occurring through official recognition practices, such as annual bonuses, performance reviews/appraisals or through official organisational announcements or communiques. For participant 7, the formal acknowledgement and reward given by management served as an important source of motivation for continued entrepreneurial behaviour.

"I like working in a school, cross college role. So I like working with people who are engineers and people who are in business studies, I like working with people from different disciplines because I feel like we are all in education together, we may as well share it. So I had a great opportunity to work with staff in computing and staff in hair and beauty, two different worlds and I was able to devise, get some money, to devise some new programmes and way of engaging with community with these two diverse communities it was highly successful and brought in new revenue to the institution. That became a model for institutional development in the place that I was working there. My Dean loved the initiative and it's all formal now with my name attached to it. To me it's those kinds of rewards and recognition I look for sometimes. It keeps me thinking about how I can do more." (Participant 7 - Male, Educator).

Likewise, participant 8 described how being acknowledged formally during annual performance appraisals was an important means of keeping him motivated and encouraged him to be entrepreneurial in his role.

“When I’m coming up with these solutions, these alternative ideas, they are valuable because as you say it is not only within my function, it impacts the entire site... And I know that management appreciates that. My direct manager is very pleased with my performance, he noted down officially all these innovative ideas to problems I have been working on and yeah that is also one of the motivations that I have to continue to be innovative in my role.”
(Participant 8 - Male, Lab and Operations Technician).

In several instances, formal acknowledgement referred to the combination of various rewards, such as in the cases of participants 2 and 5. Formal acknowledgement in their respective work was not only evident through it being recorded officially during performance appraisals, but also in the form of annual bonuses. For participant 2, annual bonus came in the form of a fairly substantial salary increment and also acted as an important motivator for similar future behaviour.

“Managers are trained to recognise that innovative and creative employees are very critical people in the organisation, so these are people who can make or break things and they are willing to reward people for their efforts. For me, It came in the form of a salary increment, its why I like what I do and his

company... knowing that they will take care of you later if you are prepared to think out-side of the box.” (Participant 2 - Male, I.T Risk and Recovery Analyst).

On the other hand, informal acknowledgement such as those coming from peers recognising their contributions, informal ‘pats on the back’ and/or feelings that an employee’s voice was heard in important and critical situations was also recognised as a crucial motivating force in encouraging participants to continue with their entrepreneurial behaviour. Participant 9 felt highly appreciative of the informal acknowledgement that he received from managers and peers. Accordingly, this has further motivated him to continue to identify opportunities to revamp the way that the organisation deals and interacts with external partners:

“In my organisation we work in a very matrix environment where we have to work cross functionally with all the different divisions. And it is not just people of your similar, but all the way up to the director level and the ground level. As I interact with them regularly, I can hear the good comments from to me via my bosses or via them giving the resources to me when asked, that gives me a lot of drive to continue experimenting with new initiatives for working with external clients.” (Participant 9 -Male, Middle Manager).

Similarly, participant 1 also described the high motivation he felt after receiving informal praise from the organisation’s CEO during a social event, as well as being able to have his voice heard during important meetings.

“I also personally believe that intangibles are super important. For example getting a pat on the back by the group CEO, getting recognition...you develop... the gravitas... that confidence... I mean huge meetings with other stakeholders you tend to realise that your voice is being heard more and more, so those are the intangibles that-that-that- that you get.”
(Participant 1- Male, Middle-Manager).

5.2.3.2 Lack of acknowledgement.

Some participants also identified lack of acknowledgement by their peers or their organisation, as a powerful demotivating force with respect to their entrepreneurial behaviour. Interestingly, much of this feeling of being unappreciated appears to stem from management’s indifferent attitude towards their work. Participant 6, whose role requires him to drive entrepreneurial efforts in his organisation, is highly critical and concerned by the lack of feedback and acknowledgement from senior management for his initiatives and activities. This has discouraged him from being entrepreneurial.

“I know right now, not much. I would say that I don’t have, one of the things I am struggling with right now is that I don’t have get feedback or enough acknowledgement, and you know one thing that I Have learnt as an entrepreneur is that you need thick skin beyond your dreams of having. So you know I really have an issue with feedback and acknowledgement, but I am not getting that much around here.. Maybe its management’s mind-set or something.” (Participant 6 - Male, Corporate Innovator).

Similarly, participant 3 reported how she feels that her contribution to the organisation is not that great, and this is partly because it has never been formally acknowledged or recognised by senior management staff.

“I’m not sure that my bosses know what I do and how important it is for the organisation. It’s because I don’t feel that the problems or issues, I solve on a regular basis are properly acknowledged. It’s never mentioned during my appraisals or thinks like that, and I am not rewarded any more or less for it. I believe that management have this attitude that problems would sort themselves out.” (Participant 3 - Female, Senior Procurement Manager).

Participant 7 also felt that the lack of recognition for his work and the contributions he has been trying to make towards the organisation has made him question the significance of his role. Moreover, the lack of recognition was described by the participant as a demotivating factor, and one which made him question his future behaviours.

“I took this role, to drive change, to be a part of something bigger than myself. Make an impact as they would say. I know this happening, I can sense and see it, but what gets me down is that by in large my contribution is either undervalued or not noticed by management often.... Don’t get me wrong, everyone wants to be recognised at some point for their effort, so when it’s not done so, you naturally feel bummed about it... I have all these questions in my head about

why this why that. It just makes your more measured in the future about what you going to do.” (Participant 7 - Male, Educator).

5.3 Major Theme 3: Possessing Specific Capabilities and Skills

Entrepreneurial behaviour within organisations is normally considered as a challenging type of behaviour and often occurs outside the scope of an employee’s role (Gawke et al., 2017). Moreover, such behaviour requires specific skills and capabilities in order to be properly executed. All participants identified the importance of feeling that they had the necessary capabilities and skills to perform their role as a motivator of their entrepreneurial behaviours. This was described by participants as having a sense of self-confidence and belief that they possess the sufficient skills and abilities to engage in work. Participants further indicated that their confidence in their capabilities and skills was illustrated by a range of personal attributes as well as their personal experiences.

5.3.1 Sub-theme 1: Personal attributes.

Particular competencies and skills were considered by most interviewees as essential to becoming entrepreneurial in their roles. These included the attributes of open-mindedness, positivism and relational skills.

5.3.1.1 *Open-mindedness and curiosity*

Two of the most important skills reported by majority of participants was open-mindedness and curious think-styles. Such attributes were found to build participants’ awareness of entrepreneurial opportunities as part of their work by

looking at problems and issues in a new light and coming up with innovative or creative solutions to them.

For example, participant 8 highlighted the importance of approaching issues at work with an open mind in order to see things from a broader perspective.

“It is to keep the mind open and keep it very neutral and so that I can look in a broader perspective into what actually, where the issues or the cause of it. After that I can zoom into the different details and the route cause as to what is the model have been missed out and what has been the cause of these issues.”
(Participant 8 - Male, Lab and Operations Technician).

This was also echoed by participant 1 who spoke about how being curious is akin to creativity.

“Be creative is one of them, be creative to be really alert and on our toes most of the time to solve problems and most of the time the clear path to solving the problem is not the best solution. You see, you need to think of more creative ways to basically like to solve that particular problem quickly in the most cost-effective manner.” (Participant 1- Male, Middle-Manager).

Adopting an open-minded and curious approach fuels not only confidence in one's abilities but also motivated participants to pursue further entrepreneurial endeavours. For example, participant 7 shared how he was motivated by the idea of being creative and curious.

“I get motivated by the idea of being, if you can even say this, about being creative and innovative and of being curious. I don’t like the status quo; I want to do things differently I don’t like doing things the way that they are. I like the idea, the novel, the passes of a foreign country that they do things differently there. I always liked that, so let’s have a look at where we are. And we were in a session the other day where one of my colleague’s talked about thinking outside of the box I just like that idea of all the time, saying that this is where we are and what can we do the improve the work that we are doing here? Let’s get feedback from our students and talk to our colleagues about it, let’s open it up.” (Participant 7 - Male, Educator).

Endorsing this view further was participant 2 who shared how his ability to tackle complex problems in a systematic, logical and curious manner helped him to achieve the status of one of the top problem solvers in the organisation. In doing so, he became more motivated to explore new ways of solving problems.

“That ability to think in terms of patterns, I think that is my...my skill, that I bring to the role, so if I see a pattern that is not usual, I am able to quickly spot it. So if you run a normal software it will open up a window and it will give you an option to minimise or maximise or close. But if I run another software and it doesn’t follow that pattern, it doesn’t opens up a window but it has an item at the taskbar, that is now out of the ordinary, so I am able to identify and okay this is something we should classify as harmful.” (Participant 2 - Male, I.T Risk and Recovery Analyst).

5.3.1.2 Positivism.

Several participants also mentioned the importance of having a positive attitude and mindset towards their roles, which is crucial to their being able to behave entrepreneurially at work. Such positive attitudes were identified by participants as coming from being proactive and passionate towards the issues they were confronting. For example, participant 7 was proactive and passionate about improving the skills and abilities of fellow colleagues by using the technique of reflective learning. Such positive attitudes served as a means of encouraging him to introduce a new scheme into his workplace.

“I think that once I held a role as staff development manager at a large further education college, and I wanted to encourage more reflection amongst staff, and I had read somewhere. This is going back 20 years now, about the uses of a reflective portfolio to record people’s consciousness of their teaching or the administrative roles of their responsibilities. And I spoke to my line manager who was the vice principle and she liked the idea and I was given top blanché to introduce, to 1200 staff a portfolio, which I developed and did it in a very short space of time. But it is still there I had an idea; it was something that I had been doing myself.” (Participant 7 - Male, Educator).

Participant 6 also mentioned the importance of being passionate as an attitude that enhanced his sense of positivism.

“Well one of the issues that I have fundamentally is when I joined this current organisation, I you know I asked the customer that I am more than happy to

come in give you my life. I am the type of person where I don't talk to my parents. Not because I don't want to but because I don't really feel comfortable talking to them and taking to them about my day to day issues. They will probably break down and cry about how I live my life. So you know there are sacrifices about when you believe in business and I am happy to say I do." (Participant 6 - Male, Corporate Innovator).

Passion for their work allowed several participants to face difficulties with a positive attitude. This fueled participants' motivation to remain optimistic despite setbacks, and to continue to remain entrepreneurial despite challenges faced. As participant 5 stated.

"Being passionate, being on my toes constantly. I'm just recently doing a launch into new markets, abroad, so I'm trying to pre-empt things, look for new opportunities. I've been on the ground, meeting new clients, suppliers, distributors, talking to them to learn and understand where I can help them, and how they can help me. Its little things like this, have given me assurance, seeing things moving forward, giving me confidence in my abilities to do this role, and do it well." (Participant 5 - Female, Sales and Marketing Manager).

Participant 1 also talked about the need to 'persevere' when trying to tackle client problems and opportunities in emerging markets like Cambodia. This grit was viewed as a positive attribute by participant 1 and one which further fueled his motivation to behave entrepreneurially.

"You have to have that perseverance, that entrepreneurial grit to move on. Because most of the time the answers are not clear, the answers are not clear,

most of the time you don't know what you are going to stumble upon, what sort of challenges that lies ahead, so I believe that if you don't have that perseverance or that grit then I think it's going to be a bit challenging to thrive emerging markets.” (Participant 1- Male, Middle Manager).

5.3.1.3 Relational skills.

Relational skills were identified as the participants' ability to successfully identify and leverage on relationships to acquire resources necessary to act entrepreneurially and to motivate others to behave entrepreneurially. One of the most important aspects of relational abilities identified by the participants was the ability to lead others (subordinate/colleagues) and encourage them to behave entrepreneurially. Participant 7 described how his ability to relate with his fellow colleagues has been useful in convincing others about the value of his ideas:

“I feel that I do have some skills, at engaging people who are bit outsider-ish. Because I think that one-way forward is to work as a team, a group of individuals. To do that you need to provide opportunities for people to be themselves. Well I think that when you take as an example, an old kind of qualification for a ??? that invests in people. That is the kind of thing that I am keen on. Getting people to be open, to be collaborative, to be receptive to ideas about change and working together.” (Participant 7 - Male, Educator).

For participant 6, being able to lead fellow employees was an important relational skill in motivating him to behave entrepreneurially as part of a team.

“I was a numbers guy and I realised that, that doesn’t actually allow you to build businesses analysis it’s around getting people to work together. So how do you get a technical developer, how do you get a marketing person, how do you get them in a room to get them to focus to get stuff done? That is my single focus as much as a I think that I can out do them, I have got to give them the space....and that’s about vision, you know one thing that I think is critical with building a company’s business is having that vision that people can buy into. So the abilities to tell that story, to communicate that right, because ultimately what you are studying is that you are not able to compensate people financially in a corporate model, you are not able to give people stability which is in the corporate model. You basically get people to work for you, by getting them to buy into your vision of being creative, doing things differently.”
(Participant 6 - Male, Corporate Innovator).

Similarly, participant 1 also talked about the ability to get fellow colleagues and team members aligned to work in order to achieve specific corporate goals such as growing the organisation’s presence in emerging markets.

“Yep for me personally, leadership as well. Leadership not in the traditional sense, but leadership in the sense that I believe in order to get things going you need to make sure that there is alignment between all stake holders because essentially you work with different people, not just within this organisation but across the group in different markets as well. So you need to possess that ability, that skill to be able to align everybody.” (Participant 1- Male, Middle-Manager).

Relational skills are not just about relating with or leading others, but also about being able to appreciate others' points of view as well as genuinely look into their issues or concerns.

For example, participant 9 stressed the importance of being able to relate closely with both internal and external stakeholders in order to better understand the issues and problems they faced. In doing so, he is able to understand his clients better and thus address their needs better.

“At the same time I think we also need to be very strategic with the things that we do, so there are things that we do that sounds very short term, short term meaning three to six months, things that we roll out very quickly, But there is also that we work with partners on very long term basis one year to three years. So we need to have higher level discussions with executives to plan things in advance, that other level of the company may not be able to see.” (Participant 9 - Male, Middle-Manager).

Additionally, participant 8 also pointed out the importance of being willing to open-up and approach others to help him remain innovative around client's issues/problems.

“Empathy to understand both the partner's needs as well as marinating the professional needs of our eventual goal, but more importantly, willingness to speak, the willingness to approach key people, understand what they are seeing and to really drive the whole thing to resolve the issues they experience.” (Participant 8 - Male, Lab and Operations Technician).

5.3.2 Sub-theme 2: Personal experience(s).

Nearly all participants discussed the importance of being able to draw upon past knowledge, as well as personal and working experiences in boosting their skills and abilities to behave entrepreneurially. Underlying this sub theme was the ability and capacity to learn from current and past experiences and their prior knowledge. Additionally, a lack of prior knowledge and experience was identified as discouraging one from behaving entrepreneurially.

5.3.2.1 *Prior knowledge.*

Both participants 2 and 4 described how their formal education served as important sources of experiences. Both of them were fortunate enough to complete critical problem-solving related courses during their postgraduate studies. Participant 2 pursued a postgraduate degree in computer science where he honed his critical thinking and reasoning skills. Such skills had given him the confidence necessary to identify and solve the malware problems that his clients faced.

“In the course of completing a masters in computer science, that, that is a fair amount of coding and problem solving, that is a fair amount of dealing with software. So when you are a malware analyst it is also thousands of lines of code everyday hundred and thousands even thousands. So it was something that I had done before when I was at unit, I had gone through lines and lines of code so I am sure that I can look up this software, no matter how many lines of code and if there is something out of the ordinary with this code I will be able to

...from hours and hours of debugging code.. that kind of skill helps you on the job, so you can go through lines and lines of code and you will be able to spot something out of the oxidant.” (Participant 2 - Male, I.T Risk and Recovery Analyst).

Similarly, participant 4 explained how his degree in Business afforded him the necessary human resource and interpersonal skills which are instrumental in his ability to tackle issues in relation to managing staff in India.

“If you see during my education I came across many scenarios. Bachelor in business and human resource management that allowed me to learn certain skills. How to deal who to manage that, how to work in a human resource industry so um my, my personal ability, you know what like the... maybe my interest towards managing the organisation. I always wanted to be on the management side, you know I always loved to manage the things, always love to lead the group. So I have used those knowledge and skills a lot in my current role, helped to me to see old problems in a new light so to speak, especially in India, where things can be lacking.” (Participant 4 - Male, HR Manager).

5.3.2.2 Ability and capacity to learn from current and past experiences.

Both prior and current working experiences were identified by participants as important sources of experience in developing specific skills and abilities necessary as part of their work and one which also gave them the confidence to behave entrepreneurially. Specifically, participants mentioned the importance

of being able to reflect on past and current working experiences and draw upon them to motivate their entrepreneurial behaviours.

Participant 6 talked extensively about how his past working experience in the banking sector had opened his eyes to the potential to exploit under-served markets. He was able to draw on such experiences for his current role as corporate innovator in charge of growing banking services in Southeast Asia.

“I started my career in working for traditional banks. My job was essentially build up business, build up products and build up platforms for traditional banks, typical large global universal banks, Barclays, Credit-Suisse those types. I saw opportunities everywhere and learnt how to exploit them. I initially I was based in Europe...I spent let’s say about seven or eight years in Europe before then and during the financing crisis moving out to Asia and helping Barclays build up their Asia business, Asia, Middle East and Africa Business for about five years in total. Then I started my own digital banking business in Singapore and ran that for three years and then I joined the current company to basically as entrepreneur in residence to basically build up businesses within this group as well.. The current role is as pure entrepreneur within corporate as it gets, I have a very broad mandate to build up businesses with a specific focus initially to build up lending business. I draw on extensively on my past banking experience, the knowledge, the skills I learnt to make things happen here.”

(Participant 6 - Male, Corporate Innovator).

Sharing a similar sentiment, participant 7 also talked about how his past working experiences had taught him a lot about entrepreneurship. Subsequently,

he has been able to draw on those experiences to be innovative in his teaching methods for his Masters students.

“Currently I like the challenge this role affords, and I like opportunities to be creative and innovative blah blah blah (sic) but also like doing that with people as well. You know to be part of the team, problem solving is great. I think that has come from experience, suppose in terms of having been there and done that...coming from one university leadership position to another international one... I carry those experiences and knowledge with, especially when I am here (new role) thinking about creative and innovative ways in which we can work with and design programmes for master’s students. But I am still willing to learn more, even from this experience.” (Participant 7 - Male, Educator).

For other participants, experience served as not only a learning source but also as a means to increase confidence in their abilities. Having positive experiences in the past motivates them to pursue more entrepreneurial efforts such as the ones echoed by participant 1.

“Yes, it’s pretty confident that yeah my skill levels are sufficient to deliver the day to day. That’s because of the creative projects that have been on before. I have seen clear, clear results based on the decision that I have made...which I tied back to all of the attributes that I have actioned earlier so that essentially give me confidence, and knowledge, to try and use much of what I have learnt to new projects.” (Participant 1- Male, Middle-Manager).

Previous success in entrepreneurial endeavours also paved the way for participants 8 and 9 to develop their entrepreneurial skills and abilities further and apply them to current initiatives with more confidence.

“I am learning everyday- because firstly it is new environment from a start-up to getting it GMP, so I think that in terms of knowledge I am gaining every day and I am feeling that it is fulfilling and then I got to collaborate with different units, different function of the sight and working with people, resolving the issues to me is fulfilling.... The learning, from such experiences has been invaluable to me currently, with what I am doing now, I have this confidence to be more innovative, to be more bold with my ideas.” (Participant 8 - Male, Lab and Operations Technician).

Similarly, participant 9 also mentioned that:

“I think experiences, here in this job it’s taught me a lot, made it so I grow quickly, as I need to rapidly understand situations and how to deal with our partners. So I take these past opportunities in my stride, as a way of building my confidence. Shapes my mind now on how to tackle some of the existing problem that we are having.” (Participant 9 - Male, Middle-Manager).

5.3.2.3 Lack of prior knowledge and experience.

Some participants also described how a lack of past experiences and knowledge shaped their own willingness to behave entrepreneurially. Participant 5, a former Pharmacist who now works in pharmaceutical sales and development,

describes how her prior technical expertise and knowledge does little to boost her confidence in her skills to be entrepreneurial in her current role.

“Okay so at the moment to be honest, in my current role my background is totally different from what I am doing at the moment. In terms of confidence level, it is very very low I am still in the learning stage. I am very much depending on what my colleagues have been doing based on the examples of what they are currently doing. My decisions are mostly based on those things because I am not very comfortable on what I am thinking....yeah... if it, if you are talking about previously as a pharmacist that would be very different because we need to be very sure with these things and how we advise our patients. Then the confidence level has to be very very high.” (Participant 5 - Female, Sales and Marketing Manager).

Participant 3 also mentioned how her lack of prior technical knowledge and experience in Engineering and construction had sometimes hindered her confidence and capacity to tackle issues and problems in her current role in an innovative manner.

“No I don’t always feel that (confidence), because I don’t have the technical knowledge and experience, I feel the need to prove myself in other areas. So I don’t feel confident at all, I don’t feel that I know enough technical details to solve some of the problems we face. I know that annoys the people in the firm and being a bit nosey. Sometimes wanting to know what they know about the firm and they don’t like it.” (Participant 3 - Female, Senior Procurement Manager).

Lack of experience made it difficult for some interviewees to transition from one role to another. For instance, lack of experience by participant 8 hampered his ability to meet the innovativeness requirement of his new role.

“I am actually the first microbiologist being hired in the laboratory and in terms of experience, I am one of the oldest in terms of on the Site. But I always have this transition, it’s all new to me, these requirements. My qualification and the knowledge I had has not been sufficient in this new role at times. Especially, when there is a company culture and expectation here of pushing the boundaries. It takes some time to get used to, but I too will eventually get there.”

(Participant 8 - Male, Lab and Operations Technician).

5.4 Discussion and Implications

This chapter sought to answer the research question how does an employee’s active orientation towards their work influence their entrepreneurial behaviour? In addressing this question, semi-structured interviews with nine participants from various occupational groups and varied experiences were conducted. Participants identified three main positive role orientations which influenced their entrepreneurial behaviour: Self-determination, Realising the significance of one’s work, and Possessing Specific Capabilities and Skills. These factors acted as intrinsic motivators of participants’ willingness to engage in entrepreneurial behaviour. The section below provides a discussion of the key findings and how they relate to theory and concepts in the literature.

Social Cognitive Theory (SCT) (Bandura, 1986) provides a theoretical rationale to explain how the abovementioned findings influenced employee

entrepreneurial behaviour. Social Cognitive Theory helps to explain the role of cognitive process in shaping and influencing individual activity and functions. According to SCT, an individual's actions and behaviours are shaped and modified through their interactions between their immediate environment, and their individual cognitive states and their behaviours. Of particular relevance here is one's cognitive state, which has been positively linked to motivating an individual towards desirable behaviours (Spreitzer, 1995) such as innovativeness (Singh & Sarkar, 2012) and creativity (Dietrich, 2004).

Self-determination was described by participants as the extent to which they felt that they had the opportunity, freedom, and confidence to decide on how they initiated and carried out tasks. This is likely to occur in situations where employees feel that their work activities are not excessively controlled by management (Bell & Staw, 1989). The Data suggested that participants who felt a higher degree of self-determination, perceived themselves as having significant influence over the particular work or tasks they perform as well as over the discretionary behaviours they chose to exhibit. Specifically, participants with a greater sense of self-determination were able to easily make decisions about their day-to-day work methods, the pace at which they were working as well as controlling the amount of effort they put into each task or activity. Such decisions also enabled participants to find new ways of working and to also recognise and take advantage of emergent opportunities as part of their work.

Broadly, the findings align closely with the notions of job autonomy and work discretion found throughout the entrepreneurship and organisational

psychology literatures (Hornsby et al. 2002; 2009; Kuratko et al., 2005). Hence, the findings here add further support to the notion regarding the positive association between job autonomy, work discretion and entrepreneurial behaviour. When employees perceive and feel that they have discretion and autonomy in their roles, they are able to freely design their work, thereby increasing their self-efficacy (Globocnik & Salomo 2015). Findings further suggest that in addition to formalised discretion and autonomy provided by management, creating a sense of empowerment, particularly through positive and supportive organisational cultures can also help to raise participants' sense of self-determination. Moreover, findings suggest that self-determination can act as an important source of intrinsic motivation in encouraging employee's entrepreneurial behaviour.

Realising the significance of one's work also emerged as an important factor in determining participants' entrepreneurial behaviour. The realisation of the significance of one's work referred to participants feeling that actions as part of their work were making a real difference to their organisation and the wider community. Data revealed that the personal value of one's role, the perceived impact of one's work and the recognition of one's work are critical determinants in realising the significance of their work. Such findings suggested that participants felt a strong fit between the requirements and the characteristics of their work, their own personal beliefs and their values systems. This helped to reinforce a sense of intrinsic motivation among them in carrying out interesting and worthwhile activities as part of their work. It also encouraged them to engage in discretionary behaviours such as taking personal risks to see ideas

through or using their own personal initiative to push through with ideas and suggestions. Participants also described the great personal pride they felt from observing the impact of their work and knowing that it was contributing in some way to the development and growth of their organisation or peoples' lives. The finding above suggests that, in realising the significance of one's work, employees may experience an augmented sense of growth and development (Pratt & Ashforth, 2003). Moreover, such experiences can act as a motivating factor, thereby encouraging a sense of task focus and exploration of new working ways, methods and ideas among employees.

Such findings resonate strongly with the concept of meaningfulness of work. Khan (1990) described meaningfulness of work as a "sense of return on investments of self in role performances" (p. 705) and the feeling that the work carried out is valuable. Meaningfulness of work represents the psychological state for employees' motivation, experience at work, and productivity (Hackman & Oldham, 1976). The existing literature has demonstrated a positive association with employees' perceptions of the meaningfulness of their work and innovativeness (Zhang & Bartol, 2018) as well as proactiveness (Tims, Derks & Bakker, 2016). Additionally, the findings also support existing arguments in the entrepreneurship literature concerning the role of passion and entrepreneurial activity (Cardon, Gregoire, Stevens & Patel., 2013).

Scholars have long acknowledged the fact that sustained entrepreneurial activity requires a high-degree of personal passion for it (Cardon et al., 2013) as passion is linked to an individual's capacity to recognise new information patterns in the discovery and exploitation of promising opportunities

(Sundararajan & Peters, 2007). Passion requires strong positive feelings towards an object or an activity and has been consistently identified with entrepreneurial process (Cardon, Sudek & Mitteness, 2009). Passion and meaningfulness have been linked to individual entrepreneurship and creativity at work (Chen, Liu & He, 2015), due to their capacities to motivate individuals to engage in discretionary behaviour. The interview data largely supports this view too. As participants began to realise the significance of their work, they began to look for more interesting and alternative ways in which they could generate value or contribute to their organisation, clients, or customers. Such feelings encouraged participants to experiment with new ideas, challenge existing assumptions and practices as well as become more proactive in their engagements with clients, customers or their organisation.

Finally, feeling that one possessed specific capabilities and skills also emerged as an important determinant of participants' entrepreneurial behaviour. Entrepreneurial behaviours are demanding in nature and often occur outside of an employee's role (Gawke et al., 2017). This requires individuals to possess specific skills and capabilities, above and beyond what is required of their role, in order to successfully carry out and sustain their entrepreneurial behaviour (Urbano & Turró, 2013). Specific capabilities and skills were defined as the confidence in one's self that they possess the sufficient skills and abilities to carry out their role easily. Personal attributes and personal experiences were further found to shape participants' confidence in their skills and capabilities. Specific skills and capabilities included open-mindedness, curiosity and positive attitudes as well as relational skills. Data showed that participants who felt that they possessed such skills and capabilities were apt at identifying

unique entrepreneurial opportunities in their work-domains, and being able to confidently propose new and novel solutions to existing organisational and customer issues. Additionally, personal attributes such as prior knowledge and work experiences along with a capacity to quickly learn were found to not only help participants identify new opportunities and propose solutions, but also to encourage them to push through with proposed ideas despite challenges and setbacks.

The abovementioned findings also support more established ideas in the organisational psychology and entrepreneurship literatures regarding the importance of self-efficacy. The notion of self-efficacy reflects an individual's innermost thoughts on whether they have the abilities perceived as important to task performance, as well as the belief that they will be able to effectively convert those skills into a chosen outcome (Bandura, 1989). Studies established a positive association between the possession of specific capabilities (Urbano & Turró, 2013) and having self-efficacy and employee entrepreneurial behaviour (Wakkee et al., 2010). The above findings add to the literature by providing a finer grained view of the specific capabilities and skills deemed necessary. For example, while the existing literature has mentioned extensively the importance of knowledge and networking (Urbano & Turró, 2013), capabilities and skills such as critical problem solving skills, open mindedness or prior working experience and knowledge have not been considered. The findings suggest that when participants felt that they possessed such skills and capabilities, they felt more confident in engaging in entrepreneurial behaviour.

The above themes can be loosely seen as mapping onto the established construct of Psychological Empowerment (PE). Empowerment refers to the process through which individuals, organisations, and communities gain mastery over issues of concern to them (Rappaport, 1987). Psychological Empowerment (PE) can be viewed as an increased intrinsic task motivation manifested in a set of four cognitions reflecting an individual's orientation to their work role. The four cognitions are meaning, competence, self-determination and impact (Thomas & Velthouse, 1990). Findings suggest that psychologically empowered employees are able to engage in entrepreneurial behaviour, act independently and have high commitment to their organisation. This is possible because they are likely to find more meaning in their work, believe they are in control of the work that they do and display a level of confidence in their skills and capacity to act entrepreneurially. This view is supported by the recent findings of Afsar et al. (2017) who also established a positive association between the concept of PE and employee entrepreneurial behaviour.

Spreitzer et al. (1999) suggested that not all four dimensions of PE have to be present in order to have a motivating effect on behaviour. The above findings also support this notion. In particular, the above findings identified three instead of four different dimensions of PE, which were relevant to fostering employee entrepreneurial behaviour. Findings also demonstrated some subtle differences with respect to how the dimensions of PE were viewed. For instance, in Spreitzer et al's (1999) conceptualisation of PE, impact or the degree to which a person can influence strategic, administrative, or operating

outcomes at work was considered as a separate dimension. However, the data suggested impact as a key determinant of employee's sense of realisation of the significance of their work or meaning. Hence, recognising the impact of one's work on their organisation, community, clients and customers helped in ascribing greater meaning to an employee's work, thereby also encouraging entrepreneurialism. Findings also suggested that impact was not only viewed in terms of the extent to which the participants felt that they helped to achieve organisational goals and objectives, but also to the extent that their role or work was making a difference to the wider community and clients. The latter was not considered as part of Spreitzer et al's (1999) original conceptualisation of the impact.

Similarly, Spreitzer et al. (1999) described meaning as the fit between the requirements of a work role and a person's beliefs, values, and behaviours (Brief & Nord, 1990; Hackman & Oldham, 1980). Such a view recognises that meaning is very personal and it is something that the individual ascribes to their own work, and something that emerges from the attributes of the work itself. However, interview data also highlighted the subtle role of recognition of one's work through either formal or informal acknowledgement in helping to assign meaning to one's work/. Whether formal or informal, acknowledgement helped to re-affirm in participants' minds that their work held critical importance to those around them and especially their organisations, thereby also heightening the meaningfulness of their work/role to them.

Several studies have linked the concept of PE to positive proactive behaviours and commitment (Anderson & Williams, 1996; Spreitzer et al., 1999). The concept of PE has been shown to have positive effects on employee

innovativeness (Bystead, 2013; Pieterse et al., 2010). However, to date, PE has yet to be properly linked to pro-organisational behaviours that are also entrepreneurial in nature such as personal initiative and individual risk taking (Afsar et al., 2017). Evidence from the interviews extend the existing literature in this regard by demonstrating a possible link between PE and employee entrepreneurial behaviour. Findings demonstrated that in addition to ideation and creativity, PE can also foster behaviours such as proactivism, risk taking and strategic networking. These behaviours are closely associated with entrepreneurialism. Broadly, the findings suggest that PE can act as an intrinsic motivator for employees' entrepreneurial behaviour. Hence, by demonstrating an association between PE and employee entrepreneurial behaviour, the findings help to expand the nomological network of PE, particularly in relation to its positive outcomes.

5.4.1 Practical and managerial implications of findings.

The findings here also have relevance for organisations alike. In realising their entrepreneurial aspirations, organisations have largely focused on creating entrepreneurial environments (Mustafa, Gavin & Hughes, 2018) and or human resources practices that lead to corporate entrepreneurship (Hayton, 2005). Although factors such as strategic autonomy, coaching of entrepreneurial employees and ensuring the availability and access to critical resources remain crucial to building and maintaining entrepreneurial environments, the findings here also suggest that employees' positive orientations towards their work may also be of significance in fostering their entrepreneurial behaviour.

Considerations of job design have been strongly linked to promoting both innovative and entrepreneurial behaviours (De Jong et al., 2015; Hammond, Neff, Farr, Schwall & Zhao, 2011). However, much of the considerations around job design have focused on providing employees with sufficient discretion and autonomy or task variety (De Jong et al., 2015). While consideration of such features in the design of an employee's work is important, also important are other aspects such as ensuring that their work provides ample opportunities for personal growth and development. Hence, organisations may do well by paying careful attention to how they design employees' jobs so that employees may feel as if they are positively contributing to their organisations and that they are personally growing and developing in the process.

Equally important may be ensuring that an employee's work has a stronger sense of purpose and meaning behind it. The latter point may be particularly important considering the growing participation of millennials in the work force. In their field study of Millennials expectations with respect to work, Ng, Schweitzer, and Lyons (2010) noted the growing importance of new age employees looking for work that is meaningful and fulfilling. Organisations may do well by emphasising specific aspects of employee's work which may be considered as appealing. Doing so may raise current and/or future employee's positive attitudes towards their work.

Besides providing meaningful and fulfilling work, providing nurturing work environment, in addition to an entrepreneurial work culture, may also

prove fruitful in enhancing employees' positive orientation towards their work. For instance, increasingly important in work-places is the social aspect of working (Council, 2005), wherein there is a close collaboration between the employee, their supervisors/managers and fellow colleagues. In creating such conditions in the work-place, organisations may need to be cognisant of how they create opportunities for interactions between the employees and fellow colleagues. Similarly, organisations may need to also consider how employees are provided feedback on their actions and to ensure that opportunities for personal learning and development are provided. The reciprocal connection between recognising business opportunities, behaving entrepreneurially and receiving feedback, may lead to increase in the self-efficacy of employees. Hence, organisations should provide structured training programmes aimed at developing entrepreneurial skills and competencies among their employees.

5.5 Chapter Summary

This chapter took an exploratory approach to understanding how employees' active orientation towards their work influences their entrepreneurial behaviour. Findings revealed the importance of Self-determination, Realising the significance of one's work, and Possessing Specific Capabilities and Skills as unique factors influencing employees' entrepreneurial behaviour. Interestingly, the findings from the chapter relate strongly with the concept of Psychological Empowerment (PE) (Spreitzer, 1995). The chapter also highlighted that despite the similarity between the findings here and the concept of PE, some subtle differences still exist. The next chapter will examine the impact of job demands, job resources, and PE on employee entrepreneurial behaviour. The chapter will

also serve as a means of empirically verifying the findings from this chapter, especially with regards to the positive association between an employee's positive orientation towards their work and their entrepreneurial behaviour.

CHAPTER SIX: Empirical Study

3

6 Chapter Overview

This chapter examines whether employees' psychological empowerment (PE) moderates the relationship between their job demands, job resources (job autonomy and task variety) and their entrepreneurial behaviour. It begins with a brief description of the proposed hypothesis, followed by analysis of the data, a short description of validity and assumption checks undertaken and a presentation of the key findings. Empirical data comes from a sample of 321 knowledge-workers in knowledge intensive organisations. Chapter 4 provided a detailed explanation regarding the recruitment of the sample, as well as the specific measures adopted in the study. The chapter ends with a discussion of the findings and a summary of the key points of the chapter.

6.1 Proposed Hypotheses and Conceptual Model

Chapter 3 outlined the theoretical rationale for the proposed relationships in this particular study. The following paragraphs describe the proposed direct and moderating effects of job autonomy, task variety, job demands and psychological empowerment on employee entrepreneurial behaviour and its associated dimensions.

Both directly and indirectly, job autonomy is expected to raise employees' self-beliefs and expectations in their own capabilities and abilities as well as their sense of felt responsibility. The benefits stemming from increased job autonomy may encourage employees to see out new opportunities and ideas in the workplace, take personal initiatives and risks in pushing through with ideas and initiatives. Similarly, when employees experience increased task variety, they may not only experience a greater sense of meaning towards their work, they may also be able to better interpret and position their work in the broader context of the organisation. Such attributes may encourage employees to develop new ideas and to use personal initiative in order to bring about positive changes to work-related products or processes. Based on the above reasoning, the following hypotheses are proposed.

H1: Job autonomy is positively associated with employee entrepreneurial behaviour;

H2: Task variety is positively associated with employee entrepreneurial behaviour;

In addition to the above main hypotheses, the following sub-hypotheses are also proposed in relation to the associated dimensions of employee entrepreneurial behaviour.

H1a, b, c: Job autonomy is positively associated with the associated dimensions of employee entrepreneurial behaviour (ideation, personal initiative and risk taking);

H2 a, b, c: Task variety is positively associated with the dimensions of employee entrepreneurial behaviour (ideation, personal initiative and risk taking).

Based on the reasoning outlined in chapter 3, job demands are expected to have either a positive or negative effect on employee entrepreneurial behaviour. Given the lack of empirical evidence concerning the relationship between job demands and employee entrepreneurial behaviour, a non-directional hypothesis is proposed. When viewed as hindrances, job demands such as excessive workload and time pressures can reduce the capacity and willingness of employees to be innovative, use their personal initiatives and take risks. In such instances, employee entrepreneurial behaviour is expected to be reduced. When viewed as a challenge however, job demands such as excessive workload and time pressures may be expected to motivate employee to take personal risks and initiatives to pursue opportunities and propose new ideas. Based on the above reasoning the following hypothesis is proposed.

H3: Job demands is associated with employee entrepreneurial behaviour.

Similarly, the following sub-hypotheses are proposed in relation to the associated dimensions of employee entrepreneurial behaviour.

H3 a, b, c: Job demands is associated with the various dimensions of employee entrepreneurial behaviour (ideation, personal initiative and risk taking).

In this study, PE is hypothesised to moderate the relationship between job autonomy, task variety, job demands and employee entrepreneurial behaviour for the following reasons: Firstly, due to their increased sense of self-determination and their perceived ability to control their environments, psychologically empowered employees may be better able to cope with the demands of their jobs. Secondly, psychologically empowered employees are likely to perceive themselves as having a strong sense of internal control. Hence, when given job autonomy, psychologically empowered employees may be motivated to propose new ideas, support others in behaving entrepreneurially as they are likely to have greater confidence in their own abilities to perform. Finally, when experiencing a high degree of task variety in their jobs, psychologically empowered employees will be more likely to draw on their enhanced feelings of impact and self-determination to motivate themselves to take individual risks and use their personal initiative to propose new ideas in pursuit of opportunities. Based on the above reasoning, the following hypotheses are proposed.

H4: Psychological Empowerment (PE) will moderate the relationship between job autonomy and employee entrepreneurial behaviour;

H5: Psychological Empowerment (PE) will moderate the relationship between task variety and employee entrepreneurial behaviour;

H6: Psychological Empowerment (PE) will moderate the relationship between job demands and employee entrepreneurial behaviour.

In addition to abovementioned main hypotheses, the following sub-hypotheses are also proposed in relation to the associated dimensions of employee entrepreneurial behaviour.

H4 a, b, c: Psychological Empowerment (PE) will moderate the relationship between job autonomy and the associated dimensions of employee entrepreneurial behaviour;

H5 a, b, c: Psychological Empowerment (PE) will moderate the relationship between task variety and the associated dimensions of employee entrepreneurial behaviour;

H6 a, b, c: Psychological Empowerment (PE) will moderate the relationship between job demands and the associated dimensions of employee entrepreneurial behaviour.

Figure 6.1 below provides a conceptual overview of the proposed relationships and their associated hypothesis.

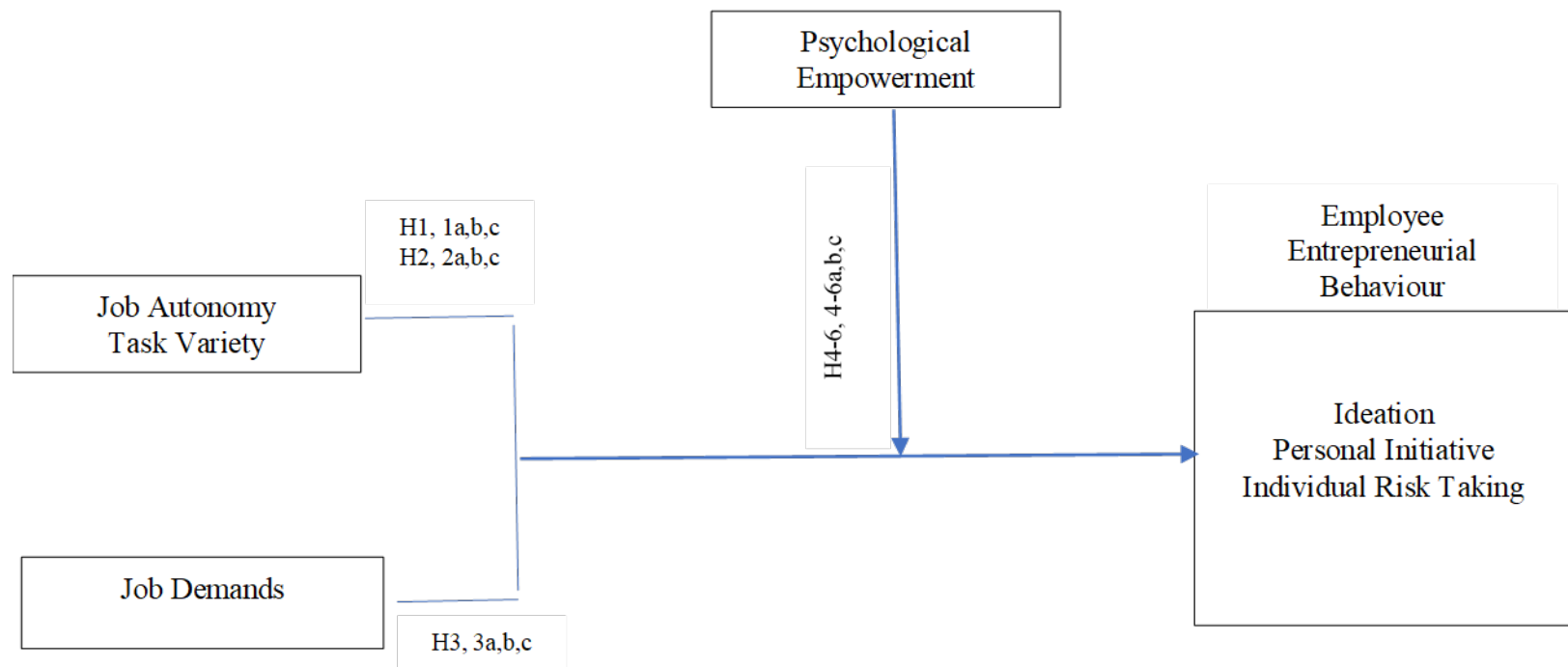


Figure 6.1. Conceptual Model and Hypothesised Relationships

6.2 Data Analysis

6.2.1 Descriptive analysis.

Descriptive statistics for all the variables in this study are shown in Table 6.1. Kim (2013) suggests that for large sample sizes ($N > 300$), normality parameters should be in the range of -2 to 3 for skewness and Kurtosis. Based on this suggestion, the data was found to have normal distribution. Moreover, all predictor variables used in the analyses were significantly correlated with the dependent variables.

Variable	M.	S.D.	Skew	Kur	1	2	3	4	5	6	7
1. JobAut	3.64	0.85	-0.62	0.25	-						
2. TaskVar	3.60	0.82	-0.38	-.08	.44*	-					
3. JobDem	3.08	0.73	0.18	-.14	.32*	.32*	-				
4. PsyEm	3.78	0.72	-0.62	.55	.57*	.44*	.05	-			
5. Idea	3.28	0.78	-0.42	.11	.51*	.46*	.20*	.43*	-		
6. PerIn	2.73	0.93	0.18	-.60	.35*	.29*	.20*	.41*	.65*	-	
7. Risk	2.30	0.85	0.54	-.12	.29*	.18*	.28*	.21*	.35*	.52*	
8. EB	2.78	0.70	0.12	-.14	.46*	.37*	.27*	.42*	.80*	.89*	.76*

Table 6.1. Descriptive and Correlations of the Main Study Variables.

Note. $N = 321$; * = $p < .01$; M = Mean; S.D. = Standard Deviation; Skew = Skewness; K = Kurtosis; JobAut = Job Autonomy; TaskVar = Task Variety; JobDem = Job Demands; PsyEm = Psychological Empowerment; Idea = Ideation; PerIn = Personal Initiative; Risk = Risk Taking; EB = Entrepreneurial Behaviour

6.2.2 Validity and assumption checks.

A Harman's one factor test was conducted to test for common method bias (Podsakoff, 2003). All the study variables were loaded into a single exploratory factor analysis, extracting 9 factors accounting for 72.22% of the total variance. The first factor accounted for 27.23% of the variance. Following Podsakoff's (2003) suggestion, as no single factor accounted for more than 50% of the variance, common method bias was not considered to be a major issue for the data.

Multi-collinearity can pose a threat to the data as overly correlated predictor variables in the model may make it extremely difficult to trash out and interpret the individual effects and relative contributions of each independent variable in the model. To examine the possible effects of multi-collinearity, variance inflation factors (VIFs), tolerance indices were used. Multi-collinearity thresholds were set below 10 (VIF) and 0.1 (Tolerance) as indicated by Field (2000). In this study, the VIF and tolerance indices for all variables were within the acceptable range. Furthermore, none of the independent variables had high intercorrelations ($p > 0.80$) indicating low risk for multi-collinearity (Field, 2000).

6.2.3 Confirmatory Factor Analysis (CFA).

In addition to the above normality checks, a Confirmatory Factor Analysis (CFA) was also carried out. The CFA was conducted to confirm the factor structure of the items in the job autonomy, task variety, PE, proactive

personality, entrepreneurial behaviour and its associated dimensions of ideation, personal initiative and risk taking. Within the CFA, specific attention was devoted to evaluating the construct and discriminant validity of the above-mentioned items. The following indices were used to evaluate construct validity in the study: chi square (χ^2), root mean square error of approximation (RMSEA) with 90% confident interval, Bentler comparative index (CFI) and root mean square residual (RMR), normed chi square value (ratio of chi square to df; χ^2/df), goodness of fit index (GFI) as well as Akaike information criterion (AIC) and consistent AIC (CAIC). Table 6.2 below shows the results of the CFA.

Variable	Items	Model	CFA results
Job Autonomy	3	1-factors	$\chi^2/\text{df}(4)=3.06, p < 0.001$, RMSEA =0.08, RMR = 0.04, CFI = 0.99, GFI =0.99, AIC = 34.24 and CAIC = 86.72
Job Demands	7	1-factors	$\chi^2/\text{df}(11)=3.27, p < 0.001$, RMSEA =0.08, RMR = 0.03, CFI = 0.98, GFI =0.97, AIC = 69.98 and CAIC = 151.09
Proactive Personality	5	1-factor	$\chi^2/\text{df}(11)=3.27, p < 0.001$, RMSEA =0.08, RMR = 0.03, CFI = 0.98, GFI =0.97, AIC = 69.98 and CAIC = 151.09
Psychological Empowerment	12	4-factors	$\chi^2/\text{df}(50) = 1.81, p < 0.001$, RMSEA =0.50, RMR =0.04, CFI =0.99, GFI =0.96, AIC = 146.33 and CAIC = 279.93
Personal Initiative	3	1-factors	$\chi^2/\text{df}(1) =0.03, p < 0.001$, RMSEA =0.00, RMR =0.004, CFI =1.00, GFI =1.00, AIC = 10.26 and CAIC =33.88
Ideation	3	1-factor	$\chi^2/\text{df}(1) = 4.81, p < 0.001$, RMSEA = 0.08, RMR = 0.04, CFI = 0.99, GFI = 0.95, AIC = 146.81 and CAIC = 38.67.
Risk Taking	3	1-factor	$\chi^2/\text{df}(27)=2.67, p < 0.001$, RMSEA =0.07, RMR = 0.05, CFI =0.96, GFI =0.95, AIC = 108.81 and CAIC = 194.70
Task Variety	3	1-factor	$\chi^2/\text{df}(1)=3.17, p < 0.001$, RMSEA =0.08, RMR = 0.02, CFI =0.99, GFI = 0.96, AIC =13.17 and CAIC = 37.03
Total EB	9	3-factor	$\chi^2/\text{df}(50) = 1.80, p < 0.001$, RMSEA = 0.80, RMR = 0.04, CFI =0.99, GFI = 0.98, AIC = 146.33 and CAIC =279.93

Table 6.2. Confirmatory Factor Analysis (CFA) of Main Study Variables.

Figures 6.2 – 6.9 provide a graphical representation of the CFA for each main study variable.

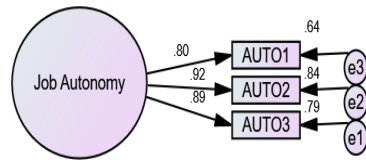


Figure 6.2. Confirmatory Factor Analysis (CFA) for Job Autonomy.

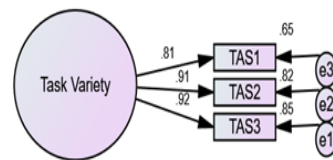


Figure 6.3. Confirmatory Factor Analysis (CFA) for Task Variety.

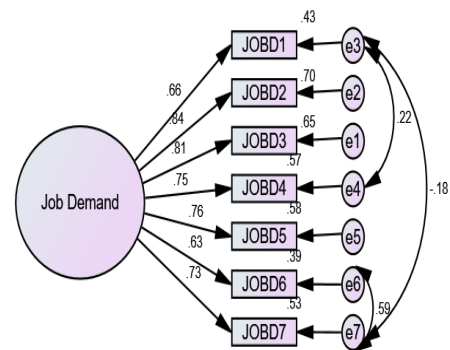


Figure 6.4. Confirmatory Factor Analysis (CFA) for Job Demands.

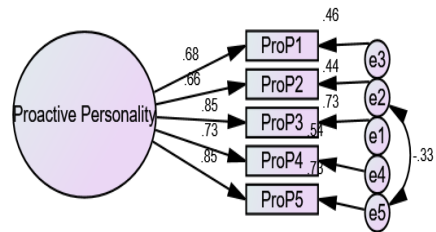


Figure 6.5. Confirmatory Factor Analysis (CFA) for Proactive Personality.

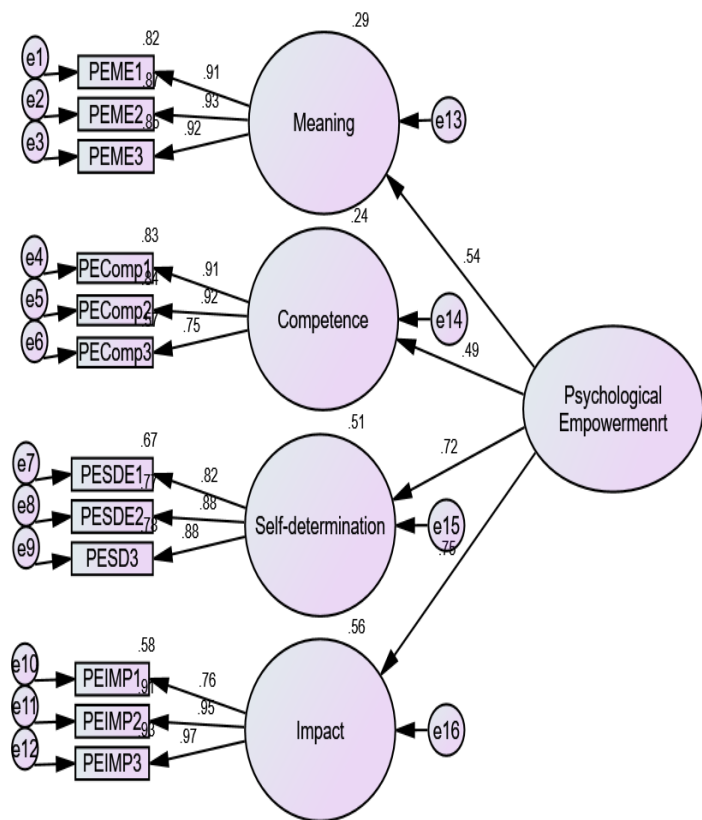


Figure 6.6. Confirmatory Factor Analysis (CFA) for Psychological Empowerment (PE).

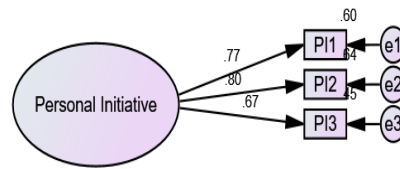


Figure 6.7. Confirmatory Factor Analysis (CFA) for Personal Initiative Dimension of Employee Entrepreneurial Behaviour.

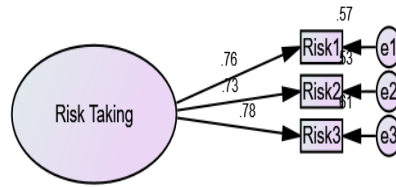


Figure 6.8. Confirmatory Factor Analysis (CFA) for Risk Taking dimension of Employee Entrepreneurial Behaviour.

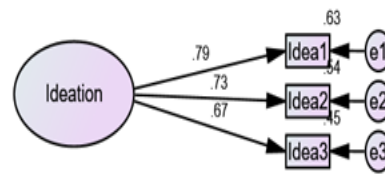


Figure 6.8. Confirmatory Factor Analysis (CFA) for Ideation dimension of Employee Entrepreneurial Behaviour.

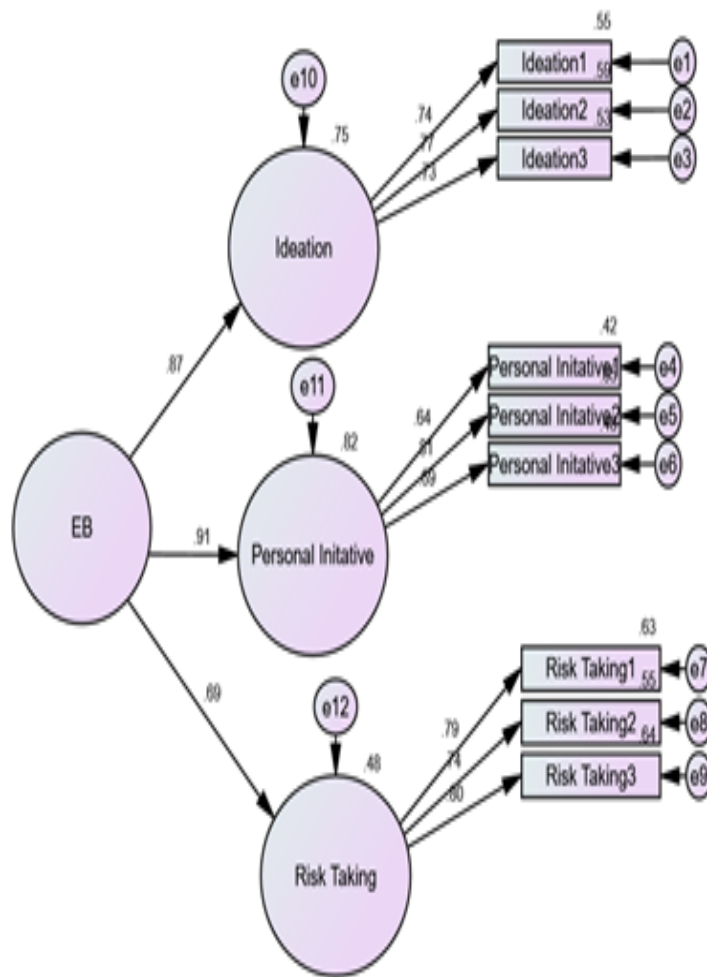


Figure 6.9. Confirmatory Factor Analysis (CFA) for higher order Employee Entrepreneurial Behaviour Scale.

Table 6.3 below shows the recommended cut-off point for an acceptable model fit, based on the suggestion by Awang (2012).

Name of category	Name of index	Level of acceptance	Remarks
Absolute fit	Chisq	$p > 0.05$	Sensitive to sample size > 200
	RMSEA	RMSEA < 0.08	Range between 0.05 and 1.00 is acceptable
	GFI	GFI > 0.90	GFI = 0.95 is a good fit
Incremental fit	AGFI	AGFI > 0.90	AGFI = 0.95 is a good fit
	CFI	CFI > 0.90	CFI = 0.95 is a good fit
	TLI	TLI > 0.90	TLI = 0.95 is a good fit
	NFI	NFI > 0.90	NFI = 0.95 is a good fit
Parsimonious fit	Chisq/df	Chi square/df < 5.0	Value should be less than 5.0

Table 6.3. Level of Acceptance of the Model Fit Indices.

As can be seen from Table 6.3 all values were well within the limits suggested by Awang (2012). Discriminant validity was evaluated using the parameter estimates of the standardised factor loadings and factor correlations. Various values for acceptable factor loadings of items have been suggested by the literature. In this thesis, Brown's (2006) recommendation, a cut-off point of greater than 0.5, was adhered to. Accordingly, and as seen from the above Figures 6.2 – 6.9, all items for the suggested constructs exceeded 0.5.

6.3 Hypotheses testing

Tables 6.4 – 6.7 below provide evidence of the hierarchal regression analysis carried out as part of the study to examine the proposed hypotheses. With regards to the dependent variable, employee entrepreneurial behaviour, the researcher examined its determinants, firstly as a whole construct (EB), and then with respect to its different dimensions. This was done in order to enable a finer-grained view of the determinants of employee entrepreneurial behaviour.

	β	SE β	t	P	LLCI	ULCI
Control variables:						
Tenure	-0.005	0.004	-1.14	$p > 0.05$	-0.0138	0.0036
Proactive Personality	0.21	0.03	6.53	$p < 0.01$	0.1495	0.2875
RFvsSen	0.72	0.14	5.13	$p < 0.01$	0.4485	1.0060
RFvMid	0.34	0.09	3.87	$p < 0.01$	0.1684	0.5172
RFvsJun	0.16	0.08	2.10	$p < 0.05$	0.0105	0.3190
RFvsOth	0.28	0.12	2.32	$p < 0.05$	0.0432	0.5258
Independent variables:						
Job Autonomy	0.12	0.05	2.35	$p < 0.05$	0.0200	0.2245
Task Variety	0.02	0.05	0.39	$p > 0.05$	-0.0748	0.1121
Job Demands	0.02	0.005	4.004	$p < 0.01$	0.0119	0.0348
Moderator:						
PE	0.07	0.05	1.36	$p > 0.05$	-0.0334	0.1826
Interactions:						
Job Autonomy x PE	-0.09	0.04	-2.01	$p < 0.05$	-0.1690	-0.0050
Task Variety x PE	-0.09	0.05	-1.99	$p < 0.01$	-0.1764	-0.0009
Job Demands x PE	0.004	0.01	0.71	$p > 0.05$	-0.0083	0.0177

Table 6.4. Regression Analysis on Employee Entrepreneurial Behaviour (EB). Note. *RF- Rank and File; PE- Psychological Empowerment.

	β	SE β	t	P	LLCI	ULCI
Control variables:						
Tenure	-0.005	0.005	-1.001	$p > 0.05$	-0.0144	0.0052
Proactive Personality	0.23	0.04	6.31	$p < 0.01$	0.1601	0.3054
RFvsSen	0.54	0.15	3.43	$p < 0.01$	0.2303	0.8577
RFvMid	0.30	0.10	3.10	$p < 0.01$	0.1050	0.4980
RFvsJun	0.25	0.09	2.80	$p < 0.01$	0.0723	0.4197
RFvsOth	0.30	0.14	2.12	$p < 0.05$	0.0308	0.5740
Independent variables:						
Job Autonomy	0.16	0.06	2.73	$p < 0.05$	0.0444	0.2738
Task Variety	0.16	0.05	3.05	$p < 0.01$	0.0576	0.2679
Job Demands	0.01	0.007	1.28	$p > 0.05$	-0.0045	0.0213
Moderator:						
PE	0.04	0.06	0.60	$p > 0.05$	-0.0803	0.1638
Interactions:						
Job Autonomy x PE	-0.12	0.06	-2.47	$p < 0.05$		
Task Variety x PE	-0.10	0.05	-2.06	$p < 0.05$	-0.2019	-0.0045
Job Demands x PE	-0.03	0.007	0.38	$p > 0.05$	-0.0175	0.0117

Table 6.5. Regression Analysis on Ideation Dimension. Note. *RF- Rank and File; PE Psychological Empowerment.

	β	SE β	t	p	LLCI	ULCI
Control variables:						
Tenure	-0.001	0.01	-0.10	$p > 0.05$	-0.0131	0.0118
Proactive Personality	0.26	0.05	5.53	$p < 0.01$	0.1672	0.3518
RFvsSen	0.97	0.20	4.77	$p < 0.01$	0.5677	1.3658
RFvMid	0.53	0.13	4.21	$p < 0.01$	0.2842	0.7835
RFvsJun	0.21	0.11	1.83	$p > 0.05$	-0.0150	0.4266
RFvsOth	0.20	0.16	1.15	$p > 0.05$	-0.1431	0.5478
Independent variables:						
Job Autonomy	0.03	0.07	0.42	$p > 0.05$	-0.1152	0.1775
Task Variety	-0.00	0.07	-0.0009	$p > 0.05$	-0.1338	0.1337
Job Demands	0.02	0.01	2.78	$p < 0.05$	0.0067	0.0395
Moderator:						
PE	0.19	0.80	2.38	$p < 0.05$	0.0327	0.3432
Interactions:						
Job Autonomy x PE	-0.10	0.06	-1.65	$p > 0.05$	-0.2159	0.0188
Task Variety x PE	-0.10	0.06	1.63	$p > 0.05$	-0.2293	0.0218
Job Demands x PE	0.01	0.01	0.62	$p > 0.05$	-0.0127	0.0244

Table 6.6. Regression Analysis on Personal Initiative Dimension. Note. *RF- Rank and File; PE Psychological Empowerment.

	β	SE β	t	P	LLCI	ULCI
Control variables:						
Tenure	-0.01	0.01	0.14	$p > 0.05$	-0.0221	0.0030
Proactive Personality	0.15	0.05	3.18	$p < 0.01$	0.0574	0.2438
RFvsSen	0.67	0.20	3.27	$p < 0.01$	0.2664	1.0721
RFvMid	0.19	0.13	1.45	$p > 0.05$	-0.0669	0.4382
RFvsJun	0.04	0.11	0.37	$p > 0.05$	-0.1812	0.2646
RFvsOth	0.36	0.18	2.03	$p < 0.05$	0.0105	0.7080
Independent variables:						
Job Autonomy	0.18	0.08	2.35	$p < 0.05$	0.0288	0.3243
Task Variety	-0.11	0.07	-1.56	$p > 0.05$	-0.2417	0.0282
Job Demands	0.04	0.01	1.17	$p < 0.01$	0.0220	0.0549
Moderator:						
PE	0.005	0.08	0.06	$p > 0.05$	-0.1511	0.1610
Interactions:						
Job Autonomy x PE	-0.05	0.06	-0.78	$p > 0.05$	-0.1656	0.0713
Task Variety x PE	-0.06	0.06	0.35	$p > 0.05$	-0.1858	0.0677
Job Demands x PE	0.01	0.01	1.17	$p > 0.05$	-0.0076	0.0296

Table 6.7. Regression Analysis on Risk Taking Dimension. Note. *RF- Rank and File; PE Psychological Empowerment.

6.3.1 Testing for direct effects.

As shown in Table 6.4, after controlling for the effects of tenure, proactive personality and job levels, job Autonomy ($\beta = 0.12, p < 0.05$) and job demands ($\beta = 0.02, p < 0.01$) had significant positive relationships with entrepreneurial behaviour but task variety and PE had none. Hence hypothesis 1 and hypothesis 3 were supported.

Regarding the dimension of ideation (see Table 6.5), after controlling for the effects of tenure, proactive personality and job levels, job autonomy ($\beta = -0.09, p < 0.05$) and task variety ($\beta = 0.16, p < 0.01$) had significant positive effects on ideation, but job demands had none. Similarly, PE had no significant direct effects on the dimension of ideation. Hence, hypothesis 1a and hypothesis 2a were supported.

Regarding the dimension of personal initiative, Table 6.6 shows that after controlling for the effects of tenure, proactive personality and job levels, amongst the independent variables, only job demands ($\beta = 0.02, p < 0.05$) had significant direct effect on personal initiative. That is, higher job demands led to higher levels of personal initiative. Similarly, PE was found to have a significant direct and positive effects on the dimension of personal initiative. Hence, only hypothesis 3b was supported.

With respect to the dimension of risk taking, Table 6.7 shows that after controlling for the effects of tenure, proactive personality and job levels, job autonomy ($\beta = 0.18, p < 0.05$) and job demands ($\beta = 0.04, p < 0.01$) had

significant direct and positive effects on risk taking while task variety and PE both had none. Hence, both hypothesis 1c and 3c were supported.

6.3.2 Testing for the moderation effects of Psychological Empowerment (PE).

A key objective of this chapter was to examine whether PE moderated the relationships between job resources (job autonomy and task variety), job demands and employee entrepreneurial behaviour (ideation, personal initiative and risk taking).

With respect to the overall construct of employee entrepreneurial behaviour, as indicated by Table 6.4, PE moderated the relationship between job autonomy ($\beta = -0.09, p < 0.05$), task variety ($\beta = -0.09, p < 0.01$) and employee entrepreneurial behaviour. Hence, both hypothesis 4 and hypothesis 5 were supported. As can be seen from Figure 6.10, PE enhances the effects of job autonomy on employee entrepreneurial behaviour at low and medium levels of job autonomy. However, the effect tapers off at high levels of job autonomy.

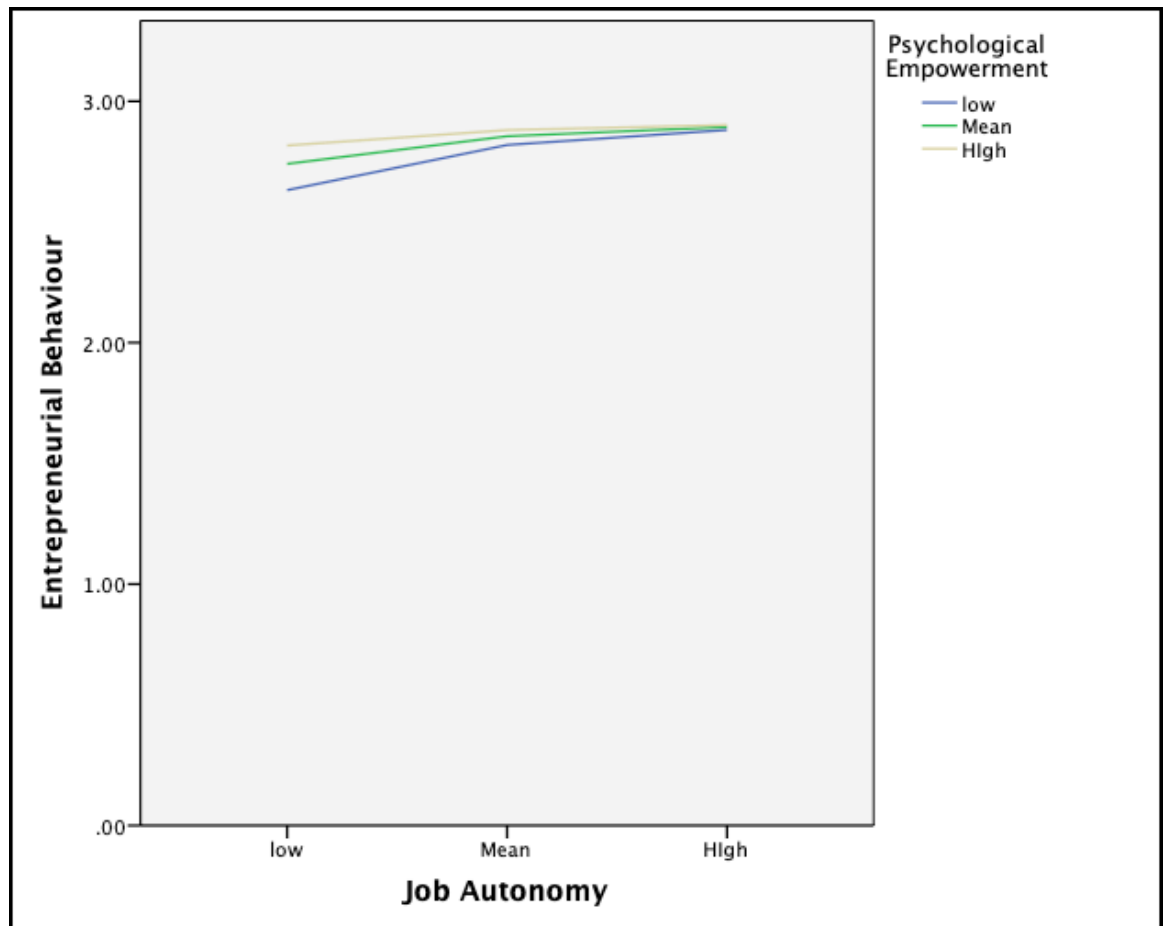


Figure 6.10. The Moderating Effects of PE on the relationship between Job Autonomy and Employee Entrepreneurial Behaviour.

Likewise Figure 6.11 shows that PE enhances the effects of task variety on employee entrepreneurial behaviour at low and medium levels of task variety. However, the effect tapers off at high levels of task variety.

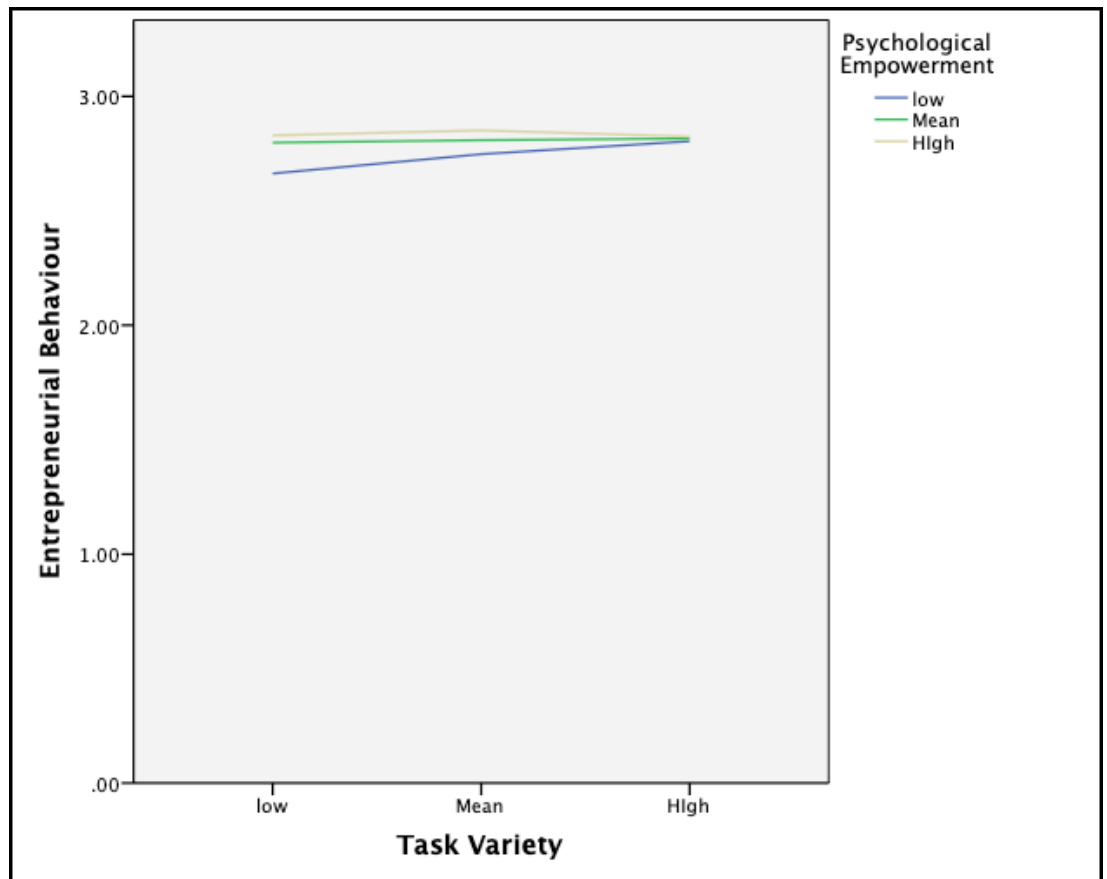


Figure 6.11. The Moderating Effects of PE on the relationship between Task Variety and Employee Entrepreneurial Behaviour.

Regarding the dimension of ideation, Table 6.5 reveals that PE had significant interactive effects on the relationship between job autonomy ($\beta = -0.12, p < 0.05$), task variety ($\beta = -0.10, p < 0.05$) and ideation. Hence, both hypothesis 4a and hypothesis 5a were supported.

Figure 6.12 shows the simple slopes to visualise the moderating effects of PE on job autonomy and ideation. Based on Figure 6.12, at low levels of job autonomy, PE enhances its positive effects on ideation. This implies that ideation is enhanced by increased PE when job autonomy is low. However, at

high levels of job autonomy, PE actually reverses the effects of job autonomy.

At high levels of job autonomy, ideation decreases when PE is high.

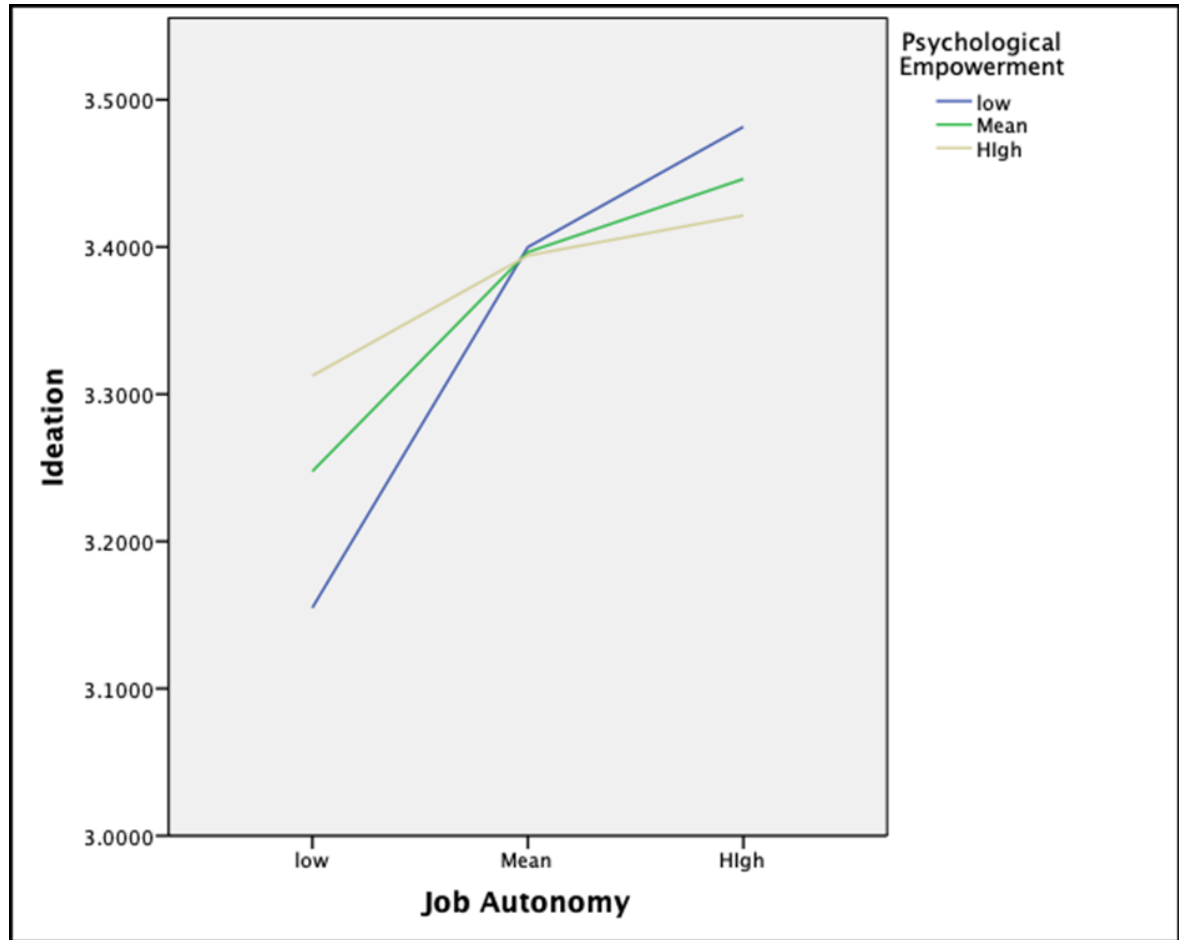


Figure 6.12. The Moderating Effects of PE on the relationship between Job Autonomy and Ideation.

Likewise, as shown in Figure 6.13, the graph of the simple slopes shows that at low levels of task variety, higher levels of PE lead to higher levels of ideation. However, at high levels of task variety, increased PE reverses the positive effects of task variety and actually induces lower incidences of ideation.

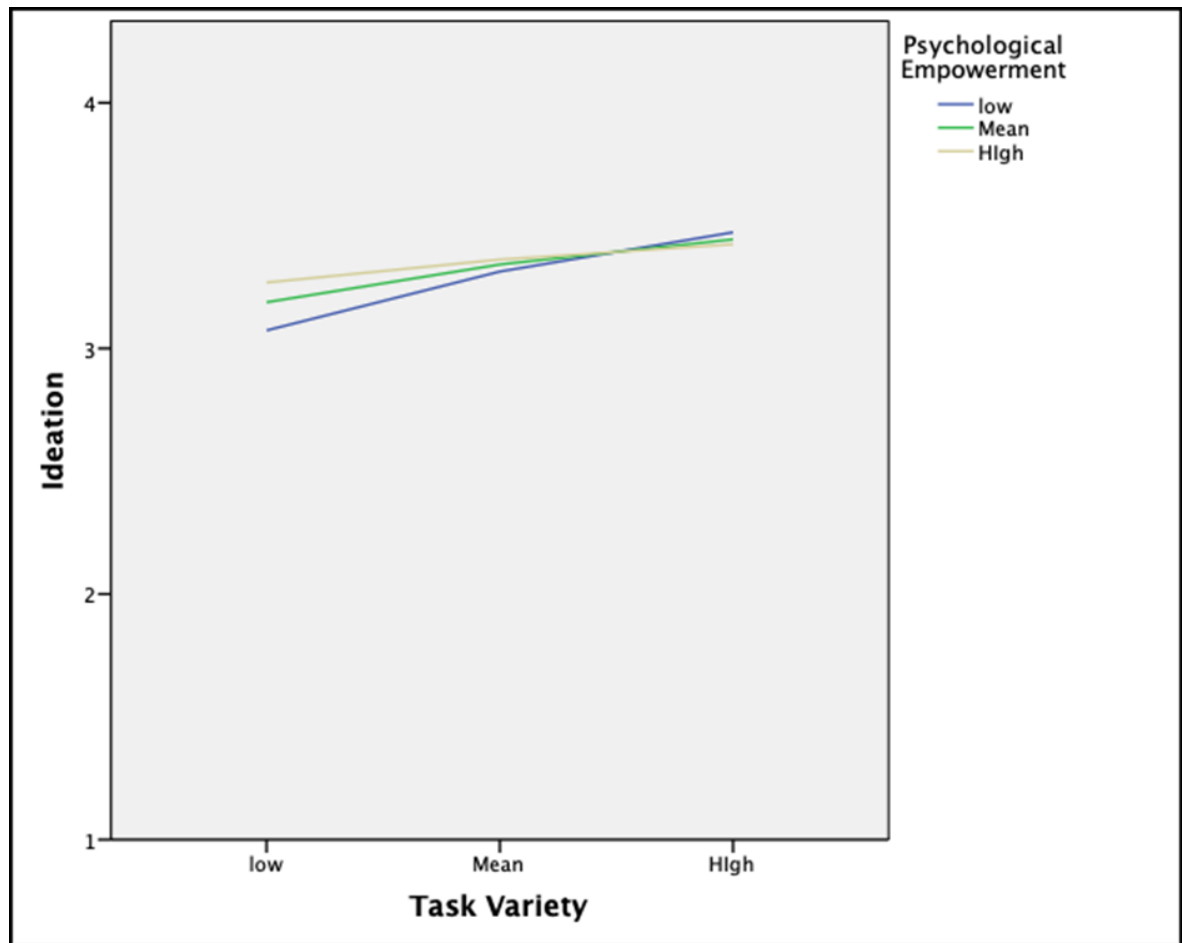


Figure 6.13. The Moderating Effects of PE on the relationship between Task Variety and Ideation.

In terms of personal initiative dimensions, Table 6.6 no significant interaction effects between PE and any of the independent variables (job autonomy, task variety and job demands) were observed. Similarly, regarding the risk-taking dimension Table 6.7, also showed no significant interaction effects between PE and any of the independent variables (job autonomy, task variety and job demands) were observed.

6.4 Discussion and Implications

The chapter sought to answer the question regarding whether an employee's Psychological Empowerment (PE) moderates the relationship between their job demands, job resources (job autonomy and task variety) and their entrepreneurial behaviour. Empirical evidence was based on the responses of 321 knowledge-workers from knowledge intensive organisations. Results were analysed using hierarchical regression analysis and the process macro in SPSS. The JD-R model was used to explain the key findings from the chapter.

Regarding overall employee entrepreneurial behaviour, after controlling for the effects of tenure, proactive personality and job level, job autonomy and job demands were found to have a significant positive relationship with entrepreneurial behaviour. Neither task variety nor PE was found to have any significant effects on employee entrepreneurial behaviour. However, PE was found to have moderating effects, with respect to both job resources (task variety and job autonomy).

Regarding the direct effects, job autonomy was found to have a significant effect on employee entrepreneurial behaviour. Such a finding is consistent with earlier studies that show the positive effects of increased job autonomy and work discretion on employee entrepreneurialism (De Jong et al., 2015; Hornsby et al., 2009; Kuratko et al., 2005). Job autonomy refers to the extent of control employees have in carrying out their tasks (De Spiegelaere et al., 2012) and is considered as a desirable feature of one's work. It has been very strongly linked to the notion of work motivation (Hackman & Oldham, 1976).

Job autonomy can influence employee entrepreneurial behaviour in a number of ways. Firstly, employees who have autonomy in their jobs are able to shape their working styles and patterns because they are free to decide how and when to go about doing their assigned work. This affords them greater opportunities to use their personal judgment at work because of less managerial oversight. Moreover, employees who have greater control over their work patterns and styles are also more likely to develop feelings of responsibility over the outcomes of their own work (Bandura 1997 Hackman & Oldham 1976). Hence, employees with greater autonomy may perceive that they have greater control over their work environment and experience a greater sense of self-determination (Deci et al., 1989). This may motivate them to proactively pursue new opportunities to design and implement new solutions to workplace or client problems. Additionally, employees with greater job autonomy may not only be encouraged to recognise opportunities and threats, but they may also have the significant decision-making powers in order to propose and implement ideas in pursuit of opportunities (Cabrera et al., 2006). Secondly, having increased job autonomy may also encourage employees to be more engaged at work (Schaufeli et al., 2002) as they have access to greater information, which might motivate them to engage in risk taking, alternative thinking, and problem solving (Hackman & Oldham 1976; Zhang et al., 2017).

Contrary to expectations, job demands were found to have a positive and significant effect on employee entrepreneurial behaviour. Studies have typically treated job demands as a significant strain on employees' cognitive and physical well-being, thereby reducing employees' ability and willingness to engage in discretionary behaviours (Bakker & Demerouti, 2017; Dediu et al., 2018). The

above finding, however, suggests otherwise. In fact, they suggest that employees perceived the demands of their jobs as a particular motivator to engage in entrepreneurial behaviours. Cavanaugh et al. (2000) opinions that jobs with moderate amounts of time pressures and cognitive demands may yield opportunities for personal growth and development and the use of problem-focused coping style. Such positive feelings of stress may induce a sensation of being challenged, which may lead towards the achievement of goals and objectives, thereby representing a motivating force (Van den Broeck et al., 2011).

For example, employees who are involved in knowledge work may have to develop unique solutions for client's problems, within a short period of time and this with often limited resources. Such demands may motivate employees to seek unique and creative solutions and to proactively pursue such opportunities. It may also encourage them to find unique and novel ways of overcoming the demands of their job by proposing new solutions or by learning new skills and capabilities to cope with their current situations (Demerouti et al., 2009). The above findings are consistent with LePine et al. (2005) and Van den Broeck et al. (2008) assertion that that not all job demands are detrimental to employee performance.

The findings also demonstrated the moderating effects of PE on both job autonomy and task variety on employee entrepreneurial behaviour. Specifically, findings suggest that PE attenuated the effects of job resources (job autonomy and task variety) on employee entrepreneurial behaviour at low to moderate levels. However, at high levels of job resources (job autonomy and task variety), the effect of PE on job resources tapers off. A number of possible reasons may

exist for this finding. Firstly, PE may substitute for the low and medium levels of job resources. Psychological Empowerment consists of four key dimensions, meaning, self-determination, competence and impact (Spreitzer, 1995). However, prior research has shown that not all dimensions of PE may necessarily be linked to work behaviours (Singh & Sarkar, 2012) and that some dimensions may have a stronger impact than others. In this respect, employees' positive perceptions of their skills and competencies and the belief that they are going to make an impact in the organisation may still continue to motivate them to pursue emergent opportunities, even though they may lack actual job autonomy and task variety.

Secondly, by having greater variety in their tasks and autonomy over their jobs, employees may experience feelings similar to that of being psychologically empowered. Specifically, employees who have high levels of job autonomy and task variety may experience greater flexibility and confidence to explore new opportunities in the workplace. Such feelings are very similar to that of PE, in that employees may perceive themselves as having greater control over their work environment, which may encourage them to take specific actions in the pursuit of new opportunities. The above-mentioned findings suggest that the effect of PE is only useful when the employee experiences low to medium job autonomy and task variety. Compared to PE, both job autonomy and task variety are considered as structural characteristics of an employee's job, whereas PE is considered as an employee's attitude or active orientation to their jobs. At low to medium levels of job autonomy and task variety, employees may not still be able to search for opportunities and suggest new ideas as they continued to be burdened with achieving specific job

and task related objectives. However, in such cases, psychologically empowered employees may still perceive that their jobs have meaning to them, and that they are personally growing and developing and that their actions may have a positive impact on their organisation. Hence, this may motivate them to continue to persist with entrepreneurial behaviour, even though they may not have significantly high levels of job autonomy or task variety.

Findings also demonstrate the differential effects of job resources, job demands and personal resources on the different dimensions of employee entrepreneurial behaviour. Broadly, the findings suggest that different dimensions of employee entrepreneurial behaviour are encouraged by different combinations of job resources, job demands and personal resources. Regarding the ideation dimension, only job autonomy and task variety were found to have significant direct effects on employee entrepreneurial behaviour. Although PE had no direct effect, it was found to moderate the relationship between both job variety and job autonomy.

This is consistent with the view in the literature that job resources are an important means of encouraging employee ideation and innovativeness (Dediu et al., De Spiegelaere et al., 2014; Hammond et al., 2011). Task variety refers to the extent to which an employee's jobs requires the performing of a broad array of tasks (Montani, Odoardi & Battistelli, 2014). Employees with increased task variety perform a greater breadth of activities, which provides them with regular and continuous opportunities to master day-to-day tasks (Axtell & Parker, 2003). Additionally, employees with greater task variety are also more likely to perceive the meaningfulness of their work in the organisation as they

have developed a deep understanding of the impact and value of their job (Grant, 2008). Ultimately, this may increase the engagement of employees in the organisation (Humphrey et al., 2007) and personally motivate them to produce creative results (Noefer et al., 2009) via recombining their knowledge to generate and implement new ideas in order to bring about positive changes and improvements in their organisation (Parker et al., 2010).

Along with task variety, increased job autonomy may also encourage ideation among employees. Increased job autonomy permits employees to have greater control over their immediate and in some cases proximal working environment (Hackman & Oldham, 1976). Employees with greater control over their work environments have better opportunities to freely experiment with different work approaches and methods in order to complete tasks and/or their work. The increased self-efficacy resulting from this may motivate employees to recognise new opportunities and propose innovative solution in the pursuit of those opportunities.

Regarding the moderating effects of PE, a number of interesting findings were also observed. Firstly, PE was found to only moderate the relationships between personal resources (job autonomy and task-variety) and employee entrepreneurial behaviour and its associated dimension of ideation. Broadly, this suggests that personal resources can be considered as another form of job resources (Mayerl, Stolz, Waxenegger, Rásky & Freidl, 2016). Secondly, the findings showed that at both lower levels of job autonomy and task variety, higher levels of PE may lead to higher levels of ideation. In such situations, the meaning that an employee derives from their work, along with the positive perceptions towards their own capabilities in performing their role and the

potential impact they may have, might be sufficient to overcome the lack of autonomy and task variety that they experience in their work. Ultimately, this may motivate them to experiment with new ideas and solutions to workplace problems.

The findings also demonstrated that a high level of job autonomy and task variety, increased PE, may reverse their positive effects and actually induce lower incidences of ideation. Two possible reasons for this finding may exist. Firstly, ideation and creativity require employees to have some degree of attentional focus (Friedman, Fishbach, Förster & Werth, 2003). However, when employees have a high degree of autonomy and task variety and also feel they are psychologically empowered, they may be willing to take on a number of different tasks simultaneously. As a result, they may not be able to cognitively devote sufficient attention to specific tasks long-enough to generate solutions or ideas for them.

Secondly, psychologically empowered employees who also have high levels of job autonomy and task variety may be involved in a variety of different activities throughout the organisation. Hence, they may develop a greater appreciation and understanding of their own abilities and the value of their work in the organisation. Such instances may encourage employees to question their effort towards the organisation. For example, they may find that with the added job autonomy and task variety, they may seek out management positions. Hence, employees may have greater responsibilities at work as well as variety, but they may also feel more empowered as they know that their work is making a greater impact on the organisation. Furthermore, such employees may be more

focused on day-to-day matters, such as managing subordinates or budgets, and thus having less time to devote to ideation.

Change-oriented employee behaviours that enhance innovation are considered essential for the effective function of organisations (Baer & Frese, 2003). Much of the reasoning here is rooted in the notion that organisational effectiveness stems from employee personal initiatives (Katz, 1964). Regarding the personal initiative dimension, after controlling for the effects of tenure, proactive personality and job levels, only job demands and PE were found to have significant effects.

Psychological empowerment refers to an individual's belief in their capabilities to mobilise the motivation, cognitive resources, and courses of action needed to exercise control over given events (Ozer & Bandura, 1990). By having an active orientation towards their job, psychologically empowered employees may not only perceive that their efforts will lead to improved performance, but will also be aware that they have the necessary abilities to cope with the events, situations, and people they encounter at work (Stewart & Manz, 1997). Specifically, psychologically empowered employees will be more likely to see themselves as competent and able individuals who can influence their work environments in meaningful ways (Thomas & Velthouse, 1990). They are also more likely to be intrinsically motivated to bring about changes in their environment (Zhang & Bartol, 2010). Therefore, when presented with workplace challenges, psychologically empowered employees will be more likely to become active in generating ideas and solutions to overcome such workplace issues and challenges and/or pro-actively seek out management support and resources in order to capitalise on emergent opportunities.

Additionally, given that their actions are likely to have a positive impact on organisational outcomes, psychologically empowered employees may also be willing to work harder and proactively seeks ways to make their ideas heard or be noticed within the organisation. The above finding is consistent with earlier studies which have generally found PE to be related to a range of proactive behaviours such as personal initiative taking (Seibert et al., 2011; Whitaker & Westerman, 2014).

The finding regarding the positive effects of job demands on personal initiative can be explained by considering job demands as a particular form of challenge, rather than hindrance to employees (LePine et al., 2005). Significant job demands can create stressors for an employee, which can act as a personal motivator for an employee to engage self-initiated and proactive behaviours. For instance, situational constraints such as a lack of resources or significant time pressures to complete specific tasks may motivate employees to proactively find ways to acquire such resources from management or intensify their collaboration with others in their work environment in order to complete tasks (Wrzesniewski & Dutton 2001). Similarly, high job demands may encourage employees to proactively change the content of their tasks and/or to participate in new projects in order to alleviate some of the strains. Increased job demands may also encourage employees to take the personal initiative to side-step bureaucratic hurdles in order to implement promising new ideas or initiatives. For instance, Zampetakis et al. (2009) and Pearce et al. (1997) both suggested that an important element of employee entrepreneurialism is the ability to proactively find solutions and work arounds to every-day job challenges and demands.

Additionally, and in contrast to the existing literature (Fay & Sonnentag, 2002), no significant direct relationship was found between job autonomy and task variety and personal initiative. Such a finding can be partly explained by the sample population. Data for this study was drawn from knowledge-workers in knowledge intensive organisations. Such employees are said to have unique characteristics which differentiate them from nonknowledge-workers (Harman & Brelade, 2000), such as the capability and the ability to perform independent and autonomous work. Knowledge work also requires a significant degree of task variety. Hence, respondents may be in roles and organisations which already permit them a certain amount of job autonomy and job variety to complete their tasks. Therefore, they may not consider such job design characteristics as unique enough to encourage them to use their personal initiative in the workplace.

Janssen (2000) suggested that employee entrepreneurial behaviour may often involve taking actions without the permission or knowledge of management. This is consistent with the notion that in order to successfully pursue the development and implementation of opportunities and new ideas, employees must engage in a certain level of risk. Regarding the dimension of risk taking, after controlling for the effects of tenure, proactive personality and job levels, only job autonomy and job demands were found to have a significant positive relationship with risk taking. Psychological empowerment was found to have no significant moderating effects with respect to either job demands, job autonomy or task variety.

The above finding further adds to the complexity surrounding the determinants of employee risk taking as part of entrepreneurial behaviour. For

instance, Rigtering and Weitzel (2013) could not find any significant association between an employee's work context and the dimension of risk taking, nor could De Jong et al. (2015) between either job autonomy and job variety and risk taking. In contrast, the above finding demonstrated a positive relationship between job autonomy and job demands and employee risk taking. According to the JCM (Hackman & Oldham, 1976), specific job characteristics can lead to specific critical psychological states, which in turn can act as powerful forms of intrinsic motivation. Individuals are more likely to engage in risk taking behaviours when they are intrinsically motivated to do so (Amabile, 1985; Lepper & Greene, 1978).

When employees are provided with increased job autonomy, they are also likely to experience less excessive managerial oversight over how they do their jobs and tasks (Hornsby et al., 2009). This can permit employees to have greater individual choice and control over their individual work behaviours and process. The sense of felt responsibility and increased meaningfulness of their work (Parker & Collins, 2010) can give employees the confidence and the capacity to boldly move forward with new ideas and initiatives without a priori permission or consensus from management. Employees in such situations may also be motivated to take individual risks in order to gain access to critical resources that would enable them to pursue opportunities and/or implement their ideas.

The above-mentioned findings also point to the importance of job demands in fostering employee risk taking. Prior research traditionally focused on a limited number of jobs and work-place characteristics in promoting employee risk taking (Amabile, 1985). Consequently, scant attention has been

devoted to understanding how the cognitive, emotional and/or physical demands of ones' job can motivate individuals to take risks. Research has also suggested that workplace stressors and challenges can lead to employee counter productive work behaviours (Meurs, Fox, Kessler & Spector, 2013). By engaging in counterproductive behaviour, individuals often have to take risks in order to operate outside the norms and to meet the challenges posed by one's job or workplace. The above finding regarding job demands generally supports this view. In particular, the findings suggest that employees perceived job demands as a particular challenge, rather than a hindrance. When faced with demands such as increased time pressures, in-role demands and compliance to organisational rules and standards, employees may be motivated to act against the standard practices of their organisations in order to achieve specific tasks (Heinze & Weber 2016). For example, faced with excessive organisational bureaucracy, employees may choose to cut 'red-tape' and existing processes in order to push forth with emergent opportunities and ideas. Similarly, with increased job demands, employees may be encouraged to seek innovative ways to acquire new resources that they do not control in order to pursue opportunities. Such examples entail individuals engaging in risk taking behaviours. They also demonstrate the effect of increased motivation and engagement (LePine et al., 2005) as employees may believe that valuable outcomes may result from taking risks to successfully meet the challenging demands.

Broadly, the findings add to the body of literature concerning the determinants of employee entrepreneurial behaviour in several ways. Firstly, the study adds to the literature by using the JD-R model to understand the impact

of job demands, job resources and personal resources on employee entrepreneurialism. The JD-R model has been extensively used in organisational behaviour and organisational psychology research, yet it has rarely been used to understand employee entrepreneurial behaviour (De Clercq et al., 2016; Messmann et al., 2017). The findings regarding the differential effects of job demands, job resources and personal resources on employee entrepreneurial behaviour and its associated dimensions, further demonstrate the applicability of the framework to entrepreneurship studies. The study also extends the nomological network of pro-organisational behavioural outcomes associated with the JD-R (Bakker & Demerouti, 2017).

Secondly, despite growing research interests, the role of personal resources in the JD-R model remains rather unclear. For instance, some studies have viewed personal resources as another form of job resources in JD-R model (Mayerl et al., 2016), as affecting perceptions of job demands (Boudrias, Desrumaux, Gaudreau, Nelson, Brunet & Savoie, 2011), or as potential moderators or mediators (Xanthopoulou et al., 2009). In this particular study, personal resources were conceptualised as moderator between job demands and job resources. Findings showed that PE only had moderating effects on the job resources of job autonomy and task variety. No moderating effects were found with respect to PE and job demands. This suggests that specific personal resources may have little or no buffering effects to help employees cope with the demands of their job. Instead, personal resources were found to attenuate the effects of job resources, particularly at low levels. The finding here not only supports Van den Broeck et al. (2011) earlier findings regarding the moderating effects of personal resources, but also extends the JD-R model by suggesting

that personal resources have implications for the way in which individuals perceive and respond to job resources (Xanthopoulou et al., 2007).

Furthermore, by utilising the JD-R model, the study also responded to recent calls in the employee entrepreneurial behaviour literature to better understand the complex ways in which such behaviour emerges. Kurtako et al. (2005) and others have suggested that the decision to act entrepreneurially is a personal one (Mustafa, Gavin & Hughes, 2018), yet few existing studies investigating the determinants of employee entrepreneurial behaviour have considered both situational and personal-level determinants simultaneously (see Rutherford & Holt, 2007). In contrast, using the JD-R model allowed for the simultaneous investigation of both personal and situational-level factors and their interactions. Findings showed that personal level factors, such as PE, can have differential effects on both employee's job resources and different dimensions of their entrepreneurial behaviour. Collectively, such findings highlight the complex relationship between personal and situational factors in promoting employee entrepreneurial behaviours. The findings also suggest that the JD-R may be considered as a powerful and flexible model that can permit scholars to study the complex process by which employee entrepreneurial behaviour emerges.

Thirdly, the findings from the study also add to the nomological network concerning the determinants of employee entrepreneurial behaviour. Currently, much of the existing literature in this area has focused on job resources as determinants of employee entrepreneurial behaviour. In utilising the JD-R model, the study also considered the role of job demands. Doing so responds to recent calls in the literature to examine the effect of job induced uncertainty and

stress and its influence on employee entrepreneurial behaviour (Neessen et al., 2018). Contrary to expectations in the literature, the findings suggest that job demands can act as enablers of employee entrepreneurial behaviour rather than inhibitors of it. The findings suggest that the stress caused by job demands can stimulate and motivate employees to engage and take personal initiatives as well as individual risks. Such a finding deepens the literature and also facilitates understanding of the role of job characteristics and features and how they can influence employee entrepreneurial behaviour.

The study also adds to our understanding of the role of individual-level determinants of employee entrepreneurial behaviour. Prior research has tended to focus on a narrow range of individual-level determinants, such as psychological ownership (Mustafa, Martin & Hughes, 2016), self-efficacy (Wakkee et al., 2010) and positive and/or negative affect (Rutherford & Holt, 2007). Consequently, this study represents one of the first efforts in the literature to empirically link the concept of PE with entrepreneurial behaviour and its associated dimensions. Afsar et al. (2017) earlier found PE to have both moderating and direct effects on employee entrepreneurial behaviour. However, in this study, PE only had a direct effect on employee personal initiative and no other dimension of employee entrepreneurial behaviour. This stands in contrast with Afsar's et al. (2017) study and a number of other studies which have shown a positive relationship between PE and the dimension of ideation and innovative work behaviour (Messmann et al., 2017; Singh & Sarkar, 2012). However, PE was found to have only moderating effects on overall employee entrepreneurial behaviour and the dimensions of ideation and only moderated the job design variables of job autonomy and job variety. The addition of PE to nomological

network of employee entrepreneurial behaviour determinants helps us to better understand when and why some individuals may choose to behave entrepreneurially or not. Specifically, it suggests that other than individual differences, one's positive attitude to their work may also be an important factor in intrinsically motivating individuals to engage in ideation.

Finally, in examining employee entrepreneurial behaviour and its three key dimensions separately, the findings also provide a fine-grained view of the effects of various antecedents on different aspects of employee entrepreneurial behaviour. Particularly interesting was the finding regarding the differential relations and interactions of job demands with the three dimensions of employee entrepreneurial behaviour. When modelled as a single construct, job demands had direct effects on employee entrepreneurial behaviour. However, when examining the three components of employee entrepreneurial behaviour separately, job demands was found to have significant direct effects only with respect to the personal initiative and risk-taking dimensions.

Furthermore, when the moderator was included in the model, PE was found to have moderating effects with respect to employee entrepreneurial behaviour as a whole. Yet, when examining the three dimensions separately, PE was found to have a significant interaction with job autonomy and task variety on ideation, but not on the dimensions of personal initiative and risk taking. Such findings further our understanding of the conditions under which employee entrepreneurial behaviour may emerge.

6.4.1 Practical and managerial implications of findings.

Several managerial implications emerge from the findings. Firstly, organisations need to be cognizant of the fact that employee entrepreneurialism requires employees to meet both organisational and individual interests in order to develop unique solutions and approaches to problems (Ma Prieto & Pilar Perez-Santana, 2014). In today's modern workplaces, employees may encounter significant workplace demands just in order to keep pace with their current workloads. Hence, engaging in entrepreneurial behaviours, which tend to occur outside of their job roles, may be considered as a distraction (Monsen & Boss, 2009). In this respect, organisations may need to be mindful about how they can give employees opportunities to behave entrepreneurially, through their individual roles. One way of doing this may be by paying attention to how an employee's job is designed (Parker et al., 2010). For example, it might be worthwhile for organisations to not only provide employees with adequate job autonomy, but also significant task variety in their roles. Doing so may not only encourage employees, but also give them opportunities to freely experiment with promising new ideas and/ initiatives.

Secondly, organisations must also be acutely aware of the need to create the right conditions internally in order to foster employee entrepreneurial behaviours. Much of the literature and associated practices surrounding the demands of an employee's job has seen them in a largely negative light (Schaufeli & Bakker, 2010). This line of thinking generally views the increase in social, cognitive and emotional demands of an employee's job as being detrimental to their health and well-being, as well as their performance (Crawford, LePine & Rich, 2010). In response to such issues, organisations

have put in place many initiatives designed to ultimately reduce the negative effects of one's job. Doing so, however, may have hindered some of the motivational aspects attached to the challenges found in the demands of one's job. Consequently, the findings here suggest that in addition to providing supportive workplace structures and resources, managers should seek to induce job stress on employees by 'artificially' creating demands in one's job. For example, organisations may give employees short term windows to complete specific tasks, give difficult problems to solve and ambitious goals to reach. This suggestion is consistent with a small of body of research which has shown that low to moderate levels of job stress may actually improve creativity and task performance in employees (Hon, 2013).

Finally, the findings also suggest that positive feelings towards one's job and a sense of empowerment may have a positive influence on employee's willingness to engage in entrepreneurial behaviour. In this respect, organisations must realise that the decision to behave entrepreneurially is inherently a personal one. Although organisations can force their employees to behave entrepreneurially, they may be better at giving them a 'nudge' in the right direction by focusing on their long-term growth and development. In this respect, organisations may do well by providing employees with training and development programs designed to raise their confidence in their own skills and capabilities. This is consistent with a body of research which has shown entrepreneurial education and training programs as important elements in raising individual's entrepreneurial competencies and intentions (Sánchez, 2013). Similarly, organisations may seek to encourage employees to use their

personal initiative to pursue opportunities at work or propose new ideas and initiatives, by increasing employees' awareness regarding the significance of their job. Specifically, by creating effective communication strategies, organisations may help employees to understand the meaningfulness of their work and how and why it can have positive impact on their work-unit/team/group/department (Park et al., 2014). Such actions may ultimately encourage employees to use their personal initiative and/or take individual risks in order to pursue new opportunities or propose new ideas.

6.5 Chapter Summary

Using the JD-R model, this chapter set out to test a conceptual model concerning the determinants of employee entrepreneurial behaviour. Specifically, the chapter examined whether specific job resources (job autonomy and task variety) and job demands influenced employee entrepreneurial behaviour and its associated dimensions of ideations, personal initiative and risk taking. Additionally, Psychological Empowerment (PE), conceptualised as a personal resource, was examined as to whether it moderates the relationships between job resources and job demands and employee entrepreneurial behaviour and its associated dimensions. Empirical evidence showed that job resources (job autonomy and task variety) and job demands had differential effects on employee entrepreneurial behaviour and its associated dimensions. Furthermore, PE was found to also have differential moderating effects on the proposed relationships. Overall, findings from the chapter helps to deepen the existing literature and also facilitate understanding of how the

design of an employees' job and their individual attitudes can influence their entrepreneurial behaviour. The chapter also demonstrated the flexibility of using the JD-R model to examine the determinants of employee entrepreneurialism.

CHAPTER SEVEN: Empirical Study 4

7 Chapter Objectives

This chapter seeks to examine the personal resources that employees develop from being entrepreneurial at work and the personal resources that positively influence their engagement at work. Data was obtained through a series of semi-structured interviews with 11 entrepreneurial and innovative employees at a Malaysian Corporate Incubator. Figure 7.1 and Table 7.1 provide a graphical representation of the themes that emerged from the data. Additionally, Table 7.2 presents the profile of the 11 participants in the study. Chapter 4 provides a detailed explanation of how the case firm and participants were selected along with the data analytical process.

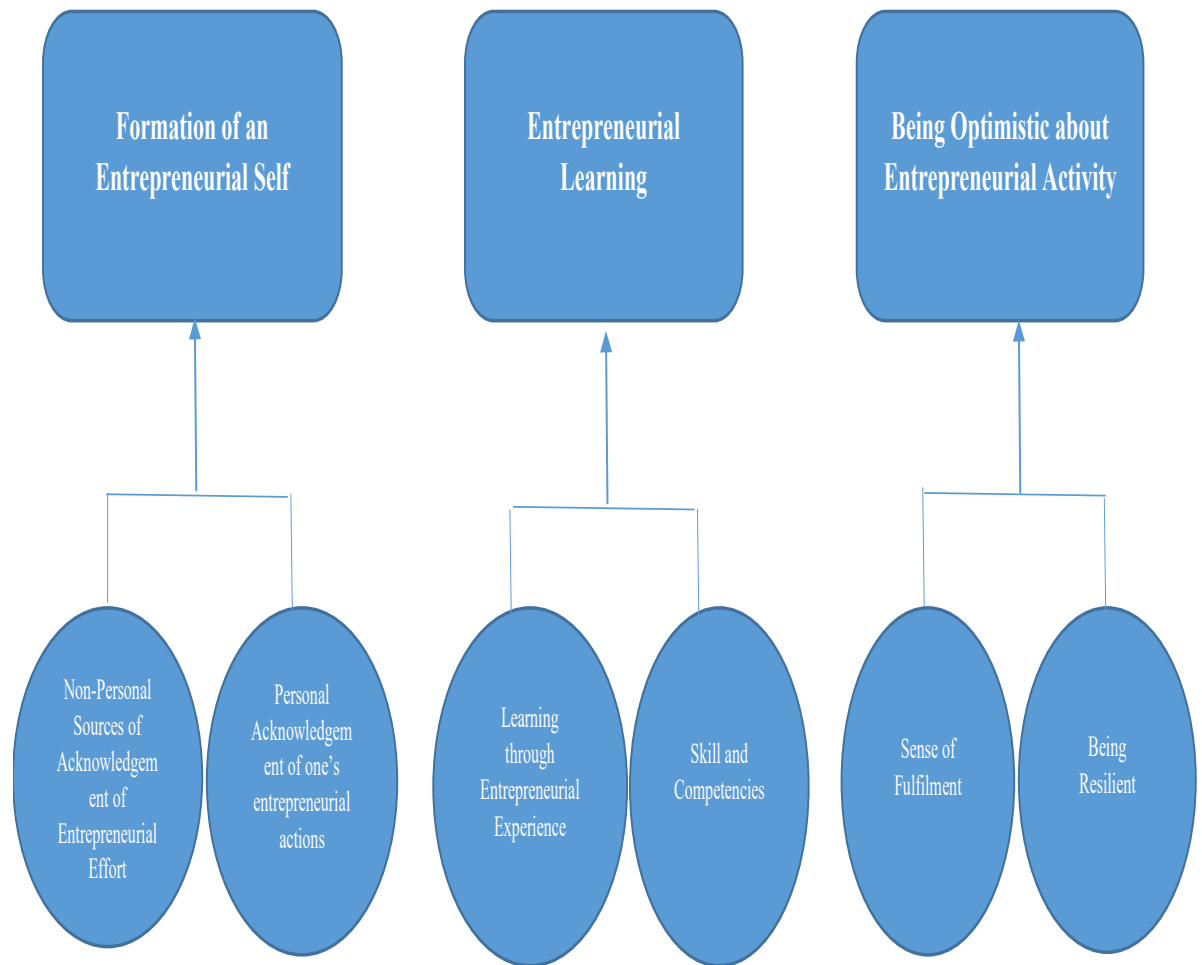


Figure 7.1. Graphical Representation of Emergent Themes for Study 4.

Macro-Theme	Meso-Theme	Micro Descriptors	Examples
Formation of an Entrepreneurial Self – Feeling and belief that one is being viewed by fellow colleagues, management, and stakeholders as an entrepreneurial minded individual.	External Acknowledgement of Entrepreneurial Effort – Knowing that one is recognised for their entrepreneurial activity by others	Being recognised through formal appraisals or awards	R1, R3, R4, R5, R6, R9, R11
		Being recognised through informal means	R2, R4, R7, R8, R10, R11
	Personal acknowledgement of one's Entrepreneurial Actions – A positive feeling and sense that one is engaged in entrepreneurial activity	Self-confidence	R1, R3, R5, R9, R10
		Evidence of small personal wins/gains	R1, R2, R6, R11
		Appreciating failure and/or success	R1, R5, R6, R7, R9
Entrepreneurial Learning – Learning new skills and competencies from part of the entrepreneurial process	Learning through Entrepreneurial Experience – A sense that one is developing 'skin in the game' by being involved directly with entrepreneurial initiatives	On-the-job	R2, R3, R6, R11
		Leadership and management skills development	R2, R3, R9, R11
	Skill and Competencies – Recognising that one is growing personally by developing new entrepreneurially related skills and knowledge	Relational and networking skills development	R1, R5, R7, R8
		Seeing the bigger picture/vision.	R1, R5, R8, R11
	Beginning to Think Strategically		

Being optimistic about Entrepreneurial activity. - Belief that despite the present difficult circumstances, the future is still promising		Being involved across multiple organisational functions/activities	R1, R3, R4, R6, R7, R9, R10
	Sense of Fulfilment – The positive feeling that one has delivered entrepreneurial initiatives.	Satisfaction/joy/happiness associated with completing initiatives	R2, R4, R5, R8, R11
		Sense of accomplishment	R2, R5, R8, R9, R10, R11
	Being Resilient – A willingness to invest effort in one’s entrepreneurial role at work, and the willingness to persist through with entrepreneurial efforts in the face of difficulties.	Determination to see activities succeed	R3, R4, R5, R8
		Feeling challenged by the work	R3, R4, R5, R6, R7, R8, R11

Table 7.1. Thematic Coding Structure for Study 4.

Participant	Organisational Tenure (years)	Organisational Position	Education	Management/Colleagues Description of Interviewees' Entrepreneurial Behaviour	Job Scope/Role in the Organisation
1	2	Rank & File	Masters in Computer Science	Innovativeness, creative, initiative	Deals one-on-one with clients to detect and solve their problems related to software and databases
2	3	Middle-Management	Bachelor of Arts	Supportive, highly passionate, generates ideas, drive	Heads a small team designated with designing and delivering new initiatives internally to improve existing systems and process
3	1.5	Middle-Management	Bachelor of Science (Engineering)	Risk taker, driven, passionate, generates ideas,	Responsible for engaging with external stakeholder across the region and locally, to seek out and develop new business opportunities
4	8	Senior-Management	MBA	Creative in cutting red tape, supports others entrepreneurially, shares knowledge, proactive	Head of division responsible for designing and delivering innovations throughout Digital Services
5	3	Senior-Management	MBA	High personal initiative, forward thinking, innovative, supportive	Head of corporate development responsible for identifying and exploiting new investment opportunities for Digital Services
6	4	Middle-Management	Bachelor of Science (Engineering)	Innovative, persistent, good problem solver, creative thinker	Part of emerging projects team and is responsible for developing customised solutions for clients existing problems
7	4	Junior-Management	Bachelor of Computer Science	Risk taker, proactive, creative	Leads a dynamic product development team responsible for setting up

					new product platforms and online products
8	7	Junior-Management	MBA	Proactive, risk taker, influencer and good networker	Part of product development team responsible for developing new products and re-designing and improving existing ones in the market
9	3	Team-Leader	Bachelor of Science	Creative, good at lateral thinking	Part of new product development team and is responsible for developing new products for online use
10	4	Middle-Management	Bachelor of Engineering	Risk taker, proactive, good networker	Part of business development team and is responsible for managing relations with suppliers and developing new investment opportunities in commodity products.
11	3	Team-Leader	Bachelor of Economics	Risk taker, driven, passionate, generates ideas,	Heads special projects team asked with launching new products in emerging markets and marketing them

Table 7.2. Profile of Study 4 Participants.

7.1 Major Theme 1: Formation of an Entrepreneurial Self

Scholars have suggested that an entrepreneur's identity is often 'intimately intertwined with their entrepreneurial actions (Shepherd & Haynie 2009, p. 330). Similarly, Ireland and Webb (2007b) noted that 'in many ways, entrepreneurship is a process of identity construction' (p. 916). A growing body of research in both the entrepreneurship and psychology domains has shown that developing a work identity can give meaning to an individual's experiences, provide a positive predisposition for future actions, make them to distinguish themselves from others (Shepherd & Haynie, 2009) and improve their psychological well-being (Farmer, Yao & Kung-Mcintyre, 2011). It can also serve as a personal resource for employees and thus motivate their future behaviour.

Analysis of the data revealed the formation of an entrepreneurial identity through entrepreneurial behaviour. Entrepreneurial identity formation emerged as an important theme in understanding how employees remained engaged at work. It refers to a feeling that employees were being recognised for their entrepreneurial efforts and that they were perceived by fellow colleagues, management, and/or stakeholders as being entrepreneurial and innovative. Participants who felt that they were viewed as entrepreneurial were more likely to remain committed and motivated towards their entrepreneurial tasks and their work in general. Examination of the data further revealed two important sub-themes which

determined employees' entrepreneurial identity formation. These sub-themes are non-personal sources of acknowledgement of entrepreneurial effort, and personal acknowledgement and realisation of one's entrepreneurialism.

7.1.1 Sub-theme 1: Non-personal sources of acknowledgement of entrepreneurial effort.

Non-personal sources of acknowledgement were described by participants as a feeling and knowledge that they are being recognised for their entrepreneurial behaviour by others within and outside of their organisation. Such feelings reaffirmed to participants that they were making positive contributions towards the organisation, thereby motivating them to remain dedicated and engaged in their work. Recognition through formal and informal means were identified by interviewees as the main determinants of non-personal sources of acknowledgement of entrepreneurial effort.

7.1.1.1 Recognition through formal means.

Participants described formal recognition of their entrepreneurial efforts as occurring either through management's formal performance appraisals, awards or via external associations. For instance, participant 11 is a team-leader who, over the years, has been heading a special projects team. The team has been specifically tasked with developing new products and marketing them in emerging markets. The team has successfully developed and launched three products over the past two years under rather challenging circumstances. Participant 11 has been very

dedicated and enthusiastic about the task, often working long-hours and over the weekend in order to meet deadlines and propose innovative client solutions. Subsequently, participant 11 commented on how being praised by the senior Vice-President (VP) during performance appraisals has kept him focused and dedicated to continue:

“Recognition from the management that’s for sure, sometimes just knowing that management believes in me and recognises my talent especially at year end reviews.” (Participant 11 – Male – Team Leader).

Similarly, participant 3 plays a crucial role as part of a small team in identifying and developing investment opportunities in the Malaysian market. Participant 3 also mentioned how being regularly recognised for his entrepreneurialism in the team during performance appraisals has cemented his identity as an entrepreneurial individual, especially among senior management.

“Like where it helps with your bosses and when it comes to do an appraisal you have something to talk about and to say like, hey I did more than just my job, and they record that what you did was innovative and all... then all of management start thinking you are this really entrepreneurial person.” (Participant 3 – Male – Middle-Management).

Participant 7 also talked about the importance of being formally recognised by management as a way of reaffirming his own entrepreneurial identity.

“Getting recognised for my ideas at the end of year by the bosses, it’s what I look forward to each year, it’s kind of like gun-powered in your pocket right.... I

mean it keeps me aware that I do things differently and that I am an innovative employee.” (Participant 7 – Male – Junior-Management).

In another instance, formal recognition and acknowledgement of entrepreneurial efforts came from official awards either via the organisation or through external associations. Participant 2 heads a small team in charge of internally designing and delivering new initiatives to improve existing systems and processes. For the past two years, participant 2 has won the most creative and innovative employee award in the organisation. The award was presented during the company annual retreat; it comes with a cash prize as well as the prestige of having the employee’s photograph hung in the lobby at the company headquarters. For participant 2, such an award not only signaled his entrepreneurialism to the rest of the organisation but also helped to convince him of his entrepreneurialism.

“I was surprised I won the award, 2 years in a row. Never thought of what I do as being innovative, but I guess others think otherwise. So it’s a good feeling, no doubt, people now know me as this innovative guy.. (laughs).... I think like that too now as well. It’s a good feeling.” (Participant 2 – Male – Middle-Management).

Participant 9 also won the ‘*Best Failed-Initiative*’ award in 2016, which helped convince him that he is actually an entrepreneur.

“I laughed when I won the award in 2016... but thinking about it, it was actually good for me, good in the sense that it’s like hey, you are doing something right. I mean you hear that failure is a characteristic of entrepreneurs, so if its ok for them it should be more than ok for me.” (Participant 9 – Male – Team-Leader).

For three of the participants, awards and recognition from external sources such as associations and governmental bodies were also identified as important sources of acknowledgement of entrepreneurial effort. Participant 5 is the head of corporate development and is responsible for identifying and exploiting new investment opportunities for Digital Services. In 2017, he was nominated for a “*Best New Idea*” award by the Malaysia Telecommunication Authority. This helped him to develop his entrepreneurial identity, not only in the organisation, but also in the community.

“I didn’t win the award. It would have been nice though. But the media campaign around the nomination was great. I was approached by several newspapers in the region to talk about entrepreneurship in companies and how to make it a reality. I suddenly felt as if I was an expert on such things.” (Participant 5 – Male- Senior-Management).

Similarly, participant 4 received an award from the HRM Asia society for his innovative approaches towards implementing Big Data Solutions at the case firm. The award came as a surprise to participant 4 as it revealed to him that others acknowledged his work as being entrepreneurial in nature.

“I never thought what I was doing was innovative. For me it was just business as usual, but it’s different now, people’s reaction to my award showed me otherwise” (Participant 4 – Male- Senior-Management).

7.1.1.2 Recognition through informal means.

Besides formal recognition and acknowledgment, participants also indicated that informal recognition and acknowledgement from colleagues/co-workers and clients/customers was equally important. For instance, participant 8, who is part of product development team responsible for developing new products and re-designing and improving existing ones in the market, commented about how being thought of as innovative by clients has helped him to develop his entrepreneurial persona.

“Respect from our clients... I mean them recognizing and respecting that you are constantly pushing the envelope with new ideas and stuff... makes you walk away with this positive image of yourself.” (Participant 8 – Male- Junior-Management).

Both participants 7 and 10 also talked about how being informally recognised as entrepreneurial by fellow colleagues has kept them personally motivated and engaged in their roles:

“People have become inclined to speak to me about something as opposed to someone who is not an active influencer or someone who is not that entrepreneurial or innovative. I take great satisfaction in knowing that others think of me like that... in a way it makes me want to do better in the future, you know, not let people down and all.” (Participant 7– Male- Junior-Management).

Additionally, participant 10 also mentioned something similar:

“When, guys come to me say.... Hey you come up with innovations and solutions regularly, go for it... that to me, means a lot. It also makes me want to continue to serve them in unique ways.” (Participant 10– Male- Middle-Management).

7.1.2 Sub-theme 2: Personal acknowledgement and realisation of one’s entrepreneurialism.

Several participants identified personal acknowledgement and realisation of one’s own entrepreneurialism as an important source of their entrepreneurial identity formation. Personal acknowledgement and realisation of one’s entrepreneurialism were found to refer to the positive feeling and sense that one was engaged in entrepreneurial activity and that their entrepreneurial activity was making a difference. Such feelings were found to act as a positive motivating force which encouraged the participants to remain engaged with more entrepreneurial work. A sense of self-confidence and recognising evidence of small personal wins/gains were found to determine interviewees’ personal acknowledgement and realisation of their entrepreneurialism.

7.1.2.1 *Sense of self-confidence.*

Participants suggested that their sense of self-confidence helped to initiate entrepreneurial actions and enabled them to persist in their efforts even in the face of obstacles or difficulties. More importantly, as participants developed their self-confidence from behaving entrepreneurially, they began to view themselves more

as entrepreneurs rather than as regular workers. For example, participant 1 has been regularly dealing with clients one-on-one to detect and solve their software and database related problems. Having completed many successful projects with clients, participant 1 has become more confident of his entrepreneurial abilities. Moreover, he discussed how such self-confidence helped to convince him that he has a rather entrepreneurial role in the organisation, despite his low positional ranking:

“Success breeds success, you know, at first I was doubtful about whether I could successfully deliver on my idea, after all it was bigger in scope and impact than I thought. But now I have been doing this for a while, I start to feel my role here is different, not just a programmer but more of innovative problem solver.”

(Participant 1– Male- Rank-and-File).

The role of Participant 9 is quite dynamic as he has to constantly look for new product opportunities in tightly contested markets. Having been in the role for three years and developed several successful products for clients in the region, participant 9 has begun to personally acknowledge and refer to himself as an ‘entrepreneur’:

“I joined here as a team-leader, but that doesn’t really describe what I do. My role is much more than that. The work I have been doing for the past few years, makes me think of myself as an entrepreneur, like starting and running my own company, but only I do it in this company and not outside.” (Participant 9– Male- Team-Leader).

Participant 5 also explained how he began to personally recognise that he was behaving more entrepreneurially, and that such behaviour was valuable to him and the organisation:

“Now, I’m involved in a lot of entrepreneurial activity and it’s kind of who I am now and what I do. You see, when you are entrepreneurial, people recognize and value you a lot. So, what ends up happening is that you end up getting more business—more business or more opportunities with clients or products and resources.” (Participant 5 – Male- Senior Management).

7.1.2.1 Evidence of entrepreneurial wins/gains.

Entrepreneurial activity can be complex and may involve many different tasks simultaneously. In some instances, individuals may not be cognizant of the fact that they have engaged in entrepreneurial behaviours. Interviews with participants suggested that evidence of the impact of their entrepreneurial activity helped them to personally acknowledge and reaffirm that they were entrepreneurial. For example, participant 6 suggested that his entrepreneurial actions have made him aware that what he is doing is meaningful and impactful. As participant 6 stated:

“You start to get this sense, you know... feeling that what you have been doing is different, it’s innovative, it’s creative, it’s worthwhile... and you see it when you deliver a creative solution to a client, it’s more than just doing something that you are being told to do. More importantly it is knowing that I can do this today or whatever... I’ve delivered this.” (Participant 6 – Male- Middle-Management).

Participant 1 also realised that he was rather entrepreneurial only after directly observing the impact of his actions on his clients.

“I’m a programmer by training. I was hired for the role in this organisation, but it’s obvious that I am more than that here... I recall that it was in my 3rd client’s team that I spotted this opportunity, and I delivered on this opportunity with this new piece of software. It made a huge difference to them. But it’s there that I realised that hey... what I am doing is really innovative stuff, stuff I would expect to see an entrepreneur do.” (Participant 1 – Male- Rank-and-File).

Similarly, participant 2 also mentioned how delivering a project at work helped him to see the impact of his entrepreneurialism. Observing the impact of his entrepreneurial actions also strengthened his acknowledgement of such activities.

“Pride, seeing the worthwhileness of your activity. You know what you did was innovative, but you need to see its impact, otherwise how will you know it’s different and creative. I successfully delivered on my idea. Now not everything I do is innovative or entrepreneurial, but there have been somethings that I have done that are... you know personally when it’s entrepreneurial, the impact is bigger, it’s more impactful.” (Participant 2 – Male- Middle-Management).

7.2 Major Theme 2: Entrepreneurial Learning

As can be seen from Table 7.2, majority of the participants came from science and engineering backgrounds and were involved in rather technical roles. Consequently, many participants felt that they did not have enough business and management skills to successfully function in their roles. Entrepreneurial learning emerged from the data as one of the most highly valued and important personal resources developed from behaving entrepreneurially. Moreover, the development of such a personal resource served as a means of coping with the difficulties associated with their roles and motivating them to remain engaged at work. Entrepreneurial learning refers to the personal recognition that they have learnt and developed new and specific skills and competencies necessary to be successful in the workplace. As participants felt they had the necessary skills and competencies at work, they became more engaged with their work activities and in their roles. Further examination of the data revealed two important sub-themes which determined employees' entrepreneurial learning namely: learning through entrepreneurial experience/skill and competencies development.

7.2.1 Sub-theme 1: Learning through entrepreneurial experience.

Participants described learning through entrepreneurial experience as a means of developing 'skin in the game' through the experience of being directly involved with entrepreneurial initiatives. Several participants suggested that entrepreneurial learning was achieved by being directly involved in entrepreneurial

initiatives or by experiencing success or failure. Hence, underlying this sub theme was appreciating failure and/or success and on-the-job learning.

7.2.1.1 Appreciating failure and/or success.

Nearly all the participants mentioned that experiencing ‘failure’ as part of entrepreneurial initiatives was an important determinant of their entrepreneurial learning. Several participants indicated that experiencing significant setbacks and failures is part of behaving entrepreneurially at work, and also something that keeps them motivated in their work.

For example, participant 1 has an active role in troubleshooting clients’ IT related problems within the Southeast Asian region. For him, having products that do not initially meet customers’ expectations is a positive thing as it affords him an opportunity to learn from the experience about how to improve in the future.

“Not all solutions and ideas are good, most fall short and are total failures. But personally for me, even if the idea is not adopted and it falls short of expectation, I will learn something from the process of coming up with it.” (Participant 1 – Male-Rank-and-File).

Participant 7, who is part of a dynamic project team, has on numerous occasions experienced project failure. Participant 7 has a positive view of such experiences. Specifically, he sees them as an opportunity to take a step back and reevaluate how he approached the project.

“It is what it is, you win some projects, but you may lose many also. For me personally, I don’t mind some failure once in a while. It acts as a way for me reassess how I did the thing (inaudible)... that’s good because it acts as a checks and balances for me to see if I am on top of things.” (Participant 7 – Male- Junior-Management).

Learning from entrepreneurial experience can also occur through success rather than failure. For instance, participant 5 explained how a recent successful entrepreneurial initiative has taught him how to sell new initiatives to the board.

“Part of being entrepreneurial, is... is really the ability to sell an idea, something that you believe in, you have to convince the merits of it... So this recent project, it was good and quite successful. It was new to the company, something that they had not done before. So it got through eventually... it got me thinking that I had to adapt my management style and use new tactics more suited to the boards taste.” (Participant 5 – Male- Senior-Management).

Similarly, participant 9 mentioned how he learnt about the importance of adapting design specifications to meet users’ requirements and expectations.

“I have always been a build it type of person, even at work. I design the apps you see and all this while I rarely gave a thought about the user’s experience. Recently, we developed this line of software for a client. It honestly took the team many rounds to get the user ability right... In the end we got it right, but it was a journey, and it’s something I remember now with these new projects.” (Participant 9 – Male-Team-Leader).

7.2.1.2 On-the-job learning.

Most participants stated that they were part of an entrepreneurial organisation and that their roles often required them to be involved in either team or organisational wide entrepreneurial initiatives. Furthermore, they also indicated that their first ‘exposure’ to entrepreneurial activities was at their current role. Hence, on-the-job learning was reported by many participants as an important informal means of entrepreneurial learning. On-the-Job training was also identified by several participants as a motivational factor.

Most participants indicated that they had received little formal training with respect to behaving entrepreneurially in their roles. As participant 2 stated:

“No real training for this role was given, yes the usual sort of thing like induction etc., but much of the learning involved has been on the fly, you know, do and see what works and what does.” (Participant 9 – Male- Team-Leader).

Participant 6 also highlighted the lack of formal entrepreneurial training initiatives provided by the organisation. Instead for participant 6, entrepreneurial learning occurred exclusively through his role in developing creative solutions for clients.

“I came into this role almost a bit unprepared... that was bad on my path, but it’s been nothing but go from day one. A lot of what I have been learning has been directly because of the nature of the job. The organisation has done so far very little to prepare us for the role. Sure there have been a few seminars on

brainstorming etc., but these don't translate well to real life practice.” (Participant 6 – Male- Middle-Management).

Participants also indicated how the very nature of their roles as part of entrepreneurial initiatives further encouraged on-the-job training. Several participants described how the informal and highly unstructured nature of their roles as part of entrepreneurial initiatives provided significant on-the-job learning opportunities and the development of specific skills and competencies. Participant 3 is currently working on a very large entrepreneurial initiative designed to introduce mobile insurance options for SMEs in Myanmar. According to participant 3, he has to regularly engage with regional stakeholders across all levels (suppliers, distributors, clients, Governments, NGOs), which has thrown up many unpredictable situations for him. One of the most important entrepreneurial skills participant 3 learnt via his role, is the need to be proactive and use his personal initiative regularly. According to participant 3.

“This by far is the most unstructured, ill organized role I have had to date but don't get me wrong, I find it challenging and that's great. There's so much opportunity to learn via this role right. I mean everything is happening so fast and simultaneously and every day I am learning, learning to apply new things. What, what I think I have learnt from this is to be more persistent, like we are dealing in markets where opportunities disappear overnight. There's no real advantage in waiting for things to happen, you have to make them happen.” (Participant 3 – Male – Middle-Management).

Similarly, participant 11 has learnt different techniques and approaches to ideation, because of his role as team-leader of the special project teams.

“Here, we are all about what works and what doesn’t. Often what we think we know should work, won’t actually work, that’s because of the way we deal with projects here. There’s no stock standard blueprint or plan. It’s just trial and error. Take for instance, our brainstorming sessions. Traditionally, one would expect that this would work to generate a huge amount of ideas. But that’s not the case here. I quickly learnt in this role, that the team doesn’t work like, it’s more about individual creativity. That’s fine with me, I just use that as a method now and then it works.” (Participant 11 – Male – Team-Leader).

7.2.2 Sub-theme 2: Skills and competencies development.

Participants also highlighted the development of specific management and leadership skills and competencies as an important determinant of entrepreneurial learning. For participants, this meant the recognition and acknowledgement that one is growing personally by developing new or enhancing existing management and leadership related skills and knowledge. Such management and leadership skills and competencies helped participants to perform effectively in their roles and also encouraged participants to remain engaged at work. Underlying this sub theme was specific leadership and management skills, relational and networking skills and strategic visioning/thinking.

7.2.2.1 *Specific leadership and management skills.*

Skills and abilities are changeable, learnable and attainable through specific experiences. Several participants highlighted the importance of developing specific leadership and management skills and competencies from behaving entrepreneurially. Specifically, such skills and competencies were considered particularly valuable to participants who came from technical and engineering backgrounds and those who had little prior exposure to management.

For instance, participant 9 comes from a technical background and prior to working in the organisation had very little management experience. Being involved directly in the development and launching of new applications, he has faced several setbacks, specifically related to managerial issues such as project management and budgeting. When participant 9 was asked why he continues to remain motivated and engaged in his role, even though he experiences difficulties, he responded by saying:

“It’s management skills and competencies... so yeah, you’re seeing a totally different world right now, from what you’ve learned in uni and what you’ve practiced so far.” (Participant 9 – Male- Team-Leader).

For participant 11, behaving entrepreneurially served as a powerful means through which they developed important management techniques and practices such as project management, budgeting and business/idea pitching. For example, although being highly creative, participant 11 described himself as ‘lacking business and management acumen’. Consequently, he has traditionally struggled

with managing large and long-term projects. According to participant 11, learning project management skills was one of the important personal resources developed through behaving entrepreneurially.

“Now I better understand where the company comes from and the jargon that they use... I have learnt how to manage projects, big ones, expensive ones. This is all possible because some of these current projects have involved speaking their language, e.g. numbers, time-lines, completion dates etc.” (Participant 11 – Male – Team Leader).

Participants 2, 3 and 9, also considered leadership skills development as an important outcome of behaving entrepreneurially. For instance, participant 2 has developed his leadership skills from working directly with various internal teams on solutions to work related problems. Concerning the development of such skills and capabilities, participant 2 noted that:

“So like so many others there’s a dream or turn on for being my own boss, and so if my company can help give me those skills and tools while I am doing a great job here, then I would be one of the winners. And that’s what’s happening right now... I am on this accelerated path of leadership learning. It’s by just doing, like these new changes being developed introduced.” (Participant 2 – Male – Middle-Management).

Similarly, participant 3 has also been able to fine tune his leadership skills, specifically in relation to dealing with internal clients as a result of his entrepreneurial behaviour.

‘in order for you to drive creativity and innovation you face a lot of challenges every day, in terms of stakeholders, and their leadership. How you upward management and lead, colleagues, within the opco so that forces you to be really be on your toes and drive it forward.’ (Participant 3 – Male – Middle-Management).

Additionally, participant 9, who is a Team-leader, explained how being part of and leading a small entrepreneurial team has taught him valuable leadership skills.

“Leading, yea, leading all those other guys in my team. It’s ok to come up with ideas, but somebody has to take charge and show the rest direction.” (Participant 9 – Male – Team-leader)

7.2.2.2 Relational and networking skills.

In addition to managerial and leadership skills development, the development of relational and networking skills was further identified by participants as an important skill developed from behaving entrepreneurially. For instance, participant 8 has traditionally considered himself as a *“shy member of the team. One that prefers to work in the background”*. However, recently, participant 8 has been increasingly involved directly in projects that require him to think of creative solutions to customers’ IT problems. According to participant 8, the requirement to be attentive to customer needs has also made him cognizant of how he networks and manages relationships.

‘Working with clients, building relationships, it’s something I didn’t really give much thought to before. You see, now I think I have a good relationship with the client, it means I can consider multiple fields and perspectives, from the client’s side, from the trend side and industry side, whether or not this solution is doable or sellable.’ (Participant 8 – Male-Junior-Management).

Participant 5 is regularly on the lookout for new investment and business opportunities for new and existing clients. One of the difficulties he constantly faces is working with clients to pursue those business and investment opportunities. Doing so, though, has taught participant 5 about how to manage external relationships and partnerships.

“Clients (are) always difficult. Some of them are new start-ups with little or no experience themselves. But over the years, I have developed my abilities in this area, you have to, you are proposing radical new ideas to them... they are not going to accept it easily, so there’s a lot of smoothing of the relationship to do.” (Participant 5 – Male-Senior-Management)

For participants 1 and 7, one important skill they learnt and developed from behaving entrepreneurially was building their networking capacity within and across the organisation. Participant 1, who often takes a proactive approach to address client issues, has learnt that he has to regularly consult with other internal teams and departments to address these issues. Through such actions, participant 1 has developed a greater appreciation and respect for building and managing relationships both vertically and laterally in the organisation.

“There’s a limit to what I can do myself personally for the client... it takes a whole team approach and then some more. What I am seeing right now, it’s all about building contacts in the company... yeah yeah, who can I go to get this sort of help... which team can I work with. In some cases, it’s about which managers and department heads do I need to befriend.” (Participant 1, Male – Rank -and-File).

Similarly, participant 7 also mentioned the importance of strategic networking capacity as a skill developed from behaving entrepreneurially.

“You get yourself noticed firstly... and then you see these doors opening up for you in the company. I mean people start wanting to work with you more ask your opinions. It’s this network that you develop as a result of it... that’s what’s valuable for me and it’s what sort of keeps you going here, wanting to do more, building that network.” (Participant 7 – Male – Junior-Management).

7.2.2.3 Strategic visioning/thinking.

Being able to think strategically and seeing the bigger picture was identified by numerous participants as another specific skill and competency developed from behaving entrepreneurially. Specifically, data suggests that participants viewed strategic thinking and visioning capacity as the ability to understand the broader issues and development in their organisation and to be also involved in initiatives that have a positive impact on the organisation. For instance, participant 1, although only a rank-and-file employee, described how he has developed a greater awareness

of the organisation's activities through his regular inter-departmental networking activity. Consequently, this has affected how he thinks about addressing client issues in the future.

“When others come up with some solution since you are now maybe a top influencer, slowly becoming an active influencer they will want to bring your attention to their ideas because they know you are a frequent tester. So you get to know about what is happening. So over time people will naturally be inclined to speak to you about something as opposed to someone who is not an active influencer or someone who is not that entrepreneurial or innovative. For me this means thinking about the next client project, how can I make it better, how can it serve the company better.” (Participant 1, Male – Rank -and-File).

Participant 11 also mentioned about how being a part of entrepreneurial initiatives and behaving entrepreneurially in the organisation has exposed him to the importance of being able to think not just about operations, but also more strategically about building real value for the organisation.

“I’m just handling this small portion of things for the company you see... but doing it also gives you like a broader perspective in terms of how all of this departments come into play, right. When you have done with digital marketing, you will have something to talk about when you’re speaking to your marketing department. You understand where the company gets from the jargon that they use. So you begin to see how you fit into the whole puzzle (reference the organisation) and how you can deliver value.” (Participant 11 – Male – Team-Leader).

Participant 10 has been instrumental in conceiving and implementing innovative opportunities for clients in commodity products. He leads a rather big entrepreneurial initiative in the organisation, and in doing so has been exposed to various other initiatives in the organisation. Such exposure has helped him considerably in reframing his attitude towards the organisation and towards clients. More specifically, he mentioned how this has helped to develop his long-term thinking skills and more importantly his strategic thinking capacity.

“Personally, all of this gives me far more exposure to business... its more about being strategic right now, thinking about how I can contribute to the organisation, especially in the future. So, I’m thinking right now, with all these activities in the pipeline and being completed, how my team can make a bigger mark in terms of our portfolio, which obviously benefits the organisation and benefits corporate.”
(Participant 10 – Male – Middle-Management).

7.3 Major-Theme 3: Being Optimistic about Entrepreneurial Activity

Entrepreneurial behaviour within organisations is normally considered as a challenging type of behaviour and often occurs outside the scope of an employee’s role. Moreover, employees often engaged in entrepreneurialism regularly face setbacks and even failure during the process. Such setbacks can often be demotivating for employees and may negatively affect their engagement at work. In contrast, being optimistic can help employees overcome the challenges associated with behaving entrepreneurially. Being optimistic about entrepreneurial activity, which refers to a capacity and the ability to maintain a positive outlook

into the future despite the present difficult circumstances, emerged as major theme in the data. This is found to be a source of motivation and energised participants to continue to persevere with their entrepreneurial initiatives despite setbacks and organisational constraints. Examination of the data further revealed two important sub-themes which determined employees' optimism regarding their entrepreneurial activity, namely sense of fulfilment and being resilient.

7.3.1 Sub-theme 1: Sense of fulfilment.

A positive sense of fulfilment was considered by many participants as an influential personal resource they developed from being entrepreneurial at work. A sense of fulfilment referred to the positive feeling associated with successfully delivering on entrepreneurial initiatives despite experiencing setbacks and challenges. Underlying this sub-theme was a personal sense of satisfaction/joy/happiness and a sense of accomplishment.

7.3.1.1 *A personal sense of satisfaction/joy/happiness.*

Several participants mentioned how, despite the fact that behaving entrepreneurially can be challenging, they nevertheless experienced significant satisfaction and joy from seeing entrepreneurial initiatives being implemented. For example, participant 8 mentioned the great sense of joy he felt upon finally seeing the new idea he developed for his client being implemented.

“You know that feeling, seeing this baby you have been working on for months finally come to life and grow up... I admit it, this project was a real headache, it

took a lot out of me and the whole team. So yeah, the joy from it was real.”
(Participant 8 – Male- Junior-Management).

Similarly, participant 4, as Head of Division, has been responsible for delivering several innovative practices in the organisation. He explained that not all of his entrepreneurial initiatives have been successful, and this has, at times, been upsetting from him. But he does experience great personal satisfaction from seeing his entrepreneurial initiatives succeed. This he considers as a particularly important outcome of his entrepreneurial behaviour and something that keeps him motivated.

“We all think and wish for the rewards, the recognition, the awards etc... yeah I admit they are good, but you know what, there’s this real sense of satisfaction I personally gain from seeing one of my proposed ideas succeed. I can see how they (ideas) change this place for good, the people, my colleagues...So when an initiative is done, I have this feeling while walking around the office, I have done this today or whatever, I’ve delivered this... it’s all because of me.” (Participant 4 – Male- Senior-Management).

Additionally, participant 5 talked about the positive and uplifting effects of behaving entrepreneurially. According to participant 5, behaving entrepreneurially at work is not only rewarding, but it is also something that is personally enjoyable for him.

“Often there would be some higher level of purpose or enjoyment that one would derive from seeing your idea taking shape and taking off the ground. I don’t

know why, maybe it's because you have some greater control over what you do and how you do it." (Participant 5 – Male- Senior-Management).

7.3.1.2 Sense of accomplishment.

Closely related to a sense of satisfaction and joy, numerous participants also mentioned the importance of a sense of accomplishment they experienced in behaving entrepreneurially. This feeling was described as rather motivational in nature by participants which encouraged them to continue with their entrepreneurial activity despite difficulties experienced during the process. For instance, participant 2 has been part of a dynamic customer engagement project and has played a central role by successfully conceptualising and implementing a new innovation that significantly improved customer engagement and the efficiency of current services. According to participant 2, being part of this successful entrepreneurial initiative was:

"like I was contributing to my colleagues the team and the higher purpose of the company. It was a great feeling of accomplishment on my behalf." (Participant 2 – Male – Middle-Management).

Participants 5 and 9 provide further examples of positive feelings of accomplishment that employees may feel from behaving entrepreneurially. In each instance, the participants' feelings of accomplishment gained from successfully completing entrepreneurial initiatives served to motivate them to remain engaged at work. For instance, participant 5 mentioned the many failures he has experienced

by being entrepreneurial at work. However, he cites his limited examples of success as one of the main reasons he continues in the role.

“There’s always more failures and road-blocks then success stories. It’s part and parcel of being innovative..., but once in a while you taste the success. Seeing the fruits of your labor pay off in the end. This gives a sense of accomplishment, you all go afterwards and celebrate and then you say, right let’s get back at it, let’s try again”. (Participant 5 – Male- Senior-Management).

Similarly, participant 9 also talked about the sense of accomplishment he felt on finally delivering on a tough project. The project in question had taken over 1.5 years to complete and had experienced many delays and set-backs. It had been particularly draining on participant 5 and seeing it being successfully completed was a great relief.

“I started this adventure... That’s what I call this idea I came up with for the client. Yeah, it is an adventure, lots of bad experiences. So imagine the relief I felt when it was finally complete, when I finally got it over line and saw the people reacting to that when it’s working, I tell you it was a great feeling.” (Participant 9 – Male – Team-Leader).

7.3.2 Sub-theme 2: Being resilient.

Nearly all participants discussed the importance of developing a sense of resilience towards the challenges and difficulties they encountered while being entrepreneurial at work. Participants viewed resilience as a personal willingness to invest effort in one’s entrepreneurial activities at work and one’s willingness to

persist with entrepreneurial efforts in the face of difficulties. Interviewees also viewed resilience as a powerful motivating force. Underlying this sub- theme was a determination to see entrepreneurial activities succeed and fee challenged by entrepreneurial work.

7.3.2.1 Determination to see entrepreneurial activities succeed.

Several participants highlighted the significance of adopting a persistent mindset. Such a mind-set was deemed necessary by participants in order to see through their entrepreneurial ideas and remain motivated in the process. Digital Services operates in dynamic marketplaces, which are constantly and rapidly changing. Consequently, employees need to rapidly adapt to changing situations and respond accordingly. They also need to be resilient in order to deal with the numerous setbacks and demands that might arise from turbulent, uncertain, or dynamic environments. For example, participant 8 has been proactively involved in looking for new business opportunities with partners throughout the Southeast Asia region. However, as participant 8 pointed out, the process of looking for and developing new opportunities in emerging markets is filled with considerable challenges, one which requires a positive mindset and persistence to succeed.

“Dealing with different clients in different countries, where there is lack of systems is something I face all the time. It’s highly frustrating, but something that I need to adapt too, you just learn to deal with it.” (Participant 8 – Male- Junior- Management).

Participant 4 also explained the importance of having a positive and success-oriented mindset in order to see his entrepreneurial initiatives succeed as Head of Division responsible for designing and delivering innovations throughout Digital Services.

“I would say thick skin, a try and try again until you eventually succeed attitude. Because of what I do, and how I go about doing, I will hear more no and very rarely a yes from management regarding about my ideas.” (Participant 4 – Male- Senior-Management).

Participant 3 has recently worked with clients in emerging market. He admitted that working with clients in the region has been particularly challenging because of competing goals and objectives. He highlighted the difficulty he faces trying to convince clients to abandon old ways of building products and services and to be more innovative and radical in their approaches to the market. In describing the issue participant 3 stated that:

“At the end of the day, this whole project has to eventually succeed. So for me to make that a reality I have push the boundaries, get out of my comfort zone and put myself in a situation where I don’t have the relevant skill sets. I just have to eventually try new things, new to me and hopefully it will be enough.” (Participant 3 – Male – Middle-Management).

7.3.2.2 Feeling challenged by entrepreneurial work.

For many of the participants, behaving entrepreneurially allowed them to work on interesting and meaningful projects that they were all passionate about. Moreover, interview data indicated that many participants derived a great sense of optimism from the challenging nature of the work they were directly involved in. For example, participant 4 talked about the challenges involved in thinking of creative ways to improve internal work processes at Digital Services. Consequently, he feels the challenge associated with the task has taught him about the importance of remaining resilient under such circumstance. As participant 4 stated:

“Being able to do things which not many people have done, to do something different. That’s the real challenge associated with what I am doing now. There are certain people, who will always resist doing things differently or better, what I have realised, is that when there are such challenges at work, you just have to take them in your stride and deal with them. You can’t beat all the challenges, just need to push on through.” (Participant 4 – Male- Senior-Management).

Similar sentiments were expressed by other participants. For instance, the role of participant 9 is quite dynamic, as he has to constantly look for new product opportunities in tightly contested markets. Not only is participant 9 under significant pressure to perform, he also admits that the organisation does not

provide him with enough resources to execute his desired plans. Despite such pressures, participant 9 has, in the past few years, been able to successfully deliver on a number of marquee projects which has significantly impacted Digital Services financially. Such success in the face of adversity was attributed to his sense of dedication to the task and confidence in his abilities to execute projects with tight budgets. As participant 9 explained:

“I stick to projects, even when the going is tough and failure is the most likely outcome, but then again I am confident in myself and my abilities to deliver something, right, create a new business, see yourself as successful.” (Participant 9 – Male – Team-Leader).

Participant 7 also mentioned the inherent challenges associated with coming up with innovative solutions for clients. Specifically, he explained how he appreciates the challenging nature of the role as it encourages him to push through with clients’ requests:

“Client problems are never stock standard, each is unique. Each presents me with a challenge and frustration... You just need a healthy dose of optimism and belief that your solution is up to scratch... This is my formula for success in this role.” (Participant 7 – Male – Junior-Management).

Participant 11 also mentioned the challenge associated with working in an organisation that actively encourages entrepreneurialism. He felt particularly enthusiastic about the potential opportunities that the organisation afforded him.

Moreover, participant 11 acknowledged that he has to be rather resilient in his role in order to capitalise on those opportunities.

“The way I see it, this organization is not just a place where I come to work, but it’s an institution it’s a gold mine where there are a lot of opportunities within the organisation, that for the lack of a better word manipulate or leverage... but those opportunities don’t come easy to you. You have to work at them, be patient, and be persistent.” (Participant – Male – Team Leader).

7.4 Discussion and Implications

This chapter sought to address the question: which personal resources do employees develop from being entrepreneurial at work and that positively influences their engagement at work? Findings suggest three main personal resources that participants developed while being entrepreneurial at work, and which positively influenced their engagement at work: formation of an entrepreneurial self-identity, entrepreneurial learning and being optimistic about their entrepreneurial activity. Findings also suggested that such personal resources helped participants to cope with the challenges associated with remaining entrepreneurial in their job and positively impacted their engagement at work. The paragraphs below provide a discussion of the key findings and how they relate to the existing literature.

Entrepreneurial self-identity formation refers to the feeling that individuals were being recognised for their entrepreneurial efforts and that they were perceived by fellow colleagues, management, and/or stakeholders as entrepreneurial. This

theme is consistent with the established notion of an entrepreneurial identity in the literature. Prior entrepreneurship research has long held the view that the entrepreneurial actions and behaviours in the recognition and exploitation of opportunities can be quite profound (Navis & Glynn 2011). This is due to the notion that entrepreneurial behaviours are often an expression of an individual's identity and thus strongly infused with meaning (Leitch & Harrison, 2016). Within work contexts, employees may hold multiple micro-identities, such as manager/team leader or team member (Pratt & Foreman 2000). One such identity, as suggested by the above findings, is that of an entrepreneur. Murnieks and Mosakowski (2007) described entrepreneurial roles as 'a set of socially held behavioural expectations attached to the positions external to an individual' (p. 2). Such a role identity can be quite distinct from other work-related identities, such as manager/leader. Given that entrepreneurial behaviour is considered as an extra-role type of behaviour, developing and being recognised as entrepreneurial at work could be a particularly profound identity and something that is very distinct from an individual's normal work identities. Lindgren and Wåhlin (2001) suggested that such identities can be shaped by different life episodes and patterns, and hence broadly represent a set of meanings associated with roles in the social structure. The abovementioned findings largely support this view.

Most participants described how their entrepreneurial identities were formed either via personally recognising it, or via fellow colleagues, management or the broader business community. Such a finding is consistent with the notion that identities are subjectively constructed and dynamically reconstructed (Van der

Haar & Hosking 2004). One of the most powerful sources of entrepreneurial identity formation for participants was through being either formally or informally recognised as entrepreneurial from either colleagues or the organisation's management. Such external sources of identity formation, whether informal or formal, helped to legitimize the entrepreneurial status of the participants within the organisation. The other way in which participants formed their entrepreneurial identity was through self-realisation. Specifically, evidence suggests that participants became highly cognizant of their entrepreneurial behaviours by either observing or acknowledging the impact of their entrepreneurial behaviours. By observing their entrepreneurial behaviour, participants began to view themselves as action-oriented innovators and risk-takers in the workplace.

Entrepreneurial identities can serve as a primary motivational source for a variety of human behaviours and positive attitudes. Most participants tended to have a positive view of being labelled as entrepreneurial in their organisations. Participants also felt that such a label represented an important resource for them in the workplace and a factor that distinguished them from others. For example, being labelled as 'entrepreneurial' in the workplace helped to reinforce participants' self-confidence and self-efficacy. This helped in the recognition and pursuit of entrepreneurial opportunities in the workplace. Findings suggest that being labelled as entrepreneurial helped some participants to overcome specific challenges they faced as part of their work and helped to build more meaningful relations with fellow colleagues and management in order to acquire specific resources. The formation of entrepreneurial identities also motivated participants

to remain more absorbed and dedicated to their work. Such findings are consistent with the view that particular identities can serve as potentially powerful motivators of pro-organisational mind-sets (Leitch & Harrison, 2016).

For many of the participants, entrepreneurial learning represented the development of new skills and competencies necessary to be successful in the workplace. The findings situate entrepreneurial learning as a form of learning wherein knowledge is continuously shaped and revised as new experience takes place (Sullivan, 2000). Findings suggest that by behaving entrepreneurially, participants were not only developing new skills and capabilities, but they were also forming stronger positive evaluations of themselves. This helped them to create a more positive and resourceful work environment for themselves (Kohn & Schooler, 1982). The learning of new skills and capabilities was also found to positively motivate participant's engagement at work.

Many of the participants did not have any prior entrepreneurial or business management experience. Majority also lacked the prior skills and capabilities necessary to function in or lead entrepreneurial initiatives. Consequently, participants described the value and importance of learning new skills and capabilities related to management and entrepreneurship as a result of their entrepreneurialism. Evidence showed that the case organisation did not provide structured training related to entrepreneurship or specific entrepreneurial skills. Hence, participants' entrepreneurial learning was largely informal and experiential in nature. Particularly, learning on-the-job and directly through either experiencing

success or failure emerged as one of the most powerful mechanisms through which participants developed this personal resource.

Prior research has also described entrepreneurial learning as a process of developing and updating mental models (Zacher & Frese, 2018). The findings strongly support his view. Leadership and management skills, relational and networking skills and strategic visioning/thinking emerged as particularly important and valuable skills and capabilities developed from behaving entrepreneurially. Such skills and capabilities were not only important in improving participants' performance and engagement with their work, but also helped them to cope with the challenges they faced in their workplace. For example, several participants came into their roles with little or no prior management or business experience. However, behaving entrepreneurially, enabled participants to learn to manage and lead others and large projects. Additionally, most participants talked about the importance of developing their relational and network skills. This helped participants to locate specific resources in the organisation and helped them to push through their entrepreneurial efforts by gathering support from management. Behaving entrepreneurially also exposed some participants to new parts of their organisation. This allowed them to develop a greater appreciation of their contribution to the organisation by getting them to reflect on the strategic importance of their actions.

Such findings are consistent with established notions in the literature that specific Knowledge, Skills and Attitudes (KSA) of employees are necessary for effective performance. The findings further support those studies in

entrepreneurship showing how skills and abilities are changeable, learnable and attainable through specific experiences and can also lead to superior performance in the future Kyndt & Baert, 2015; Wagener, Gorgievski & Rijdsdijk, 2010). Findings also extend the existing literature in a new direction. Prior studies into employee entrepreneurial behaviour have typically focused on specific skills and capabilities that encourage employees to behave entrepreneurially (Urbano & Turro, 2013). However, there is little empirical evidence concerning the specific skills and capabilities that employees can develop through their entrepreneurial behaviours (Belousova & Gailly, 2013; Urbano & Turro, 2013; Zacher & Frese, 2018). Findings identified the importance of strategic thinking and management/leadership skills and capabilities developed from behaving entrepreneurially, which has yet to be considered by the existing literature. Such skills and competencies helped to complement participants' lack of specific management and business skills. Findings also suggested that participants newly acquired skills and capabilities impacted not only their future entrepreneurial behaviours but also their dedication and vigor towards their work.

Carver and Scheier (2003) described optimism as the sense of confidence one had in oneself in approaching challenging situations with enthusiasm and persistence. Research has also suggested that optimistic employees will be more likely to cope in challenging work environments where there is significant information overload and operational constraints (Baron, 1998). Similarly, optimistic employees are also more likely to be able to quickly adapt to and respond to rapidly changing work situations (Block & Kremen, 1996). Findings also support

this view. Most participants discussed significant personal and organisational challenges they faced while behaving entrepreneurially. However, findings also revealed that the challenges associated with their entrepreneurial behaviour helped participants to develop their optimism. This was particularly the case in situations where participants were able to successfully complete challenging and difficult tasks and thus develop a sense of pride from doing so. Equally important in developing participants optimism was being able to critically reflect on the past success associated with their entrepreneurial behaviour. This was considered as a motivating factor as it encouraged participants to ‘see the rainbow at the tunnel’ and to become more energetic and dedicated to their daily work.

Scholars have defined resilience as ‘the process of coping with adversity, change, or opportunity in a manner that results in the identification, fortification and enrichment of resilient qualities or protective factors’ (Richardson, 2002, p.308). Resilience has been well studied in the entrepreneurship literature and many scholars have suggested that being able to adapt to change and rebound from challenges under harsh conditions is a key characteristic of entrepreneurial individuals (Lee & Wang, 2017). However, the existing literature has often suggested optimism as a predictor of resilience (Segovia, Moore, Linnville, Hoyt & Hain, 2012) or suggested that both optimism and resilience as separate personal resources (Gawke et al., 2017; Xanthopoulou et al., 2009). Findings identified resilience as a predictor of optimism and that a reciprocal relationship exists between the two. For example, participants talked about the need to develop ‘thick-skin’ and to become resilient as it helped them to remain optimistic about the

outcome of their entrepreneurial actions. However, findings also suggested that as participants became more optimistic about the future, they also became more resilient in facing future challenges.

Theoretically, the findings from this chapter extend our prior knowledge and understanding of entrepreneurial behaviours in organisations in several ways. Firstly, the findings deepen understanding in the existing literature of how personal resources may affect employee engagement. Given its beneficial effects at both the personal and organisational levels, scholars have been interested in uncovering a range of personal, organisational and role-specific factors that encourage employee engagement (Bakker & Demerouti, 2008). Yet, much of prior literature that examined personal resources focused on a narrow set of personal resource. For instance, in examining the effects of entrepreneurial behaviour on work engagement, Gawke et al. (2017) focused on three specific personal resources, namely optimism, resilience and self-efficacy. These resources were largely generic in nature and had been used as personal resources in a number of other studies examining a variety of different occupations. In contrast, this study identified two new personal resources (Formation of an Entrepreneurial Self and Entrepreneurial Learning) rarely considered by the existing literature. Both personal resources were found to act as buffer against the effects of external events and challenges, thereby encouraging participants to remain engaged at work (Gorgievski-Duijvesteijn, Bakker, Schaufeli, & Van der Heijden, 2005; Mäkikangas et al., 2013). Collectively, such findings add new insights into

explaining how and why some individuals continue to remain engaged in their work and not others and broadens the literature on what constitutes personal resources.

Secondly, findings also extend the literature regarding the outcomes of employee entrepreneurial behaviour. Scholars have largely been preoccupied with answering the question of what drives employee entrepreneurial behaviour (Hornsby et al., 2002; Rigtering & Weitzel, 2013). Consequently, little consideration has been given the positive outcomes associated with employee entrepreneurial behaviour (Rigtering & Weitzel, 2013; Rutherford & Holt, 2007). This is surprising, given that past research has recognised the importance of such behaviour in driving organisational-level entrepreneurship (Ireland et al., 2009). By demonstrating how employee entrepreneurial behaviours influences their ability to remain engaged at work, the findings explain how the entrepreneurial activity of employees can be cascaded up and sustain firm-level entrepreneurship. Hence, the findings further add to our understanding of the process by which employee entrepreneurial behaviours can positively contribute to organisations.

Organisations are likely to stay entrepreneurial (Ireland et al, 2009), as long as they have employees who are entrepreneurial themselves (Lau et al., 2012; Mustafa, Martin & Hughes, 2016) and who also bring high levels of energy and involvement to their work (Bakker et al., 2011). Yet, studies examining the nature of the relationship between these two concepts remain sorely lacking (Gawke et al., 2017; 2018). The findings here fill this gap in our knowledge, by adopting a process-oriented approach to examine the positive consequences of employee entrepreneurial behaviours (Belousova & Gailly, 2013; Dess et al., 2003; Sieger et

al., 2013). Specifically, findings identified the specific boundary conditions under which employee entrepreneurial behaviour can contribute to their engagement at work. Hence, this study broadly responds to recent calls in the literature to understand the effects and processes associated with employee entrepreneurial behaviour (Belousova & Gailly, 2013).

Finally, the findings also make a small methodological contribution to the literature on entrepreneurial behaviour in organisations. As identified by Mustafa, Gavin and Hughes (2018), studies into employee entrepreneurial behaviour have been dominated by quantitative approaches. Subsequently, this has led to a theory-testing approach with respect to the consequences of employee entrepreneurial, thereby also limiting its nomological network. In contrast, this study represents one of the few attempts in the literature to adopt a qualitative approach to examining the consequences of employee entrepreneurial behaviour. As evidenced from the findings, the qualitative approach permitted the identification new personal resources, which sustained employee entrepreneurial behaviour not considered by the literature before.

7.4.1 Managerial and practical implications.

A number of practical implications also emerge from the findings. Firstly, the findings suggest that besides the obvious organisational benefits of employee entrepreneurial behaviour, it can also have a number of personal benefits. On one hand, entrepreneurial employees are likely to be more engaged in their roles at work. As a consequence, such employees may be less likely to experience negative

well-being effects such as burnout, as a result of behaving entrepreneurially. This suggests that organisations may do well by cultivating internal environments which encourage employee entrepreneurial behaviour. Particularly important may be organisational wide communication strategies emphasising the personal benefits associated with entrepreneurialism.

Secondly, findings demonstrated that employee entrepreneurial behaviour can have beneficial effects on the career development and personal growth of employees. There is growing recognition that entrepreneurial activity itself can contribute to development of specific skills and abilities, which may be beneficial for future career opportunities (Burton, Sørensen & Dobrev, 2016). Hence organisations may seek to develop and implement specific HR practices and HR policies which recognise and reward entrepreneurial behaviour as a part of an employees' job. Doing so will allow entrepreneurial behaviour to be properly assessed and accounted for during performance appraisal. Alternatively, organisations may wish to focus on redesigning employee jobs, ensuring that there is a certain degree of challenge and creativity involved within them. Doing so will not only challenge employees, but it will also motivate them to learn new skills and abilities, thus helping them to grow personally.

Finally, findings highlighted the importance of developing personal resources such as identity formation, entrepreneurial learning and optimism, in overcoming some of the challenges that employees faced at work. This suggests that organisations should explore ways to promote the development of such personal resources. Consistent with the recommendation of Van den Heuvel

Demerouti and Peeters (2015), organisations may put into effect specific interventions designed to increase specific personal resources. For example, simulated experiences may be used to put employees in difficult and challenging situations, thereby forcing them to come up with unique and novel problems. Doing so may help to develop employees' resilience and optimism. Similarly, organisations can introduce a greater degree of vertical and horizontal integration as part of the work structures in order to promote greater interactions among employees, teams and divisions. It may also force employees to work with different work units/group and offer them an opportunity to learn about management and leadership as well as improve their overall relational capabilities.

7.5 Chapter Summary

This chapter examined the personal resources employees developed from being entrepreneurial and the personal resources that positively influenced their engagement at work. Data was derived through a series of semi-structured interviews with 11 entrepreneurial and innovative employees from an entrepreneurially minded organisation. Thematic analysis identified formation of an entrepreneurial self-identity, entrepreneurial learning and being optimistic about their entrepreneurial activity as key personal resources that participants developed as result of their entrepreneurial behaviours, and which helped them to remain engaged at work. Such personal resources were considered important by participants in order to cope with the demanding nature of their entrepreneurial work, as well as the conditions within their organisation. Additionally, they were

also considered as a personally rewarding attribute of behaving entrepreneurially at work. Hence, participants also perceived their personal resources as a source of encouragement for them to remain engaged and dedicated in their roles. Finally, the chapter demonstrated how the identification of the personal resources added to the existing list of personal resources which were deemed as having an influence on employee engagement in the literature.

CHAPTER EIGHT: Reflections, Contributions, Limitations, Suggestions for Future Research and Conclusions

8 Chapter Overview

This chapter discusses the main contributions of the thesis, its limitations, and suggestions for future research. Regarding contributions, the chapter pulls together the distinct findings of each empirical chapter to assess the overall contribution of the thesis to the existing literature on entrepreneurship and organisational psychology. In discussing the limitations of the thesis and the process behind it, the researcher drew on reflexivity to understand their position in shaping the research process (Blaxter et al., 2001). Throughout the thesis, the term ‘researcher’ has been used to refer to the actions of the individual author. However, in this chapter, the researcher refers to himself as ‘I’ to denote his thoughts and actions.

Reflective writing seeks to generate individual learning which ultimately leads to some form of change in one’s actions or behaviour through developing a sense of understanding. According to Boyd and Fales (1983). “Reflective learning is the process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self, and which results in a changed conceptual perspective” (p. 100).

Reflective writing acknowledges the subjective nature of the researcher's interaction and interpretation of the data, by providing a decision trail within the public domain (Koch, 1996). Thus, through reflection, the researcher provides insight into "their presuppositions, choices, experiences, and actions during the research process" (Mruck & Breuer, 2003, p. 3). While reflexivity is acknowledged as a crucial means of understanding the process of knowledge generation in qualitative research (Mihas, 2019), the approach is also being actively applied in quantitative methods and the entire research process as well (Ryan & Golden, 2006). In the following sections, I will reflect on the overall contributions of the thesis, the limitations of individual studies as well as limitations of the entire thesis process, emerging from my own values and involvement in the process.

8.1 Overall Thesis Contributions

The contributions of the thesis are in relation to the literature in the fields of entrepreneurship and organisational psychology. One of the objectives of thesis was to provide a better understanding of employee entrepreneurial behaviour by incorporating theories from the field of organisational psychology, such as the JD-R model. I had hoped that by attaining this objective, I would bridge the gap between entrepreneurship and organisational psychology researchers' understanding of employee proactive and discretionary behaviours. The four overall contributions of the thesis are discussed below.

Firstly, the thesis contributes to deepening our understanding of employees' entrepreneurial behaviour, which is a key antecedent of the Corporate

Entrepreneurial process (Sharma & Chrisman, 1999). By focusing on the determinants and consequences of employee entrepreneurial behaviour, the thesis addressed broader calls in the entrepreneurship literature to examine the micro-foundations of entrepreneurial process in established firms (Zahra, Randerson & Fayolle, 2013). Several studies have examined a range of organisational and external factors as possible determinants of CE. However, such studies have often tended to overlook the fact that firms will only be entrepreneurial in nature to the extent that their human resources are entrepreneurial. Hence, by focusing on employee entrepreneurial behaviour, this thesis addresses Rauch and Frese's (2007) call to put the person back in the heart of entrepreneurship research.

Additionally, the micro-foundations view adopted in this thesis may also help the literature to better understand the causes and consequences of pro-organisational and discretionary employee behaviours. For instance, various studies on employee entrepreneurial behaviours have tended to focus on organisational-level factors and conditions which drive such behaviour (Hornsby et al., 2002; Mustafa, Gavin & Hughes, 2018; Neessen et al. 2018; Rigtering & Weitzel, 2013). However, this study focused on specific characteristics of employees' jobs and their attitudes towards their jobs, as both antecedents and consequences of their entrepreneurial behaviour. This approach is important because in organisational settings employees are likely to be influenced by proximally close factors, such as those pertaining to the design of their job than more distant factors such as workplace environments or organisational strategies (Hornsby et al., 2002; Rigtering & Weitzel, 2013). Hence, by examining the specific aspects of an

employee's job design and how, they influence employees' entrepreneurial behaviour, this study helps the field to better understand how and why entrepreneurial behaviours may or may not emerge in the presence or lack of supportive environments. Furthermore, the thesis helped to broaden the field's understanding of why some individuals and not others may continue to remain entrepreneurial at work. In doing so, the thesis adds to the small body of literature in organisational psychology which examines the positive psychological benefits associated with entrepreneurial behaviour (Gawke et al., 2017; 2018).

Secondly, the thesis extends the existing nomological network concerning the determinants and consequences of employee entrepreneurial behaviour. It also extended the JD-R model, thereby responding to recent calls in the entrepreneurship literature to examine how job design features can influence employee entrepreneurialism (Mustafa, Gavin & Hughes, 2018; Neessen et al., 2018). Specifically, the thesis adds to the literature by demonstrating a positive association between job demands (Bakker & Demerouti, 2017) and employee entrepreneurial behaviour and its associated dimensions. In doing so, the thesis responded to a number of reviews in the field (see Mustafa, Gavin & Hughes, 2018; Neessen et al. 2018), that have called for better understanding of how the demands of one's job can have beneficial effects on an employee's behaviour. Additionally, the thesis extended the nomological network of employee entrepreneurial behaviour by demonstrating the relative importance of personal resources (psychological empowerment, optimism, entrepreneurial learning) as both important determinants and consequences of such behaviour.

With regards to the JD-R model, the thesis also makes some significant contributions. Firstly, it extends the nature of the concepts examined within the JD-R model. Currently, scholars linking specific job resources and demands within the JD-R model with pro-organisational and discretionary behaviours have done so by focusing on a narrow range of concepts such as innovative work behaviour (Hakanen et al., 2008), OCB (Pooja, De Clercq & Belausteguigoitia, 2016), job crafting (Tims et al., 2012), creativity (Bakker & Xanthopoulou, 2013) and work engagement (Bakker & Demerouti, 2008). In this thesis, employee entrepreneurial behaviour was conceptualised as a form of discretionary pro-organisational behaviour and as a higher order construct, consisting of ideation, personal initiative and risk taking. In doing so and by linking the concept with job resources and demands, the thesis demonstrated how the concept can be incorporated into the JD-R model more generally. Specifically, employee entrepreneurial behaviour may prove to be an important way for scholars of organisational psychology to conceptualise a range of employee discretionary and pro-organisational behaviours. Clearly, more conceptual and empirical work is needed in the area. Additionally, by adopting a qualitative approach to the study of how personal resources are developed, the thesis identified two new concepts namely, entrepreneurial identity formation and entrepreneurial and managerial learning. Consequently these two concepts can subsequently be incorporated into the wider array of personal resources used within the JD-R model. Additionally, by drawing on the JD-R model and the assumptions contained within it, the thesis also demonstrated the robustness

and flexibility of the JD-R model by showing how the JD-R model can be extended to unique occupational groups and organisational contexts.

Thirdly, the thesis helps scholars to understand why some employees and not others may choose to behave entrepreneurially and/or continue to do so. The thesis recognises that the decision to engage in and continue with entrepreneurial behaviour remains an inherently personal one (Kuratko et al., 2005; Mustafa, Martin & Hughes, 2016). By introducing the notion of Psychological Empowerment (PE) as a personal resource, the thesis provided a means through which scholars can enhance their understanding on why some employees and not others engage in entrepreneurialism. Specifically, the thesis demonstrated that an employee's positive orientation towards their job, i.e. their sense of PE, and the intrinsic motivation contained within it, may motivate employees to engage in entrepreneurial behaviour. The thesis also demonstrated how employees' PE may influence their view and response to the various characteristics and attributes of their job. This suggests that employees' orientations towards their job can predispose them towards engaging in entrepreneurial behaviour. Furthermore, the thesis showed that employees can develop specific personal resources that may help them to cope with the demands of entrepreneurial behaviour and remain engaged at work. Collectively, my findings suggest that in addition to concepts such as Psychological Ownership (Seiger et al., 2013; Mustafa, Martin & Lee, 2016), Emotional Intelligence (Zampetakis et al., 2009) and Self-efficacy (Wankee et al., 2010) that are used to examine an employee's dispositions towards entrepreneurial

behaviour, an employee's personal resources also matters in their decision to behave entrepreneurially.

Fourthly, the thesis provides further empirical clarity on the role of personal resources in the JD-R model. Within the JD-R model, personal resources have been used in a variety of ways, such as a third and/or mediating variable. However, empirical evidence concerning its role as a moderating variable remains limited (Van den Broeck et al., 2011). By conceptualising personal resources as a potential moderator, the findings of the thesis showed how personal resources can influence employees' perception and response to the nature and characteristics of their job (Xanthopoulou et al., 2007).

Finally, the thesis adds to our understanding of employee entrepreneurial behaviour by drawing together the fields of entrepreneurship and organisational psychology. A particularly unique aspect of this thesis was the use on off job design theories to help explore the determinants and consequence of employee entrepreneurial behaviours. By doing so, the thesis also highlights the mutual benefits that can be gained from getting two subject disciplines to talk to one another. For instance, in utilizing the JD-R model, the thesis was able to expand the determinants of employees entrepreneurial behaviour in two distinct ways. Firstly, the organisational psychology perspective further highlighted the need to consider the demanding aspects of ones work/role. Consequently, this led the researcher to explore the role of Job Demands in influencing employee entrepreneurialism. Secondly, by utilizing the JD-R the researcher was able conceptualise the role of personal resources in distinct ways. In one way, the JD-R permitted the modelling

of Psychological Empowerment (PE) as a moderating variable in the relationship between job demands and job support factors. Doing so added to the literature regarding personal dispositions and how they may influence employee entrepreneurialism.

Additionally, by considering the role of personal resources, the thesis also showed how individual employees learn from their entrepreneurial behaviour in the organisation. Consequently, this added to the field of organisational psychology and the JD-R model in particular, what constitutes personal resources. Thirdly, in exploring the employee entrepreneurial from an organisational psychology perspective, the thesis adds the network of outcomes associated positive psychology. Currently, the field of organisational psychology has focused on exploring a limited number of pro-organisational behaviours, such as job crafting, innovative work behaviour, work engagement and extra-role behaviour. However exploring the concept of employee entrepreneurial behaviour from an organisational psychology greatly added to the list of pro-organisational behaviour. In fact, the thesis demonstrated that not only can employee entrepreneurial behaviours be considered as an outcome of job design, but it can also be considered as a potential driver of employee engagement. In sum, the thesis has demonstrated that considerable mutual benefits may be gained from bridging the two disciplines (entrepreneurship and organisational psychology) together to study pro-organisational behaviours in organisations.

8.2 Thesis Limitations

In the following section, I take a reflective approach to discuss the limitations of each empirical chapter and the entire thesis.

8.2.1 A reflection on the thesis process.

The author is a male, with 15 years of academic and consulting experience. Prior to the commencement of the study, I had been directly involved in developing and delivering modules at both the undergraduate and postgraduate levels on topics closely allied to the core themes of this thesis; namely Corporate Entrepreneurship and Innovation Management and Creativity. Prior to and during the research process, I was fortunate to work with and be mentored by several prominent researchers in the field. These individuals have not only assisted me to publish several papers on the topic, but have also shaped my thoughts on the topic, as well as the future directions of the field. I have also been fortunate enough to advise and consult with several start-ups and established firms in the region regarding the development of innovative and entrepreneurial cultures. Collectively, such experiences have shaped my own body of knowledge and understanding of the topic, and influenced how the thesis was approached.

Nevertheless, throughout the entire process, I strived for transparency in my values, and engagement with reflexive practices (Banister, Burman, Parker, Taylor, & Tindall, 1994). For example, I maintained a 3-year diary about all my experiences in collecting literature, deciding on which participants to interview,

which firms to select and study, as well as considering other potential influences in the process. This practice allowed me to understand and accept the evolution of my thoughts about the design and execution of the study. Additionally, where possible, I met in person with peers and my supervisor to discuss concerns and receive feedback to reduce researcher subjectivity regarding each individual study as well as the entire thesis process. Below I will elaborate on how my dual identity as a PhD researcher and an academic has impacted the research design and execution of the thesis.

One particular issue that I grappled with during the thesis process was my prior knowledge and publishing experience in the phenomena of interest. Having published several manuscripts on the topic meant that I already had an informed idea of the topical area, key issues and debates in the field. In fact, I had been actively contributing to the resolution of ongoing debates in the field and had thus shaped the development of the field in some way. Not surprisingly, I approached the initial conceptualisation of the thesis with certain ‘blindness’ already in place, which in hindsight has had a future bearing on the outcome of the thesis.

For example, one issue that I felt was heavily shaped by my prior experiences was the focal construct of the thesis – Employee Entrepreneurial Behaviour. As discussed in chapters 2 and 3, the terms “intrapreneurial” and “entrepreneurial” had been used by scholars to refer to the topic. In fact, research from the field of organisational psychology has preferred to use the term intrapreneurial, instead of entrepreneurial. However, in the past I have been hesitant to use this term, preferring the term entrepreneurial instead. Much of this was

influenced by my mentor and later co-author, who, along with myself, had certain reservations with the term. Such a conscience choice impacted my ability to conceptualise the phenomena of interest. For instance, using the term entrepreneurial made it more likely that future respondents and participants during the data collection phases of the study would be better able to respond to and understand my questions. This I hoped would have made the process of data collection much easier.

In an attempt to counter this, I conscientiously searched for literature using the term intrapreneurial in parallel with the term entrepreneurial. Nevertheless, the term entrepreneurial was still my personal preference. This, no doubt, limited or at least biased my search preferences in the literature and influenced the nature and scope of the thesis. I was highly cognisant of the fact that considerable knowledge and exploration existed with respect to organisational and environmental-level factors that conditioned the process. Hence, after considerable discussion with both my mentor and supervisor, I decided to focus on specific job-level characteristics. In hindsight I acknowledge that such a decision reduced my ability to develop a more holistic picture of how entrepreneurial behaviour really emerges as I consciously excluded environmental and organisational-level factors.

Similarly, in late 2013, I undertook a small consulting project for a R&D company in Malaysia. Part of the project included a focus group with employees on issues related to working in the department. A particularly eye-opening aspect of this project was employees' discussions on the personal motivations for innovative and entrepreneurial actions. One particular issue I was highly cognisant

of during my thesis was how to ground and link the topic to the field of organisational psychology. I used the findings from the consulting experiences to shape my ideas concerning the conceptualisation and rationale for the second study, which explored the positive benefits of employee entrepreneurial behaviour on their engagement at work. In this respect, one could argue that I had a very specific intent and focus for the design of Study 4 and some of the other studies in the dissertation.

Secondly, I believe my role as an academic had particular bearing on the process of collecting data for the various studies of the thesis. In my prior studies, I had experienced great difficulty in developing and utilising measurement instruments to measure employee entrepreneurial behaviour (see Mustafa, Martin & Hughes, 2016). Specifically, I had tried different scales to measure the phenomena albeit with mixed results. A common issue I faced was with respect to the reliability of the measure with some participants mentioning that the items were at times difficult to understand and relate to with respect to their work. Bearing this mind, I was highly conscious throughout the development of the survey instrument to use a simple operationalisations of employee entrepreneurial behaviour and other related measures. Such a knowledge was instrumental in my decision regarding the development of study 3. For example, I purposefully sought out and utilised well established measures for the entrepreneurial behaviour scale. Ideally, and knowing the existing limitations of the established scales, I should have used the thesis as an opportunity to develop a specific scale. However, I was highly conscious of the fact that such an approach might have been risky and therefore not yield the desired results.

Additionally, for my thesis, I chose to utilise a professional data collection agency for the quantitative study. This approach, I hoped, would allow me to target a specific population of interest. It also ensured that I was able to collect a sufficient number of responses in order to draw meaningful conclusions from the data. In the past, I had experienced great difficulty in collecting the required number of respondents from surveys. However, I do acknowledge that there are certain limitations with this approach.

My experience as an academic also influenced the recruitment of participants for my qualitative studies (studies 2 and 4) as well as how I collected data from participants. In this respect, I acknowledge my insider status and role during the data collection phase for both of the qualitative studies (studies 2 and 4). As an academic, I had the privilege of supervising several students on the topic of corporate entrepreneurship. In particular, one student played an instrumental role in providing me with connections and introductions to potential individuals who were considered as innovative and entrepreneurial in their organisation. Hence, I leveraged my connections with students and individuals with whom they work with or are friends with, to help me recruit participants for studies 2 and 4. This at times gave me a unique role as an insider in some situations and also helped to raise my creditability as a researcher in other situations.

In the case of study 4, I selected an organisation in which one of my Master's student was an employee. Knowing this student gave me unique access as an insider, which in some situations I personally exploited. For example, on several occasions prior to conducting field work, I had personally contacted the student and

asked for a briefing regarding the background of the organisation and recent developments. Such discussions were particularly insightful as they gave me an understanding of what I should mention or avoid during my interviews. The discussions also predisposed me to certain information about the target organisation that may or may not have been revealed by participants. Similarly, in designing and refining my interview protocol for study 4, I was highly cognisant of the intra-organisational politicking that had been taking place. I was able to partially counter this effect during the data analysis phase by consciously reminding myself of discussions with my previous students.

Additionally, two months before commencing data collection for the fourth study, I had delivered a lecture on the ‘importance of entrepreneurialism’ at the target organisation. This lecture was held during lunch time and was attended by staff in the organisation. In hindsight, such a talk could have influenced participants about the aim of the study, as well as their personal perceptions of me. For example, the interval between the lecture and the interviews may have given participants an opportunity to familiarise themselves with the topic. Furthermore, delivering such a talk may have allowed participants to see me as a trusted and knowledge-full researcher, rather than as a PhD student. Seeing me as a trusted researcher might have encouraged participants to open up to me more than they probably would have done without this knowledge. It also meant that participants took the interviews more seriously. In particular, during the interviews for study 4, several participants went beyond the interview protocol to talk extensively about the problems associated with their organisation, even though it was considered as an

entrepreneurial organisation. When selecting potential participants for study 2, I utilised my own personal and professional networks, with whom I introduced myself as an academic member of staff, rather than as a Ph.D. student. In hindsight, such an action may have influenced participants' willingness to participate in the study because they may have been more willing to participate in the study, knowing that the interviews were being conducted by a professional academic.

These prior experiences may have also influenced the way I approached the analyses of the data. For instance, when analysing interview transcripts I took an exploratory approach, and specifically focused on what I deemed to be entrepreneurial behaviour. In hindsight, I do acknowledge that entrepreneurial behaviour may be inherently personal in nature. For example, what one participant deemed as entrepreneurial may not be deemed so by another participant. In fact, it could just be part and parcel of their everyday behaviours. Thus, having a clear a priori paradigm in approaching my data analysis could have potentially limited my ability to look at the data with a fresh lens or framework. Nonetheless, these prior experiences helped me maintain a clear direction for the thesis and generate meaningful information. What follows is a discussion of the limitations of each individual study.

8.2.2 Limitations of study 1.

Study 1 sought to provide a comprehensive overview of the existing literature on employee entrepreneurial behaviour. A Systematic Review of Literature (SLR) following the protocol outlined by Tranfield, Denyer and Smart

(2003) was conducted. Accordingly, 26 relevant studies for further investigation were identified. Additionally, the ABS 2015 Journal Quality List was utilised to ensure a quality threshold. Nevertheless, despite strict efforts to ensure a systematic approach to the review, a number of limitations existed. Firstly, the review was restricted to only English, peer-reviewed articles in ranked ABS-level 2 or higher journals. Consequently, non-English articles books and book chapters were excluded. Hence, there is a possibility that several articles which could have been included for review have been excluded. For instance, due to my prior research, I was aware of four specific articles, which should have been included but were not as they did not appear in the SLR search process. Nevertheless, I did not include such articles, despite their relevance, as I felt it was important to adhere to the strict protocol of the SLR in order to ensure reliability.

Secondly, some limitations existed in my coding and analysis of the key themes and contents of the review articles. For example, one choice I faced was how to classify the emergent factor of ‘management support’ as a determinant of employee entrepreneurial behaviour. Management support can be viewed as either part of organisational support or as part of ‘leadership support’. Therefore, how I classified the theme had an impact on the theoretical framework developed at a later stage in the study. When viewed as leadership support, management support formed part of specific management and leadership practices that lead to the creation of pro-entrepreneurial organisational cultures. However, if management support is classified as a part of organisational support, it could have been viewed as a consequence of a pro-entrepreneurship organisational culture. Such issues may

affect the pattern of antecedents and determinants of employee entrepreneurial behaviour and their interactions.

8.2.3. Limitations of study 2 and 4.

Both study 2 and 4 utilised qualitative methodologies (interviews and a case study) to examine how employees' attitudes towards their job influences their entrepreneurial behaviours at work and how employees' entrepreneurial behaviour influenced their engagement at work. A number of limitations exist with the chosen methodologies.

Firstly, the emergent findings from the studies were based on the experiences of a limited number of participants from specific organisational contexts. For instance, participants from both studies were identified and selected on the basis that they were knowledge-workers and part of knowledge-intensive organisations. That being said, the transferability of the findings to other organisational contexts and among non-knowledge-workers may be limited. Moreover, by focusing on this specific group of workers (the knowledge workers), the researcher was unable to draw conclusions regarding other contextual variables which could have affected employee entrepreneurial behaviour. For instance, it is highly plausible that the conditions found in knowledge intensive organisations is considerably different from those in say the tourism and financial services sectors or in manufacturing firms.

Secondly, my presence in the research process could have affected the outcome of the study. As explained in chapter 4, I obtained the samples through

personal contacts and such prior relationships with potential participants could have led to some form of response bias. For instance, the aim of study 2 was to explore how employees' attitudes towards their job influenced their entrepreneurial behaviour. However, during the interview process, several participants often drifted off topic and wanted to discuss the negative issues associated with their roles. However, by following the semi-structured interview protocol, I ensured that participants remained focused on the motivational aspects of their entrepreneurial behaviour, a situation that could have potentially biased possible responses.

Finally, as evidenced by participant profiles for the two studies, there was an overall lack of gender balance, especially among participants from study 4. Both the roles of social norms and gender in influencing entrepreneurial intentions and behaviours has been well established in the literature (Engle, Schlaegel & Delanoe, 2011). Consequently, by only exploring the experiences of males an incomplete picture of what drives entrepreneurial behaviour in established organisations and how it influences engagement at work might have emerged. For instance, it is quite plausible that in highly paternalistic culture, such as that of the case firm in study 4, women may have less opportunities to interact with senior management. This may make it more difficult for women to have their innovative ideas recognised by management. Additionally, given gendered role expectations in collectivist societies such as Malaysia (Kennedy, 2002), women may have very different attitudes towards their roles in an organisation, thereby limiting our understanding of what determines employees entrepreneurial behaviour.

8.2.4. Limitations of study 3.

Study 3 set out to investigate the interactions of job demands, job and personal resources in the facilitation of employee entrepreneurial behaviour. Empirical data was based on a sample of 321 knowledge-workers from several knowledge-intensive organisations. A primary limitation of the study was the use of cross-sectional survey data. However, since the aim of the study, was not to establish causality between the constructs, a cross-sectional design was deemed appropriate. Ideally, if the study sought to determine causality, a longitudinal research design similar to that of Gawke et al. (2017; 2018) would have been adopted.

Secondly, the study's sample was drawn from knowledge workers from a range of knowledge intensive organisations. The decision to focus on knowledge workers was my conscious choice during the design of the thesis. Specifically, I focused on knowledge-workers, since from past experience, I believed that such employees were more likely to be entrepreneurial in nature, compared to manual workers or those in the manufacturing or agricultural sectors. Such a limitation affects the generalisability of the findings to other sectors and industries. Prior research has shown that employee entrepreneurialism can and does exist across other industry sectors and occupational types (Smith, Rees & Murray, 2016). Consequently, the nature as well as the types of antecedents that drive employee entrepreneurialism in different industries and occupational groups may be significantly different from that of knowledge-workers.

A final limitation concerns the conceptualisation and operationalisation of the employee entrepreneurial behaviour construct. In conceptualising employee entrepreneurial behaviour, I did so along the dimensions of innovativeness, risk taking and personal initiative. This is consistent with the conceptualisation of the firm-level construct Entrepreneurial Orientation (EO) (Lumpkin & Dess, 1996). The decision was influenced by my prior experiences and difficulty in identifying a scale that captures the phenomena. However, the limitations of this measure have been recently identified (Gawke et al., 2019) regarding its similarity with respect to firm-level entrepreneurship. Hence, a possible limitation here is that the adopted measure in the study may not be fully representative of actual behaviours. Consequently, future research is required in the development of bespoke behavioural-based scales (Lau et al., 2012; Gawke et al., 2019) in order to properly assess the extent of employee entrepreneurial behaviours.

Additionally, all measures in the present study were self-reports, hence the possibility of common method bias may exist (Podsakoff, 2003). I made the decision to rely on self-report due to possible operational related limitations in collecting multi-sourced data. Yet, the approach adopted in relying on perception-based measures to evaluate participants entrepreneurial behaviour and perceptions of their jobs and work environment, is consistent with prior research in the area (De Jong et al., 2015). Accordingly, future research should ideally aim to combine both self-report measures along with peer and managerial observations.

8.3 Directions for Future Research

Scholarly interest in the field of employee entrepreneurship has been growing rapidly. This is particularly evident from the rapid growth in the number of publications on the topic recently (Neessen et al., 2018), as well as the several recent systematic reviews on the topic (see Blanka, 2018; Mustafa, et al., 2018). Based on such literature and the empirical findings from this thesis, several promising avenues for future research have been recommended. Responding to some of the suggestions below can help the theoretical and empirical advancement of the field as a whole. The suggestions for future research have been clustered around three key areas (assessing and conceptualising employee entrepreneurialism; examining the determinants and consequences of employee entrepreneurial behaviour and contextual and methodological issues related to employee entrepreneurial behaviour).

8.3.1 Assessing and conceptualising employee entrepreneurial behaviour.

One area of future research in need of urgent attention is the conceptualisation and measurement of entrepreneurial behaviour. In this thesis, I opted to use entrepreneurial behaviour to refer to employee entrepreneurialism. The choice of the term was largely driven by my knowledge and prior experience of the field (De Jong et al., 2015; Mustafa, Martin & Hughes, 2016). However, it must be pointed out that several parallel terms such as ‘intrapreneurial behaviour’ and

‘intrapreneuring’ have also been used to refer to the phenomenon. Although describing a similar phenomenon, both terms approach the topic from slightly different points of view. The term intrapreneurship views employee entrepreneurialism as a form of self-initiated discretionary behaviour which traditionally occurs via bottom-up process in the organisation (Valsania et al., 2016). This bottom-up view is complemented by the term ‘entrepreneurial’ which makes no real distinction when and where employee entrepreneurialism emerges from or how (De Jong et al., 2015). The use of the term entrepreneurial similarly implies a top-down process which in turn can be influenced by organisational and managerial policies and practices (Hornsby et al., 2009). Nevertheless, looseness with regards to the use of terminology regarding the concept has hampered the development of a specific definition for the concept.

Specifically, the lack of a concrete definition for the concept has led to lack of synthesis over its nomological network and system of effects and contingencies, as well as the advancement of the field in general (Mustafa, Gavin & Hughes, 2018). Therefore, future research should strive towards the consistent use of a term which should also help in the development of a definition of the concept. A particularly interesting starting point is the recognition that employee behaviours maybe quite distinct in form and character from that of firm-level entrepreneurship. Hence, it may be particularly worthwhile to develop definitions which incorporate aspects of employee proactivity and discretionary behaviours alongside more traditional definitions of entrepreneurship. Specifically, adopting a behavioural-based approach to employee entrepreneurial behaviour may permit future scholars

to better position the concept among strategic proactive behaviours (Parker & Collins, 2010) and to distinguish it not only from firm-level entrepreneurship but also from concepts such as employee creativity (Anderson, Potocnik, & Zhou, 2014) and voice (Tangirala & Ramanujam, 2008) and job crafting (Tims et al., 2012).

Additionally, the development of a measurement tool to assess the construct may also help in the formation of a definition. A particular challenge I faced in this thesis was deciding on how to operationalise the construct. In the end, I chose to operationalise the construct along the lines of the EO construct, due to time and resource constraints, as well as being a construct that I was familiar with. This approach was also consistent with that adopted by De Jong et al. (2015) and others (Valsania et al., 2016; Wakkee et al., 2010). Despite the recent scholarly interest in the concept, there continues to be a lack of an overall measurement tool to assess employee entrepreneurial behaviours (Lau et al., 2012; Gawke et al., 2019). Instead, scholars have tended to rely on adapting the EO scale, consisting of innovativeness, proactiveness and risk taking, to the individual level (Moriano et al. 2014). Yet, relying on this approach to conceptualise and operationalise employee entrepreneurial behaviour assumes that such behaviours are likely to mirror those of firm-level entrepreneurship (Mustafa, Gavin & Hughes, 2018). Both this thesis and recent studies have suggested however (study 1 (SLR), that employees may exhibit entrepreneurial behaviours with unique characteristics that are more in line with a view of entrepreneurship at the individual-level (e.g. idea generation). Hence, the reliance on the individual-level adaption of the EO may lead to a limited

understanding and appreciation of the scope of employee entrepreneurial behaviour. Recently, Neessen et al. (2018) and others identified behaviours such as opportunity recognition and networking also constitute employee entrepreneurial behaviours (Lau et al., 2012). Clearly further research is needed to explore the uniqueness of the underlying dimensions of employee entrepreneurial behaviour.

In addition to exploring the different types of employee entrepreneurial behaviours, future research needs to also consider how such behaviours may vary according to an employee's organisational-level or functioning. According to Hornsby et al. (2009) and others (Sieger et al., 2013), employee entrepreneurial behaviours are not ubiquitous within organisations and are likely to vary depending on an individuals' organisational positioning. For example, rank-and-file employees may likely be involved in idea generation, while middle-mangers may be involved in up-selling ideas and winning support for their ideas from management (Mustafa, Martin & Hughes, 2016). Hence, future research needs to not only explore the scope of employee entrepreneurial behaviours, but to also examine how the scope of such behaviours vary with respect to organisational function and positioning.

Finally, besides exploring the underlying behaviours that constitute employee entrepreneurial behaviours, future research also needs to consider the inter-relationship between such behaviours. Entrepreneurial behaviours rarely occur in isolation and may often be inter-connected. For instance, in generating ideas, employees may also engage in risk taking and opportunity recognition simultaneously. Similarly, when employees become proactive, they may also

engage in strategic networking and may undertake individual risks. Hence, future research may examine inter-relationship between employees' entrepreneurial behaviours. For instance, must employees display all aspects or combinations of identified behaviours in order to be entrepreneurial, or could some specific entrepreneurial behaviours compensate for other types of behaviour? Therefore, future research needs to move to working on a concrete definition of employee entrepreneurial, as well as the development and validation of an appropriate measurement tool to capture the uniqueness of such a concept. Particularly useful here may be the adoption of more qualitative and exploratory approaches to identify relevant behaviours, as well as utilise scale development techniques.

8.3.2 Examining the determinants and consequences of employee entrepreneurial behaviour.

The field of employee entrepreneurial behaviour has been dominated by the broad question: what influences employee entrepreneurial behaviour? In order to address this question, the thesis focused specifically on the job-specific characteristics and conditions as well as employees' positive orientations towards their job as possible determinants of their entrepreneurial behaviour. Yet, significant opportunities for future research remain in this area. For example, in contrast to theorised expectations, job demands were found to have a significant positive association with specific dimensions of employee entrepreneurial behaviour. Consequently, future research should adopt a more detailed view of job demands, by focusing specifically on examining the differential factors associated

with job demands, such as pressures, emotional demands, politicking (Janssen, 2000), and their impact on the different dimensions of employee entrepreneurial behaviours (Noefer, Stegmaier, Molter & Sonntag, 2009). Particularly worthwhile may be the use of JD-R model and the Conservation of Resources Theory (COR) (Hobfoll, 1989) in order to not only model the effects of specific job demands, but to also consider how individual employees may cope with their job demands. Doing so may give unique insights into when and why employee entrepreneurial behaviours emerges.

Equally important for future researchers is the need to better understand why some employees may behave entrepreneurially and not others. This may necessitate a further exploration of the individual-level determinants and how they impact employee entrepreneurial behaviour. Currently, research into the individual-level determinants of employee entrepreneurial behaviour has lagged behind that of the organisational-level factors (Mustafa, Gavin & Hughes, 2018). In this thesis, while Psychological Empowerment was treated as an individual-level determinant of employee entrepreneurial behaviour, Proactive Personality was also included, albeit as a control variable (De Jong et al., 2015). Results indicated that PE had a significant direct and moderating effect on only some dimensions of employee entrepreneurial behaviour. In contrast, although a Proactive Personality was treated as a control variable, it was found to have significant effects on employee entrepreneurial behaviour and all of its associated dimensions.

A Proactive Personality is generally considered as a unique personality construct (Fuller & Marler, 2009). Individuals who are proactivetend to also be

inclined towards taking action to influence their environment (Bateman & Crant, 1993). Such a disposition may be particularly valuable to employees working in dynamic environments as it may help them to cope and thrive in such situations. Hence, future research may wish to explore the interpersonal processes and relational dynamics through which Proactive Personality can influence employee entrepreneurial behaviour. Equally important may be to conduct longitudinal studies to examine the within-individual differences among entrepreneurial behaviours and how they can vary over time.

Rigtering and Weitzel (2013) stated that employee entrepreneurial behaviours in organisations come about in complex ways. Hence, future research may need to also think about examining the interactions between individual and organisational-level factors. It may be particularly worthwhile to model such interactions using the JD-R model. The JD-R model provides a flexible approach to understanding specific job demands, job resources and personal resources, and their interactions and how they can influence employee proactive behaviours and attitudes.

Future research is also needed to better understand the multi-level nature and the complexity of employee entrepreneurial behaviour. Current investigations into the determinants and consequences of employee entrepreneurial behaviour has largely looked at either organisational-level, individual-level factors or a combination of them (Rigtering & Weitzel 2013; Rutherford & Holt, 2007). Such approaches have consequently given us limited insights into how employees' entrepreneurial behaviour actually contributes to firm-level entrepreneurship. For

instance, it is quite plausible that firm-level entrepreneurship is the result of an additive process whereby individual entrepreneurial behaviour adds up to positive organisational-level outcomes. Accordingly, future research is needed to better understand this process. In particular, future research may need to consider how an employees' entrepreneurialism fits in with other organisational activities and processes. For instance, employees often work in teams or as part of larger divisions. Hence, future research may consider exploring how an employee's entrepreneurial behaviour is shaped by their team, as well as how an employees' behaviour may also shape team performance. Additionally, future research may also wish to consider when and how employee entrepreneurial behaviours are recognised by management and the organisation. For example, factors such as leadership styles, organisational communication strategies and management's attitudes towards failure and risk (Park et al., 2014) might be important determinants of how and when employees' entrepreneurialism is recognised. Investigating such issues will help scholars to understand why some entrepreneurial efforts of employees are recognised and how individual-level entrepreneurial behaviours can lead to organisational-level entrepreneurial initiatives.

Future research is also needed to understand the personal costs associated with employee entrepreneurial behaviour. Currently, much of the existing research on employee entrepreneurial behaviour is focused on its determinants (Rutherford & Holt 2007) and how such behaviour can have positive individual and organisational-level effects (see Rigtering & Weitzel 2013). Employee entrepreneurialism may often require individuals to go the extra mile in order to

meet their job requirements or to successfully complete initiatives (Birkinshaw, 1997). Hence, employee entrepreneurial behaviours may be considered as particular forms of challenging or demanding work behaviour (Gawke et al., 2017). This in itself may have particular personal implications for employees. For instance, Gawke et al. (2018) showed how employee entrepreneurial behaviour can have both beneficial and detrimental effects on employees' well-being and performance. Similarly, Shepherd, Haynie & Patzelt (2013) showed how repeated project failures can negatively influence entrepreneurial employees' emotions and their ability to learn from failure. Therefore, future research on the de-motivational and health impairment aspects of employee entrepreneurial behaviours is needed. For instance, future researchers may explore how employees' entrepreneurial behaviour affects their mental well-being. Equally important are investigations into the dark-side of employee entrepreneurialism.

While employee entrepreneurial behaviour may have positive benefits for the organisation, it may also have several negative consequences for an individual employee's standing in the organisation. For example, by behaving entrepreneurially, employees may often need to deviate from established organisational and group norms in order to push forth with un-conventional ideas (Gino & Ariely, 2012). However, doing so may cause conflict with management and even fellow colleagues, which may result in the employee not being provided with support or resources to continue their entrepreneurial behaviour. In such situations, entrepreneurial employees may gradually develop a sense of frustration and estrangement with their fellow colleagues and even the organisation.

Ultimately, this may lead to a sense of loneliness, frustration and eventually burnout (Mustafa & Ramos, 2018). Future research may wish to examine such relationships and under what conditions they emerge.

8.3.3 Contextual and methodological issues related to employee entrepreneurial behaviour.

Future research, incorporating different methodological approaches, is also highly warranted. Recently, there has been strong calls both within the organisational psychology and entrepreneurship fields for the adoption of qualitative methodologies to study employee proactive and discretionary behaviours (Suddaby, Bruton & Si, 2015). Yet, majority of the studies on employee entrepreneurial behaviour have relied on the cross-sectional survey design method (Neessen et al., 2018; Mustafa, Gavin & Hughes 2018). Consequently, the lack of qualitative and longitudinal studies in the topical area (Gawke et al., 20179) has led to limited theory generation and limited understanding of the dynamic processes associated with employee entrepreneurialism. By permitting the investigation of a particular phenomenon across time and multiple units of analysis simultaneously, qualitative methodologies are particularly useful in uncovering new insights into employee entrepreneurial behaviours and how they contribute to group and organisational-level process. Particular qualitative methodologies which may be insightful to the study of employee entrepreneurial behaviours are case studies and diary methods.

A case study research involves detailed investigations into one or more organisations or groups within a specific context. The case method is considered

appropriate when exploring new topics or novel examples or in situations where an existing theory appears lacking (Bagnoli & Megali, 2011). By allowing data to be collected over a period of time and permitting a detailed analysis of the context and processes involved in the phenomenon under investigation (Rossman & Rallis, 1998), the case study method allows the researcher to gather rich and insightful data from the field (Eisenhardt 1989). Case studies have the potential to generate rich insights about the specific nature of employee entrepreneurial behaviours and how each employee actually contributes to entrepreneurial initiatives. The use of case studies is also consistent with Belousova and Gailly (2013) which advocates process-oriented approaches to the study of the phenomena. Additionally, scholars have long-drawn on case studies to develop specific theories about topics such as group process (Edmondson, Bohmer & Pisano, 2001) and firm-level entrepreneurial strategy formation (Mintzberg & Waters, 1982). Given that the field of employee entrepreneurial behaviour lacks the use of a dominant theoretical framework, the adoption of the case method in order to generate new theories on the phenomena may be particularly useful (Eisenhardt & Graebner, 2007).

Besides the adoption of case studies, future research may also wish to use the diary method. The diary method, a well established method of inquiry in psychological research, permits researchers to engage their participants in a direct and frequent recording of participants' experiences and events, either in their own words or by responding to rating scales, on a frequent basis (Iida, Shrout, Laurenceau & Bolger, 2012). There are different types of diary studies, however the event based design which has been used in the past for innovation related studies

(Amabile, Schatzel, Moneta & Kramer, 2004; Unsworth, Clegg & Stream, 2004) may be particularly appropriate for the study of employee entrepreneurial behaviour. In particular, future research may wish to utilise the diary method to explore employee's feelings and moods associated with their entrepreneurial behaviour. Such insights may be useful in understanding how emotions affect not only an employees' entrepreneurial behaviour, but also how such behaviours affect their emotions.

Future research is also needed to study the context in which employee entrepreneurial behaviour occurs. Prior research has shown that employees' entrepreneurial behaviours can vary significantly according to their organisational positioning (Mustafa, Martin & Hughes, 2016). While future research is needed to compare and contrast employee entrepreneurial behaviours at different organisational-levels (see Hornsby et al., 2009), future research is also needed to uncover the unique determinants and consequence of such behaviours. For example, it is quite plausible that the organisational and individual-level factors that drive middle-managers entrepreneurial behaviour might be quite different to that of rank-and-file employees. Similarly, employees at different organisational positions may also be faced with different personal and organisational consequences as a result of their entrepreneurial behaviour. For instance, senior managers who engage in risk taking behaviours associated with entrepreneurship may be faced with severe consequences such as termination and reputation loss if they are unsuccessful in their endeavours. On the other hand, a rank-and-file employee may experience mental exhaustion or diminished psychological well-being as a consequence of

failed entrepreneurial efforts. Either way, both qualitative and quantitative studies are needed to address such issues.

Any future research should also take into consideration the role of gender in influencing employee entrepreneurial behaviours. Findings from study 3 highlighted the subtle role played by gender in influencing the determinants of women's entrepreneurial behaviour. In particular, the findings from study suggested that in some instance, women had to overcome stereo typical role expectations in order to be recognised as entrepreneurial in the workplace or even to get their ideas heard in the workplace. Particularly worthwhile maybe future research which examines the role of gender-stereotyped attitudes and expectations (Balachandra, Briggs, Eddleston & Brush, 2019) and how they influence employee entrepreneurial behaviours. For instance recet research has suggested that differences may exist between men and women in how they view the demands of their jobs and the support provided to them in their job (Huang, Xing & Gamble, 2019). Hence, future reseach may explore the way gender influences how individuals view the job resources provided to them or the demands of their job, with respect to their entrepreneurial behaviour.

Finally, future research is also needed to compare and contrast the entrepreneurial behaviours of employees across different work functions/groups and in different types of organisational settings. For example, this thesis only investigated the determinants and consequence of entrepreneurial behaviour among employees engaged in knowledge-work. Hence, further research may be needed to better understand the impact of specific job functions such as accountants, graphic

designers, computer programmes, sales staff, on employee entrepreneurialism. Additionally, future research may also wish to examine the transferability of the findings from this study to other contexts. For instance, all empirical chapters in this thesis drew data from knowledge-workers and knowledge-intensive organisations. Future research may wish to test the applicability of the findings from this study in other organisational contexts, such as comparing employees from service and knowledge-intensive organisations with those from manufacturing firms, or for-profit and not-for-profit organisations, SMEs versus MNC. Doing so may lead to the discovery of new determinants and consequences which may shape employees entrepreneurial behaviour.

8.4 Thesis Conclusion

This thesis set out to examine the determinants and consequences of employee entrepreneurial behaviour in established organisations. In particular, the research drew on the JD-R model to examine not only employees' orientation towards their job, but also the specific characteristics of their job that influenced their entrepreneurial behaviour. Additionally, the thesis examined how through behaving entrepreneurially, employees may remain engaged at work. Consequently, the researcher conducted 4 separate empirical studies (a SLR, interviews, a quantitative survey, interviews and a case study) to address the research objectives. Several interesting findings emerged from the empirical studies that make up the thesis. Firstly, the findings from the thesis suggested that there are considerable opportunities for the enhancement of the field from both theoretical and

methodological standpoints. Secondly, findings showed how the specific characteristics of an employee's job as well as their individual orientations towards their job can have differential effects on their entrepreneurial behaviours. Broadly, this suggests that employee entrepreneurial behaviour may emerge through complex means and that a variety of different factors and conditions need to be in place to successfully foster such behaviour.

Thirdly, the findings highlighted the personal benefits of behaving entrepreneurially at work, particularly with respect to employees' levels of engagement at work. Specifically, the thesis showed that while demanding in nature, employee entrepreneurial behaviours at work can ultimately help individual employees to grow and develop. Finally, by drawing on the JD-R model to examine the determinants and consequences of employee entrepreneurial behaviour, the thesis helped to bridge the fields of entrepreneurship and organisational psychology. Doing so permitted a finer grained analysis and understanding of the micro-level drivers and consequences of employee entrepreneurial behaviour.

8.5 Chapter Summary

This chapter set out to describe the overall contribution of the thesis to existing literature on entrepreneurial and organisational psychology. The chapter adopted a reflective approach to identifying and discussing some of the limitations inherent in the study as a result of the researcher's involvement in the process. Through the process of reflexivity, the researcher showed that his involvement in the thesis conceptualisation and implementation might have had an effect on how the thesis was designed, carried out and how the results were interpreted. Finally,

by taking into consideration the limitations of the thesis and each empirical study, the chapter concluded with a discussion outlining future avenues for research in the area. Specifically, the need for more exploratory research and the need to develop a more refined and bespoke measure of employee entrepreneurial behaviour was identified.

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APPENDIX A: Ethics Approval Forms

FASS2018-0015/DOAP/MJM18012573

Mike James Mustafa
Division of Organisational and Applied Psychology
Faculty of Arts and Social Sciences

12 Julai 2018

Dear Mike,



Faculty of Arts and Social Sciences
Jalan Broga
43500 Semenyih
Selangor Darul Ehsan
Malaysia
Tel +6(03) 8924 8000
Fax +6(03) 8924 8012
www.nottingham.edu.my

FASS Research Ethics Committee Review

Thank you for submitting your proposal on **"Role demands, attitudes towards work and Entrepreneurial/Innovative Behaviour"**. This proposal has now been reviewed by the FASS Research Ethics Committee to the extent that it is described in your submission.

I am happy to tell you that the Committee has found no problems with your proposal and able to give approval.

If there are any significant changes or developments in the methods, treatment of data or debriefing of participants, then you are obliged to seek further ethical approval for these changes.

We would remind all researchers of their ethical responsibilities to research participants. If you have any concerns whatsoever during the conduct of your research then you should consult those Codes of Practice relevant to your discipline and contact the FASS Research Ethics Committee.

Independently of the Committee procedures, there are also responsibilities for staff and student safety during projects. Some information can be found in the Safety Office pages of the University web site. Particularly relevant may be:

Section 6 of the *Safety Handbook*, which deal with working away from the University,
<http://www.nottingham.ac.uk/safety/handbook/general-precautions.aspx>

Specific safety guidance on:

Fieldwork <http://www.nottingham.ac.uk/safety/documents/fieldwork-policy.pdf>

Lone working <http://www.nottingham.ac.uk/safety/documents/lone-working.pdf>

Overseas travel/work <http://www.nottingham.ac.uk/safety/documents/overseas-travel.pdf>

Risk management <http://www.nottingham.ac.uk/safety/policies-and-guidance/guides-and-support.aspx>

Responsibility for compliance with the University/National Data Protection Policy and Guidance also lies with the principal investigator or project supervisor.

The FASS Research Ethics Committee approval does not alter, replace or remove those responsibilities, nor does it certify that they have been met.

Sincerely

Yeoh Ken Kyid

Dr Yeoh Ken Kyid

On behalf of the FASS Research Ethics Committee

The University of Nottingham
in Malaysia Sdn Bhd (473520-K)





The University of
Nottingham

UNITED KINGDOM • CHINA • MALAYSIA

Mike James Mustafa
Division of Organisational and Applied Psychology
Faculty of Arts and Social Sciences

2 April 2018

Dear Mike,

Faculty of Arts and Social Sciences
Jalan Broga
43500 Semenyih
Selangor Darul Ehsan
Malaysia
Tel +6(03) 8924 8000
Fax +6(03) 8924 8012
www.nottingham.edu.my

FASS Research Ethics Committee Review

Thank you for submitting your proposal on "**Cognitive and Emotional States and Entrepreneurial/Innovative Behaviour**". This proposal has now been reviewed by the FASS Research Ethics Committee to the extent that it is described in your submission.

I am happy to tell you that the Committee has found no problems with your proposal and able to give approval.

If there are any significant changes or developments in the methods, treatment of data or debriefing of participants, then you are obliged to seek further ethical approval for these changes.

We would remind all researchers of their ethical responsibilities to research participants. If you have any concerns whatsoever during the conduct of your research then you should consult those Codes of Practice relevant to your discipline and contact the FASS Research Ethics Committee.

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Overseas travel/work <http://www.nottingham.ac.uk/safety/documents/overseas-travel.pdf>

Risk management <http://www.nottingham.ac.uk/safety/policies-and-guidance/guides-and-support.aspx>

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Sincerely

Dr Yeoh Ken Kyid

On behalf of the FASS Research Ethics Committee



The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Mr Mike James Mustafa
Division of Organisational and Applied Psychology
Faculty of Arts and Social Sciences

18 May 2016

Dear Mike,

Faculty of Arts and Social Sciences
Jalan Broga
43500 Semenyih
Selangor Darul Ehsan
Malaysia
Tel +6(03) 8924 8000
Fax +6(03) 8924 8019
www.nottingham.edu.my

FASS Research Ethics Committee Review

Thank you for submitting your proposal on *"Entrepreneurial Actions and Behaviour. What actually matters"*. This proposal has now been reviewed by the FASS Research Ethics Committee to the extent that it is described in your submission.

I am happy to tell you that the Committee has found no problems with your proposal and able to give approval.

If there are any significant changes or developments in the methods, treatment of data or debriefing of participants, then you are obliged to seek further ethical approval for these changes.

We would remind all researchers of their ethical responsibilities to research participants. If you have any concerns whatsoever during the conduct of your research then you should consult those Codes of Practice relevant to your discipline and contact the FASS Research Ethics Committee.

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Section 6 of the *Safety Handbook*, which deal with working away from the University,
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Fieldwork <http://www.nottingham.ac.uk/safety/documents/fieldwork-policy.pdf>
Lone working <http://www.nottingham.ac.uk/safety/documents/lone-working.pdf>
Overseas travel/work <http://www.nottingham.ac.uk/safety/documents/overseas-travel.pdf>
Risk management <http://www.nottingham.ac.uk/safety/policies-and-guidance/guides-and-support.aspx>

Responsibility for compliance with the University/National Data Protection Policy and Guidance also lies with the principal investigator or project supervisor.

The FASS Research Ethics Committee approval does not alter, replace or remove those responsibilities, nor does it certify that they have been met.

Sincerely

Yeoh Ken Kyid

Dr Yeoh Ken Kyid

On behalf of the FASS Research Ethics Committee

The University of Nottingham
in Malaysia Sdn Bhd (473520-K)



APPENDIX B: Interview Protocol for Study 2

Gender_____

What is organisational level?_____

How long have you been working in this organization (approx. years)_____

How long have you been working?)_____

What is your highest level of educational attainment_____?

How would you briefly describe your position/job in the organisation?

How do you feel about the work you currently do?

Would you recommend others to work their why/why not?

Can you describe and/or explain the work/role you currently perform?

How interesting and challenging do you find your current work/role?

What actions and behaviours have you done to successfully perform in your current work/role?

Please describe your attitudes and feelings towards your current role?

How motivating/de-motivating do you find your current work, why/why-not?

How does your current role/work motivate you in identifying opportunities at work or solving organisational related issues/problems?

In your opinion, what are the benefits to you personally of behaving entrepreneurially in your job?

In your opinion, what are the costs to you personally of behaving entrepreneurially in your job?

Is there anything you missed in response to my earlier questions that you would like to add?

APPENDIX C: Questionnaire for Study 3

1. Background Information

Age (years) _____ Gender M/F _____ Tenure (years) _____ Years of Working Experience _____

Education: 1. High School/Diploma 2. Degree 3. Masters 4. Phd

Please indicate the approx. number of employee in your organization.

1. Less than 50 2. 51 – 99 3. 100-250 4. 251 – 499 5. 500 +

Please indicate the type of work/role you generally perform:

1. Clerical/Admin 2. Managerial 3. Marketing/Sales/Advertising
4. Engineering/Science/R&D 5. Technical/Construction 6. Professional Services/Consultancy 7. Teaching/Academia

Please indicate your current position in the organization:

1. Senior Management 2. Middle Management 3. Junior/Team/Front-line Management 4. Rank-n-File Employee

Do you receive performance based pay Yes/No

Please indicate to the extent you believe your current and/or past roles/work involves the generation of unique ideas or solutions to problems

1 (Never)	2	3 (Occasionally)	4	5 (A great deal)

As part of your current or previous job/role to what extent do you:	1 (Never)	2	3 (Occasionally)	4	5 (A great deal)
pay attention to issues that are not part of your daily work?					
consider how things can be improved in your organization and/or job/role?					
search out new working methods, techniques or instruments?					
generate original solutions to problems in your organization and/or job/role?					
find new approaches to execute tasks?					
make important organizational members enthusiastic for new ideas/solutions to problems?					
attempt to convince people to support an innovative idea/solutions?					
systematically introduce innovative ideas/solutions into					

existing work practices?					
contribute to the implementation of new ideas/solutions?					
put effort in the development of new things?					

As part of your current or previous job/role to what extent do you:	1 (Never)	2	3 (Occasionally)	4	5 (A great deal)
actively attack problems/issues					
search for a solution immediately whenever something goes wrong					
search out new working methods, techniques or instruments?					
take chances to get actively involved					
take initiative immediately even when others don't					
use opportunities quickly in order to attain my goals					
do more than you were asked to do					
feel that you are particularly good at realizing ideas/issues					

As part of your current or previous role/job how likely are you to:	1 (Never)	2	3 (Occasionally)	4	5 (A great deal)
take risks in completing tasks or objectives					
go for the 'big win' even when things could go seriously wrong					
to act first and then ask for approval, even if it would annoy other people					

Please indicate to what extent you agree with the following statements:	1 (Strongly Disagree)	2	3 (Neither Agree or Disagree)	4	5 (Strongly Agree)
The work/role I do is very important to me					
My job/role are personally meaningful to you					
The work/role I do is meaningful to me					
I am confident about my ability to do my job/role					
I am self-assured about my capabilities to perform my work activities					
I have mastered the skills necessary for my job					

I have significant autonomy in determining how I do my job					
I can decide on my own how to go about doing my work					
I have considerable opportunity for independence and freedom in how I do my job					
My impact on what happens in my department/team is large					
I have a great deal of control over what happens in my department/team					
I feel I have significant influence over what happens in my department/team					

As part of your current and/or previous role/job to what extent do feel you:	1 (Never)	2	3 (Sometimes)	4	5 (Always)
Have to work fast ?					
Have too much work to do ?					
Have to work extra hard to finish a task?					
Work under time pressure?					
Have to deal with a backlog of work?					

Have problems with the pace of work?					
Have problems with the workload?					
Can do your work in comfort ®					

To what extent does your current and/or past Job/role	1 (Rarely)	2	3 (Sometimes)	4	5 (A great deal)
involve a great deal of task variety					
require the performance of a wide range of tasks					
involve performing a variety of tasks					

APPENDIX D: Interview Protocol for Study 4

The following questions are designed to help us understand how you're cognitive and emotional states influence the work/role you perform.

Please describe yourself with respect to your educational background and work histories?

Can you explain and describe what types of innovative and entrepreneurial projects you have been involved in as part of your work/role

What role did you play? How did you ensure the project was completed?

How do you feel about the work you perform and/or the projects you are a part of?

To what extent do you think you are engaged/involved with your work?

Are you aware of the personal characteristics and skills that allows you to function in your work/role?

How confident do you feel in your ability to do you're work/role?

What personal challenges did you face when you were a part of entrepreneurial projects?

How have you sought to overcome some of the challenges?

How have you personally learnt and/or developed from being a part of entrepreneurial projects?

Can you describe or explain how and why you remain engaged as in your role.

What personal skills or abilities do you feel you possess that helps you to remain and committed and engaged at work?

Can you describe the working conditions in your organisation?

How does your organisation try to support or motivate you in your role?

How do you personally respond to the emotional needs of your work/role?

Is there anything that helps you get in the right emotional state to perform your work/role?

Is there anything you missed in response to my earlier questions that you would like to add?