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WORK ENGAGEMENT, JOB CRAFTING, AND PERFORMANCE: AN ANALYSIS IN  
AN INDIAN CONGLOMERATE

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A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in  
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## **Abstract**

Although studies have demonstrated a positive relationship between work engagement and task/contextual performance, research needs to more fully explore the network of linkages involving the antecedents, mediators, moderators, and consequences of work engagement. This study proposes a comprehensive model of such linkages. Using latent moderated structural equation modelling on a sample of 320 dyads of permanent, full-time, front-line employees and their supervisors in an Indian organisation, it was found that having a more supportive supervisor and better personal resources (measured here as core self-evaluations) are positively associated with the work engagement of employees. More engaged employees are then more likely to report that they craft their jobs, a relationship that is strengthened when employees enjoy greater work autonomy. Greater job crafting is associated with better task performance. Reinforcing the importance of employee control in their working environment, the mediating role of job crafting between work engagement and task performance is enhanced by greater autonomy, and whether greater work engagement leads to better task or contextual performance is influenced by the degree of work autonomy that employees enjoy. The results emphasise the dynamic role of work autonomy in the relationship among the variables hypothesised in the theoretical research model.



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## **Chapter 1**

### **Introduction**

The main aim of this thesis is to answer questions related to the nomological network of work engagement, by examining key predictors, mediators, moderators, and outcomes. The chapter will begin by providing the background of the thesis. Next, the focus and significance of the study will be specified. Thereafter, the design of the study will be outlined. The chapter will conclude by describing the structure of the thesis.

#### **1.1. Background of the thesis**

Work engagement, as a positive work-related state of mind, is one of the most researched management areas of current times (Bakker, 2015). Kahn (1990) was one of the first scholars to offer a conceptual understanding of work engagement. Parker and Griffin (2011, p. 61) argue that the continued interest in work engagement “taps into a rich and diverse history of ideas about the meaning of work”. It is important to understand whether employees are engaged or not because the way employees feel at work can impact on their actions (Hakanen, Peeters, & Schaufeli, 2017). Work engagement is of serious interest to managers because research suggests that engaged employees perform better (Christian, Garza, & Slaughter, 2011), exhibit higher organisational commitment (Salanova, Del Líbano, Llorens, & Schaufeli, 2014), and are likely to stay longer with the organisation (Schaufeli & Bakker, 2004).

Work engagement research has largely focused on situational factors and personal resources as predictors (Christian et al., 2011; Schaufeli, 2012). Research suggests that supportive workplaces (as situational factors) are one of the key predictors of work engagement

(Wollard & Shuck, 2011) and, acting as agents of the organisation, supervisors have an impact on how employees perceive organisational policies (Levinson, 1965). Although some studies have investigated the role of supervisors in fostering the engagement of employees, there is a dearth of research in this area (Bakker, Albrecht, & Leiter, 2011a). Similarly, core self-evaluations, which are defined as self-evaluations of individuals about their capability and self-worth (Judge, Bono, Erez, & Locke, 2005), have been studied as an important personal resource that predicts work engagement (Judge & Kammeyer-Mueller, 2011). Out of the various personality traits, core-self evaluations are an under-researched area with respect to work engagement (Karatepe & Demir, 2014; Rich, LePine, & Crawford, 2010). Bakker and Demerouti (2008) suggest that contextual and individual factors play an important role in enhancing the work engagement of employees. So, in this study, supportive supervisory style (as a situational factor) and core self-evaluations (as a personal resource) are studied as predictors of work engagement. One of my key aims is to investigate how these variables impact on the performance of employees, through mediating and moderating mechanisms.

There is accumulating empirical evidence that engaged employees deliver better performance (e.g., Breevaart, Bakker, Demerouti, & Derks, 2016; Rich et al., 2010). However, there is a need to understand the pathways through which performance takes place, and job crafting may be one such mechanism (Schaufeli, 2012). An important area in contemporary organisational behaviour studies, job crafting, refers to how employees shape their jobs so that they are more aligned with their needs and abilities (Wrzesniewski & Dutton, 2001). Oldham and Hackman (2010) argue that in the current changing environment, employees perform work differently than defined in their formal job descriptions, if they have one. In these changing times, "employees must act independently, as shapers of their own work environments and careers" (Judge & Kammeyer-Mueller, 2011, p.331). Demerouti (2014) argues that although a

well-designed job description can support individual performance, such perfect conditions may not be the reality for many employees. Individuals have a propensity to seek meaningful work that is satisfying for them and leads to favourable outcomes (Wrzesniewski, 2003). Demerouti and Bakker (2014) assert that job crafting is a type of proactive behaviour, with its roots in the job design literature, such as the job characteristics model developed by Hackman and Oldham (1976). The job characteristics model focuses on skill variety, task identity, task significance, autonomy, and feedback, as key features of a job (Hackman & Oldham, 1976). However, Wrzesniewski and Dutton (2001) argue that unlike in job design or redesign, where managers are assumed to play a key role, in job crafting, employees play an active role, with or without the knowledge of their managers.

Job crafting has been related to many positive outcomes, such as task performance (Leana, Appelbaum, & Shevchuk, 2009), increases in job resources (Tims, Bakker, & Derks, 2013), person-job fit (Chen, Yen, & Tsai, 2014), work engagement (Karatepe & Eslamlou, 2017), and job satisfaction (de Beer, Tims, & Bakker, 2016). There is considerable research on job crafting as a predictor of work engagement (Demerouti, 2014). However, the reverse relationship between the two has not received the same research attention, and there is a need to investigate this further.

This thesis intends to address these gaps in the literature. The job demands-resources model (JD-R; Bakker & Demerouti, 2007), the ability-motivation-opportunity model of individual performance (AMO; Boxall & Purcell, 2003), and the model of proactive motivation (Parker, Bindl, & Strauss, 2010) contribute to the theoretical basis of the study by arguing that situational and personal resources impact on the engagement of employees, who make proactive changes to their work characteristics to perform better. Work autonomy is included

as an important contextual moderating variable in these models. Moreover, these relationships are portrayed through the lens of conservation of resources theory, which focuses on resource accumulation (Hobfoll, 1989), self-determination theory, which emphasises autonomy as a fundamental need (Deci & Ryan, 1985), and a social exchange perspective, which focuses on reciprocity (Blau, 1964).

## **1.2 Focus of the study**

Although studies have demonstrated a positive relationship between work engagement and performance, the objective in this thesis is to more fully explore the network of linkages involving the antecedents and consequences of work engagement, including important questions of mediation and moderation. Specifically, the thesis explores two questions: a) What factors predict work engagement? and b) How does work engagement predict performance? My focus is on several variables that may hold explanatory potential, and which, to my knowledge, have not yet been tested as a set of interrelated variables. Specifically, I include in my theoretical model two antecedents of engagement: core self-evaluations and supportive supervisory style. I theorise that these two variables predict work engagement which, in turn, predicts task/contextual performance. However, I propose that job crafting is a key mediator between engagement and performance, and that this mediating relationship is strengthened when employees have greater autonomy to craft their job.

The research questions, thus, address the theoretical arguments highlighted by the model of proactive motivation (Parker et al., 2010) and the AMO model (Boxall & Purcell, 2003), which suggest that performance is a function of one's work environment (studied as 'supportive supervisory style' in my thesis) and individual characteristics (studied as 'core self-

evaluations' in my thesis). Although prior studies have examined these two variables as predictors of work engagement (Judge & Kammeyer-Mueller, 2011; Rich et al., 2010), my research examines them as distal antecedents of performance. Positive interactions with supervisors have an impact on employee attitudes, such as commitment and job satisfaction (Blau, 1964). Supervisors are an important part of an employee's work environment and have the potential to influence important employee outcomes (Boxall & Purcell, 2016). Moreover, the way I have conceptualised and measured 'supportive supervisory style' has not received much research attention in work engagement studies. Similarly, out of all the personal resources, I found core self-evaluations to be broader, and they have also received lesser research attention as compared to many other individual characteristics/personality traits. Also, consistent with the arguments of the previously described theoretical models, my research also examines the important role played by motivation, proactive behaviours, and perceived opportunity to perform in the performance chain, thus highlighting the complexity involved in enabling employees to deliver better performance.

### **1.3 Significance of the study**

This thesis contributes to the literature on work engagement and job crafting in several ways. The field of work engagement will benefit by a) contributing to evidence related to supportive supervisory style and core self-evaluations as predictors of work engagement, b) investigating the relationship between work engagement and job crafting, with work autonomy as a moderator, and c) exploring the relationship between work engagement and performance, with job crafting as a mediator, and work autonomy as a moderator. Similarly, the thesis contributes to job crafting research by a) examining supportive supervisory style and core self-evaluations as distal predictors, and work engagement as a proximal predictor, b) investigating the role of

work autonomy as a moderator, and c) providing evidence of linkages to task performance. This thesis also contributes to the literature on personality by suggesting that the core self-evaluations construct may be multidimensional and thus, more complex than what was originally envisaged.

The current study offers important implications for practitioners, which will help them to understand the factors which can make employees more engaged in their work. Practitioners will benefit from understanding how engaged employees can deliver better performance. Training and developing employees to increase their personal resources, and ensuring that supervisors are effectively implementing the HRM practices, can be some ways through which work engagement can be enhanced. However, developing an engaged workforce may not be sufficient. How can work engagement lead to performance? To answer this question, this thesis highlights the important role of job crafting and work autonomy, without which employees may feel constrained, which can have a detrimental effect on their performance.

#### **1.4 Design of the study**

The data were collected from 320 dyads of permanent, full-time, front-line employees and their supervisors, from a manufacturing organisation in India. The study was conducted in two phases. Phase one was about understanding the management practices of the organisation, through semi-structured interviews. In the second phase, data were collected from participants and their supervisors through an online survey. Except for one scale, which I developed, the study used measurement scales whose psychometric properties have been validated in prior studies. It was considered necessary to develop a scale for supportive supervisory style. The

reason was that this scale intended to capture the perceptions of employees on how their supervisors implemented the HRM practices, which would be context-specific.

The study adopted latent moderated structural equations approach using Mplus 7.4 with MLR (i.e., maximum likelihood estimation with robust standard errors) to test the hypotheses, and the overall research model. It was expected that the results will provide support for the antecedents, mediators, and the moderator conceptualised in the overall model.

### **1.5 Structure of the thesis**

This thesis begins by reviewing the literature on work engagement (Chapter 2). The antecedents and outcomes of work engagement are described keeping in mind different theoretical perspectives, especially the needs-satisfying approach (Kahn, 1990), and the JD-R model (Bakker & Demerouti, 2007).

Thereafter, the literature on job crafting is explored in Chapter 3. In this chapter, the perspectives provided by Wrzesniewski and Dutton (2001), and Tims and Bakker (2010) provide the basis for describing the antecedents, measures, and outcomes of job crafting.

In Chapter 4, the conceptual research model of the study is developed. To support the formulation of a set of hypotheses, the literature on core self-evaluations, supportive supervisory style, and work autonomy is explored. Prior studies also provide an understanding of the hypothesised relationships of these variables with work engagement, job crafting, and performance.

Next, the research design and methods used in the study are described (Chapter 5). The results of the analyses are reported in Chapter 6, and their significance is discussed in Chapter 7. Apart from discussion of results, Chapter 7 also sheds light on the strengths and limitations of the study, and the theoretical contributions. Chapter 8 provides an overall conclusion of the thesis as well as the practical implications of the study.

In summary, the overall objective of the thesis is to provide a broader picture of work engagement and understand its nomological network, with respect to performance. This thesis explores a research model where supportive supervisory style and core self-evaluations are antecedents of work engagement, which predicts performance through job crafting as a mediator and work autonomy as a moderator. The data in this study are from 320 dyads of permanent, full-time, front-line employees and their supervisors. The findings of this study contribute to the literature of organisational behaviour, HRM, and personality.

## **Chapter 2**

### **Work engagement**

The aim of this chapter is to describe the nomological network of work engagement as it is one of the key variables of the proposed model that will be discussed in chapter 4. Reviewing the literature on work engagement will set the tone for the role it can play both as a dependent and an independent variable. This chapter will begin by describing work engagement from the viewpoint of practitioners. Next, the literature on work engagement as studied by academia will be discussed. After that the uniqueness of work engagement in comparison to related constructs will be highlighted.

#### **2.1 Work engagement: the practitioner literature**

It is believed that the term 'engagement' was first used by the Gallup Organisation in the 1990s, and soon it became a favourite marketing tool for consultants (Schaufeli, 2012). There are different definitions that consultants use when they refer to work engagement. For instance, Mercer uses the term commitment, Hewitt uses words like extra-role behaviour, and Towers Perrin uses words like satisfaction to describe work engagement (as cited in Schaufeli, 2014). Another example is the definition of work engagement stated by MacLeod and Clarke (2009) in the report they submitted to the Department for Business, Innovation, and Skills (Government of UK). MacLeod and Clarke (2009, p.9) define engagement as "a workplace approach designed to ensure that employees are committed to their organisation's goals and values, motivated to contribute to organisational success, and are able at the same time to enhance their own sense of well-being".

As part of their study, MacLeod and Clarke (2009) interacted with practitioners, academics, representative bodies such as the Confederation of British Industries (CBI), British Chambers of Commerce (BCC), and professional bodies such as the Chartered Institute of Personnel and Development (CIPD), over a period of eight months, to understand the factors that lead to engagement. They identified four main predictors: leadership, enabling managers, voice, and integrity.

Through various real-life case studies, MacLeod and Clarke (2009) elaborated on these four predictors. According to MacLeod and Clarke (2009), a highly ‘visible leadership’ connects the employees with the vision of the organisation. This way employees not only understand the journey of the organisation, but also how their individual contribution fits in to create the complete picture. MacLeod and Clarke (2009) argue that ‘enabling managers’ empower employees to achieve their targets and provide constructive feedback on performance. The attitudes of employees are influenced by the way their line managers interact with them, and communicate organisational policies and procedures. The third predictor of ‘voice’ deals with the participatory role of employees in the decision-making process. MacLeod and Clarke (2009) assert that for voice to be effective, managers in the organisation need to respond to employees' voice and keep the communication channels open. The last predictor is ‘integrity’: consistency between what the managers say and what they do. MacLeod and Clarke (2009) argue that any gap between the two may lead to feelings of distrust.

Besides outcomes related to financial performance, MacLeod and Clarke (2009) highlight other outcomes such as improved customer service, reduced employee turnover rate, low absence levels, and job satisfaction. Again, to make their point, they quote different case studies from well-renowned organisations in their report.

Keenoy (2014) argues that the report by MacLeod and Clarke (2009) is methodologically weak and is based on political objectives rather than reality. Keenoy (2014) further states that since this report was generated as part of an initiative by the then current government, de-linking the political agenda from the true picture becomes tricky. Keenoy (2014) argues that there is ambiguity in the report because the views of academics and practitioners are mentioned together, without any distinction between the two. Also, the evidence for engagement is based on case studies, which are based on management narratives and may not reflect the views of the employees (Keenoy, 2014).

Keenoy (2014) argues that consultants use the term 'work engagement' interchangeably with the constructs of organisational commitment, job satisfaction, and job involvement. Keenoy (2014) further states that this is one of the reasons that academia is often critical of the way work engagement is defined by consultants and other practitioners. Schaufeli (2014) asserts that non-availability of questionnaire items and other measurement details from consultants adds to this scepticism. So, the question here is: are practitioners measuring work engagement or are they measuring other job attitudes?

There are several measures that have been developed by consultants to capture the experience of engagement. One of such measures is Gallup's Q<sup>12</sup>, where respondents rate 12 questions on a scale (Harter, Schmidt, & Hayes, 2002). Although the measures developed by consultants have been tested for reliability (Fletcher & Robinson, 2014), what they may be measuring may be an overall 'attitude' factor, rather than engagement (Newman, Joseph, & Hulin, 2010). In other words, these measurement instruments may have blurred the boundaries among engagement, its antecedents, and outcomes (Fletcher & Robinson, 2014). Similarly,

Schaufeli (2014) argues that Gallup's Q<sup>12</sup> measures the antecedents of work engagement rather than the experience itself.

To conclude, it seems that consultants may have muddled up the definition of work engagement with other related constructs. Although consultants have identified various antecedents of work engagement and have provided evidence for its favourable outcomes, academia mostly remains sceptical of these claims. Further, the measures used by practitioners do little to alleviate these doubts, as the measurement items do not seem to fully capture the experience of work engagement, as argued by academics.

## **2.2 Work engagement: the academic literature**

Kahn (1990) was the first scholar to conceptually define the term 'engagement' in his seminal article published by the 'Academy of Management' Journal. Thereafter, it was studied in 1997 by Maslach and Leiter, who suggested that work engagement is the opposite of burnout. With this in mind, Schaufeli, Salanova, González-Romá, and Bakker (2002) conducted a study with two samples (314 undergraduate students of the University of Castellón, Spain, and 619 employees from 12 Spanish private and public companies), and concluded that work engagement is distinct from burnout. The majority of research started from that point and the past decade has witnessed a steep rise in work engagement studies (Schaufeli, 2012). Schaufeli (2014) argues that one of the main reasons for this sudden interest in work engagement could be the shift in focus towards positive constructs, due to the advent of the positive psychology movement. Positive psychology is concerned with the scientific study of human resource (HR) strengths and the optimal state of functioning (Seligman & Csikszentmihalyi, 2000), and work engagement is viewed as a positive state (Schaufeli, Bakker, & Salanova, 2006).

Let us now turn to the meaning of work engagement as defined by academia. Researchers use different theoretical frameworks as a basis for studying work engagement (Schaufeli, 2014). With this in mind, the meaning, antecedents, outcomes, and measures of work engagement will be described by grouping them under three theoretical perspectives: a) the needs-satisfying approach, b) the job-demands resources model, and c) other frameworks.

### **2.2.1 The needs-satisfying approach to work engagement**

Shuck (2011) points out that Kahn (1990) has described engagement through the lens of needs satisfaction. Kahn (1990) developed the concept of engagement from a theoretical framework and empirical study. Schaufeli (2014) argues that although Kahn (1990) is a pioneer in the field of work engagement, his approach is only used occasionally in research.

#### **2.2.1.1 Key definitions**

According to Kahn (1990), engagement is the simultaneous employment and expression of physical, emotional, and cognitive energies by employees while carrying out their role(s). Conversely, when the self is separated from the role and a person becomes withdrawn and defensive, disengagement sets in. Kahn (1990) compares self-employment of physical, emotional, and cognitive energies with involvement and flow, and self-expression with authenticity, creativity, and personal voice. Csikszentmihalyi (1990) defines 'flow' as a state of optimal experience reflected by focused attention, effortless concentration, total control, and intrinsic enjoyment. Kahn (1990) argues that self-employment and self-expression produce engaging behaviours where neither self nor role is compromised. Kahn (1990) argues that when an employee is disengaged, withdrawal (manifested in the form of detachment or burnout) and

self-defensive behaviour (manifested in the form of depersonalisation and closed-mindedness) are exhibited. In this situation, self is separated from role and a person performs the role in an auto-pilot mode. Furthermore, Kahn (1990) asserts that the physical, emotional, and cognitive dimensions of engagement depend on the pre-conditions of psychological meaningfulness, psychological safety, and psychological availability. According to Kahn (1990), it is with the satisfaction of these three psychological needs that the right conditions for engagement are created.

It is also worth noting the way engagement has been defined by Rich et al. (2010), and May, Gilson, and Harter (2004), who have drawn mainly on Kahn's (1990) work. According to Rich et al. (2010), engagement is about "investing the hands, head, and heart in active, full work performances" (p. 619). Similarly, May et al. (2004) describe engagement as an alignment of physical, cognitive, and emotional energies.

#### **2.2.1.2 Antecedents**

Kahn (1990, p. 703) asserts that psychological meaningfulness takes place when there is "a feeling that one is receiving a return on investments of one's self". In a field study conducted with 213 employees working in the administration division in an insurance firm in USA, May et al. (2004) empirically tested the antecedents of the three psychological conditions of meaningfulness, safety, and availability as proposed by Kahn (1990). They found that although all these conditions were significantly associated with engagement, meaningfulness displayed the strongest link.

Although Kahn (1990) argues that positive work interactions (with co-workers and clients) make work more meaningful, May et al. (2004) did not find evidence for this association. However, May et al. (2004) discovered that task characteristics such as challenging work, creativity, skill variety, and goal clarity made jobs enriching, and work that allowed congruence with one's self-concept made work more meaningful. Rich et al. (2010) found similar results when they tested value congruence as one of the antecedents of engagement. This suggests that when people find meaning in their work, they are more engaged. In a nutshell, when employees feel their personal values align with the organisational values, they feel more connected, integrated, focused, and attentive during role performances (Rich et al., 2010).

Psychological safety, according to Kahn (1990, p. 708), is being "able to show and employ one's self without fear of negative consequences to self-image, status, or career". Psychological safety, in turn, depends on relationships marked with trust and support, consistency of management practices, the political power enjoyed by the group to which one belongs, and shared organisational norms. In terms of psychological safety, May et al. (2004) suggest that positive co-worker and supervisory relations give employees the confidence that they can deploy their true selves at work. Rich et al. (2010) take a broader view and define psychological safety as 'perceived organisational support' in the form of supportive management as well as interpersonal relations, and provide evidence for a significant relationship between perceived organisational support and engagement. Rich et al. (2010) further explain that norms created by co-workers may stifle the freedom of employees to be what they want to be, especially when there is a big variance between employees' values and the prescribed norms. Quite separately, Kahn (1990) had originally stated that when people go

outside the invisible boundaries created by shared norms, they feel unsafe. According to Kahn (1990), safety is associated with adhering to the shared expectations of the group.

Psychological availability according to Kahn (1990, p. 714) is depicted as the "sense of having the physical, emotional, or psychological resources to personally engage at a particular moment". Describing psychological availability, Kahn (1990) asserts that self-conscious people are less available for their roles, since they are constantly thinking about how they are being perceived by others. May et al. (2004) assert that people who view their own world through others' eyes struggle with being 'themselves' at work and tend to display behaviours that they feel will be appropriate. Defining self-belief broadly as 'core self-evaluations', Rich et al. (2010) found that people who exhibit a strong belief in their capability and skills are more available to engage fully in their roles. In another finding, May et al. (2004) provided evidence that the more physical, emotional, and cognitive resources one possesses, the more available one is for role performance(s).

Overall, the needs-satisfaction framework posits that employees engage themselves depending on the answers to three questions: "(1) How meaningful is it for me to bring myself into this performance? (2) How safe is it to do so? (3) How available am I to do so?" (Kahn, 1990, p. 703). Crawford, Rich, Buckman, and Bergeron (2014) assert that these three psychological conditions, when studied together, can have unique influences as well as interactive influences on engagement. As an example of unique influences, in May et al.'s study (2004), the psychological conditions of meaningfulness, safety, and availability independently predicted engagement. In a different study depicting interactive effects, Kinnunen, Mauno, and Siltaloppi (2010) found evidence that off-work recovery (construed as psychological

availability) weakened the negative association between job insecurity (construed as psychological safety) and engagement.

Kahn (1992) asserts that it is the twin presence of right personal attributes and right organisational factors that will lead to more engaged employees. One, without the other, will not create the right conditions. Kahn (1992) argues that managers may not always desire their employees to be engaged at all times due to fear of their 'status quo' being challenged, as engaged employees may question existing practices and systems. The lack of display of engaged behaviours by organisational leaders may also prevent employees from being fully present. Kahn (1992) argues that there may be demographic factors such as age, gender, or ethnicity, which may encourage or discourage employees to be psychologically present or absent from role performances. Employees may also not have adequate physical, emotional, and cognitive resources to be fully engaged. Hence, it is possible that employees may vacillate between 'low' and 'high' engagement depending upon various internal and external factors. Also, some jobs may not provide enough 'space' for engagement to happen. For instance, jobs related to provision of standardised services may require employees to stifle emotions not desired for that particular role (Kahn, 1992). More research is needed on the antecedents based on the approach suggested by Kahn (1990).

### **2.2.1.3 Outcomes**

Let us now turn to the outcomes of engagement based on the needs-satisfying approach. Unfortunately, Kahn (1990) did not fully elaborate on the outcomes of work engagement (May et al., 2004), although he mentions personal growth and enhanced organisational effectiveness as broader consequences. Drawing on Kahn's (1990) model, Rich et al. (2010) studied the

behavioural aspects of performance and argue that employees may vary in their behaviour because of their individual characteristics. Rich et al. (2010) assert that engagement leads to task performance due to three reasons: firstly, an employee who invests physical energy is willing to work hard and for the achievement of targets; secondly, investment of cognitive energy makes employees attentive, focused, and nearer to their goals; thirdly, emotional energy helps to develop cohesive connections with others during role performances, in order to achieve shared organisational goals (Rich et al., 2010).

In addition to task performance, Rich et al. (2010) suggest a direct relationship of engagement with organisational citizenship behaviour (a form of contextual performance). Goodman and Svyantek (1999) define contextual performance as behaviours that are not formally required by an organisation, but help in creating a collaborative social climate toward the achievement of larger organisational goals.

Although there are some interesting findings, there is insufficient research on the outcomes of work engagement based on the approach suggested by Kahn (1990). Next, the measures based on the needs-satisfying approach will be discussed.

#### **2.2.1.4 Measurement**

As discussed previously, Kahn (1990) did not suggest any measures for gauging engagement. However, taking cue from Kahn's (1990) work, Rothbard (2001) created a scale with five work-absorption, five family-absorption, four work-attention, and four family-attention items, and tested it on a sample of 790 employees of a public university. The results provided evidence that although attention and absorption (the two components of engagement) were highly

correlated, they were statistically different from each other. Until now, this scale has not been used in any other study.

As discussed earlier, May et al. (2004) empirically tested the three psychological conditions of meaningfulness, safety, and availability as stated by Kahn (1990), and found a significant association of these three conditions with engagement. May et al. (2004) developed a scale to measure cognitive, emotional, and physical engagement separately. However, results of an exploratory factor analysis did not support a three-factor structure as measured with 24 initial items. Thereafter, May et al. (2004) used a highly reliable 13-item scale to get a total engagement score. This scale has been used occasionally by other researchers (e.g., Avey, Wernsing, & Luthans, 2008).

Let us now turn to another measure influenced by Kahn's framework, the one developed by Rich et al. (2010). They developed and administered an 18-item job engagement measure on a sample of 245 fire-fighters and argued that a measurement scale comprising three dimensions (physical, cognitive, and emotional) fits the data best. However, Rich et al. (2010) could not find any scales in the literature, which precisely tapped the three dimensions of engagement, so they took items from different scales, modified and reworded them, to depict engagement as conceptualised by Kahn (1990). Rich et al. (2010) referred to Brown and Leigh's (1996) 'work intensity' measure to frame items for 'physical engagement', and Russell and Barrett's (1999) 'core affect' research for writing items related to 'emotional engagement'. Rich et al. (2010) developed their 'cognitive engagement' items after refining six items related to absorption and attention in the Rothbard (2001) scale. There are some studies that have used this measure (e.g., Alfes, Shantz, Truss, & Soane, 2013; Haynie, Flynn, & Mauldin, 2017).

Although Soane et al. (2012) considered Kahn's (1990) theory in developing the Intellectual Social Affective (ISA) engagement measure, they also incorporated others' views, as observed by Fletcher and Robinson (2014). ISA is a 9-item questionnaire, validated through a study involving 683 employees of a UK-based retail organisation. It is a fairly new measure and its role in engagement research is yet to be determined. While keeping the emotional and cognitive dimensions of engagement intact, Soane et al. (2012) replaced the physical dimension with a social dimension, after reviewing Kahn's (1990) work. Emphasising the need for a social aspect, Kahn and Heaphy (2014) argue that relationships do "shape the extent to which people engage"(p. 82).

Overall, the measures based on Kahn's (1990) theoretical perspective have physical, cognitive, and emotional dimensions, except for Soane et al.'s (2012) scale, where the physical dimension was replaced with a social dimension. Although the scale items developed by various scholars are different, they are framed in a way to capture the physical, emotional, and cognitive energies that employees bring to work. In a structured synthesis of work engagement studies, Bailey, Madden, Alfes, and Fletcher (2017) found that until now, four studies have used the scale developed by May et al. (2004), three studies have used Rich et al.'s scale (2010), and three studies have used Soane et al.'s (2012) scale.

In this section, the definitions, antecedents, outcomes, and measures based on Kahn's (1990) needs-satisfying approach have been reviewed. Although Kahn (1990) is the pioneer in the field of engagement, the evidence from studies, based on his framework, is limited.

### **2.2.2 The JD-R model**

The JD-R model (Bakker & Demerouti, 2007) posits that the characteristics of a job can be divided into job demands and job resources. According to Bakker and Demerouti (2007, p. 312), job demands are “those physical, psychological, social, or organisational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs”. Bakker and Demerouti (2007, p. 312) define job resources as “those physical, psychological, social, or organisational aspects of the job that are either/or: functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, and stimulate personal growth, learning, and development”. The JD-R model differentiates between a motivational process, which leads to positive outcomes such as work engagement, and a health impairment process, which leads to negative outcomes, such as depression or psychosomatic complaints (Schaufeli, 2014). Bakker and Demerouti (2007) argue that the JD-R model encompasses a wide range of job demands and job resources, so it can be applied to various work contexts. This model is commonly used in studying work engagement (Schaufeli, 2012). In the present study, the JD-R model provides the theoretical basis to understand the antecedents and outcomes of work engagement and job crafting.

#### **2.2.2.1 Key definitions**

Schaufeli et al. (2002) consider work engagement as a motivational well-being construct with two dimensions, one being activation (ranging from exhaustion to vigour) and the other being identification (ranging from cynicism to dedication). Schaufeli et al. (2002) define work engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigour,

dedication, and absorption’’ (p.74). According to Schaufeli et al. (2002), vigour refers to high levels of energy, mental resilience, and willingness to invest effort and persistence amidst obstacles. Dedication is characterised by strong work involvement, meaningfulness, enthusiasm, and challenge. Absorption is described as concentration, where one has the feeling that time flies and there is unwillingness to get separated from work. Initially only two dimensions were included; absorption was added as a third dimension from the analysis of 30 in-depth interviews (Schaufeli et al., 2002). However, in 2008, Salanova and Schaufeli argued that absorption may be a consequence of work engagement, and hence, only vigour and dedication could be “considered the core dimensions of engagement” (p. 118). Thereafter, many studies have incorporated only two dimensions of vigour and dedication in the work engagement scale (e.g., Rodríguez-Munõz, Sanz-Vergel, Demerouti, & Bakker, 2014; Schmitt, Den Hartog, & Belschak, 2016). I agree with this reasoning and hence, in this thesis, I have incorporated only two dimensions of work engagement: vigour and dedication.

#### **2.2.2.2 Antecedents**

As discussed above, the JD-R model describes job demands and job resources as the key pillars in predicting work engagement. In 2007, Xanthopoulou, Bakker, Demerouti, and Schaufeli expanded the JD-R model by including personal resources. Xanthopoulou et al. (2007, pp 123-124) define personal resources as “aspects of the self that are generally linked to resiliency and refer to individuals’ sense of their ability to control and impact upon their environment successfully”. Xanthopoulou et al. (2007) argue that in the job resources-work engagement relationship, it is important for individuals to feel that they will be able to conduct effectively the task(s) at hand. Bakker and Xanthopoulou (2013) argue that personal resources act as proximal resources towards work engagement and have a mediating role in the job resources-

work engagement relationship. With this in view, the antecedents will be discussed under these three headings: job demands, job resources, and personal resources.

#### **2.2.2.2.1 Job demands**

Crawford, LePine, and Rich (2010) refined the JD-R model and renamed it as the 'differentiated job demands–resources model'. Crawford et al. (2010) argue that the association between job demands and work engagement is not straightforward; the nature of the demand is an influencing factor. Through their meta-analyses, Crawford et al. (2010) suggest that hindrance demands (such as role ambiguity and role conflict) relate negatively with work engagement, whereas challenge demands (such as workload and time pressure) are positively associated. In other words, people feel that challenge demands give them an opportunity to prove their potential and thus they feel more engaged although they know that this might lead to depletion of their resources. This resonates with De La Rosa and Jex's (2010, p. 135) observation that "a bored employee is not an engaged employee", so a demanding job can be exciting and fulfilling for an employee.

Research has provided evidence that work engagement is positively linked to challenge demands such as cognitive work demands (Bakker, Demerouti, & Schaufeli, 2005) and workload (Bakker, Demerouti, & Schaufeli, 2003). In other studies, work and time pressure were found to be positively related to work engagement (e.g., Bakker, van Emmerik & Euwema, 2006; Schaufeli, Taris & van Rhenen, 2008). Similarly, in their meta-analysis, Christian et al. (2011) assert that job complexity and problem-solving are positively related to work engagement. With respect to hindrance demands, studies have found that they are

negatively associated with work engagement and positively associated with burnout (Crawford et al., 2010).

Although work pressure has been found to be a challenge demand for many occupational groups (Crawford et al., 2010), a study by Bakker and Sanz-Vergel (2013) on 120 home healthcare nurses found otherwise. The results of Bakker and Sanz-Vergel's (2013) study show that nurses perceive work pressure as a hindrance job demand. On the other side, Bakker and Sanz-Vergel (2013) found that nurses consider interacting with clients and dealing with emotional pressures as part of their work and so, for them, emotional demands (as work pressure) were a challenge. So, the question is: is the bifurcation of demands into challenges or hindrances the same across occupations? At present, it seems that there is a need to further analyse this conceptualisation of job demands, preferably with occupation as a moderator (Bakker & Sanz-Vergel, 2013).

#### **2.2.2.2.2 Job resources**

Crawford et al. (2010) found that job resources predict work engagement and are associated with lower levels of burnout. There are several job resources that have been studied in relation to work engagement, which will be discussed next.

Autonomy refers to the freedom in conducting one's work (Hackman & Oldham, 1976) and has been the most frequently studied job resource (Crawford et al., 2014). Christian et al.'s (2011) meta-analysis revealed a moderate correlation between autonomy and work engagement. This relationship has also been validated in various studies (e.g., Vera, Marti'nez, Lorente, & Chambel, 2016; Xanthopoulou, Bakker, Demerouti & Schaufeli, 2009a).

Feedback refers to the extent to which information on performance is provided by the job (Hackman & Oldham, 1976). Feedback has shown positive relationships with work engagement in studies involving teachers (Hakanen, Bakker & Schaufeli, 2006), dentists (Hakanen, Perhoniemi & Toppinen-Tanner, 2008), and information technology workers (Schaufeli, Bakker & van Rhenen, 2009). The strength of this relationship is also evident from Christian et al.'s (2011) meta-analysis.

Apart from the above, there is evidence for other job resources such as opportunities for professional development (Xanthopoulou et al., 2007), task variety (Salanova & Schaufeli, 2008), social support (Schaufeli & Bakker, 2004), transformational leadership (Mauno, Ruokolainen, Kinnunen, & Bloom, 2016; Tims, Bakker & Xanthopoulou, 2011), coaching (Xanthopoulou et al, 2009a), supervisory support (Hakanen et al., 2006), and organisational climate (Bakker, Hakanen, Demerouti & Xanthopoulou, 2007) as predictors of work engagement.

Recently, there has been an emergence of moderated mediation studies to understand the in-depth relationship among variables. In one such study, Schmitt et al. (2016) found that work engagement mediated the positive relationship between transformational leadership and proactivity. Acting as a moderator, low job strain was found to be necessary for work engagement to lead to higher proactivity (Schmitt et al., 2016). In another study, it was found that the indirect relationship between climate for conflict management (CCM) and work engagement through workplace bullying was moderated by the levels of CCM (Einarsen, Skogstad, Rørvik, Lande, & Nielsen, 2016). In other words, when CCM was low, there was a negative relationship between workplace bullying and work engagement. Einarsen et al. (2016, p.5) define CCM as “employees’ beliefs that interpersonal conflicts are generally managed well

and fairly in their organisation, and that general procedures for the distribution of benefits and burdens in the organisation are fair”. In a study of 192 employee-supervisor dyads, Wayne, Lemmon, Hoobler, Cheung, and Wilson (2016) found that a high work-scheduling-autonomy environment buffered the negative effects of work-family conflict on work engagement, through emotional exhaustion.

With the above antecedents in mind, let us explore what happens when job resources interact with job demands. Applying the job demands-control-support model to understand the work engagement of supervisors and managers, De La Rosa and Jex (2010) argue that although job demands are essential for employees to experience excitement in performing work, beyond a point they can be detrimental. Jobs that offer low control to supervisors and managers over their work, especially in high job demand situations, will not leave enough room for engagement to flourish. They used hierarchical regression analysis on data collected from 4470 supervisors and managers (cross-national samples) to provide evidence that challenging job demands when coupled with high control and support lead to higher work engagement.

Turning to another example, in a study of teachers, Bakker et al. (2007) suggest that acting as buffers, job resources mitigate the negative relationship between pupil misbehaviour and work engagement. Based on their study, they argue that supervisory support, appreciation, and organisational climate help teachers in coping with demanding interactions with students. It was in the presence of high job demands (in this case pupil misbehaviour) that the motivating potential of job resources emerged. In a nutshell, in such active jobs, where high job demands interact with high job resources, work engagement is likely to follow (Schaufeli, 2012). Karasek and Theorell (1990) argue that ‘active jobs’ provide high control to employees in a

situation of high demands. Such active jobs provide learning opportunities and help employees cope with high demands.

Although not a job resource, job crafting has emerged as an important variable to be studied in relation to work engagement. Wrzesniewski and Dutton (2001) define job crafting as task related, cognitive, and relational changes people make in their job to experience enhanced identity, meaning, and have a better person-job fit. Employees engage in job crafting when they are motivated to do so and when they perceive an opportunity to do so. Tims et al. (2013) demonstrate that employees who craft their own jobs are more likely to be engaged, since the job now fits better with their needs and abilities. Job crafting is emerging as an interesting predictor of work engagement (Tims and Bakker, 2014) and there is an increase in studies exploring this relationship (e.g., Bakker, Rodríguez-Muñoz, & Vergel, 2016; de Beer et al., 2016; Harju, Hakanen, & Schaufeli, 2016; Karatepe & Eslamlou, 2017).

#### **2.2.2.2.3 Personal resources**

In a critical review of the JD-R model, Schaufeli and Taris (2014) argue that personal resources have been integrated with the JD-R model in five different ways. Firstly, personal resources directly impact work engagement (Lorente, Salanova, Martinez & Schaufeli, 2008). Secondly, personal resources moderate the relationship between job characteristics and work engagement (Brenninkmeijer, Demerouti, Le Blanc, & van Emmerik, 2010). Thirdly, personal resources play a mediating role between job characteristics and work engagement (Xanthopoulou et al., 2007). Fourthly, personal resources influence how job characteristics are perceived (Xanthopoulou et al., 2007). Lastly, personal resources affect the perception of the environment as well as work engagement.

In a study of 714 Dutch employees of six divisions of an electrical engineering and electronics company, Xanthopoulou et al. (2007) found that personal resources mediated the relationship between job resources and work engagement. In their study, job and personal resources were highly related, suggesting an overlap, although confirmatory factor analysis highlighted their empirical distinctiveness. In a different finding, Xanthopoulou et al. (2009a) collected data from forty-two employees working in three branches of a Greek fast-food company. They found that day-level job resources (autonomy, coaching, and team climate) impacted work engagement through day-level personal resources (organisation based self-esteem, optimism, and self-efficacy), which in turn predicted financial returns. Similar results were observed in a study involving flight attendants (Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008).

Durän, Extremera, and Rey (2010) assert that positive self-evaluation is an important antecedent of engagement as people who perceive themselves to be self-efficacious, and resilient, and who have high self-esteem have a tendency to perceive their work environment favourably. Such people are open to feedback and are able to deal effectively with adverse situations. Durän et al. (2010) arrived at these results by conducting hierarchical regression analysis on data obtained from a multi-professional sample of 413 employees. Their results indicated that core self-evaluations predicted vigour and dedication. Similar results on core self-evaluations as an antecedent were obtained by Rich et al. (2010). With regard to some other individual characteristics, in a study of 572 Dutch employees from different organisations, Langelaan, Bakker, van Doornen, and Schaufeli (2006) found that extraversion correlated positively and neuroticism correlated negatively with both vigour and dedication.

To summarise, the antecedents of work engagement under the JD-R framework can be divided into job demands, job resources, and personal resources. Although the word 'job' is used in the JD-R model, it refers to the job characteristics in a broader sense to include the non-work antecedents as well. For instance, Schaufeli and Taris (2014) include 'negative spillover from family to work' as job demands and 'positive spill-over from family to work' as job resources in their comprehensive list of job demands and job resources. Although the list of antecedents seems to be comprehensive, Schaufeli (2012) emphasises that there is a need to study more variables as predictors of work engagement.

### **2.2.2.3 Outcomes**

Bakker, Tims, and Derks (2012) argue that engaged employees deliver higher performance as compared to non-engaged employees since they experience positive emotions, take initiative, and hence make changes in their working environment. Task performance is defined as "the effectiveness with which job incumbents perform activities that contribute to the organisation's technical core, either directly by implementing a part of its technological process, or indirectly by providing it with needed materials or services" (Borman & Motowidlo, 1997, p.99). It is quite similar to the definition of in-role performance (Bakker, Demerouti & Verbeke, 2004). Work engagement has been empirically related to task performance in many studies (e.g., Breevaart et al., 2016; Breevaart, Bakker, Demerouti, & van den Heuvel, 2015; Christian et al., 2011).

In their study of employees from various industries, Halbesleben and Wheeler (2008) provided evidence for the unique effect of work engagement on job performance after controlling for job embeddedness. Job embeddedness is "the collection of forces keeping an

employee in the job" (Halbesleben & Wheeler, 2008, p. 242) and refers to attachment to one's job. Similarly, Salanova, Agut, and Peiro (2005) conducted a study among employees working in Spanish restaurants and hotels, and the results of structural equation modelling indicated that work engagement predicted service climate, which further predicted employee performance. In another study, Bakker and Bal (2010) investigated 54 Dutch starting teachers who filled in short questionnaires every Friday for five consecutive working weeks. Results showed that weekly engagement was positively related to weekly self-rated performance, which was further related to supervisors' ratings of teachers' performance. Similarly, Wayne et al. (2016) found that work engagement was positively related to three employee performance-related outcomes: promotability, performance, and increase in salary.

Halbesleben (2011) suggests that employees are engaged because they have more job resources and so they are in a better position to further invest those resources. Because of this investment, they can attain better outcomes like enhanced performance. Also, due to better health (Schaufeli, 2012), engaged workers deploy personal energies during role performances, which may result in higher performance (Christian et al., 2011). As is evident from these studies, work engagement seems to have a positive influence on job performance, so there is an increase in research focusing on this relationship (Demerouti & Cropanzano, 2010) although still very little is known about performance as an important outcome of work engagement (Christian et al., 2011).

Work engagement has important implications for organisational performance too. For instance, in a diary study of 42 employees in a fast food company, Xanthopoulou et al. (2009a) demonstrate that day-level job resources impact work engagement through day-level personal

resources, which in turn predict financial returns. They defined financial returns as the total amount of money earned in a particular shift.

Schaufeli and Bakker (2004) found that engaged employees were less willing to leave the organisation as they were more satisfied (Fleck & Inceoglu, 2010). In a different study, based on longitudinal data, Halbesleben and Wheeler (2008) show that although there was a correlation between work engagement and intention to quit, work engagement did not make an additional contribution to turnover intentions after controlling for job embeddedness.

In their study of 84 female school principals and 190 teachers, Bakker and Xanthopoulou (2013) found that engaged principals were given a high rating on charismatic leadership by their subordinate teachers. They explained that "engaged leaders are absorbed in their goals, are enthusiastic and have the energy to inspire their followers, and thus are likely to behave in a charismatic manner" (p. 2765). Their analysis provides evidence for a positive relationship between engagement and creativity.

In addition to the above, there is evidence that engaged employees are more committed (Salanova et al., 2014), innovative (Schaufeli et al., 2006), and show personal initiative (Hakanen et al., 2008). Additionally, engaged individuals look forward to gaining occupational knowledge (Hyvönen, Feldt, Salmela-Aro, Kinnunen, & Mäkikangas, 2009) and display active learning behaviours (Bakker, Demerouti, & Brummelmeis, 2012). Bakker and Demerouti (2007) argue that engaged employees create more job resources as they see their work environment in a positive light. One reason for this may be that positive affective states tend to broaden peoples' momentary thought-action repertoires and build lasting resources (Fredrickson, 2001). With regard to job demands, it was found in a longitudinal study that work

engagement predicted an increase in job demands over time, as owing to their enthusiasm, engaged employees tend to take over more tasks (Sonnentag, Binnewies, & Mojza, 2010).

Earlier, it was mentioned that employees who craft their jobs are more likely to be engaged. However, the reverse has also been found to be true. Engaged employees experience positivity and thus are more inclined to think proactively and engage in job crafting (Bakker et al., 2012). Although job crafting has been studied mostly as an antecedent of work engagement (e.g., Chen et al., 2014; Tims et al., 2013), "it is conceivable that job crafting is not only a cause but also a consequence of being engaged with the job"(Bakker et al., 2012, p.1372).

To summarise, it can be determined from the above studies that work engagement has positive implications for individual performance, and through that for organisational performance. However, does a dark side of work engagement exist? As Halbesleben (2011) theorises, engaged employees may craft their job to get positive outcomes and in the process ignore other important aspects of the job that may have a negative outcome. For instance, an engaged employee may avoid interaction with a high net-worth but difficult client if they feel such an interaction may take up too much of their emotional energy. This may have a negative impact on organisational performance as the client may feel neglected and switch to some other organisation for business. Similarly, there is an indication that too much engagement may be detrimental to an individual's health (Albrecht, 2010) although ill-health may be caused by many factors apart from organisational ones (Maslach, 2011).

On the dark side, proponents of labour process theory may consider work engagement as a soft means of control, which can lead to work intensification for employees (Thompson & Harley, 2007). In other words, managers may want their employees to be engaged so that they

can get maximum productivity and output from them. This may have implications for the work-life balance of employees. Also, there is always a possibility that the rewards may not be commensurate with the efforts of an engaged employee (Truss, Shantz, Soane, Alfes, & Delbridge, 2013). As George (2011, p. 53) argues, "the costs of high work engagement for employees deserve far greater attention than they have received to date and question to what extent high engagement is always such a positive experience for employees". So, more research is needed on both positive as well as negative outcomes of work engagement before we can conclude that it has only favourable consequences.

#### **2.2.2.4 Measurement**

Schaufeli et al. (2002) developed the Utrecht Work Engagement Scale (UWES) for measuring work engagement. The UWES-17 is a self-report questionnaire with 17 items and measures the three underlying dimensions of work engagement: vigour (six items), dedication (five items), and absorption (six items) (Schaufeli et al., 2002). Schaufeli et al. (2002) created two versions of the scale, an employee version and a slightly differently worded student version (the UWES-Student Survey). The validity and reliability of the UWES-17 has been substantiated in many studies (e.g., Bakker & Lloret, 2006; González-Romá, Schaufeli; Schaufeli & Bakker, 2004). The UWES has been validated in many contexts, for instance, China (Yi-Wen & Yi-Qun, 2005), Greece (Xanthopoulou, Bakker, Kantas & Demerouti, 2012), South Africa (Storm & Rothmann, 2003), Spain (Schaufeli et al., 2002), and the Netherlands (Xanthopoulou et al., 2012).

In 2006, on analysing data from 14,521 employees in 10 different countries, Schaufeli and colleagues suggested that the original UWES-17 can be shortened to 9 items (UWES-9),

with three items each for vigour, dedication, and absorption. Furthermore, confirmatory factor analysis provided evidence that the UWES-9 had good internal consistency and test-retest reliability among the scales. In another study, confirmatory factor analyses of 1266 participants from 10 separate occupational groups provided evidence for the three-factor structure of UWES-17 and UWES-9 as well as for their internal consistencies (Nerstad, Richardsen, & Martinussen, 2010), thus demonstrating that both can be used as a three-dimensional scale. Although the three-factor structure of the UWES has been used in many studies, Schaufeli and Bakker (2010) argue that an overall engagement score may also be equally useful.

As discussed earlier, some studies have used a limited version of the UWES by considering only vigour and dedication as the two core dimensions of work engagement (e.g., Hakanen, Seppälä, & Peeters, 2017; Salanova, Schaufeli, Martínez & Bresó, 2010). This may be because absorption has been found to play a different role and is seen as an outcome of work engagement and not one of the dimensions (Salanova, Llorens, Cifre, Martínez & Schaufeli, 2003).

The UWES has been extensively used by researchers. At present, there is substantial evidence for its psychometric properties. It has also been used widely across occupations, industries, and countries. Bailey et al.'s (2017) structured synthesis of the work engagement literature showed that until now 42 studies have used the UWES-17 scale and 90 studies have used the UWES-9 scale. Based on extensive evidence of the psychometric properties of the UWES, I decided to use this scale to measure work engagement in the current study.

In this section, the definitions, antecedents, outcomes, and measures based on Schaufeli et al.'s (2002) JD-R model have been reviewed. The JD-R model is the most widely used

framework in work engagement research. Many studies have provided evidence for the various predictors and outcomes of work engagement based on this approach. The UWES is a popular scale that is mainly used by researchers in work engagement studies. Next, some other theoretical frameworks in work engagement research will be discussed.

### **2.2.3 Other theoretical frameworks**

Although Kahn's (1990) and Schaufeli et al.'s (2002) definitions are popularly referred to in studies, there are many other definitions and frameworks that researchers draw from in their research of work engagement. First of all, these definitions will be discussed. Thereafter, the antecedents and outcomes that have emerged from the studies, which have used these frameworks, will be described. Lastly, a few other measurement scales of work engagement will be discussed.

#### **2.2.3.1 Key definitions**

Maslach and Leiter (1997) argued that work engagement and burnout are on one continuum, and renamed the three burnout dimensions in an opposite manner to reflect work engagement: emotional exhaustion as high energy, depersonalisation/cynicism as strong involvement, and reduced sense of efficacy as high efficacy. Maslach and Leiter (1997) argue that when employees are not burnt-out, they will display engagement behaviours. Bakker et al. (2011a) argue that although this perspective led to a renewed interest in work engagement, it is mostly used for assessing burnout.

Providing another perspective, Saks (2006) differentiates between job engagement and organisational engagement in a study of 102 employees working in various organisations. Saks (2006) defines engagement as "a distinct and unique construct consisting of cognitive, emotional and behavioural components that are associated with individual role performance" (p. 602). This definition is quite similar to Kahn's (1990) and Schaufeli et al.'s (2002) definition.

In another study, Macey and Schneider (2008) define engagement in three separate ways. According to them, as a trait, engagement is seen as dispositional in nature. For instance, people who have proactive personality, are conscientious, and display positive affect are more likely to adapt as well as initiate change in their environment where they can perform better. Macey and Schneider (2008) define state engagement as feeling in a specific way (such as dedication, self-investment, and enthusiasm). The third type is behavioural engagement, which is manifested in the form of discretionary behaviours, such as extra-effort and extra-role behaviour (such as organisational citizenship behaviours, role expansion, proactive behaviour, and personal initiative), which can be directly observed. According to Macey and Schneider (2008), thus defined, trait engagement is a distal antecedent of behavioural engagement.

To conclude, there are various ways in which scholars have defined work engagement. However, the definitions mostly revolve around the three core dimensions of physical, emotional, and cognitive energies. So, this indicates that there is a relatively high degree of commonality in the way work engagement is described by academics.

### **2.2.3.2 Antecedents**

A theoretical framework recently used in the context of work engagement is the ‘affective shift model’ proposed by Bledow, Schmitt, Frese, and Kühnel (2011). This perspective states that negative affect has motivating potential if it is followed by experience of positive moods and events. Bledow et al. (2011) collected data on affective events and work engagement twice daily, for nine working days, from 55 software developers and computer scientists. Their study, which is based on the affective shift model, finds that negative affect can lead to work engagement if employees experience high positive affect after experiencing negative affect. In other words, negative affect has a motivating potential if it is followed by the experience of positive moods and events. Their study further suggests that when people are dispositionally low on positive affect, they rely more on external events for work engagement whereas people who are internally high on positive affect are not too affected by negativity. According to Schaufeli (2014), the affective shift model looks promising but so far it has not been used in any other research study.

Social exchange theory argues that a series of interactions between people or parties can create obligations (e.g., Blau, 1964; Cropanzano & Mitchell, 2005; Gouldner, 1960). Over time, relationships become trusting and mutual when all parties involved follow rules of reciprocity. For instance, when employees receive resources from their organisation, they feel obliged to respond in a similar way (Cropanzano & Mitchell, 2005). Saks (2006) provided evidence that perceived organisational support leads to both job and organisation engagement. Chughtai and Buckley (2012) collected data from 170 research scientists to study the role of trust in building work engagement. They found that employees who trusted their top management felt more engaged as they identified more with the organisation and felt obliged

to reciprocate in a positive way whereas when employees trusted their team members, it led to an increase in their work engagement because they felt psychologically safe. There are various other studies, which have used the social exchange perspective to explain the antecedents of work engagement. For instance, Jose and Mampilly (2012) assert that satisfaction with HR practices is one of the drivers of employee engagement although there is a dearth of literature examining the relationship between HR practices and work engagement. Similarly, Alfes et al. (2013) found that the perception of HRM practices had an impact on the work engagement levels of employees.

Another important predictor of work engagement is person–job fit, which refers to the congruence between people and their jobs (Kristof-Brown, Zimmerman, & Johnson, 2005). The more individuals perceive fit with their jobs, the more likely they are to be engaged (Macey & Schneider, 2008). Although small in number, studies have supported the positive relationship between person-job fit and work engagement (Laschinger, Wong, & Greco, 2006). Crawford et al.'s (2010) meta-analysis provided evidence that work-role fit was one of the predictors of work engagement. In another finding, person-job fit was found to play a mediating role between job crafting and work engagement in the hospitality industry (Chen et al., 2014).

Purcell (2014) argues that multiple avenues of voice can create the right conditions for work engagement to bloom. van Dyne and LePine (1998) define employee voice as a kind of organisational citizenship behaviour that involves “constructive challenge intended to improve rather than merely criticize” (p. 109). Beugré (2010) asserts that employees need participation in the organisation and want to be heard. Beugré (2010) further suggests that voice leads to work engagement under four conditions: the importance of voice to employees, the extent to which voice is heard by the organisation, employees' expectation of having voice in a decision,

and cultural sensitivity towards voice. In a quantitative data collected from two UK service sector organisations during 2009, Rees, Alfes, and Gatenby (2013) found positive associations between voice and work engagement. In Kahn's (2010, p. 29) words, it can be said that "employees have pretty sophisticated radars" (Kahn, 2010, p. 29). Hence, employees will point out errors, correct processes, and volunteer in teams when they feel what they say is important and will not be ignored (Kahn, 2010).

In a nutshell, there is evidence that the antecedents of work engagement can be viewed from the lens of different theoretical frameworks. Although such studies are limited in number, they provide different perspectives to understand work engagement.

### **2.2.3.3. Outcomes**

Regarding outcomes from a social exchange perspective, Saks's (2006) study demonstrates that engaged individuals are more likely to be a part of activities not formally required by the organisation. Christian et al. (2011) argue that engaged employees do so because they efficiently conduct task performance and thus deploy free resources in contextual performance. Another reason could be that engaged employees do not differentiate between task and contextual performance, and consider every role as part of their work domain (Christian et al., 2011). In addition to that, Saks (2006) also found job satisfaction, organisational commitment, and intentions to quit as important outcomes of work engagement. Similarly, Alfes et al. (2013) found that work engagement led to greater organisational citizenship behaviour and lower turnover intentions, but this relationship was moderated by perceived organisational support and relationship with one's supervisor. However, Halbesleben, Harvey, and Bolino's (2009) study highlights that people who are highly engaged and involve themselves in organisational

citizenship behaviours experience a higher work interference with family, although this interference was less for highly conscientious individuals.

With regard to outcomes outside work life, Culbertson, Mills, and Fullagar's (2012) study suggests that positive experiences at work (such as work engagement) have the effect of enriching one's home life and work life further. Culbertson et al. (2012) explain these results on the basis of affective event theory (Weiss & Cropanzano, 1996) and broaden-and-build theory (Fredrickson, 2001). Affective event theory (Weiss & Cropanzano, 1996) suggests that attitudes and behaviours are affected by positive and negative affective states at work. Broaden-and-build theory (Fredrickson, 2001) posits that positive affect tends to broaden an individual's thoughts and actions, which build lasting resources and thus facilitates individual and organisational functioning.

Using leader-member exchange (LMX) theory (Sparrowe & Liden, 1997) as a basis for explaining employee learning, Bezuijen, van Dam, van den Berg, and Thierry (2010) found that in high LMX relationships, leaders set specific, difficult goals, which aid in work engagement as well as further learning of subordinates. According to the theory, high LMX relationships enjoy mutuality in support, trust, and loyalty (Sparrowe & Liden, 1997).

Studying outcomes based on different frameworks provides an interesting perspective as it allows a broader understanding of work engagement. Schaufeli (2012) argues that more studies are needed that provide a different approach to studying work engagement.

#### **2.2.3.4 Measurement**

Apart from the UWES, which is often used to measure work engagement, a few other measures have emerged in the academic field. Although there is limited use of these measures, there is evidence of their psychometric properties.

Maslach and Leiter (1997) assessed work engagement based on opposite scores on the three dimensions reflected in the Maslach Burnout Inventory-General Survey (MBI-GS): low scores on exhaustion and cynicism, and a high score on professional efficacy. This measure consists of three subscales of exhaustion, cynicism, and professional efficacy. Exhaustion and cynicism are measured with five items each and professional efficacy (reverse scored) is assessed with six items. A similar scale is used to measure responses of students and is known as the MBI-student survey. In a study of 9055 Finnish, Swedish, and Dutch employees of a multinational company in the forest industry, the factorial validity of the MBI-GS (Exhaustion, Cynicism, and Professional Efficacy) was substantiated across nations. It was also found that the three-factor structure of the MBI-GS is invariant across all occupational groups i.e., managers, clerks, foremen technicians, and blue-collar workers (Schutte, Toppinen, Kalimo, & Schaufeli, 2000).

Another measure used in work engagement research is the Oldenburg Burnout Inventory (OLBI), which consists of both positively as well as negatively worded items to assess the two core dimensions of exhaustion and disengagement (Demerouti & Nachreiner, 1999). In a study of 293 German employees from various occupational fields, Demerouti and Nachreiner (1999) constructed and validated the OLBI and provided evidence for its two-dimensional factor structure. Thereafter, in a sample of 374 German employees from three

different occupational fields (human services, industry, and transport), the factorial validity of the Oldenburg Burnout Inventory (OBI) and its invariance was substantiated across different occupational groups (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The OLBI is used to measure work engagement by recoding the negatively framed items. Exhaustion is defined as an effect of intense physical, emotional, and cognitive strain as a result of prolonged exposure to certain job demands. As opposed to the measurement items for exhaustion in the MBI-GS, the OLBI covers not only emotional but also physical and cognitive dimensions. The exhaustion scale in the OLBI includes eight generic items (four positive and four negative). Disengagement is defined as being distant from work and having a negative attitude and behaviour towards it. This scale also has eight items (four positive and four negative) (Demerouti, Mostert, & Bakker, 2010). The OLBI has been validated in various contexts, for instance, Germany (Demerouti, Bakker, Nachreiner, & Ebbinghaus, 2002), the United States (Halbesleben & Demerouti, 2005), and the Netherlands (Demerouti & Bakker, 2008). Studies have also provided evidence for its convergent validity, test-retest reliability, and discriminant validity (Halbesleben & Demerouti, 2005).

Saks (2006) designed a five-item scale to measure job engagement and a six-item scale (with a five-point scale each) to measure organisation engagement in order to determine the psychological presence of the participants in their job and the organisation. The results indicated that job engagement and organisation engagement were distinct with different predictors and outcomes. Furthermore, both job engagement and organisation engagement correlated positively with the outcomes of job satisfaction, turnover intentions, organisational commitment, and organisational citizenship behaviours. Fletcher and Robinson (2014) assert that this multidimensional approach of engagement is important and can be used in future

research. In their synthesis of work engagement literature, Bailey et al. (2017) found that until now, six studies have used this measure.

As we have read above, there are some other measures that have been developed apart from the UWES: the MBI-GS, the OLBI, and Sak's (2006) multidimensional scale. However, they have been used rarely in work engagement studies. There is a need to further test these scales, across contexts, to understand their relevance and to provide a comparative analysis with each other.

To conclude, the previous sections have described the different approaches to work engagement. Although academics have come up with several definitions of work engagement, there is similarity in understanding of its theoretical framework and there are common elements (Meyer, Gagné, & Parfyyonova, 2010). The physical, emotional, and cognitive dimensions of Kahn's (1990) engagement resonate closely with Schaufeli et al's (2002) dimensions of vigour, dedication, and absorption respectively, a fact that Schaufeli (2014) acknowledges. Christian et al. (2011) reviewed literature to understand the common factors in the 'engagement' definition as used by different scholars. Christian et al. (2011) draw upon two observations from Kahn's (1990) work to arrive at an operational definition of work engagement. The first one is that work engagement has to be a psychological connection to one's work and not a reaction to the features of the job. The second one is that work engagement is the self-investment of personal resources: physical, emotional, and cognitive energies. It is interesting to note that although scholars have used different frameworks to describe the antecedents of engagement, the antecedents in themselves are similar in nature. For instance, perceived organisational support (Eisenberger, Huntington, Hutchison, & Sowa, 1986) has been studied by Rich et al. (2010) under Kahn's (1990) framework while the same variable has been studied

by Sulea, Virga, Maricutoiu, Schaufeli, Dumitru, and Sava (2012) under the job demands-resources framework. Although thriving, more research is needed on the antecedents of work engagement (Schaufeli, 2012). Meta analyses can provide a useful insight into a comprehensive list of drivers since advanced statistics are done to arrive at a broad list which can then be applied to varied contexts (Albrecht, 2010).

Although there are quite a few work engagement measures that have been developed and tested for their psychometric properties, they do have contradictions. For instance, in spite of it emerging as a tool with good psychometric properties, the MBI-GS is used for assessing burnout and not engagement, whereas the UWES is mostly used to measure engagement (Bakker et al., 2011a). However, the UWES also has its own share of concerns. Seppälä et al. (2009) found overlap in all five samples in the two UWES absorption items i.e., 'I am immersed in my work' and 'I get carried away when I'm working'. Apart from that, although many studies have validated the three-dimensional structure of the UWES, Wefald and Downey (2009) argue that researchers should not automatically assume that a three structure model of the UWES is best since high correlation exists between the three factors.

Moreover, Viljevac, Cooper-Thomas, and Saks (2012) found few similarities in the conceptual meaning of the UWES and May et al's (2004) Scale. In a study of 139 employees in the Auckland-based call centres of two financial organisations, Viljevac et al. (2012) found a strong relation between the UWES absorption and May et al.'s (2004) cognitive dimension, a weak association between the UWES dedication and May et al.'s emotional dimension, and no support for a relationship between the UWES vigour and May et al.'s (2004) physical dimension. This implies that Kahn's (1990) and Schaufeli et al.'s (2002) definitions, on which the May et al. (2004) scale and the UWES are based, are different. Contrary to this, Bakker and

Demerouti (2008) argue that the dimensions of physical, emotional, and cognitive engagement in May et al.'s (2004) scale are quite similar to the vigour, dedication and absorption dimensions as measured by Schaufeli et al. (2002).

Looking into so many views and counter-views it seems that more research is needed to validate work engagement measures (Sonnentag, 2011; Viljevac et al., 2012). In a review of literature on work engagement from 1990-2007, Simpson (2009, p.1022) highlights the need to develop a "conceptually consistent definition and measurement" of work engagement. However, Bakker et al. (2011a) argue that rather than re-inventing the wheel, the existing scales can be a foundation for further developing the work engagement scale. For this to happen, the measurement scope of work engagement needs to be increased (Maslach, Schaufeli, & Leiter, 2001). Another way can be to include multiple methods to assess work engagement rather than relying solely on a self-reported questionnaire (Schaufeli, 2012).

Turning now to terminology, engagement is referred to as personal engagement (Kahn, 1990), employee engagement (Harter et al., 2002), and work engagement (Schaufeli & Bakker, 2004). However, Kahn and Heaphy (2014) argue that nomenclatures are immensely important and it needs to be seen which terminology will reflect the experience best. Referring to this debate, Schaufeli (2014) argues that at present, work engagement seems to be a relevant terminology as it reflects the relationship of an employee with work and not with the entire organisation (Schaufeli, 2014). I agree to this viewpoint and hence, in this thesis, the term 'work engagement' will be used.

Although work engagement has been mostly studied as an individual level phenomenon, recently a view is emerging that collective engagement can be of prime

importance to organisations rather than engagement at the individual level (Schneider, Macy, Barbera, & Young, 2010). There is preliminary evidence linking team work engagement to team performance (Torrente, Salanova, Llorens, & Schaufeli, 2012). However, in order to understand work engagement at the team level, more research is needed to identify its key antecedents, outcomes, and measurement tools (Richardson & West, 2010; Schaufeli, 2012).

Recently, Kahn and Heaphy (2014) highlighted the need to examine the relational dimension of engagement. They argue that relationships exist in a context and affect the accomplishment of tasks. These relational contexts, in turn, affect the engagement of employees through psychological meaningfulness, safety, and availability. This perspective is part of Soane et al.'s (2012) ISA scale, although it is yet to be seen how relevant it is as a dimension of work engagement.

Work engagement is mainly viewed as a motivational and multidimensional construct (Christian et al., 2011). Rich et al. (2010, p.41) argue that work engagement is not about doing extra but "about how you do what you are supposed to be doing." So, in a nutshell, when people bring the entire breadth and depth of their personal energies into work, engagement follows (Kahn, 2010). Managers can play an important role in enhancing the engagement of employees. In their meta-analysis, Knight, Patterson, and Dawson (2016) found a small but positive effect of work engagement interventions (related to increasing personal and job resources, leadership training, and focus on health) on the engagement of employees. In their synthesis of work engagement literature, Bailey et al. (2017) found that the JD-R model was the most widely used framework in work engagement research, followed by social-exchange theory.

### **2.3 Differentiating work engagement from related constructs**

Albrecht (2010) argues that ever since the term work engagement became popular, it has been a topic of debate with respect to its discriminant validity from related constructs such as job satisfaction, job involvement, organisational commitment, and workaholism. It has been criticised for not offering anything new in terms of its predictive validity. Hence, scholars have consistently tried to provide evidence to highlight the distinctiveness of work engagement (Schohat & Vigoda-Gadot, 2010).

Locke (1969, p.316) defines job satisfaction as “a pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating one’s job values”. Job involvement has been described by Lodahl and Kejner (1965, p.25) as "the degree to which a person's work performance affects his (sic) self-esteem." Mowday, Steers, and Porter (1979) define organisational commitment as the strength of an individual's identification with and involvement in an organisation characterised by shared goals, willingness to put in effort, and inclination to stay and be a part thereof.

Bakker and Schaufeli (2008) argue that there is a unique contribution of work engagement as compared to these employee attitudes. For instance, in a study of 245 full-time fire-fighters and their supervisors in four municipalities, Rich et al. (2010) argue that work engagement is a broader concept as compared to other well-being measures like job involvement and job satisfaction. Saks (2006) uses cross-sectional data to provide evidence that overall job satisfaction is a positive outcome of job and organisational engagement while Simpson (2009), in a cross-sectional study, suggests that overall job satisfaction is a significant predictor of work engagement.

Yalabik, Popaitoon, Chowne, and Rayton (2013) conducted a study involving 377 UK clerical workers and through structural equation modelling found that organisational commitment, job satisfaction, and work engagement were distinct concepts. Yalabik et al. (2013) provide evidence that work engagement mediates the path between job attitudes and performance outcomes. In a different study involving 186 employees of the Swedish section of an international information communication technology (ICT) and management consultancy company, it was found that work engagement was different from job involvement and organisational commitment (Hallberg & Schaufeli, 2006).

Although empirical evidence is in favour of treating work engagement, job satisfaction, job involvement, and organisational commitment as distinct concepts, there are researchers who are not fully convinced. Saks (2008) argues that work engagement lacks a distinct meaning as compared to other constructs. Similarly, other researchers also argue that these four constructs are too related (Hallberg & Schaufeli, 2006) and overlapping (Newman & Harrison 2008). Through meta-analysis, Newman et al. (2010) assert that a common 'A' (attitude) factor consisting of job involvement, organisational commitment, and job satisfaction considerably overlaps with the work engagement construct.

Work engagement has also often been compared to workaholism (e.g., Gorgievski & Bakker, 2010; Shimazu, Schaufeli, Kamiyama, & Kawakami, 2015). Schaufeli, Taris, and Bakker (2006) view workaholism as the tendency to work excessively and compulsively. Mazzetti, Schaufeli, and Guglielmi (2016) provided evidence for the discriminant validity of work engagement and workaholism. Drawing from self-determination theory, van Beek, Hu, Schaufeli, Taris, and Schreurs (2012) studied Chinese health care professionals (544 nurses and 216 physicians) to examine the motivational drivers of workaholism and work engagement.

Results of structural equation modelling provided evidence that engaged employees found their work enjoyable as they were intrinsically motivated. On the other hand, workaholic employees placed importance on their social environment as their feelings of self-worth and self-esteem were dependent on others' opinion of them. Similar results were reported by Schaufeli et al. (2008) in their study of 854 middle managers and executives of a Dutch telecom company. Their study demonstrated that work engagement, burnout, and workaholism were three different kinds of well-being. Workaholics spent so much time thinking and executing their job that they missed out on other parts of their life beyond work. The validity of the three constructs was tested by examining their relationship with five variables: excess working time, job characteristics, job outcomes, social relations, and perceived health. The study showed an empirically different yet complex relationship among the three constructs, although absorption was related to both workaholism and work engagement, hinting that it may not be a unique feature of work engagement (Schaufeli et al., 2008). Contrary to this, in their meta-analysis, Cole, Walter, Bedeian, and O'Boyle (2012) found a high correlation between work engagement and burnout, thus, raising doubts about the discriminant validity of the two.

Overall, although some studies have failed to establish discriminant validity of these constructs, work engagement seems to be a distinct concept, since it is closely related to task-centric motivation (Christian et al., 2011). Work engagement is an intrinsic motivational state and thus has a unique appeal. Bakker et al. (2011a) argue that at present there is sufficient research substantiating the discriminant validity of work engagement over other attitudinal constructs.

## **2.4 Role of context in work engagement**

Context matters for engagement (Rees et al., 2013) and the key drivers of engagement may be context-specific (Reissner & Pagan, 2013). For instance, Jenkins and Delbridge (2013) conducted two case studies (in a call centre and an energy company) and identified ‘hard’ and ‘soft’ engagement approaches. In study one, the organisation focused on a soft approach towards engagement where the focus was not on productivity, but on employee-wellbeing. In case two, management's main aim was to bolster financial gain and they saw engagement as a tool for doing so. In the second case, the perception of engagement in the organisation surfaced from the fundamental need for financial gain and so resulted in disengagement instead. Therefore, organisations need to understand what might work in their own unique circumstances.

The contextual factors, apart from being organisation-specific may be country-specific as well. For instance, Parkes and Langford (2008) argue that in Australia, workplace interventions seem to favourably impact work engagement. On the other hand, Fairlie (2011) suggested that North American employees feel engaged when they feel they are doing meaningful work. In South America, Mostert and Rathbone (2007) found that employees place importance to work-family balance, which leads to their work engagement. In the UK, Alfes et al. (2013) found that employees consider perceived organisational support to be important for their work engagement. Rothmann (2014) argues that while conducting studies in different cultures, methodological nuances need to be considered. For example, the meaning of scale items can be lost during translation into other languages. Additionally, individuals from different countries may carry their own fundamental understanding of work engagement as a construct (Rothmann, 2014).

Work engagement research has mostly been conducted in North America or Western Europe, leaving the question open whether this construct has relevance in other countries (Shantz, Schoenberg, & Chan, 2014). Emic (culture-specific) perspectives, therefore, play a role as seen from the example of Japanese employees who tend to score low on work engagement measures (Shimazu, Miyataka, & Schaufeli, 2010). This does not mean that Japan has low work engagement, but reflects the tendency of Japanese employees to hold back their emotions. So, care needs to be taken while interpreting results from different contexts (Shimazu et al., 2010).

Overall, the evidence on the role of context in impacting work engagement needs further exploration (Bailey et al., 2017). Studies, which incorporate context, can also inform practitioners in multinational organisations who have to manage employees with different cultural perspectives (Shantz et al., 2014). This may mean that managing work engagement in such complex scenarios can be a challenging task. At present, it is important to take care while administering scales which have been developed and studied mainly in specific contexts.

## **2.5 Conclusion**

The literature on work engagement has been reviewed, starting from the difference in the understanding between practitioners and academia regarding its meaning. Academics suggest that practitioners have mixed up work engagement with other constructs, such as job satisfaction, job involvement, and organisational commitment. To summarise, although many theoretical frameworks exist, academics researchers mainly draw from two perspectives to explain the antecedents of work engagement. The first one is the needs-satisfying framework based on psychological meaningfulness, psychological safety, and psychological availability

(Kahn, 1990) and the second one is based on job demands and job resources (Bakker & Demerouti, 2008). Overall, there is a consensus that work engagement is an intrinsic motivational state.

Although scholars have identified various perspectives, the JD-R model is the most frequently used theoretical basis for studying the antecedents of work engagement. Apart from other predictors, there is an increase in empirical evidence that job resources (such as feedback, social support, autonomy, and organisational climate) and personal resources (self-efficacy and optimism) are important indicators of work engagement. With regard to outcomes, at present, there is accumulating evidence that work engagement predicts individual performance (task and contextual). However, research is needed to understand the pathways through which work engagement translates into individual performance (Schaufeli, 2012). Work engagement has also shown positive outcomes in the areas of turnover intentions, absenteeism, organisational commitment, and organisational citizenship behaviours. Although a few measurement tools exist, the UWES is the most widely used measure in work engagement studies. Many studies have found the UWES to be a valid and a reliable scale.

Initially, there was a debate around the distinctiveness of work engagement with related constructs. However, many studies found that work engagement uniquely predicted outcomes, thus putting that argument to rest to a large degree. It has also been highlighted that context is worth considering when studying work engagement. The factors that predict work engagement may be specific to an organisation, industry, or even a country. Hence, care needs to be taken while administering surveys and interpreting results. Also, cross-cultural comparisons may not be beneficial unless the cultures being compared are quite similar in their characteristics.

The research on work engagement is thriving, but there are gaps. Firstly, there are very few studies that have focused on the moderators in work engagement research. Secondly, although studies have provided evidence that work engagement leads to performance, many of them do not dig deeper into the reasons for this relationship. Thirdly, during the review, it was highlighted that job crafting is an emerging area that is being explored in relation to work engagement. Although there are quite a few studies that have explored work engagement as an outcome of job crafting, there is a dearth of studies that have looked into job crafting as an outcome of work engagement. Due to these reasons, I found it important to study work engagement further, to answer these questions. As discussed, above, job crafting is another key variable of the model that has been developed in this thesis. This leads to the question: ‘what is job crafting and why is it so important?’, which is the focus of the next chapter.

## **Chapter 3**

### **Job Crafting**

Work engagement and job crafting are the two key variables in this study, around which the theoretical model has been created. In Chapter 2, the area of work engagement was explored in detail. The aim of this chapter is to describe the construct of 'job crafting'. This chapter will begin by exploring the two perspectives of job crafting. Thereafter, job crafting will be differentiated from related constructs. The relationship between work engagement and job crafting will be unpacked next. After that, the role of management in encouraging or inhibiting job crafting behaviours will be discussed, followed by a review of job crafting interventions.

The term 'job crafting' came into popular use after it was defined by Wrzesniewski and Dutton (2001). A few years later, Tims and Bakker (2010) redefined job crafting through the lens of job demands-resources theory. Tims and Bakker (2010) argue that job crafting can be applicable across levels and contexts, and even in a tightly controlled work environment, employees can find a way to craft their jobs. These two perspectives of job crafting, along with their antecedents, outcomes, and measures will be discussed in the subsequent sections.

#### **3.1 Wrzesniewski and Dutton's (2001) perspective**

Wrzesniewski and Dutton (2001) came up with the 'job crafting' construct as an alternative to other job redesign approaches. They elaborated on their job crafting theory through six different contexts: hairdressers, design engineers, information technicians, nurses, hospital cleaners, and restaurant kitchen employees.

### 3.1.1 Meaning

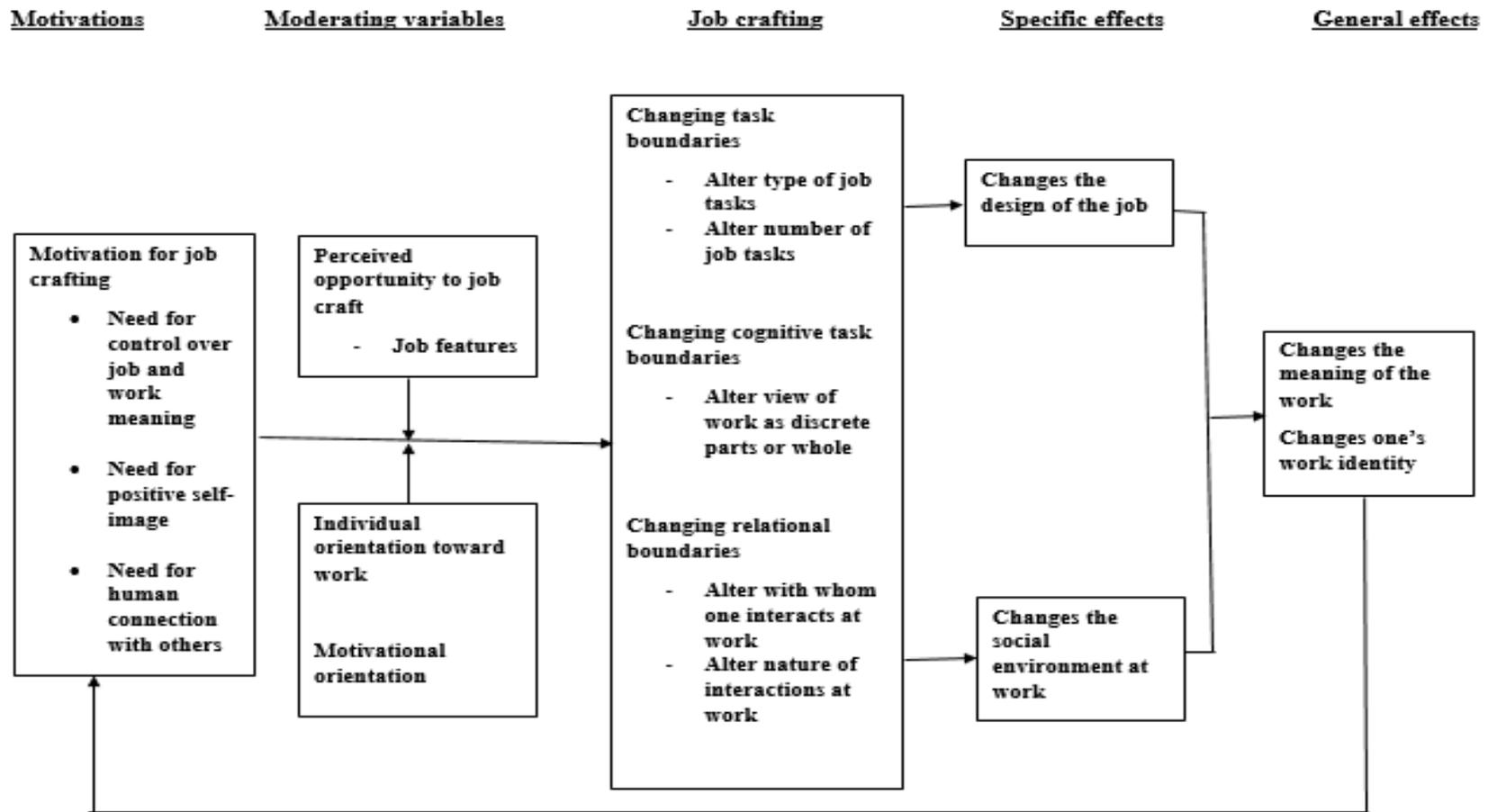
Wrzesniewski and Dutton (2001) have used the term 'job crafting' to describe the task-related (number, type, or scope), cognitive (one's perception), and relational (quantity and quality of interactions) changes people make in their job to experience enhanced identity, meaning, and have a better person-job fit. According to Berg, Dutton, and Wrzesniewski (2013), task crafting can be promoted by adding more tasks that have to be done, focusing more time and effort on those aspects of the job that are thought to be more meaningful, and redesigning tasks to derive a better meaning. Cognitive crafting can be initiated by increasing the perception of the purpose of the job and focusing on those aspects of the job that are more meaningful (Berg et al., 2013). Relational crafting can be performed through building new relationships, changing the purpose of relationships, and adapting current relationships. Wrzesniewski, LoBuglio, Dutton, and Berg (2013) argue that the three types of job crafting are not mutually exclusive and can be adopted in isolation or combination.

Wrzesniewski and Dutton (2001) argue that job crafting can either be beneficial or harmful for the organisation; it depends on the situation although Lyons (2008) did not find any counter-productive job crafting behaviours for the organisation in his study. Lyons (2008) argues that there is a possibility of negative effects of job crafting for the organisation since individuals craft their jobs to mainly serve their own needs and not necessarily the needs of the organisation, although both the needs may be linked.

Wrzesniewski and Dutton (2001) created a model of job crafting to explain this construct (Figure 3.1). The model postulates that job crafting depends on the motivation to craft a job and the opportunities present in the environment to do so. According to the model, there

Figure 3.1.

A model of job crafting.



Source: Wrzesniewski and Dutton (2001, p. 182).

are three motivating factors that lead to job crafting. The first factor is the desire to have control over one's work. So, even in jobs that offer little work autonomy, employees can look out for or create new opportunities for crafting. The second one stems from the employee's desire to have a positive self-image. The third one deals with the need for connecting to others.

In the model, perceived opportunities for job crafting refer to the discretion individuals have in conducting their work. Hence, motivated employees are more likely to craft their jobs when they perceive opportunities present in their environment, which enables them to do so. In this sense, perceived opportunity acts as a moderator in the relationship between motivation to craft a job and job crafting actions. The model also depicts two other moderators: individual orientations towards work and general motivational orientations. Individual orientations refer to seeing work as a job, career, or calling. Individuals who view work as a job are more concerned with financial rewards, career-oriented people focus more on advancement, and those who see work as a calling are more interested in finding work that provides them fulfillment and enjoyment. So, motivated individuals would craft their jobs depending on how they view their work. General motivational orientations refer to whether individuals are intrinsically or extrinsically motivated (Wrzesniewski & Dutton, 2001).

Wrzesniewski et al. (2013) have differentiated among three types of job crafters. The first type refers to 'alignment crafters' who seek alignment between themselves and the features of the environment, so they can enjoy a better fit. Thus, the focus of alignment crafters is on correcting a misalignment with respect to their current job. On the other hand, 'aspirational crafters' aspire for a future state that is currently missing and seek to find new meanings beyond what they are currently experiencing. Hence, where 'aspirational crafters' would recognise more opportunities and try to find new meanings beyond their current work, 'alignment

crafters' would try to find new opportunities in their current work. The third type are the 'accidental crafters' who stumble upon an opportunity to find enhanced meaning. It is by chance that accidental crafters come across something that they find inherently interesting and connected to themselves. So, for accidental crafters, positive work meaning is an outcome. On the other hand, aspirational and alignment crafters intentionally want to bring more meaning into their work.

To summarise, Wrzesniewski and Dutton's (2001) perspective on job crafting revolves around changing the task-related, relational, and cognitive boundaries of work. Their conceptual model provides a foundation for identifying the predictors, outcomes, and moderators of job crafting. Next, the antecedents of job crafting that have been identified based on Wrzesniewski and Dutton's (2001) perspective will be described.

### **3.1.2 Antecedents**

In their conceptual article, Wrzesniewski and Dutton (2001) suggested that predictors such as work autonomy and job demands can initiate job crafting behaviours. Until now, there are only a few studies that have explored the role of various predictors in encouraging job crafting behaviours using the framework as suggested by Wrzesniewski and Dutton (2001). For example, in a qualitative study of 33 employees by Berg, Wrzesniewski, and Dutton (2010), it emerged that employee rank was not related to the type of job crafting behaviours initiated by employees. However, rank impacted the challenges that employees faced while crafting their jobs. Specifically, it was found that higher-rank employees saw the challenges of crafting jobs as their own expectations of how they should utilise their time. Hence, higher-rank employees adapted their own expectations to craft their jobs. In contrast, lower-rank employees saw the

challenges in crafting their jobs based on what others expected from them. Therefore, lower-rank employees tried to gain support from others to engage in job crafting activities.

In a study of 232 childcare teacher and aides, Leana et al. (2009) found decision latitude to be an important predictor of job crafting. There is also evidence of need for positive self-image (Niessen, Weseler, & Kostova, 2016), task interdependence (Leana et al., 2009), and task complexity (Ghitulescu, 2006) as antecedents of job crafting.

Overall, there are limited studies that have explored the antecedents of job crafting with the perspective of Wrzesniewski and Dutton (2001). There is more research needed to explore the antecedents, as suggested by Wrzesniewski and Dutton (2001) in their conceptual model. Now, the outcomes of job crafting, as found by studies that have adopted Wrzesniewski and Dutton's (2001) approach, will be discussed.

### **3.1.3 Outcomes**

Wrzesniewski et al. (2013) argue that when employees craft their jobs they feel they can function at an optimal level through enhanced commitment and performance. Wrzesniewski and Dutton (2001) assert that job crafting leads to a better perceived person-job fit. This perception of enhanced fit with the job not only impacts individual performance, but also has the potential to impact organisational performance (Berg et al., 2010).

In their qualitative study of 107 salespersons, Lyons (2008) found that more than 78% participants reported at least one job crafting activity in the past 12 months. Skill development

was the most reported job crafting behaviour. In their study, self-image, perceived control, and readiness to change correlated positively and significantly with job crafting behaviour.

Leana et al., (2009) introduced the concept of ‘collaborative crafting’ and argued that it is different from individual crafting. In collaborative crafting, employees make joint efforts to craft their jobs to accomplish shared goals. Their study revealed that teachers who collaboratively crafted their jobs were rated highly on performance by external evaluators.

In a qualitative study of 31 employees across different occupations, Berg, Grant, and Johnson (2010) found that job crafting was related to ‘unanswered callings’ i.e., occupational callings beyond the workplace. Berg et al. (2010, p. 974) define unanswered callings as “an occupation that an individual (1) feels drawn to pursue, (2) expects to be intrinsically enjoyable and meaningful, and (3) sees as a central part of his or her identity, but (4) is not formally experiencing in a work role.” They found that when employees crafted their current jobs to include components of tasks associated with their unanswered callings, they felt psychologically fulfilled.

Ghitulescu (2006) conducted a detailed study on the three dimensions of job crafting in the manufacturing and education sectors. It emerged from the findings that ‘task crafting’ and ‘relational crafting’ (the dimension of interaction strength) related positively to work efficiency and output quality. The second dimension of ‘relational crafting’ (the range of interaction with others) was negatively related to output quality. With regard to the other two dimensions of job crafting, it was found that ‘cognitive crafting’ related to job satisfaction and organisational commitment whereas ‘task crafting’ was only related to organisational commitment.

In summary, there are a few studies that have looked at the outcomes of job crafting as defined by Wrzesniewski and Dutton (2001). These studies indicate that when employees craft their jobs, it has a positive impact on their individual outcomes. The next section will explore the measurement approach used by researchers while studying job crafting using Wrzesniewski and Dutton's (2001) perspective.

### **3.1.4 Measurement**

There is no common method that researchers use when measuring job crafting from the perspective of Wrzesniewski and Dutton (2001). Studies that have used this perspective of job crafting have been primarily qualitative and have come up with their own research methods to measure the construct (e.g., Berg et al., 2010; Lyons, 2008).

However, a few studies have tried to quantify job crafting. For instance, in two studies Ghitulescu (2006) measured the three facets of job crafting (task crafting, relational crafting, and cognitive crafting) separately. In Study 1, supervisory ratings of task-related initiatives taken by employees on their job were used to measure task crafting. Cognitive crafting was measured using Hackman and Oldham's (1976) task significance scale. Relational crafting was measured through items that captured how frequently interactions take place with others. Tims and Bakker (2010) argue that these measures do not provide any information on which job crafting behaviours are demonstrated by employees. Moreover, in Ghitulescu's (2006) Study 2, the measures were profession-specific, and hence, Tims and Bakker (2010) argue that they cannot be generalised. In another study, Leana et al. (2009) conducted interviews and focus groups to understand job crafting in the context of childcare centres. Thereafter, they created a six-item survey based on this information.

Two job crafting scales have recently been developed to incorporate the job crafting definition as conceptualised by Wrzesniewski and Dutton (2001). In the first one, Slemp and Vella-Brodrick (2013) developed a 15-item job crafting questionnaire (JCQ). Exploratory and confirmatory factor analysis on a sample of 334 employees provided support for a three-factor structure representing the three dimensions: task, relational, and cognitive crafting. This scale has been used in some studies (e.g. Slemp, Kern, & Vella-Brodrick, 2015; Slemp and Vella-Brodrick, 2014).

In another study, Niessen et al., (2016) developed a job crafting scale with the three dimensions of task crafting, relational crafting, and cognitive crafting. They found substantial correlations between the three dimensions and the second-order construct, so they suggested that an aggregate score can be used to represent the second-order construct of job crafting.

To summarise, Wrzesniewski and Dutton (2001) did not provide a common measurement tool to capture job crafting behaviours. Therefore, researchers have developed their own measures to study job crafting. All these measures tap into the three dimensions of job crafting: task, relational, and cognitive. However, whether all these measures are tapping the three dimensions in the same manner is not known and is an area for future research.

In this section, the definition, antecedents, outcomes, and measures based on Wrzesniewski and Dutton's (2001) perspective have been reviewed. Until now, there are limited studies that have used this perspective in research. One of the reasons for this could be that job crafting was not operationalised by Wrzesniewski and Dutton (2001), thus making it difficult to be used in quantitative research. In the next section, the second approach to job crafting, as developed by Tims and Bakker (2010) will be discussed.

## **3.2 Tims and Bakker's perspective**

Tims and Bakker (2010) wanted to capture the changes that employees made in their work characteristics, so they developed their job crafting definition based on the JD-R model (Bakker & Demerouti, 2007). The JD-R model postulates that every work environment comprises specific characteristics, which can be divided into job demands and job resources (as explained in detail in Chapter 2).

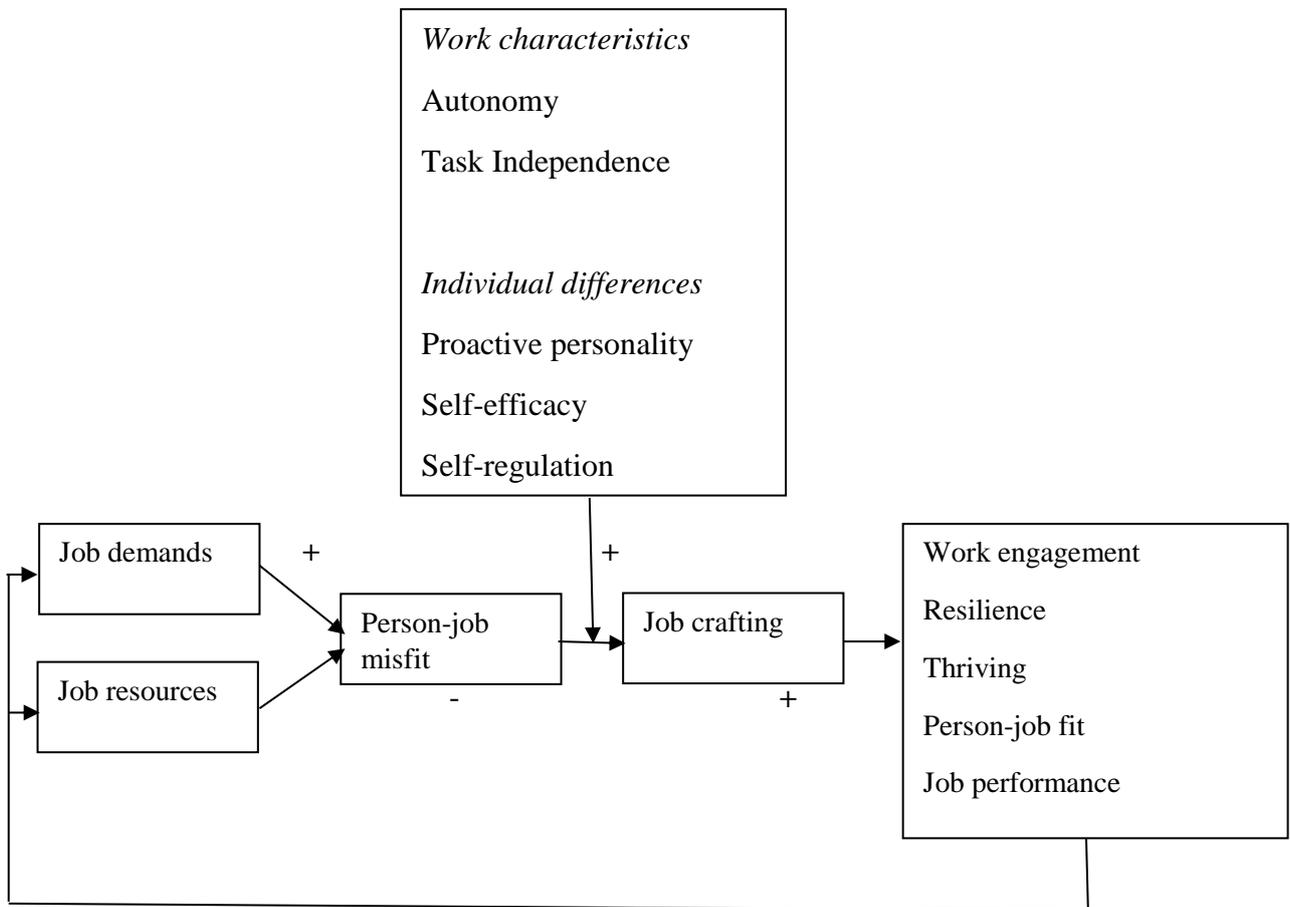
### **3.2.1 Meaning**

Tims, Bakker, and Derks (2012, p. 174) have defined job crafting as "the changes that employees may make to balance their job demands and job resources with their personal abilities and needs". Tims and Bakker (2010) argue that engaged employees craft their jobs through three ways: increasing job resources, decreasing hindering job demands, or increasing challenging job demands. Hobfoll (1989, p. 516) defines resources as "those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as means for attainment of these objects, personal characteristics, conditions, or energies". Tims et al. (2012) included 'increasing challenging job demands' in their definition because they felt that challenging jobs may have motivating potential for some employees (for instance, volunteering for more assignments). However, Tims et al. (2012) argue that employees increase their job demands only when they have sufficient job resources. Tims et al. (2012) only integrated the task and relational dimensions of Wrzesniewski and Dutton's (2001) job crafting in their definition as they felt that cognitive crafting is about coping and does not involve modifying one's job elements.

Tims and Bakker (2010) created a job crafting model (Figure 3.2) to further explain this concept. In this model, it is suggested that depending on the job demands and job resources, people may either have a person-job fit or a person-job misfit. Person-job fit refers to the congruence between people and their jobs. Person-job can be assessed in two ways: demands-abilities (DA) fit and needs-supplies (NS) fit. 'DA-fit' is defined as the fit between the demands of a job and the knowledge, skills, and abilities of a person. 'NS-fit' refers to the needs, values, and preferences of a person and those supplied by the environment (Cable & DeRue, 2002). Tims and Bakker (2010) argue that people may have a job misfit if they feel there is an imbalance in any of these factors. In Tims and Bakker's (2010) model, work characteristics such as work autonomy and task interdependence, and individual differences such as proactivity, self-efficacy, and regulatory focus, have been suggested to initiate job crafting behaviours. Regulatory focus theory posits that individuals with a 'promotion focus' are more concerned with growth and advancement, whereas people with a 'prevention focus' value security and safety (Crowe & Higgins, 1997). In this model, it is assumed that employees with a promotion focus are more likely to craft their jobs.

Figure 3.2.

A model of job crafting.



Source: Tims and Bakker (2010, p.5).

In summary, Tims and Bakker (2010) placed job crafting within the context of job demands and job resources. In their conceptual model, they have suggested various predictors, outcomes, and moderators in understanding the nomological network of job crafting. Now, the antecedents of job crafting identified through Tims and Bakker's (2010) approach will be explained.

### 3.2.2 Antecedents

Several studies have investigated the relationship between different predictors and job crafting based on Tims and Bakker's (2010) approach. In a daily diary study of 95 employees from various organisations, Petrou, Demerouti, Peeters, Schaufeli, and Hetland (2012) found that 'active jobs' (those jobs with high day-level work pressure and high day-level work autonomy) correlated with higher 'day-level' job resources and lower 'day-level' reducing demands. However, there was no relationship of these 'active jobs' to seeking challenges. Their study also provided evidence that individuals differ in the degree of job crafting.

Petrou, Demerouti, and Schaufeli (2016) conducted a three-wave longitudinal study among 368 police officers to understand how, within the perspective of regulatory focus theory, organisational change communication increases job crafting behaviours. The results revealed that when change communication was adequate there was an increase in job crafting by promotion-focused employees. In contrast, prevention-focused employees increased job crafting behaviours when the change communication was inadequate. This suggests that prevention-focused employees feel threatened when they do not receive proper communication about changes taking place in the organisation, thus triggering their job crafting behaviours. On the other hand, promotion-focused employees feel motivated by adequate change communication and, hence, craft their jobs (Petrou et al., 2016). A previous study had also highlighted that promotion-focused employees are more likely to craft their jobs (Brenninkmeijer & Hekkert-Koning, 2015).

Although "little is known regarding the predictive value of personality traits for job crafting" (Roczniewska & Bakker, 2016, p. 1028), there is evidence that it is related to

individual characteristics such as proactive personality (Bakker et al., 2012), approach temperament (Bipp & Demerouti, 2015), and promotion focus (Brenninkmeijer & Hekkert-Koning, 2015). In a study conducted on Fort Hare University's administrative employees in South Africa, Bell and Njoli (2016) found that all the big-five personality factors of conscientiousness, extraversion, agreeableness, openness to experience, and neuroticism predicted job crafting behaviours. This study has important implications for tertiary sector managers as they can involve administrative employees in redesigning their job descriptions (Bell & Njoli, 2016).

In a different study, Roczniowska and Bakker (2016) found that for 155 employees from various occupations, neuroticism related negatively with increasing structural job resources and psychoticism related negatively with increasing social job resources (Study 1). Their second study on 135 police officers found that narcissism was positively related to increasing social job resources whereas psychopathy was negatively related to increasing social job resources (Roczniowska & Bakker, 2016).

To summarise, although various studies have highlighted the role of different predictors in enhancing job crafting based on Tims and Bakker's (2010) approach, there is still a dearth of studies in this area. Now, the outcomes of job crafting based on this approach will be discussed.

### **3.2.3 Outcomes**

There is evidence that job crafting behaviours lead to enhanced performance (e.g., Bakker et al., 2012; Tims et al., 2012). Bakker et al. (2012) found that job crafting related positively with

colleague ratings of in-role performance. However, decreasing hindering job demands has been found to relate negatively to job performance (Tims, Bakker, Derks, & van Rhenen, 2013). Similar results regarding the negative relationship between decreasing hindering job demands and job performance were found in a diary study involving 95 employees (Demerouti, Bakker, & Halbesleben, 2015).

Collaborative job crafting has also been investigated under the JD-R approach. For instance, Tims et al. (2013) examined 525 individuals in 54 teams in the health sector. Their findings suggested that team job crafting predicted individual performance through individual job crafting and individual work engagement.

Tims et al. (2013) conducted a study among chemical plant employees and showed that job crafting (of resources) predicted an increase in structural and social resources in the next two months. This suggests that when employees craft their job resources, they are more likely to accumulate further resources in the future.

Emphasising the importance of job crafting behaviours on colleagues, Tims, Bakker, and Derks (2015) found that when individuals decreased their hindering job demands, it led to increased workload and conflict for their colleagues. In this study, dyads were formed non-randomly by asking participants to choose a colleague with whom they interacted at work. There is also research evidence that job crafting behaviours can be transferred from one employee to the other. For instance, in a study which involved 55 dyads of co-workers, full support was found for the crossover of the 'increasing challenging demands' aspect of job crafting from one employee to the other (partner), and partial support for the 'seeking resources' aspect (Peeters, Arts, & Demerouti, 2016). Peeters et al. (2016) found that this

crossover was greater when the partner's empathy level was high. Peeters et al. (2016) argue that these findings are rooted in social learning theory, which suggests that employees learn from each other in a social environment.

Job crafting has been shown to relate positively to work engagement (e.g., de Beer et al., 2016; Tims et al., 2012; Tims et al., 2013). Some studies have focused on the effect of different dimensions of job crafting on work engagement. For instance, increasing job demands, increasing social resources, and increasing structural resources have been found to positively relate to work engagement (e.g., Bakker et al., 2012; Tims et al., 2012). However, decreasing hindering job demands have been negatively linked to work engagement (Petrou et al., 2012).

In a cross-sectional sample of 246 Taiwanese workers, job crafting was found to relate positively to person-job fit (Chen et al., 2014). In a three-wave study, Tims, Derks, and Bakker (2016) reported that an increase in job resources and challenging job demands, and a decrease in hindering demands, predicted higher levels of person-job fit. Similarly, in a study of Chinese employees, Lu, Wang, Lu, Du, and Bakker (2014) found support for person-job fit as an outcome of job crafting. Although Lu et al. (2014) measured job crafting through a different scale, they found it was highly correlated with Tim et al.'s scale (2012).

de Beer et al. (2016) collected data from 470 employees in the mining and manufacturing industries in South Africa. Their results demonstrated that increasing structural job resources, increasing challenging job demands, and increasing social resources were significantly related to job satisfaction. However, contrary to their expectations, they found a significant negative relationship between decreasing hindering job demands and job

satisfaction. Explaining this, de Beer et al. (2016) suggested that perhaps when employees perceive the demands to be hindering, they show a negative response, which can adversely affect their satisfaction level.

Until now, there is limited research on the negative effects of job crafting. For instance, in their study, Demerouti et al. (2015) found that on days employees sought more job challenges, they also showed some counterproductive behaviours such as hiding mistakes. A reason for this could be that employees try to morally balance their ‘good’ deeds (challenge seeking behaviours) with their supposedly ‘bad’ deeds (counterproductive behaviours) (Demerouti et al., 2015).

Overall, there are many studies that have found evidence of positive outcomes of job crafting, although evidence is emerging of its not-so-positive consequences. The increasing evidence of a positive relationship of job crafting with employee performance has played a big role in the appeal of this construct to researchers. The tool developed by Tims et al. (2012) to measure job crafting will be discussed next.

### **3.2.4 Measurement**

Arguing that most of the job crafting studies are either theoretical or qualitative in nature, Tims et al. (2012) developed a quantitative job crafting scale in three separate studies in The Netherlands, with 1181 participants. The convergent validity, criterion validity, and reliability of the job crafting scale was tested and it was found that the job crafting scale had four dimensions: increasing structural resources (five items), increasing social resources (five items), increasing challenging job demands (five items), and decreasing hindering job demands

(six items). This job crafting scale has 21 items and is measured on a five-point Likert scale. The psychometric properties of the job crafting scale have been demonstrated in various studies (e.g., de Beer et al., 2016; Tims et al., 2013; Tims et al, 2016).

Researchers tend to adapt the original job crafting scale developed by Tims et al. (2012). For example, Tims et al. (2016), and Petrou, Bakker, and van den Heuvel (2016) adapted the job crafting scale to measure weekly job crafting behaviours, by adjusting all items to refer to week level. Bipp and Demerouti (2015) developed a shortened version of the job crafting scale with 13 items (five items for increasing job resources, three items for increasing challenging job demands, and five items for decreasing hindering job demands). Petrou et al. (2012) used a modified version of the original scale by including seeking resources (six items), seeking challenges (three items), and reducing demands (four items) in their scale. The validity and reliability of the modified scale developed by Petrou et al. (2012) have been demonstrated in several studies (e.g., Peeters et al., 2016; Petrou & Demerouti, 2015).

Many studies have used only three dimensions of job crafting scale: increasing structural resources, increasing social resources, and increasing challenging job demands (e.g., Hakanen et al., 2017; Harju et al., 2016; Petrou et al., 2016; van Wingerden, Bakker, & Derks, 2016). Demerouti, Bakker, and Gevers (2015) argue that ‘decreasing hindering job demands’ is generally not included as researchers find that such an action reduces the scope of work and thus inhibits the growth of employees. Another reason that is cited for this exclusion is that some researchers find that ‘reducing hindering job demands’ is not related significantly to either work engagement (e.g., Eguchi et al., 2016; Nielsen & Abildgaard, 2012) or job performance (Tims et al., 2012). Demerouti and Bakker (2014) suggest that while reducing demands could be a strategy to deal with stress, it may lead to reduced job performance.

Similarly, Petrou et al. (2012) suggest that ‘reducing hindering job demands’ can deplete motivation of employees although it leads to better health outcomes. Keeping the above arguments related to the relationship between ‘reducing hindering job demands’ and outcomes (such as work engagement and job performance) in mind, the approach of using three dimensions to measure job crafting will be followed in this thesis.

On the basis of Tims et al.’s scale (2012), Nielsen and Abildgaard (2012) developed a job crafting measure for blue-collar workers in a longitudinal study of mail delivery workers in Denmark. Nielsen and Abildgaard (2012) expected the scale for blue-collar workers to have a similar structure as the original scale developed by Tims et al. (2012). However, contrary to their assumptions, Nielsen and Abildgaard (2012) found that their job crafting measure had five dimensions: increasing challenging demands, decreasing social job demands, increasing social job resources, increasing quantitative demands, and decreasing hindering job demands. They found that social interaction was a resource as well as a demand since during the interviews the workers reported that they had both pleasant as well as unpleasant experiences with their colleagues. They also differentiated between challenging demands and quantitative demands. The ‘increasing quantitative demands’ in their scale is about increasing existing activities. The 15-item scale demonstrated discriminant and criterion validity, and test-retest reliability.

To summarise, based on Tims and Bakker’s (2010) perspective, Tims et al. (2012) developed a job crafting scale. The emergence of a measure to capture job crafting experiences gave a boost to the construct and led to an increase in studies. Although Tims et al. (2012) identified four dimensions of job crafting, the dimension of ‘decreasing hindering job demands’

has been excluded by some studies due to its negative relationship with job performance and work engagement.

In the above sections, the definition, antecedents, outcomes, and measures of the job crafting approach as suggested by Wrzesniewski and Dutton (2001) and Tims et al. (2010) were discussed. Demerouti (2014) argues that both approaches have similarities. For instance, task crafting (Wrzesniewski & Dutton, 2001) can be seen as changing job demands (Tims & Bakker, 2010), and relational crafting (Wrzesniewski & Dutton, 2001) can be interpreted as changing job resources (Tims & Bakker, 2010). As discussed earlier, Tims et al. (2010) did not incorporate cognitive crafting in their definition. Demerouti (2014) asserts that cognitive crafting may not be a daily activity and can be seen as more of one's thought process. However, Slemp and Vella-Brodick (2014) argue that by not including cognitive crafting in their scale, Tims et al. (2012) have missed out a crucial way through which employees can change the meaning of their work.

Researchers have studied job crafting through qualitative (e.g., Berg et al., 2010) as well as quantitative approaches (e.g. Tims et al., 2012). Out of the two approaches discussed above, the JD-R approach of job crafting is widely used by researchers. This could be due to its simplicity and the intuitive appeal of changing the boundaries of job by making modifications to job demands and job resources. Another reason could be the availability of a valid and reliable instrument (Tims et al., 2012) to measure job crafting. Because of these reasons, I have used the job crafting perspective as suggested by Tims et al. (2012) in this thesis.

### **3.3 Differentiating job crafting from related constructs**

Wrzesniewski and Dutton (2001), and Tims and Bakker (2010) argue that job crafting is different from other similar constructs such as role innovation, personal initiative, task revision, organisational citizenship behaviours, and idiosyncratic deals. Nicholson (1984) defines role innovation as changes made in the objectives of a job, the methods deployed, or in interpersonal relationships in order to achieve higher task performance. Individuals initiate role innovation behaviours to match the requirements of the role with their own needs and abilities. However, Wrzesniewski and Dutton (2001) argue that the focus of role innovation is mostly on reactive problem-solving whereas, in job crafting, the focus is on proactively changing the boundaries of work. This argument is also put forward by Tims and Bakker (2010) when they assert that employees engage in role innovation when their current role is not able to help them deal with problems at work.

Frese, Kring, Soose, and Zempel (1996) define personal initiative as self-starting behaviours not formally required by the job. Although this definition has similarities with job crafting, Wrzesniewski and Dutton (2001) argue that the focus of personal initiative is on problem solving, which makes it different from job crafting.

Staw and Boettger (1980) argue that task revision is about correcting problems with the support of management. They further argue that task revision is mostly undertaken when job descriptions are not properly specified. Tims and Bakker (2010) argue that since task revision is about counter-role behaviour (such as employee resistance to faulty work processes), it may be seen as socially unacceptable to managers and so, employees may not feel comfortable engaging in it. Wrzesniewski and Dutton (2001) assert that unlike task revision, job crafting is

useful even when there is no problem with any job-related tasks. Wrzesniewski and Dutton (2001) further argue that task revision is a problem-solving approach vis-à-vis job crafting, which focuses on actively changing the boundaries of one's job.

Wrzesniewski and Dutton (2001) argue that organisational citizenship behaviours (Organ, 1988) are primarily enacted by employees to help others in the organisation whereas job crafting behaviours are targeted toward changing the task and relational boundaries to derive better meaning from one's work. Idiosyncratic deals (I-deals) are work-related individual negotiations that employees make with their employers (Lai, Rousseau, & Chang, 2009). However, Wrzesniewski and Dutton (2001) assert that I-deals are formally or informally arranged between the employee and the employer as compared to job crafting, which is a creative process.

As discussed above, individuals make changes to their jobs through role innovation (redefining the role to get a better outcome), task revision (resistance to faulty processes or inaccurate job descriptions), voice (expression of opinion to bring about positive changes in the organisation), idiosyncratic deals (individualised job description), and personal initiative (proactive behaviour). However, Tims and Bakker (2010, p. 2) argue that these behaviours “do not specifically contribute to individual outcomes” although employees do derive benefit from them. In my view, from these definitions, it seems that job crafting shares similarities with all these related constructs. Whether job crafting has discriminant validity with regard to these constructs needs to be tested through empirical studies. There are some studies that have attempted to find whether job crafting is a different construct. For instance, in a study of 466 employees, Niessen et al. (2016) found that job crafting was positively related to, yet different from, personal initiative and organisational citizenship behaviour. Similarly, Tims et al. (2012)

found that personal initiative was conceptually different from job crafting. There is a need for more research to test the discriminant validity of job crafting with these constructs before it can be concluded that it is indeed a different construct.

### **3.4 Relationship of work engagement with job crafting**

Demerouti and Bakker (2014) argue that there is an ongoing debate on whether job crafting predicts work engagement or is it the other way around? Do proactive employees make changes to their work characteristics and thus get more engaged or do engaged employees feel motivated to craft their job demands and job resources? Demerouti and Bakker (2014) suggest that both scenarios are possible and there is research evidence pointing to this. At first, I will discuss job crafting as a predictor of work engagement and then it will be addressed as an outcome.

Research suggests that proactive individuals are more engaged (Bakker et al., 2012) and job crafting is seen as a kind of proactive behaviour (de Beer et al., 2016). Tims et al. (2012) argue that individuals who craft their jobs are more likely to feel engaged because the job now allows them to deploy their skills and abilities in a better way. As discussed earlier, quite a few studies have looked at job crafting as an antecedent of work engagement (e.g., Bakker et al., 2016; Eguchi et al., 2016; Kooij, Tims, & Akkermans, 2017; Petrou et al., 2012; Tims et al., 2012; Tims et al., 2013). However, there is evidence that the effects of job crafting behaviours on work engagement may be temporary. For instance, in a study of 1630 highly educated Finnish employees from different occupations in various industries, Harju et al. (2016) found that increasing social and structural job resources were not related to future work engagement. This suggests that when employees increase their job resources, it leads to work

engagement, but the feeling of being intrinsically motivated is short lived (Harju et al., 2016). One reason that Harju et al. (2016) provide for this is that when employees increase their job resources, it is generally to satisfy a short-term need, for instance improving a process. So, the gain derived from these resources tends to be for a short period of time.

There is also evidence that the dimensions of job crafting are separately related to work engagement. For instance, challenging job demands (e.g., Crawford et al., 2010; Tadic, Bakker, & Oerlemans, 2015), structural resources, and social resources (Tims et al., 2013) have been found to relate positively with work engagement whereas hindering job demands have demonstrated a negative relationship with work engagement (e.g., Crawford et al., 2010; Petrou et al., 2012; Tadic et al., 2015).

Until now, I have found only one study that has explored the role of moderators in the job crafting-work engagement relationship. While investigating the role of organisational role-salience as a moderator between job crafting and work engagement, Petrou et al. (2016) found that when organisational role-salience (i.e., the internal belief that one's work is important) was high, there was a significant relationship between the two variables. This suggests that when employees consider their work to be important, they direct their efforts toward increasing job resources and challenging demands, which leads to work engagement.

Apart from being an antecedent, Bakker et al. (2012) suggest that work engagement can also lead to job crafting as they share a dynamic relationship. Engaged employees are active job crafters who feel motivated to make changes to their job resources and job demands (Bakker, 2011) so that their work is better aligned to their needs and abilities. Parker and Griffin (2011) argue that engaged employees do so as they think creatively about their work.

Some studies have demonstrated a reciprocal relationship between work engagement and job crafting (Demerouti & Bakker, 2014). For instance, Scahufeli et al. (2009) conducted a study among telecom company managers and found that work engagement predicted job resources (such as social support and autonomy) after one year. In another study, Hakanen et al. (2008) found that work engagement predicted future job resources. In a longitudinal study, Harju et al. (2016) found that work engagement predicted increasing structural resources and increasing social resources, but did not predict increasing challenging demands. Lu et al. (2014) studied 246 Chinese employees and found that engaged employees were more likely to craft physical and relational aspects of their work.

However, in a longitudinal study of 940 employees from three European countries, Vogt, Hakanen, Brauchli, Jenny, and Bauer (2016) did not find support for a reversed causal relationship between work engagement and job crafting. In their study, engaged employees at Time 1 were not more likely to craft more jobs at Time 2 as compared to others with lower work engagement.

The above research evidence demonstrates that work engagement and job crafting may have a reciprocal relationship and each can be seen as a predictor as well as an outcome of the other (Demerouti & Bakker, 2014). More studies have looked at job crafting as a predictor of work engagement and there are only few that have examined job crafting as an outcome of work engagement. Although research on job crafting as a predictor as well as an outcome of work engagement has started picking up in recent years (e.g., Bakker et al, 2012; Petrou et al., 2012), it needs to be further validated across multiple contexts (Demerouti, 2014). Job crafting could be a crucial link between work engagement and performance (Bakker, 2010) and may also be a key mechanism leading to work engagement through increased perception of person-

job fit (Chen et al., 2014). I am more inclined toward the argument that engaged employees are more likely to craft their jobs since they possess the intrinsic motivation to do so. Hence, in this thesis, I will study job crafting as an outcome of work engagement.

### **3.5 Role of the organisation**

As stated earlier, job crafting can be good or bad for the organisation (Wrzesniewski & Dutton, 2001). Berg, Dutton, and Wrzesniewski (2007) give the example of a marketing employee who may focus more on new ideas and may ignore implementation of existing strategy, thus leading to personal satisfaction, but at the cost of organisational goals. Encouraging employees to discuss how they would like to craft their jobs can be a win-win for both the employees as well as the organisation. This encouragement may make employees feel trusted. Hence, they are more likely to craft their jobs in a way that is in the best interest of the organisation (Berg et al., 2007).

Emphasising the role of organisations in job crafting, Berg et al. (2013) introduced the concept of ‘landscapes’ to explain that a job should enable an employee to visualise end goals and, at the same time, provide a view of the interrelatedness of the job with others, so that an employee is able to view constraints as well as foresee opportunities. Lyons (2008) argues that, at the same time, employees should perceive a supportive environment wherein they can craft their jobs as at times managers may perceive job crafting as a challenge to their power and authority (Lyons, 2008). Wrzesniewski and Dutton (2001) argue that managers must accept that job crafting happens all the time, with or without their knowledge. Wrzesniewski and Dutton (2001) further argue that supporting employees in crafting their jobs will ensure that the end results are not counter-productive for the organisation. Managers can influence job

crafting behaviours through enactment of HRM policies, such as organisation of work, reward, or performance management (Wrzesniewski & Dutton, 2001). For instance, employees may choose to engage in certain job crafting behaviours depending on the incentives offered to them or the way work is organised for them (Wrzesniewski & Dutton, 2001).

Although "the study of job crafting is fraught with definitional and methodological challenges" (Lyons, 2008, p. 27), "job crafting matters to organisations" (Berg et al., 2010, p. 181) and is an emerging field with much scope for research (Oldham & Hackman, 2010). Demerouti and Bakker (2014) argue that although there are still many questions to be answered regarding job crafting, but in the current changing organisational environment in terms of technology, globalisation and diversity, a top-down job design process needs to be complemented with a bottom-up job crafting approach. Berg et al. (2008) assert that a job description that has flexibility built into it is more likely to lead to job crafting behaviours as compared to jobs that are too rigid. Demerouti (2014) argues that encouraging job crafting behaviours can be particularly useful for certain categories of employees, such as older employees, employees with disabilities, parents with young children, and female employees. These employees are more at risk of a job misfit as they have different needs and may face unpredictable demands and low resources (Demerouti, 2014).

To summarise, managers have a key role to play in encouraging job crafting behaviours in employees. There are many ways through which managers can facilitate such behaviours. One of such approaches is based on 'interventions', which will be discussed next.

### **3.6 Interventions as a tool to increase job crafting**

As discussed earlier, managers can play an important role in making employees understand job crafting so that the employees can direct their efforts in crafting jobs, which may lead to positive individual and organisational outcomes (Bakker & Demerouti, 2014). Training can be one form of a management-driven intervention (Bakker & Demerouti, 2014).

On the basis of theory and empirical research, Berg, Dutton, Wrzesniewski, and Baker (2008) created a 'job crafting exercise' as an organisational intervention to help individuals identify opportunities, so that their jobs are more satisfying. Thinking of tasks as a set of building blocks, this exercise encourages individuals to have a job crafting mindset by understanding the difference between their current allocation of time (which they called 'Before Sketch' activities) and energy to their desired objectives (through a set of 'After Diagram' activities). On the basis of this intervention, van Wingerden, Bakker, and Derks (2017) conducted a quasi-experimental design involving 75 teachers. van Wingerden et al. (2017) found that the job crafting intervention (measured in three time points over a one-year period) had a significant impact on the job crafting behaviours of the employees.

Tims et al. (2013) conducted a feedback intervention, which comprised standard feedback to all employees on their job demands and job resources. However, in the absence of a control group, they could not measure the before-after feedback effects on job crafting.

In 2015, van den Heuvel, Demerouti, and Peeters developed a job crafting intervention to encourage employees to craft their jobs best suited to their individual needs so that their work is more satisfying. This intervention is implemented in different phases consisting of a

job crafting workshop, filling of a weekly job crafting logbook, and reflecting on the process. The participants are encouraged to make adjustments to their specific job demands and job resources and thus integrate job crafting in their daily functioning. van den Heuvel et al. (2015) tested this training intervention among 39 employees of a police district. It was an experimental design where the learning of these 39 employees was compared with 47 employees who were part of the control group, through pre-test post-test measures. It was found that the training had a positive impact on two job resources: contact with the supervisor and opportunities to do developmental work, and a personal resource (self-efficacy) as compared to the control group. The participants also reported experiencing positive emotions after the training. This suggests that the training also impacted on their emotional health.

van Wingerden et al., (2016) created a JD-R intervention to examine its effect on job crafting, work engagement, job performance, and psychological capital. A quasi-experimental design, with healthcare professionals as participants, was used to compare the results with a control group (through pre-test post-test measures). They did not include decreasing hindering job demands in the exercise in line with prior research where it was found to have a negative effect on work engagement (Petrou et al., 2012). Four exercises constituted the intervention. In the first one, the participants learned about accepting the past, acknowledging the present, and to look forward to the future as full of opportunities. The second exercise was about giving and receiving feedback. In the third one, they practised how to refuse requests. The last exercise was about making a job crafting plan based on an overview of their job and their personal characteristics. The results indicated that the job crafting intervention positively impacted all the above-mentioned variables.

Job crafting interventions can be useful for employees. However, the important thing is better execution and sustainability of these initiatives (Berg et al., 2013). Rather than staying with one approach, managers can test different interventions to see which one works best for their unique context (Berg et al., 2013). Interventions aimed at creating a resourceful and challenging work environment (van Wingerden et al., 2016) indicate to employees that the organisation is receptive to job crafting behaviours (Tims, Bakker, & Derks, 2014). There is a need for managers to have an in-depth understanding of job crafting and its influence on the actions of employees. Nielsen (2013) suggests that one way to integrate the job crafting knowledge into a process is by making it part of the performance evaluation of employees. Whether such formal integration of job crafting will be effective or not is not certain at this stage, since it is believed that employees often shape the boundaries of their jobs with or without the knowledge of their supervisors (Wrzesniewski & Dutton, 2001).

### **3.7 Conclusion**

Sparked by the research of Wrzesniewski and Dutton (2001), job crafting emerged as a bottom-up approach to job redesign. In job crafting, employees are active participants, who make changes to their work characteristics, so that their work is more meaningful and satisfying. Although two perspectives of job crafting exist, this thesis will follow the approach proposed by Tims and Bakker (2010), which is based on the JD-R theory. These two perspectives have similarities, as discussed earlier. They both look at how employees craft their jobs by making changes in their work environment.

Although researchers use different theories to describe job crafting, the theoretical model generally involves three stages. The first stage is about motivation being the primary

determinant of job crafting. In the second stage, employees craft their jobs depending on the opportunities available. Lastly, job crafting behaviours lead to certain outcomes. Wrzesniewski and Dutton (2001) did not develop any instrument to measure job crafting, although their approach has been used by researchers to develop different measures. In 2012, Tims et al. created a scale to measure job crafting, which triggered many studies thereafter. Researchers have also found evidence that ‘decreasing hindering job demands’ has a detrimental effect on work engagement and job performance. This is the reason that some studies do not include the ‘decreasing hindering job demands’ aspect in their job crafting measure.

Job crafting has been found to be predicted by task complexity, decision latitude, personality, and person-job fit, among other predictors. Researchers have also found that when employees craft their jobs they are more committed, engaged, satisfied, and tend to give higher performance. Although there are similarities, job crafting is believed to be different from the related constructs of role innovation, personal initiative, task revisions, organisational citizenship behaviours, and idiosyncratic deals. Through interventions, managers have a key role to play in initiating job crafting behaviours in employees that serve both individual and organisational needs.

Job crafting shares a relationship with work engagement as it has been found to be both a predictor as well as an outcome of work engagement. Until now, there are limited studies that have explored this association, especially of job crafting as an outcome of work engagement. Hence, there is a need to study this relationship further due to its impact on performance. Moreover, there is scant research on moderating variables that can impact this relationship. Therefore, this thesis will explore the conditions under which engaged employees craft their

jobs. In the next chapter, the theoretical model of this thesis and its hypotheses will be explained.

## **Chapter 4**

### **Research Model and Hypotheses**

The literatures on work engagement and job crafting were explored in Chapter 2 and Chapter 3 respectively. Although there has been considerable research on work engagement in the past decade, its importance for individual and organisational outcomes makes it an ongoing important research topic to study. Similarly, job crafting is an individual-initiated job redesign strategy that has important implications for individual performance. As discussed in Chapter 3, when employees make changes to their work characteristics to fit with their demands and abilities, it leads to important individual-level outcomes. There are quite a few studies that have explored the relationship of job crafting with work engagement, but relatively less is known about the path leading from work engagement to job crafting. The role of key predictors, outcomes, and moderators in the path from work engagement to job crafting is a nascent research area. The aim of this chapter is to a) explore the relationship between work engagement and job crafting, b) examine how various antecedents, outcomes, and moderators relate to the two, and c) develop a set of hypotheses based on that.

This chapter will begin by describing the theoretical rationale of the research model that has been developed in this study. After that, the various relationships in the research model will be discussed, and hypotheses will be formulated accordingly. The chapter will conclude by discussing the overall research model.

## **4.1 Theoretical basis**

The research model in this thesis has its theoretical underpinnings rooted in three conceptual models: a) the JD-R model (e.g., Bakker & Demerouti, 2007; Bakker & Demerouti, 2014; Demerouti et al., 2001), b) the AMO model of individual performance (e.g., Appelbaum, Bailey, Berg, & Kalleberg, 2000; Boxall & Purcell, 2003; Blumberg & Pringle, 1982), and c) the model of proactive motivation (Parker et al., 2010). This thesis also relates to three other theories in designing the conceptual model: a) conservation of resources theory (Hobfoll, 1989), b) self-determination theory (Deci & Ryan, 1985) and, c) social-exchange theory (Blau, 1964). A brief description of these models and theories, and their relevance to the current research will be discussed next.

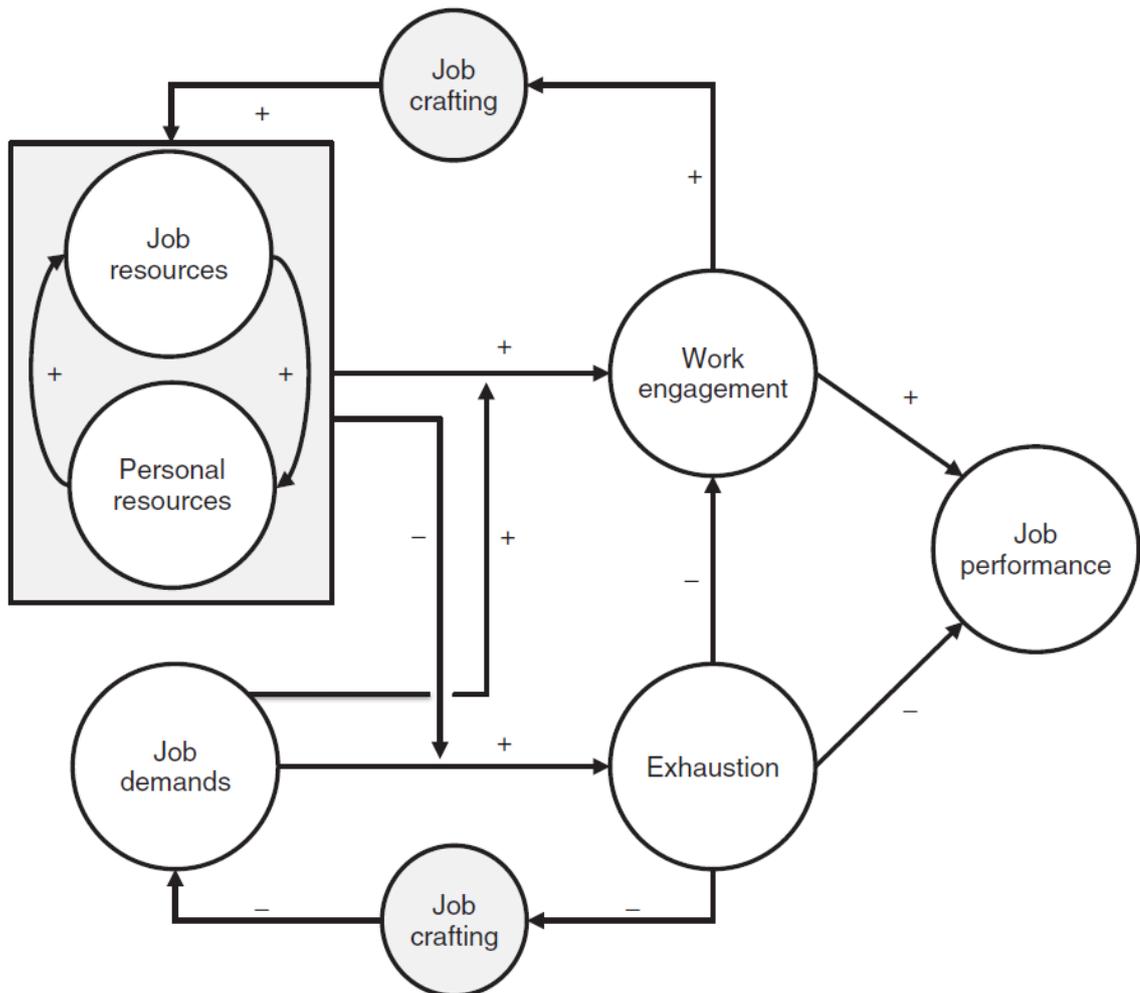
### **4.1.1 The JD-R model**

Figure 4.1 describes the model based on job demands-resources theory (Bakker & Demerouti, 2014). According to job demands-resources theory, all work characteristics can be studied as either job demands or job resources, thus making it applicable to different work environments and occupations (Bakker & Demerouti, 2014). Job demands are the physical, social, or organisational aspects of work that need physical or mental effort and may have certain costs, such as a heavy workload and time pressure (Demerouti et al., 2001). Job resources are the physical, social, or organisational aspects of the job that have an intrinsic or extrinsic motivational potential, which may be important in reducing job demands, attaining goals, or increasing individual growth (Bakker & Demerouti, 2008). The detailed definitions of job demands and job resources have been provided in Chapter 2. It was also mentioned in Chapter 2 that personal resources were added to the JD-R model as an extension. Personal resources

also include positive self-evaluations that people hold about themselves, which help them in attaining desirable outcomes (Hobfoll, Johnson, Ennis, & Jackson, 2003).

Figure 4.1.

The JD-R Model.



Source: Bakker and Demerouti (2014, p. 10).

Job demands-resources theory posits that job demands trigger health impairing outcomes such as exhaustion whereas job resources lead to motivation and work engagement (Bakker & Demerouti, 2014). Job demands and job resources interact with each other to predict

well-being, which leads to better performance. In other words, under conditions of challenging job demands, job resources have a stronger positive impact on work engagement (Bakker & Demerouti, 2014). In Chapter 2, it was discussed that job resources predict work engagement. In a recent study, it was found that work engagement also leads to the creation of job resources, thus enhancing performance (Schmitt et al., 2016). Tims and Bakker (2010) suggest that job crafting is an individual job redesign perspective, which highlights the changes employees make in their job demands and job resources. As discussed in Chapter 3, employees can craft their jobs by increasing social resources, increasing structural resources, increasing challenging job demands, and decreasing hindering demands (Tims et al., 2012).

The JD-R model (Figure 4.1) (Bakker & Demerouti, 2014) postulates that job and personal resources create conditions for work engagement, thus leading to better job performance. Job crafting plays a dynamic role in the JD-R model (Bakker & Demerouti, 2014) as it is also likely that engaged employees craft their work characteristics, which leads to better performance. In this thesis, a theoretical model has been created where job resources (situational factors) and personal resources (individual factors) create a state of intrinsic motivation (work engagement), which further leads to the creation of job demands and job resources through job crafting, thus leading to enhanced performance. Therefore, the research model developed in this thesis draws from the updated JD-R model (Figure 4.1) (Bakker & Demerouti, 2014).

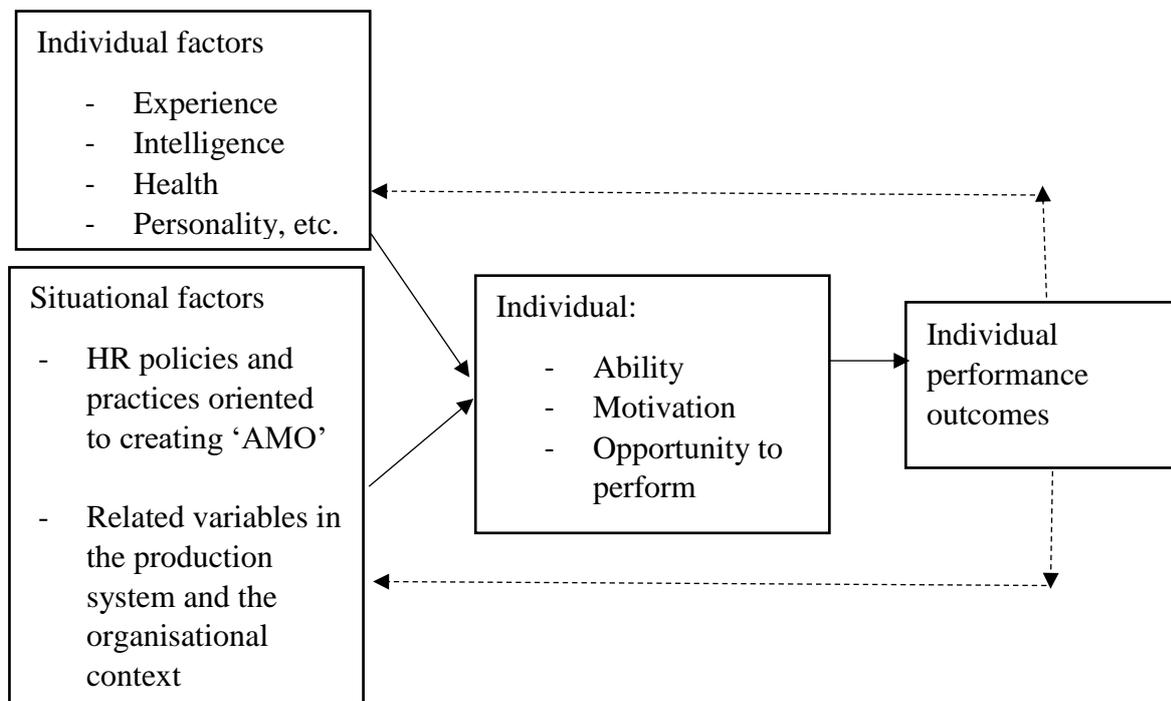
#### **4.1.2 The AMO model of individual performance**

Another conceptual model that has influenced this thesis is the AMO model (Figure 4.2). Vroom (1964) suggested that individual performance depends upon ability and motivation.

Blumberg and Pringle (1982) refined the earlier work of Vroom (1964) and suggested that the opportunity to perform is the missing link in the HRM-performance chain. Using a manufacturing industry as context, Appelbaum et al. (2000) argue that higher performance work systems are linked to discretionary effort, which further leads to performance. Thereafter, Boxall and Purcell (2003) coined the term ‘AMO’ to explain the factors that lead to individual performance.

Figure 4.2.

The AMO model of individual performance.



Source: Boxall and Purcell (2016, p. 156).

Boxall and Purcell (2016, p. 155) define AMO as: “a) the ability (A) to perform (they can do the job because they possess the necessary knowledge, skills, and aptitudes); b) the motivation (M) to perform (they will do the job because they want to do it or feel that they

must do it); and c) the opportunity (O) to perform (their work structure and its environment provide the necessary support and avenues for expression)”.

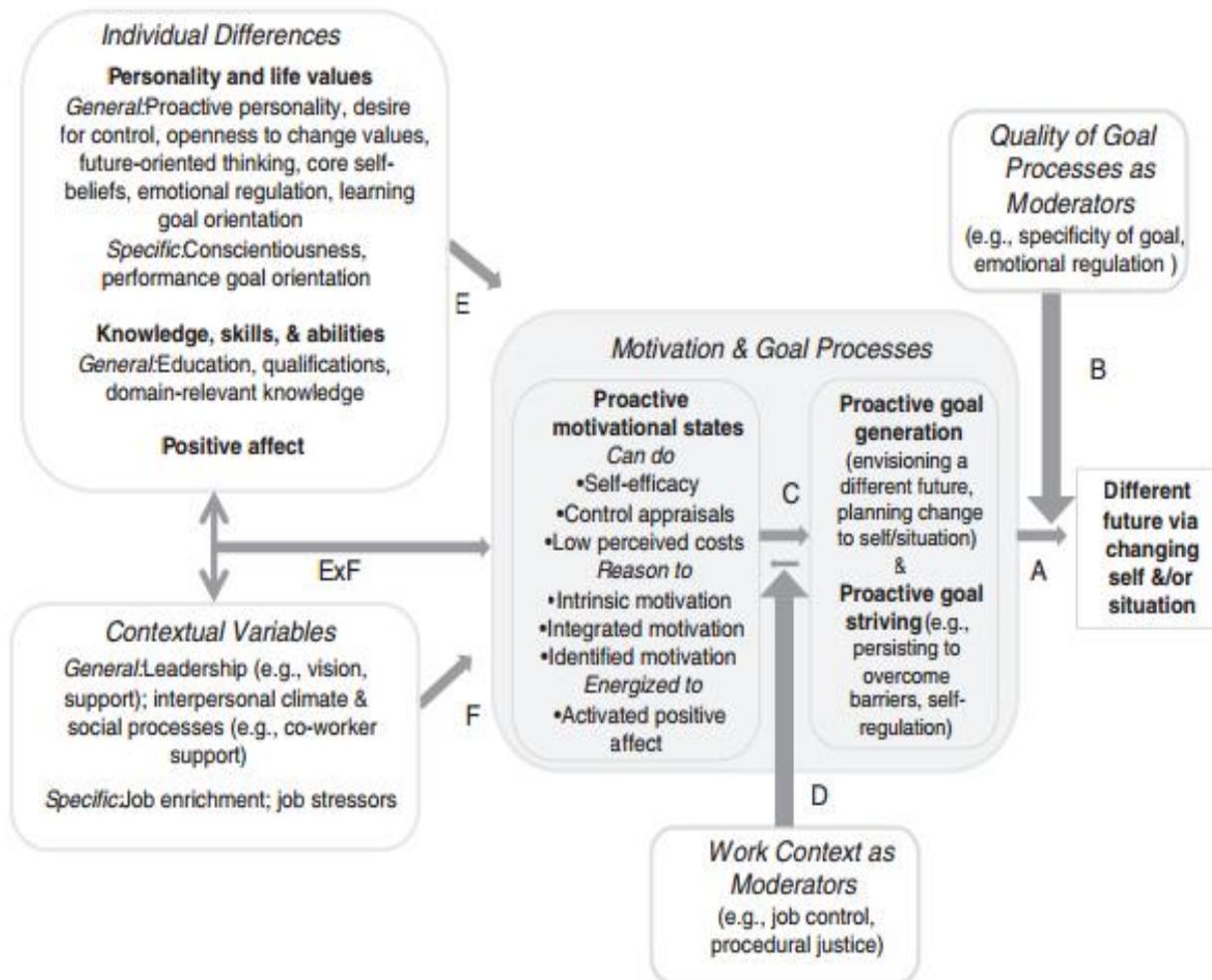
The AMO model (Figure 4.2) suggests that individual attributes (such as experience or personality) affect the motivational states of employees, and determine “what individuals bring to their work” (Boxall & Purcell, 2016, p. 156). The situational factors in the model involve the organisational context and the HRM practices. Individual and situational factors influence the abilities, motivation, and performance opportunities of individuals, thus leading to individual performance. Similar to the AMO model (Figure 4.2), the current thesis explores how individual and situational factors influence the motivation (work engagement) of employees, thus leading to desired outcomes (job crafting and performance).

#### **4.1.3 The Model of Proactive Motivation**

Drawing from existing perspectives on proactivity, Parker et al. (2010) developed a model (Figure 4.3), which suggests that proactivity consists of goal generation and goal striving. Proactive goal generation is defined as “envisioning and planning, under one’s own volition, the goal to bring about a new and different future by changing the self and/or the environment” (Parker et al., 2010, p. 5). Proactive goal striving is defined as individuals using their own behavioural patterns to reach a goal (Parker et al., 2010). In their model, Parker et al. (2010) suggest that employees need to be motivated to generate proactive goals. Parker and colleagues (2010) differentiated between three kinds of motivation states: ‘can do’ (an individual’s belief whether one can take proactive actions, e.g., self-efficacy), ‘reason to’ (an individual’s need for motivation, e.g., intrinsic motivation), and ‘energized to’ (an individual’s approach tendency, e.g., positive affect).

Figure 4.3.

The model of proactive motivation.



Source: Parker et al. (2010, p.4).

Individual factors (such as personality and core self-evaluations) and contextual variables (such as leadership and work environment) play a key role as distal predictors in this model that influence proactive goal generation, through the motivational states. Parker et al. (2010) argue that not all motivated individuals may be inclined to show proactive behaviour as the work context (for instance, lack of control) may prevent ‘motivation’ from leading to ‘proactive action’. Therefore, in their model, the work context has been suggested as a

moderator. Their model does not specifically highlight outcomes, but assumes that proactivity can lead to many positive consequences (Parker et al., 2010).

Bakker and Demerouti (2014) suggest that proactive goal generation is a self-starting behaviour, and is quite like the activity of job crafting where employees shape their environment proactively. Just like job crafting, in proactive goal generation, “the individual acts on his or her own volition rather than as the result of a specification or direction given by someone else” (Parker et al., 2010, p. 5). In their model, Parker et al. (2010) suggest that intrinsic motivation (the ‘reason to’ motivational state) is a precursor of proactive goal generation and goal striving. As discussed in chapter 2, work engagement is considered as an intrinsic motivational state (Kahn, 1990). Similar to Parker et al.’s (2010) model, the research model in this thesis also looks at individual and contextual predictors of the relationship between work engagement (the ‘reason to’ motivational state) and job crafting (proactive behaviour), with work context moderating the relationship between the two.

All the conceptual models discussed above (the JD-R model, the AMO model, and the model of proactive motivation) consider individual and situational factors as key antecedents, which lead to desired outcomes through motivation. The bifurcation of work engagement antecedents into situational and individual factors has been suggested by Bakker and Demerouti (2008). Similarly, in 2015, Slemp et al. described the positive impact of contextual and individual factors on workplace well-being. Besides these three models, conservation of resources theory, self-determination theory, and social exchange theory provide theoretical rationale for the relationships hypothesised in the research model.

#### **4.1.4 Conservation of resources theory**

Emerging from the literature on ‘stress’, Hobfoll’s (1989, p. 516) theory of conservation of resources suggests that “people strive to retain, protect, and build resources and what is threatening to them is the potential or actual loss of these valued resources”. In this theory, resources are defined as “those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies” (Hobfoll, 1989, p. 516). When individuals face resource loss, they try to counteract it by replacing it with other available resources (Hobfoll, 1989). According to Hobfoll (1989, p. 520), “individuals are motivated to gain resources”. Engaged employees are intrinsically motivated and hence, are more likely to build further resources, and craft their jobs. Resources have the potential to buffer the negative effects of demands for engaged employees (Bakker et al., 2007). Personal resources, such as core self-evaluations, give engaged employees the confidence that they can build further resources, through job crafting. Conservation of resources has been used as a theoretical framework in several work engagement studies (e.g., Halbesleben et al., 2009; Ragsdale & Beehr, 2016; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009b). Some relationships, hypothesised in my theoretical research model, draw from conservation of resources theory.

#### **4.1.5 Self-determination theory**

Self-determination theory focuses on different kinds of motivation. According to the theory, there are two kinds of self-determined behaviours: the first one being intrinsically motivated behaviours and the second type refer to externally motivated behaviours that are motivated by integrated internalisations (Deci & Ryan, 1985). Porter and Lawler (1968) suggest that

intrinsically motivated individuals do an activity because they find it inherently satisfying. Gagné and Deci (2005) argue that extrinsic motivation operates on a continuum of controlled motivation and autonomous motivation, the degree of which depends on self-determination. The theory further suggests that intrinsic motivation depends on the satisfaction of three basic needs: need for competence, autonomy, and relatedness (Gagné & Deci, 2005). According to Gagné and Deci (2005), out of the three needs, autonomy is considered the most important need for intrinsic motivation. Gagné and Deci (2005, p. 333) argue that “autonomy involves acting with a sense of volition and having the experience of choice”. Individuals, who are high in core self-evaluations, feel they are competent and this belief is likely to have a positive impact on their engagement levels. Engaged employees are intrinsically motivated (Kahn, 1990), and need work autonomy in their work to maintain their level of engagement and perform better. Many studies have based their work engagement research on self-determination theory (e.g., Kovjanic & Schuh, & Jonas, 2013; Schaufeli, 2015). In this thesis, some relationships are hypothesised based on the principles of self-determination theory.

#### **4.1.6 Social Exchange theory**

With its roots in the early 1920s (Cropanzano & Mitchell, 2005), social exchange theory revolves around obligations, which are dependent upon the actions of one individual/entity toward the other (Blau, 1964; Gouldner, 1960). A basic tenet of this theory is that there is an expectation of reciprocity. In other words, when one person/entity conducts an action for the benefit of the other, it is assumed that there will be an equivalent action in return (Cropanzano & Mitchell, 2005). Blau (1964, p. 94) argues that “the benefits involved in social exchange do not have an exact price in terms of a single quantitative medium of exchange”. This implies that social exchanges between two parties can be long-lasting. Social exchanges can be

between employees and another entity, which can be their supervisors, organisations they are employed with, customers, or even suppliers (Cropanzano & Mitchell, 2005). Similarly, Wayne, Shore, and Liden (1997) argue that social exchanges can be understood in two ways; a) between employees and supervisors (leader-member exchange), and b) employees and the organisation (perceived organisational support). LMX involves relationships between employees and their supervisors, which are based on reciprocity (Sparrowe & Liden, 1997). Organisational support theory is concerned with the development of beliefs by employees as to how much the organisation is concerned about their well-being (Eisenberger et al., 1986). In a synthesis of work engagement studies, Bailey et al. (2017) found that social exchange theory was the second most used theoretical framework (e.g., Alfes, Truss, Soane, Rees, & Gatenby, 2013; Saks, 2006; Teoh, Coyne, Devonish, Leather, & Zarola, 2016). In the current thesis, I am interested in social exchanges between employees and their supervisors, which are likely to lead to favourable individual outcomes.

The theoretical research model in this thesis focuses on situational and individual factors as predictors of work engagement, which is further related to performance, through the mediating role of job crafting, and the moderating role of work autonomy. The theories of ‘conservation of resources’, ‘self-determination’, and ‘social exchange’ provide explanatory power in the theoretical research model. The different paths of the suggested model will be discussed in the next few sections. I will begin by discussing the situational predictors of work engagement.

## 4.2 Situational factors

Work context plays an important role in employee well-being, and work engagement is considered as a kind of well-being (Bakker & Demerouti, 2007). Mowday and Sutton (1993, p.198) describe context as “stimuli and phenomena that surround and thus exist in the environment external to the individual, most often at a different level of analysis.” Similarly, Bakker et al. (2012, p.15) suggest that “organisation plays an important role in fostering engagement”. Job resources are an important part of the work characteristics available to employees. The JD-R model posits that job resources are the most important predictors of work engagement (e.g., Bakker & Demerouti, 2008; Christian et al., 2011). Developmental opportunities, support from supervisors, transformational leadership, skill variety, work autonomy, feedback, and task significance are some of the job resources that have been found to predict work engagement (Schaufeli, 2012).

Out of all the job resources, a supportive workplace is an important factor that creates the right conditions for work engagement (Wollard & Shuck, 2011). Levinson (1965) argues that acting as agents of the organisation, supervisors have an impact on how employees perceive organisational policies. This may be because supervisors interact with employees on a regular basis and play an important role in implementing the HR strategy of the organisation (Hutchinson & Purcell, 2010). Kottke and Sharafinski (1988) argue that employees can differentiate between organisational support and the support that they get from their supervisors.

In their model of proactive motivation, Parker et al. (2010) argue that leaders play a crucial role in shaping the motivation of employees. When leaders are supportive, they trigger

the motivation of employees, who respond by showing greater proactive behaviours. Similarly, Boxall and Purcell (2016, p. 158) argue that the “level of support” of line managers “can make a difference” to the performance of employees. A supervisor provides rewards for good performance, opportunities for development, and supports in making work more meaningful and, hence, can influence positive employee attitudes and behaviours (Eisenberger et al., 1986). In the absence of adequate support from their supervisors, it is quite likely that employees may feel disgruntled or demotivated, which can have an impact on their performance (Eisenberger et al., 1986).

Therefore, keeping in view the important role of supervisors in the work-life of employees, in this thesis ‘supportive supervisory style’ was chosen as one of the predictors of work engagement. Moreover, the way I have defined the construct ‘supportive supervisory style’ has been rarely studied as a predictor of work engagement in previous research. Before analysing the relationship between supervisors and work engagement, it is important to understand what is meant by ‘supportive supervisory style’.

#### **4.2.1 Supportive supervisory style**

In this thesis, the words ‘supervisors’ and ‘line managers’ have been used interchangeably. Supervisory support refers to the perceptions of employees about the support provided by their supervisors in shaping their work context (Chen, Li, & Leung, 2016). The HRM practices are experienced by employees through line managers (Boxall & Purcell, 2016) and for HRM practices to be effective, line managers’ involvement is imperative (Wright, McMahan, Snell, & Gerhart, 2001). “Line managers’ action or inaction is often responsible for the difference between espoused HR practices and their enactment” (Boxall & Purcell, 2016, pp. 166-167).

Line managers play an important role in how the HRM practices will be perceived by the employees (Purcell & Hutchinson, 2007). Hence, rather than analysing data on intended practices, perceptions assume significance because employees' attitudes are formed through these perceptions (Nishii, Lepak, & Schneider, 2008). Alfes, Shantz, and Truss (2012) argue that there is considerable research on the effect of individual HRM practices on outcomes, but it is employee perceptions of the entire 'bundle' that is important to make important inferences.

In the current thesis, 'supportive supervisory style' is defined as the perception of employees of the support provided by their supervisors; their perception of support being how they perceive the implementation of HRM practices by their supervisors. Next, the impact of 'supportive supervisory style' on work engagement of employees will be discussed.

#### **4.2.2 Supportive supervisory style as a predictor of work engagement**

How does a supportive supervisory style influence work engagement? Social exchange theory (Blau, 1964) suggests that when employees perceive their supervisors to be supportive, they are more likely to reciprocate by showing greater engagement and commitment in their work. Building on this, organisational support theory (Eisenberger et al., 1986) is a framework through which the relationship between supportive supervisory style and work engagement can be understood. This theory suggests that employees perceive the actions by line managers as indicative of the intentions of the organisation and this leads to perceptions of organisational support. In a meta-analysis of 70 studies, Rhoades and Eisenberger (2002) found that supervisory support predicts perceived organisational support, which in turn was related to job satisfaction and positive mood.

In his seminal article, Kahn (1990) suggests that when supervisors are supportive it makes employees feel psychologically safe, thus creating conditions for work engagement. Kuvaas, Dysvik, and Buch (2014) found that line managers' perception of enabling HRM practices had an impact on employees' intrinsic motivation through the mediating role of employees' perceived supervisory support. Kuvaas et al. (2014) define enabling HRM practices as the extent to which these practices help line managers in carrying out their responsibilities. Similarly, other studies have found a link between supervisory support and intrinsic motivation (e.g., Fecteau, Dobbins, Russell, Ladd, & Kudisch, 1995; van Yperen & Hagedoorn, 2003). As discussed earlier, work engagement is considered an intrinsic motivational state.

Apart from a link with intrinsic motivation, some studies have also found evidence of a positive relationship between supervisory support and work engagement (e.g., Freeney & Fellenz, 2013; Hakanen et al., 2006; Holland, Cooper, & Sheehan, 2016; May et al., 2004; Schaufeli & Bakker, 2004; Simbula, Guglielmi, & Schaufeli, 2011). Supervisory support has also been found to mitigate the negative effects of job demands. For instance, in a study of teachers, Bakker et al. (2007) found that supervisory support (as one of the job resources) predicted work engagement, especially when the teachers experienced pupil misbehaviour (job demand). Here, supervisory support acted as a mediator between pupil misbehaviour and work engagement.

Although there have been studies to understand how supportive supervisors foster the engagement of employees, there is a need to understand this relationship more. Bakker et al. (2011a, p. 13) argue that "the role of the leader in fostering work engagement has received limited research attention". Studies have generally either looked at leadership styles (such as transformational leadership) in understanding this relationship (e.g., Schmitt et al., 2016; Tims,

Bakker, & Xanthopoulou, 2011) or have looked at the social support component of supervisory support (e.g., Vera et al., 2016). The studies that have investigated supervisory support have not related it in detail to employee perceptions of the implementation of the HRM practices. For instance, Hakanen et al. (2006) studied supervisory support as one of the job resources, but it was measured with three generic support items. Similarly, Swanberg, McKechnie, Ojha, and James (2011) used a general measure of perceived social support from supervisors to measure the construct. Jose and Mampilly (2015), and Saks (2006) used a generic four-item measure of perceived supervisory support, which was adapted from a survey of perceived organisational support. In another study, Beattie and Griffin (2014) adapted the survey of perceived organisational support (by replacing the word ‘organisation’ with ‘supervisor’) to measure the impact of supervisory support on work engagement. Biggs, Brough, and Barbour (2014) used a generic scale to measure supervisor and colleague support together.

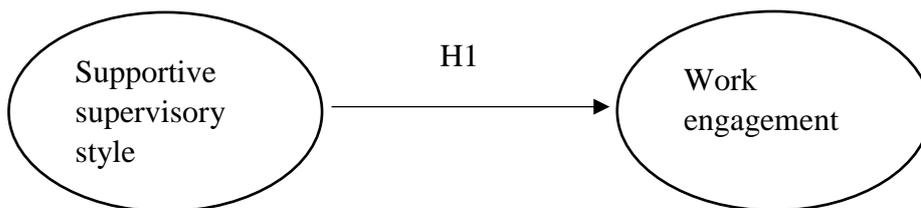
There are a few studies that have examined the impact of perceived HRM practices on work engagement, but these studies have looked at employee perceptions of HRM practices as implemented by the organisation and not by supervisors. For instance, Alfes et al. (2013) studied the perceptions of employees of the HRM practices in the organisation, but did not study the perceptions regarding the role of supervisors in this implementation. In the same way, Zhong, Wayne, and Liden (2016) found that HRM practices were related to work engagement but they did not capture employee perceptions of the implementation of these practices. From these studies, it seems that the effect of supervisory support (measured as employee perceptions of the implementation of HRM practices by their supervisors) on the work engagement of their employees needs more exploration. Based on this, as well as the reciprocity from social exchange perspective, it is hypothesised that:

Hypothesis 1 (H1): Supportive supervisory style is positively related to work engagement.

This forms the first part of the research model where a situational factor (supportive supervisory style) has been hypothesised to predict work engagement (Figure 4.4). Now, let us turn to the next part of the research model, which is about individual factors as predictors of work engagement.

Figure 4.4.

Model development: part 1.



### 4.3 Individual factors

Hobfoll et al. (2003, p. 632) define personal resources as “aspects of the self that are generally linked to resiliency”. Bakker, Demerouti, and Sanz-Vergel (2014) argue that personal characteristics may be a better predictor of motivation, and hence relate to work engagement. Kahn (1990) argues that individual differences play an important role in understanding the engagement of people. In line with this, Xanthopoulou et al. (2007, p. 137) argue that “employees who hold personal resources are confident about their capabilities and optimistic

about their future, and thus may identify or even create more aspects of their environment that facilitate goal attainment. This capability leads to goal confrontation and consequently to work engagement". This suggests that employees who possess valuable personal resources are more likely to be engaged.

Some studies have found evidence of a positive relationship between personal factors and engagement. Work engagement has been found to be predicted by proactive personality (Bakker et al., 2012), core self-evaluations (Rich et al. 2010), psychological capital (Karatepe & Karadas, 2015), organisation-based self-esteem, optimism, and self-efficacy (Xanthopoulos et al., 2009a). The positive relationship between individual factors (such as optimism, self-efficacy, positive affect, conscientiousness, and proactive personality) and work engagement has been demonstrated in a meta-analysis as well (Christian et al., 2011). Therefore, it is quite plausible that individual factors predict work engagement.

Out of the various person-related resources, core-self evaluations are an under-researched area with respect to work engagement (e.g., Karatepe & Demir, 2014; Rich et al., 2010). Moreover, Chen (2012, p.153) argues that core self-evaluations have become "a prominent individual difference factor to be considered in organisational behaviour research". Therefore, core self-evaluations (CSEs) were selected as a 'personal resource' in this thesis. The next section will now describe the meaning and characteristics of core self-evaluations.

#### **4.3.1 Core self-evaluations**

Core self-evaluations are defined as "fundamental evaluations that people make about themselves and their worthiness, competence, and capability" (Judge et al., 2005, p. 258).

Judge, Locke, and Durham (1997) conducted research to investigate the dispositional characteristics that influence job satisfaction and in the process, came up with the core evaluations construct. Judge et al. (1997) argue that core evaluations are fundamental base-line evaluations that people hold not only about themselves but also others and the world, and the most important evaluation out of all these are the core self-evaluations. Judge et al. (1997) identified four traits (generalised self-efficacy, self-esteem, emotional stability, and locus of control), which formed part of the higher order core self-evaluations, based on three criteria: evaluation focus of the trait (as opposed to description), fundamentality of the trait (as opposed to being surface traits), and scope of the trait (broad as opposed to being narrow).

Self-efficacy refers to the beliefs that people have regarding their ability to effect outcomes, and has a direct relation to the degree of effort people will exert and maintain to overcome obstacles (Bandura, 1991). Although self-efficacy was initially considered to be a situation-specific behaviour, it was found to be related to a broader context as it could be generalised to different situations (Judge et al., 1997). Park, Beehr, Han, and Grebner (2012) argue that general self-efficacy is different from ability. According to Park et al. (2012), ability can be in a specific domain whereas general self-efficacy is independent of context. So even if people feel low on specific self-efficacy (ability), a high level of general self-efficacy may lead to positive outcomes (Park et al., 2012).

Self-esteem refers to the value individuals attach to themselves in terms of their competence and worthiness and is the broadest and most fundamental core self-evaluations trait (Judge et al., 1997). Emotional stability refers to being calm and composed and is the opposite of neuroticism (Judge & Bono, 2001). Individuals who score high on neuroticism are more likely to experience negative psychological and physical outcomes (Judge & Bono,

2001). Locus of control refers to feeling mastery over one's life (Levenson, 1974). People with an internal locus believe they can control the outcomes in their lives, but external-locus individuals attribute the outcomes to powerful others or fate (Levenson, 1974).

Judge and Bono (2001) argue that the four individual traits of generalised self-efficacy, self-esteem, locus of control, and emotional stability are highly related. A meta-analysis of 274 correlations has shown similar correlations of the four traits with job performance and job satisfaction (Judge & Bono, 2001). Erez and Judge (2001) argue that a higher order core self-evaluations construct comprising the four traits is a better predictor of performance.

Chang, Ferris, Johnson, Rosen, and Tan (2012) suggest that core self-evaluations are broader in scope as compared to other personality traits as they are not restricted to a particular context. Judge, van Vianen, and de Pater (2004) found that the four core self-evaluations traits correlate substantially with the Big Five Traits (neuroticism, extraversion, openness, agreeableness, and conscientiousness). Based on their results, Judge et al. (2004, p. 342) suggest that core self-evaluations are "the most useful personality trait in the realm of human performance".

Judge and Kammeyer-Mueller (2011) argue that individuals who are high in core self-evaluations are self-motivated and believe they can achieve successful outcomes. Kammeyer-Mueller, Judge, and Scott (2009) conducted a meta-analysis and found that core self-evaluations were related to fewer perceived stressors, lower strain, less avoidance coping, and more problem-solving coping. There is research evidence that higher levels of core self-evaluations are associated with a higher level of work-related motivation (Erez & Judge, 2001), job satisfaction (Hsieh & Huang, 2017), work engagement (Rich et al., 2010), performance

(Chang et al., 2012), and lower turnover intentions (Chang et al., 2012). Hence, it is evident that core self-evaluations, as a trait, are related to important employee outcomes.

#### **4.3.2 Core self-evaluations as a predictor of work engagement**

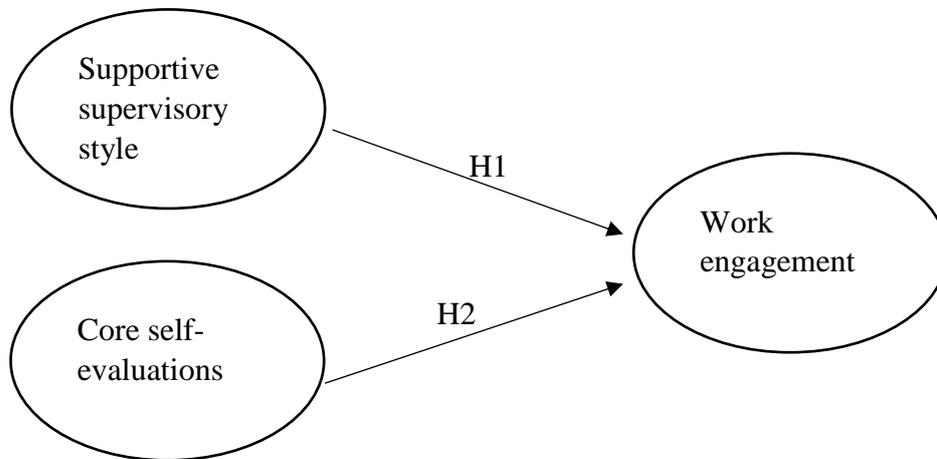
Judge and Kamneyer-Mueller (2011, p. 333) argue that “there is reason to expect that individuals who are higher in core self-evaluations will be more motivated and diligent at work”. Such individuals are more likely to be engaged in their work as they believe in their own agency. As discussed earlier, personal resources have a motivating potential. Rich et al. (2010) argue that individuals with high core self-evaluations are confident and feel more psychologically available to engage. There is empirical evidence that core self-evaluations predict work engagement, although there are only few studies that have studied this relationship (e.g., Haynie et al., 2017; Karatepe & Demir, 2014; Rich et al., 2010). In a study of 700 Finnish employees, Moazami-Goodarzi, Nurmi, Mauno, and Rantanen (2015) found that core self-evaluations predicted vigour, which is one of the three core dimensions of work engagement. Judge (2009) argues that more research is required to explore the linkages of core self-evaluations with different variables, in various contexts. Based on the theoretical and empirical linkage of core self-evaluations to work engagement, it is hypothesised that:

Hypothesis 2 (H2): Core self-evaluations are positively related to work engagement.

At this stage, two variables have been identified as predictors of work engagement (Figure 4.5). The next part of the model explains the relationship between the two key variables in this thesis: work engagement and job crafting.

Figure 4.5.

Model development-part 2.



#### **4.4 Relationship between work engagement and job crafting**

Bakker, Albrecht, and Leiter (2011b) argue that engaged employees are more likely to craft their jobs because they are positive and like to try new things. Therefore, engaged employees tend to make proactive changes in their work environment (Bakker et al., 2012). One of the reasons for this could be that when employees are engaged, they “do not just let life happen to them. Rather, they try to affect, shape, curtail, expand, and temper what happens in their lives” (Grant & Ashford, 2008, p.4). Engaged employees are intrinsically motivated and are more inclined to display proactive behaviours (Salanova & Schaufeli, 2008) since they are vigorous, dedicated, and absorbed in their work (Sonnetag, 2003). Gagné and Deci (2005, p. 331) argue that “intrinsic motivation involves people doing an activity because they find it interesting and derive spontaneous satisfaction from the activity itself”. Therefore, engaged employees are more likely to create job resources (for instance, developmental opportunities) because they are intrinsically motivated (Schaufeli, 2012).

The job demands-resources model posits that engaged employees build their own resources (Bakker & Demerouti, 2008) as they have a positive orientation towards their work environment (Bakker & Demerouti, 2007). Fredrickson's (2001) broaden-and-build theory suggests that positive states inspire people to increase their thought-action reservoirs and in this process they accumulate more resources. Similarly, conservation of resources theory states that individuals strive to obtain and protect resources (Hobfoll, 1989). This is more likely for engaged individuals because they already possess many job resources (Schaufeli, 2012) and display proactive behaviours (Salanova & Schaufeli, 2008). Parker et al.'s (2010) proactive model of motivation suggests that intrinsic motivational states provide an impetus to individuals to make proactive changes in their work environment. Work engagement has been empirically linked to proactive behaviour (Caesens, Marique, Hanin, & Stinglhamber, 2016), innovative work behaviour (Gorgievski, Moriano, & Bakker, 2013), personal initiative (Hakanen et al., 2008; Sonnentag, 2003), and creativity (Bakker & Xanthopoulos, 2013).

In their conceptual article, Bakker et al. (2011a, p. 17) suggest that "engaged employees craft their own jobs – they increase their job challenges and job resources – in order to stay engaged." In line with this, Hyvönen et al. (2009) found a positive relationship between work engagement and increases in occupational knowledge. Similarly, in another study, it was found that work engagement led to an increase in job demands (Sonnentag et al., 2010). In their proposed model of job crafting, Tims and Bakker (2010) depicted a loop from work engagement to job demands and job resources, thus suggesting that engaged employees can influence their work environment. As discussed in Chapter 2 and 3, there are very few studies that have researched the link from work engagement to job crafting (e.g., Hakanen et al., 2017; Harju et al., 2016; Lu et al., 2014; Vogt et al., 2016). The results of these studies have been mixed. Where Hakanen et al. (2017), Lu et al. (2014), and Harju et al. (2016) found a link

between work engagement and job crafting, Vogt et al.'s (2016) study was unable to find it. However, based on theoretical arguments, it seems likely that engaged employees can craft their jobs and there is a need for future studies to understand this relationship (Bakker et al, 2011a). Therefore, based on theoretical reasoning and empirical evidence, it is hypothesised that:

Hypothesis 3 (H3): Work engagement is positively related to job crafting.

#### **4.5 Work autonomy as a moderator**

Freaney and Fellenz (2013) argue that contextual factors impact on well-being. Self-determination theory suggests that work autonomy, as a work context, is an important factor for optimal functioning (Ryan & Deci, 2000). Deci and Ryan (2008) argue that when employees have greater autonomy they feel more in control of their work environment. The self-determination theory further postulates that autonomy is one of the three intrinsic psychological needs (the other two being relatedness and competence) that can lead to well-being (Ryan & Deci, 2000). The meaning of work autonomy and its importance for individual outcomes will be discussed next.

##### **4.5.1 Work autonomy**

Schreurs, Guenter, Emmerik, Notelaers, and Schumacher (2015) argue that work autonomy has been defined in various ways by different scholars. Hackman and Oldham (1975, p.162) define work autonomy as “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”. Breugh (1985) argues that work autonomy is not global, but has different dimensions. With this view in mind, Breugh (1985, p. 556) defines work autonomy as “the degree of control or discretion a worker is able to exercise with respect to work methods, work scheduling, and work criteria.” According to Breugh (1985, p. 556), work method autonomy is “the degree of discretion/choice individuals have regarding the procedures (methods) they utilize in going about their work.” Work scheduling autonomy is defined as “the extent to which workers feel they can control the scheduling/sequencing/timing of their work activities” (Breugh, 1985, p. 556). Work criteria autonomy is defined as “the degree to which workers have the ability to modify or choose the criteria used for evaluating their performance” (Breugh, 1985, p. 556). Breugh (1985) argues that the definition of work autonomy by other researchers (such as Hackman & Oldham, 1976) is confusing as it includes work autonomy as well as worker independence. I agree with the approach suggested by Breugh (1985) since it encompasses different aspects of work autonomy: criteria, schedule, and methods. Hence, this thesis uses Breugh’s (1985) definition in measuring work autonomy.

Autonomy is one of the many job characteristics Hackman and Oldham (1976) suggest, which can have a positive effect on desired work outcomes. Hackman and Oldham (1976) suggest that work autonomy would be positively related to outcomes such as job performance and satisfaction. Man and Lam (2003) argue that work autonomy gives employees an opportunity to utilise their knowledge and skills in order to get desirable work outcomes. Research has demonstrated the positive relationship of work autonomy with organisational citizenship behaviour (Nesheim, Olsen, & Sandvik, 2017), work quality (Dysvik & Kuwaas, 2011), job performance (Nesheim et al., 2017), intrinsic motivation (Gagné & Deci, 2005), and pay satisfaction (Williams, McDaniel, & Nguyen, 2006).

Schreurs et al. (2015) argue that work autonomy has an important place in several work characteristics models such as the job demand-control-support model (Johnson & Hall, 1988), the vitamin model (Warr, 1987), and the job demands-resources model (Demerouti et al., 2001). Haar and Spell (2009) argue that work autonomy can be an inherent part of the job in some occupations, whereas in others it could be at the will of the management. It is likely that employees assume they can make changes to their tasks when the managers provide them with greater discretion in carrying out activities (Haar & Spell, 2009) as they feel more trusted (Kahn, 1990). Hence, it can be assumed that work autonomy is an important part of one's work environment and is related to various positive outcomes.

Although work autonomy has been mainly studied as a mediator, there is evidence that it can be a boundary condition too. Baron and Kenny (1986) suggest that variables can either mediate or moderate relationships if they are supported by a theoretical rationale. Work autonomy has been studied as a moderator in various studies (e.g., Giebels, Reuver, Rispens, & Ufkes, 2016; Llopis & Foss, 2016). As an example, Schreurs et al. (2015) studied work autonomy as a moderator between pay level satisfaction, and employee outcomes of job satisfaction, affective commitment, and intention to stay. Their results indicated that work autonomy mitigated the negative effects of low pay satisfaction on all three employee outcomes. In a study of 196 supervisor-employee dyads, Kim, Cable, Kim, and Wang (2009) found that employees who felt emotionally competent delivered higher work performance; this relationship was mediated by interpersonal proactive behaviours and moderated by work autonomy. In their study, work performance was measured by task effectiveness and social integration. Another example is a quantitative study of 248 prison employees, where Rousseau, Salek, Aubé, and Morin (2009) demonstrated that work autonomy moderated the negative impact of procedural injustice (fairness of process related to decisions, such as pay) on

psychological health-related problems. In another study, Haar and Spell (2009) found that work autonomy moderated the positive effect of distributive justice (fairness of pay-related decisions) on pay satisfaction. In a daily diary study of 114 employees, Kühnel, Sonnentag, and Bledow (2012) found that job control moderated the relationship between time pressure and work engagement. Kühnel et al. (2012) found that when employees had high control over their job, time pressure was positively related to work engagement and on days when job control was low, there was a negative relationship between time pressure and work engagement. As evident in the above-mentioned studies, work autonomy is an important resource that can moderate the relationship between two variables and, thus, impact their relationship. When individuals have greater autonomy, it typically impacts how they conduct their work. Next, the role of work autonomy, as a moderator between work engagement and job crafting, will be discussed.

#### **4.5.2 Work engagement and job crafting: work autonomy as a moderator**

Christian et al. (2011) argue that when employees feel they have greater control over their work, they are more likely to exhibit engagement. Similarly, self-determination theory suggests that autonomy is an important condition for employees to be intrinsically motivated (Gagné & Deci, 2005). There has been considerable research evidence around the relationship of work autonomy with work engagement (e.g., Christian et al., 2011; Freeney & Fellenz, 2013; Vera et al., 2016). However, there are mixed findings with respect to the relationship of work autonomy with job crafting. Where Lyons (2008) found that work autonomy was related to job crafting, Kantén (2014) did not find any such association. In a recent study with two separate measurement points (two weeks), Niessen et al. (2016) found that although work autonomy did

not predict job crafting in Time 1, it did so in Time 2. Niessen et al. (2016) suggest that this could be due to a short time lag of two weeks.

In their conceptual article, Wrzesniewski and Dutton (2001) suggest that work autonomy can be a predictor or a moderator in understanding job crafting behaviours. Wrzesniewski and Dutton (2001, p. 184) argue that “autonomy in the job leads to perceived opportunities for job crafting and encourages employees to alter the task and relational boundaries of their jobs”. Wrzesniewski and Dutton (2001) argue that individuals like to have control over their environment and even if the opportunity to do so is low, they can still shape their work. In line with this, Bakker and Demerouti (2014) suggest that work autonomy is a job resource that is present in every job although in varying degrees. This was demonstrated in a study by Berg et al. (2010), who found that all participants in their study engaged in job crafting, irrespective of their rank, although they faced different challenges before crafting their jobs. Binnewies, Sonnentag, and Mojza (2009) found that in conditions of high job control, the employees who felt recovered in the morning displayed more proactive behaviours during the day. Hence, it is probable that work autonomy impacts on job crafting behaviours as control over one’s job acts as an important trigger to do so (Parker et al., 2010). To this end, Parker et al. (2010, p. 14) suggest that “one of the most important inhibitors of proactive work behaviour is a lack of job control”. When managers provide an opportunity to the employees in the form of work autonomy, it gives out a signal that the organisation is open to employees making changes in their jobs (Berg et al., 2013).

In the previous section, it was suggested that work engagement will lead to job crafting. However, do engaged employees always craft their jobs? Bakker et al. (2011b, p. 82) put up a thought-provoking idea by asking “What are the boundary conditions of the relationship

between engagement and job crafting”? Alfes et al. (2013) argue that the work environment may enable engaged employees to exhibit certain behaviours or suppress them. This suggests that engaged employees may display less positive behaviours due to lack of support from the work environment. Wrzesniewski and Dutton (2001, p. 183) suggest that “motivation to craft a job is more likely to spark job crafting when employees perceive that opportunities for job crafting exist. Perceived opportunity to craft a job refers to the sense of freedom or discretion employees have in what they do in their job and how they do it”. Similarly, Parker et al. (2010, p. 14) argue that “aspects of the work context can intervene to prevent individuals high in can do, reason to, and energized to motivations from being proactive”. In their exploratory research, where they developed the job crafting scale, Tims et al. (2012) suggest that work autonomy could be a boundary condition for initiating job crafting behaviours.

Until now, to my knowledge, there has not been any study that has examined work autonomy as a moderator between work engagement and job crafting, although there have been studies that have focused on the relationship between them in some other way. As an illustration, job crafting was found to mediate autonomy and well-being (as measured by workplace positive affect, workplace negative affect, and job satisfaction) in a study by Slemp et al. (2015). Similarly, in a diary study of 95 employees, Demerouti et al. (2015) found that day-level resources were positively related to day-level work engagement through day-level work autonomy. These studies suggest that work autonomy interacts with work engagement, which provides an impetus for job crafting.

Berg et al. (2013) assert that there is a need to identify the moderators affecting job crafting behaviours. Moreover, Wrzesniewski and Dutton (2001, p. 183) argue that “perceived opportunity for job crafting moderates the relationship between motivation to job craft and job

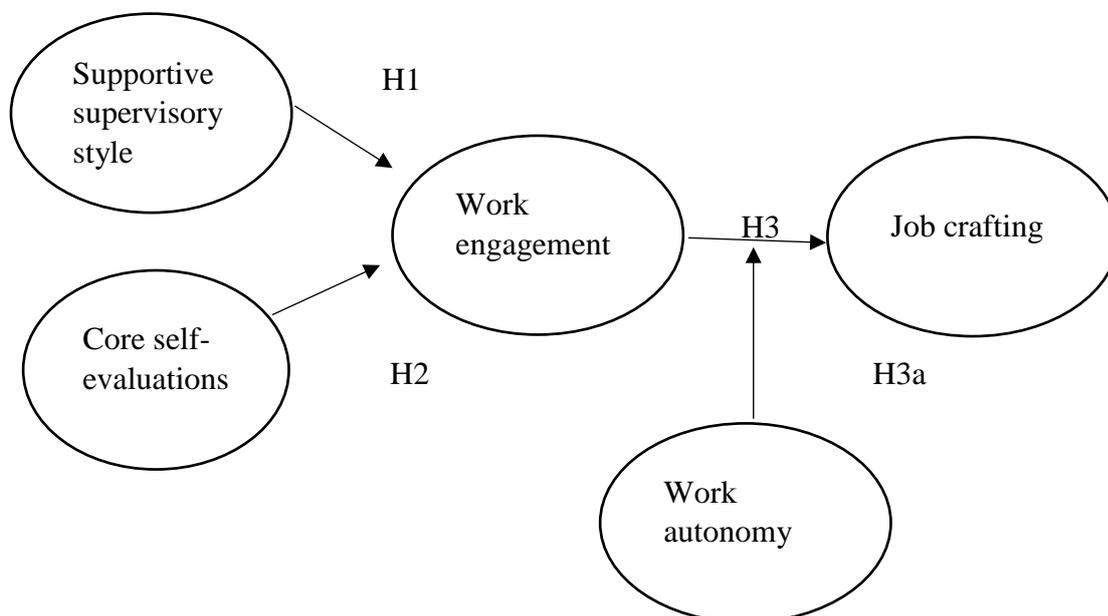
crafting behaviours”. Work engagement is an intrinsic motivational state and it is probable that engaged employees will craft their jobs, especially in a work environment that provides them greater control over their job. In view of the theoretical reasoning and empirical evidence, it is hypothesised that:

Hypothesis 3a (H3a): The direct positive relationship between work engagement and job crafting will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

The research model (Figure 4.6) until now suggests that supportive supervisory style and core self-evaluations are related to work engagement, which is further related to job crafting. Work autonomy is hypothesised to moderate between work engagement and job crafting. Next, the relationship of all these variables with individual performance will be explored.

Figure 4.6.

Model development: part 3.



#### **4.6 Job crafting and task performance**

Borman and Motowidlo (1997, p.99) define task performance as "the effectiveness with which job incumbents perform activities that contribute to the organisation's technical core either directly by implementing a part of its technological process, or indirectly by providing it with needed materials or services". It is quite similar to the definition of in-role performance (Bakker et al., 2004) but different from contextual performance (also known as extra-role performance or organisational citizenship behaviours), as in the latter the focus is on performing tasks for the organisation, which are not formally part of one's job description (Borman & Motowidlo, 1997). Borman and Motowidlo (1997) argue that since overall performance ratings are highly influenced by contextual performance, it is important to measure task and contextual components separately to know their relative impact. Previous studies have measured task and contextual performance separately, and have demonstrated their empirical distinctiveness (e.g., Turnley, Bolino, Lester, & Bloodgood, 2003; Xanthopoulou et al., 2008).

In the current study, job crafting was hypothesised to relate to task performance only, and not contextual performance. There were several reasons for this decision. Firstly, I believe that individuals craft their jobs so that their work is more aligned with their needs and abilities. In other words, employees craft their jobs so that they can perform their role better due to this enhanced fit. Goodman and Svyantek (1999, p. 255) suggest that contextual behaviours are "less role-prescribed" and are "common to many (or all) jobs". Goodman and Svyantek (1999, p. 256) further argue that "person-job fit is important for task performance" and contextual performance is more related to organisational fit. Similarly, Demerouti et al. (2015) argue that "extra-role behaviours are by definition not the most essential for one's work performance" (p. 93). Since individuals craft their jobs to fit with their job, it is more likely that job crafting will

predict task performance rather than contextual performance. Secondly, there have been mixed findings in this area. For instance, Tims et al. (2015) found that job crafting was not related to organisational citizenship behaviours, either directly or through work engagement. Demerouti et al. (2015) found support for job crafting (of resources) as a predictor of contextual performance through the mediating role of work engagement although they did not any direct association between the two. In both these studies, job crafting did not impact contextual performance directly, although in one of these studies (Demerouti et al., 2015), there was an indirect effect through work engagement. This suggests that job crafting does not directly impact contextual performance, although there is a possibility of an indirect effect through work engagement or another mechanism. Due to these reasons, it was decided to not include contextual performance as an outcome of job crafting.

Now, the relationship between job crafting and task performance will be explored. Tims and Bakker (2010) argue that individuals craft their jobs to get favourable outcomes, and proactive individuals are more likely to give positive outcomes since they try to change their environment (Crant, 2000). Similarly, Leana et al. (2009) suggest that when employees craft their 'job resources' and 'challenging job demands', there is a greater possibility that it will lead to an increase in their task performance. There can be many reasons for this. Firstly, when employees gather more job resources, they are in a better position to use those resources in enhancing task performance (Tims et al., 2013). Therefore, when employees craft their jobs to create job resources (such as feedback or support from others), they feel more inclined to put an effort to achieve their goals (Bakker & Demerouti, 2008). Secondly, it is also likely that individuals craft their jobs so that their jobs are more aligned to their abilities and needs (Demerouti & Bakker, 2014). This enhanced 'fit' of individuals with their work enables them

to give better task performance. Lastly, when employees seek challenges, they may feel competent to achieve work goals (Petrou et al., 2015).

Job crafting has been empirically linked to task performance in various studies (e.g., Bakker et al., 2012; Demerouti et al., 2015; Leana et al., 2009). As an illustration, Weseler and Niessen (2016) conducted a study of 131 employee-supervisor pairs and found that task crafting was related to task performance (both self-rated as well as rated by supervisors). Weseler and Niessen (2016) did not find support for a link between relational crafting with supervisor-related task performance, although there was an association between relational crafting and self-rated task performance. Weseler and Niessen (2016) did not find any relationship between cognitive crafting and task performance, whether self-rated or rated by supervisors. Similarly, in a longitudinal study of 580 police officers, Petrou et al. (2015) found that job resources and challenging demands were positively associated with task performance. However, Petrou et al. (2015) found that crafting of ‘job resources’ and ‘challenging job demands’ was not directly related to in-role performance: this relationship was fully mediated by work engagement. Similarly, Demerouti et al. (2015) found that ‘daily seeking resources’ was related to ‘daily task performance’ through the sequential mediating roles of ‘daily autonomy’ and ‘work engagement’. Therefore, based on the theoretical reasoning and empirical evidence, it is hypothesised that:

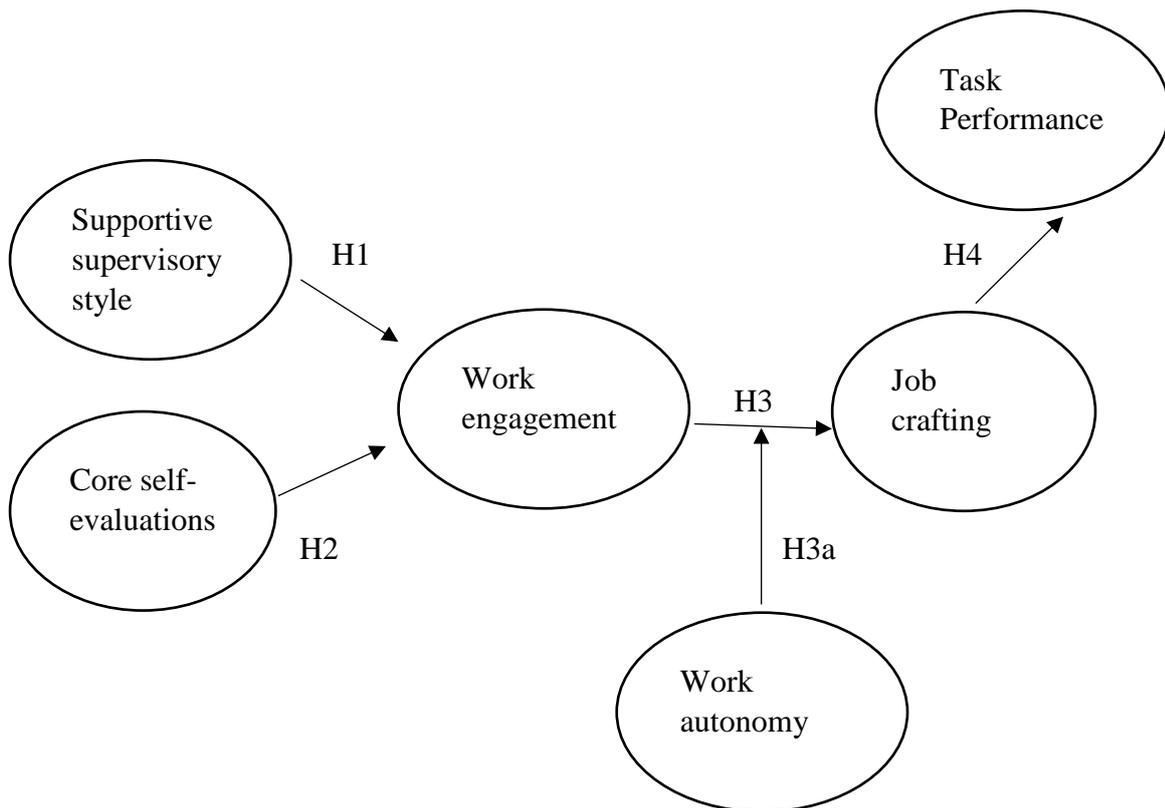
**Hypothesis 4 (H4): Job crafting is positively related to task performance**

After hypothesising the relationship of job crafting with task performance, the theoretical model (Figure 4.7) will now be elaborated by discussing how the other variables

are also related to performance. With this in mind, the relationship of work engagement with task performance will be explored next.

Figure 4.7.

Model development: part 4.



#### 4.7 Work engagement and task performance

Bakker and Demerouti (2008) argue that engaged employees perform better because they experience positive emotions, enjoy better health, create more resources, and pass on their engagement to team members. The positive relationship between work engagement and task performance is demonstrated in various studies (e.g., Bakker et al., 2012; Christian et al., 2011; Halbesleben & Wheeler, 2008; van Wingerden et al., 2016). Although studies have found a positive relationship between work engagement and task performance, “it is not clear yet why

engagement leads to performance” (Schaufeli, 2012, p. 7). Arguing similarly, Parker and Griffin (2011, p. 64) assert that “engagement does not always lead to high performance, nor does high performance always indicate engagement” and so “a straightforward association between them cannot be assumed”. Furthermore, Kim, Kolb, and Kim (2013, p. 264) argue that there is a need for “conceptual or structural model development surrounding work engagement and performance”. So, in this thesis it has been hypothesised that work engagement will lead to task performance, through either a mediating or a moderating mechanism.

#### **4.7.1 Mediating mechanism**

I am hypothesising that work engagement will lead to job crafting (Hypothesis 3a), and job crafting will further lead to task performance (Hypothesis 4). Hence, it is plausible that job crafting might be a mechanism through which engaged employees perform better. It was suggested by Schaufeli (2012) that job crafting can be one mechanism, which can explain the path from work engagement to performance. Continuing with this thought, Schaufeli (2012, p. 7) argues that when engaged employees craft their jobs, it is likely that it “boosts their motivation and hence their performance”.

Until now, there has not been any study that has investigated the indirect effect of work engagement to task performance, through the mediating role of job crafting. There have been a few studies that have examined the alternative relationship i.e., the indirect effect of job crafting on task performance, through work engagement. For instance, Tims et al. (2013) found that vigour partially mediated the indirect relationship between job crafting (‘increasing structural job resources’ and ‘challenging job demands’) and performance. Similarly, Bakker et al. (2012), and van Wingerden et al. (2016) found that job crafting was related to in-role

performance through work engagement. Job crafting and work engagement can impact each other, as was demonstrated in a longitudinal study by Harju et al. (2016). So, if employees who craft their jobs can feel more engaged and hence give better performance, then a similar scenario is also possible, where engaged employees feel motivated to craft their work environment and thus give better performance. To the best of my knowledge, this relationship has not been studied earlier. Based on the above reasoning, it is hypothesised that:

Hypothesis 5 (H5): Work engagement is positively related to task performance through the mediating role of job crafting.

#### **4.7.2 Moderated mediation mechanism**

I hypothesised earlier that work autonomy moderates the relationship between work engagement and job crafting (Hypothesis 3a). It was also hypothesised that job crafting mediates the relationship between work engagement and task performance (Hypothesis 5). It is therefore likely that work autonomy also moderates the mediation of job crafting on the relationship between work engagement and task performance. It is possible that engaged employees engage in job crafting behaviours when they perceive greater control over their work, which ultimately has a positive impact on their task performance. Although this moderated mediation relationship has not been studied earlier, it can be theoretically derived from H3b and H5. In a recent study of 95 employees, Demerouti et al. (2015) found that job crafting (day-level resources) was positively related to day-level work engagement through day-level work autonomy. Work engagement was further related to day-level task performance. This suggests that the dynamics between work engagement, job crafting, and work autonomy

have a favourable impact on task performance. The important role of work autonomy can also be understood from the lens of self-determination theory. Therefore, it is hypothesised that:

Hypothesis 5a (H5a): The indirect positive relationship between work engagement and task performance, through the mediating role of job crafting, will be moderated by work autonomy such that the indirect effect will be stronger when work autonomy is higher.

#### **4.7.3 Moderating mechanism**

Sonnentag (2011) (as cited in Bakker et al., 2011b, p. 83) questioned: “under which conditions does work engagement result in positive or negative work outcomes?” This leads to another question: are there any boundary conditions that enable engaged employees to deliver higher performance? Halbesleben (2011, p. 69) suggests that “more work is needed on moderators to the engagement-performance relationship to better understand the strategies employees take when investing their resources.” Furthermore, Parker and Griffin (2011) assert that contextual factors can moderate the relationship between work engagement and performance. Similarly, Bakker et al. (2011b, p. 83) argue that “future research on engagement should look for moderators”. So, now the question is: what factors can moderate the work engagement-task performance relationship, and why? To answer these questions, let us first look at work autonomy as a possible moderator and explore the reasons as to why it can act as a boundary condition.

Hackman and Oldham (1980) argue that employees are more intrinsically motivated when they are in more autonomous jobs, and so autonomy can be considered a key work characteristic that leads to performance through motivation. Bakker and Demerouti’s (2014)

JD-R model also signifies the importance of job resources in enhancing work engagement and, as discussed earlier, work autonomy is an important job resource. Furthermore, Boxall and Purcell (2016) emphasise the importance of opportunity to perform as a key driver of performance, in the AMO model. This was evident in a study by Boxall and Macky (2014), where they demonstrated that when employees had greater autonomy in their work, they reported well-being in terms of higher job satisfaction and better work-life balance. In their meta-analysis, Christian et al (2011) found that autonomy was an important job resource that predicts engagement.

In a study among 302 employees from various Norwegian service organisations, Dysvik and Kuvaas (2011) found that intrinsic motivation moderated the impact of work autonomy on performance. In their study, Dysvik and Kuvaas (2011) defined performance as quality of work. Based on their results, Dysvik and Kuvaas (2011) suggest that employees who have low intrinsic motivation may not have the drive or passion to work independently towards goals. This indicates that work autonomy might interact with work engagement in delivering better task performance. This can also be viewed from the lens of social exchange theory (Blau, 1964): when engaged employees enjoy greater autonomy to perform their tasks, they reciprocate by giving higher performance. It is possible that when engaged employees have greater autonomy to perform tasks, they feel more motivated, which further impacts on their task performance. Therefore, in response to the need for moderators in understanding the relationship between work engagement and performance (e.g., Bakker et al., 2011b; Halbesleben, 2011), empirical evidence, and theoretical reasoning, it is hypothesised that:

Hypothesis 6 (H6): The direct positive relationship between work engagement and task performance will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

#### **4.8 Work engagement and contextual performance**

Researchers have identified different forms of extra-role behaviours such as cooperation (Bateman & Organ, 1983), participation (Graham, 1991), and a helping attitude and initiative (Podsakoff, Mackenzie, Paine, & Bachrach, 2000). Work engagement has been empirically linked to contextual performance in several studies (e.g., Simbula & Guglielmi, 2013; Sulea et al., 2012). Engaged employees are more likely to walk the extra-mile and indulge in behaviours that are not part of their formal job duties (e.g., Salanova et al., 2005; Schaufeli et al., 2006). Rich et al. (2010) found a direct relationship between work engagement and organisational citizenship behaviours (a form of contextual performance), and argued that such behaviours help in creating a collaborative social climate, which adds to the achievement of organisational goals. Similarly, Saks' (2006) survey among employees working in a variety of jobs and organisations found that engaged individuals were more likely to be part of activities not formally required by the organisation. A positive relationship between work engagement and extra-role performance was found in a study among 280 nurses in a Portuguese hospital (Salanova, Lorente, Chambel, & Martínez, 2011). In this study, the ratings for extra-role performance were provided by the supervisors. In another study, Bakker et al. (2004) found that engaged employees demonstrated organisational citizenship behaviours. In this study, the ratings for organisational citizenship behaviours were provided by their colleagues. Christian et al. (2011) suggest that engaged employees efficiently conduct task performance, and thus deploy free resources in contextual performance. Another reason could be that engaged

employees do not differentiate between task and contextual performance and consider every role as part of their work (Christian et al., 2011).

Bakker et al. (2014) argue that engaged employees are intrinsically motivated, so they go over and above their job descriptions to conduct actions that are beneficial for the organisation. However, as discussed earlier, the relationship between work engagement and performance may not be direct, whether it is task or contextual performance. For instance, Alfes et al. (2013) found that perceived organisational support moderated the positive relationship between employee engagement and organisational citizenship behaviours, thus suggesting that “the relationship between engagement and employee behaviour may not be a straightforward association” and highlighting the “importance of contextual variables that moderate this relationship” (p. 345). This suggests that engaged employees need a conducive environment to display behaviours that are not part of the formal job description.

Based on self-determination theory, Gagné and Deci (2005, p. 332) argue that “autonomy is important for intrinsic motivation”. So, individuals who are intrinsically motivated need some control over their work so that they can contribute to extra-role behaviours. Therefore, it is possible that work autonomy moderates the positive relationship between work engagement and contextual performance. Cohen and Kol (2004), and Bakker et al. (2004) did not find a significant relationship between work autonomy and organisational citizenship behaviours although Park (2016) found a positive relationship between the two. Additionally, Park (2016, p. 282) argues that “job autonomy may have a positive relationship with organisational citizenship behaviours because autonomy affects the employees’ perception that the organisation values her or his contribution, and this perception prompts the

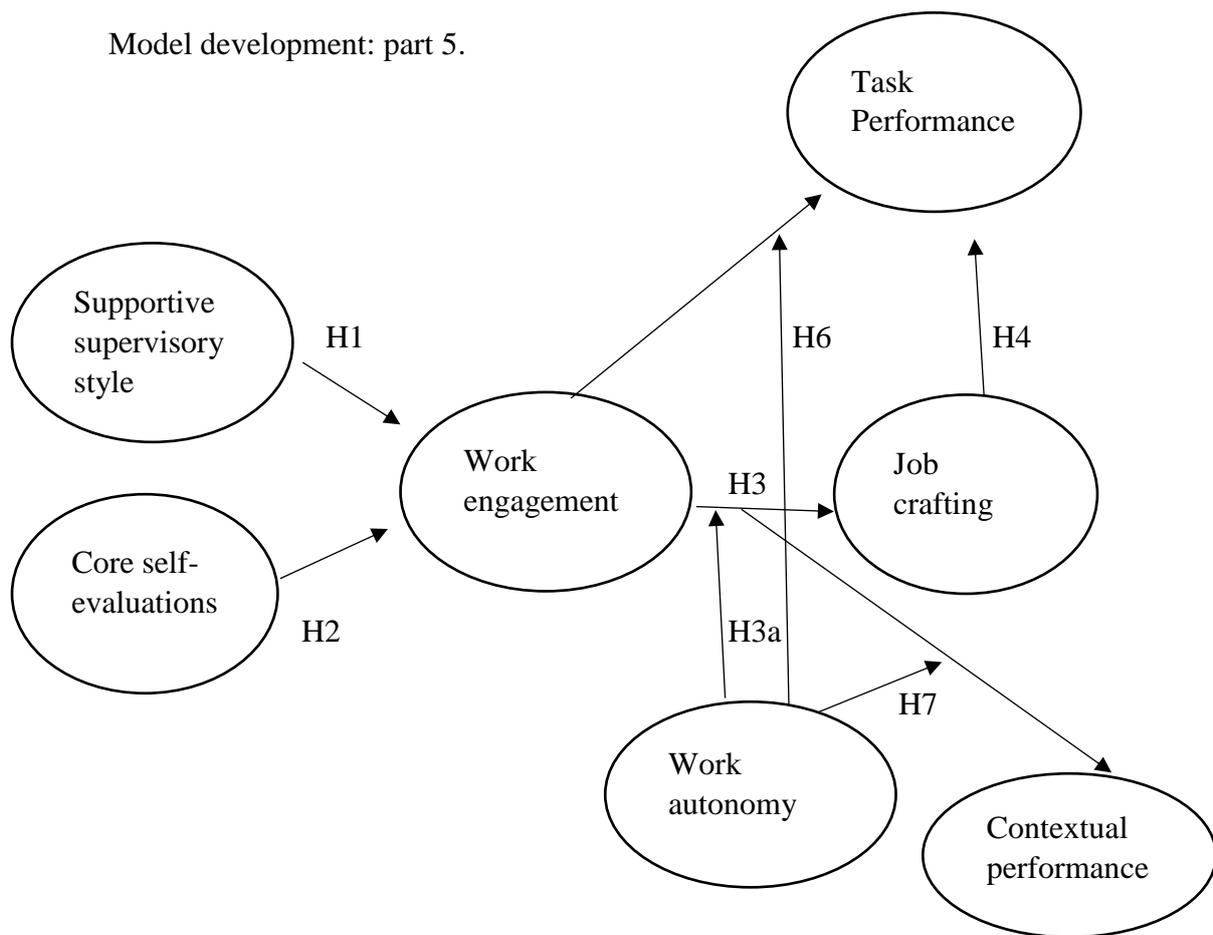
employee to reciprocate with increased citizenship behavior”. Based on the above reasoning, the following is hypothesised:

H7: The direct positive relationship between work engagement and contextual performance will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

Figure 4.8 depicts the theoretical research model with all the variables. Work autonomy is directly moderating three relationships; between a) work engagement and job crafting, b) work engagement and task performance, and c) work engagement and contextual performance. Now, the direct and indirect relationship of supportive supervisory style and core self-evaluations with task and contextual performance will be explored, to formulate the next set of hypotheses.

Figure 4.8.

Model development: part 5.



Note: H5 = H3xH4; H5a = H3axH4.

#### 4.9 Supportive supervisory style and task performance

In the theoretical model developed in this thesis, it is assumed that supportive supervisory style will be related to task performance in three ways: a) mediation, b) moderated mediation, and c) a direct effect.

#### **4.9.1 Mediating mechanism**

Hutchinson and Purcell (2003) argue that the role of line managers is important in implementing HRM practices, as it impacts employee outcomes. Marchington and Grugulis (2000) argue that researchers generally assume a simplistic role of line managers in the relationship between implementation of HRM practices and performance. It is possible that there are some underlying mechanisms that may explain how supportive supervisors impact task performance of employees.

In the previous section, based on theoretical reasoning and research evidence, it was hypothesised that supportive supervisory style will predict work engagement (Hypothesis 1), and work engagement will predict job crafting (Hypothesis 3). Turning to job crafting, although Wrzesniewski and Dutton (2001) assert that job crafting happens without the knowledge of supervisors, Tims and Bakker (2010) argue that this may not always be the case. Supervisors play an important role in providing performance feedback and encouraging employees to learn new skills (Leana et al., 2009). Hence, supervisors are likely to influence the job crafting behaviours of the employees (Tims & Bakker, 2010). As an example, in a study of 412 employees, Boon, Den Hartog, Boselie, and Paauwe (2011) found support for the mediating role of person-job fit in the relationship between employee perceptions of HRM practices and two employee outcomes (low intention to leave and high job satisfaction). Boon et al. (2011) also found that person-job fit moderated this relationship such that the indirect effect was stronger when person-job fit was lower rather than higher. One reason provided by Boon et al. (2011) was that high 'person-job fit' employees are already aligned with their jobs, so in their case the impact on outcomes would be lower. Boon et al.'s (2011) measure captured perceptions of HRM practices as implemented by the organisation and not by the supervisors.

Earlier, it was discussed that person-job fit is one of the reasons why job crafting behaviours are demonstrated by employees. Similarly, in a study conducted on 232 teachers in 62 childcare centers, Leana et al. (2009) found that supportive supervision was related positively to job crafting behaviours. Therefore, it is possible that supervisors influence the job crafting behaviours of employees.

However, the relationship between supportive supervisory style and job crafting may not be straightforward. As argued by Demerouti (2014), and Tims and Bakker (2010), more research is required to understand the role supervisors play in job crafting efforts by employees, as presently there is very limited research in this area. In their model of proactive motivation, Parker et al. (2010, p. 19) argue that “leadership plays a role in shaping motivation for a range of proactive goals”. It is possible that because supervisors influence the engagement of employees, they also indirectly influence the job crafting behaviours of the employees. In line with this, Caesens et al. (2016) demonstrated that when employees perceive their managers to be supportive, they are more willing to engage in proactive behaviour. In their study, Caesens et al. (2016) used perceived organisational support as the independent variable.

Similarly, Chen et al. (2016) found that intrinsic motivation explained the link between support from supervisors and innovative work behaviours in employees. In a moderated mediation study conducted in China, Chen et al. (2016) found support for the relationship between supervisory support and innovative work behaviour, through intrinsic motivation, with self-efficacy and internal locus of control as moderators. Specifically, Chen et al. (2016) found that the mediated effects were weaker for employees who had lower general self-efficacy or higher locus of control. Chen et al. (2016) defined ‘supervisory support’ as caring about the well-being of employees, and providing rewards and opportunities: innovative work behaviour

was defined as idea generation, idea promotion, and idea implementation. These studies suggest that supervisors impact on the intrinsic motivation of employees, which further leads to proactive behaviours. As discussed earlier, job crafting, which is a kind of proactive behaviour, should lead to favourable outcomes such as task performance. Hence, it is possible that supportive supervisory style is related to task performance, through the sequential mediating roles of work engagement and job crafting. Therefore, it is hypothesised that:

Hypothesis 8 (H8): Supportive supervisory style has an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

#### **4.9.2 Moderated mediation mechanism**

Supportive supervisory style may be related to task performance through two moderated mediation paths: the first one can be through both work engagement and job crafting, and the other one through only work engagement.

##### **4.9.2.1 Moderated mediation with both work engagement and job crafting as mediators**

I hypothesised earlier that work autonomy moderates the positive relationship between work engagement and job crafting (Hypothesis 3a). I also hypothesised that supportive supervisory style will be related to task performance, through the sequential mediating roles of work engagement and job crafting (Hypothesis 8). It is therefore likely that work autonomy moderates the sequential mediation of work engagement and job crafting on the relationship between supportive supervisory style and task performance. Parker et al.'s (2010) model of

proactive motivation suggests that contextual factors, such as a supportive supervisor, are distal antecedents of outcomes, through the mediating role of intrinsic motivation and proactive behaviours, and the moderating role of work context.

An indication of this can be taken from a few studies. Bakker et al. (2012) argue that employees can craft their jobs when their work environment provides them an opportunity to do so. Bakker et al. (2012) further suggest that a supportive supervisor is important in creating such perceptions. Rooney, Gottlieb, and Newby-Clark (2009) found that job autonomy mediated between perceived supervisory style and outcomes (job satisfaction, job strain, and turnover intentions). In a study of 847 Dutch police officers, Breevaart et al. (2015) demonstrated that LMX was related to job performance through the sequential mediating roles of work environment (developmental opportunities and social support) and work engagement. However, Breevaart et al. (2015) did not find support for the mediating role of work autonomy, as another dimension of work environment, in these relationships. Bakker and Bal (2010) conducted a weekly study among 54 Dutch teachers, and showed that autonomy, exchange with the supervisor, and opportunities for development were positively related to work engagement, which was further related to job performance. Schmitt et al. (2016) studied 148 employee-colleague dyads and found that work engagement mediated the indirect relationship between transformational leadership and proactive work behaviour. In Schmitt et al.'s (2016) study, the relationship between work engagement and proactive work behaviour was moderated by work strain. Bass (1997) argues that transformational leaders are visionaries who motivate employees to not only achieve their goals but also exceed them. Transformational leaders help employees in initiating proactive behaviours (Den Hartog & Belschak, 2012), which leads to performance (Kovjanic et al., 2013). Hence, from the above studies it is likely that supervisory behaviour impacts on the engagement of employees. In a more autonomous

environment, these engaged employees take initiatives to craft their jobs, which then leads to higher task performance. Hence, it is hypothesised that:

H9: The indirect positive relationship between supportive supervisory style and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

#### **4.9.2.1 Moderated mediation with only work engagement as a mediator**

Earlier, I hypothesised that supportive supervisory style will be positively related to work engagement (Hypothesis 1). I also posited that work autonomy will moderate the positive relationship between work engagement and task performance (H6). It is therefore likely that work autonomy will moderate the mediation of work engagement on the relationship between supportive supervisory style and task performance. This can also be ascertained by some examples from theory and practice. Bakker et al. (2011a, p. 13) argue that “an employee who receives support, inspiration, and quality coaching from the supervisor is likely to experience work as more challenging, involving, and satisfying, and, consequently, to become highly engaged with the job tasks”. Bakker et al. (2011a, p. 13) further suggest that work engagement is a “key mediating variable, or explanatory mechanism, which explains how contextual variables such as climate and job resources influence important organisational outcome variables”.

In two studies involving 1796 participants, line manager behaviour predicted work engagement, which predicted task performance (Alfes et al., 2013). Alfes et al. (2013) argue

that “it is the combination of positive perceived line manager behaviour and positive experiences of HRM practices together that is associated with an engaged and high-performing workforce” (p. 852). Alfes et al. (2013) studied perceived HRM practices and line manager behaviour as two separate antecedents of work engagement, and found support for both. Breevaart et al. (2016) conducted a diary study of 57 leader-employee dyads, and demonstrated that transformational leadership and self-leadership were positively related to performance, through the mediating role of work engagement and the moderating role of leadership. Peccei and Rosenthal (2001) found that employee perceptions of positive management behaviour (which included perceived supervisory support) were related to empowerment (which included autonomy), which in turn was related to customer-oriented behaviours. Based on these examples, it is possible that when employees perceive that their supervisors provide them a supportive environment, they feel engaged and give better performance. As discussed earlier, engaged employees need autonomy in their job to give better performance. So, the path from supportive supervisory style to task performance, through work engagement, depends on the level of autonomy that individuals enjoy. Hence, it is hypothesised that:

Hypothesis 10 (H10): The indirect positive relationship between supportive supervisory style and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

### **4.9.3 Direct association**

Apart from an indirect association, it is also plausible that supportive supervisory style can directly influence task performance. A supervisor “directly observes, appraises, and rewards

employees' formal job-related activities" (Becker & Kernan, 2003, p. 332). Kim et al. (2009) argue that when supervisors provide feedback to employees it has a favourable impact on their performance. In support of this, Sikora, Ferris, and van Iddekinge (2015) found that line managers' perceptions of their own implementation of HRM practices was related to the job performance of employees. Similarly, perceived supervisory support has been linked to higher performance in employees, in a study by DeConinck and Johnson (2009). It is likely that supervisory support (in the form of providing performance feedback, developmental opportunities, participation in decision-making, and rewards) has a direct impact on the performance of employees. Although there are only a few studies that have investigated how supervisors can directly impact task performance, it is likely that a direct relationship exists. So, it is hypothesised that:

Hypothesis 11 (H11): Supportive supervisory style is positively related to task performance directly.

#### **4.10 Supportive supervisory style and contextual performance**

In the theoretical model developed in this thesis, it is probable that supportive supervisory style may be related to contextual performance in two ways: a) moderated mediation and b) a direct effect.

##### **4.10.1 Moderated mediation mechanism**

As discussed earlier, supportive supervisory style is hypothesised to predict work engagement (Hypothesis 1) and work autonomy is hypothesised to moderate the positive relationship

between work engagement and contextual performance (Hypothesis 7). It is therefore likely that work autonomy also moderates the mediation of work engagement on the relationship between supportive supervisory style and contextual performance. Park (2016) found that autonomy was related to organisational citizenship behaviour through perceived organisational support. This is in line with Bakker et al.'s (2011a, p. 14) argument that “empowering leaders, by definition, empower their employees through autonomy, discretion, control, or decision latitude”. Employees require some aspect of control over their job to make changes to their work (Wrzesniewski & Dutton, 2001). Similarly, self-determination theory asserts that intrinsic motivation is a kind of ‘autonomous motivation’ because individuals who are motivated from within choose to take certain actions by their own will (Gagné & Deci, 2005). This suggests that when supervisors support their employees and provide them with discretion, employees are more likely to be engaged with their work, and thus display extra-role behaviours. Thus, it is hypothesised that:

H12: The indirect positive relationship between supportive supervisory style and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

#### **4.10.2 Direct association**

Apart from being indirectly related to contextual performance through work engagement, it is also possible that supervisor behaviour has a direct impact on the extra-role activities of employees. Podsakoff, Mackenzie, and Bommer (1996) suggest that employees engage in extra-role behaviours when their supervisors are supportive. When subordinates believe that they are receiving support from their supervisors, they are more likely to give back to the

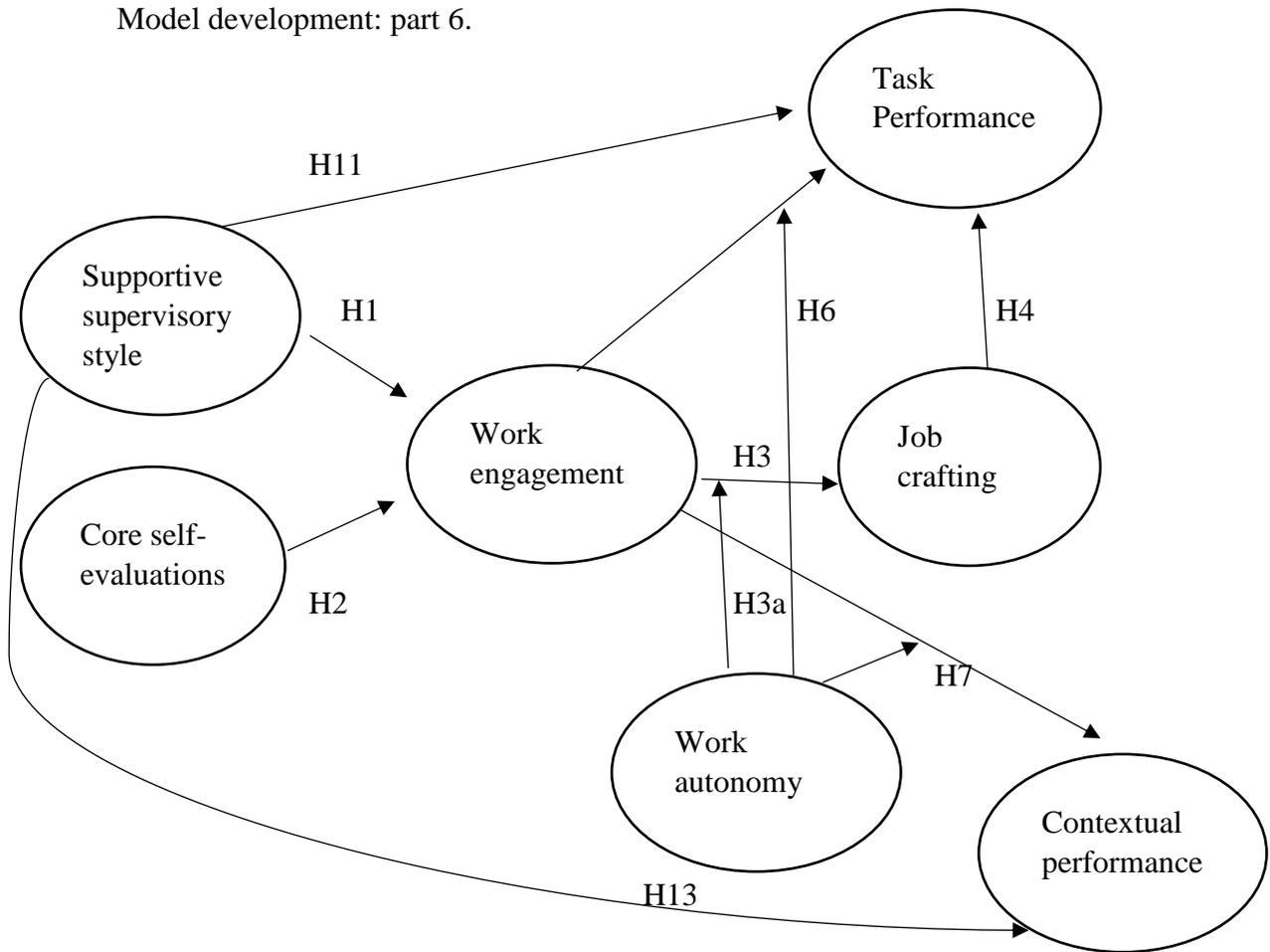
organisation, by going outside their formal job duties. This relates to social exchange theory (Blau, 1964), which deals with reciprocity. Employees feel obligated to reciprocate when they get the desired support from their supervisors, whom they view as an agent of the organisation. There is empirical evidence of a positive relationship between positive supervisory behaviour and contextual performance (e.g., Hui, Law, & Chen, 1999; Wang, Law, & Che, 2008). Hence, it is hypothesised that:

H13: Supportive supervisory style is positively related to contextual performance directly.

Based on the hypotheses that explain the relationship between supportive supervisory style and task performance, there are some additional paths that have been added to the theoretical model (Figure 4.9).

Figure 4.9.

Model development: part 6.



Note: H5 = H3xH4 ; H5a = H3axH4; H8 = H1xH3xH4 ; H9 = H1xH3axH4 ; H10 = H1xH6  
 H12 = H1xH7.

#### 4.11 Core self-evaluations and task performance

In the theoretical model developed in this thesis, it is plausible that core self-evaluations are positively related to task performance in three ways: a) mediation, b) moderated mediation, and c) a direct effect. Fullarton, Fuller-Tyszkiewicz, and von Treuer (2014) suggest that the effect of individual characteristics on job performance is not straightforward and there might be other mechanisms at play between the two.

#### **4.11.1 Mediating mechanism**

Chang et al. (2012, p. 104) argue that theoretically-founded “mediation studies are needed” to understand how core self-evaluations impact outcomes. It was hypothesised earlier that core self-evaluations will lead to work engagement (Hypothesis 2). With respect to job crafting, Lyons (2008) suggests that employees who possess a positive self-image believe they can shape their own destiny, and those who are open to change are more likely to craft their jobs (Kanten, 2014). These characteristics are present in people who possess high core self-evaluations. Individuals with high core self-evaluations "appraise themselves in a consistently positive manner across situations; such individuals see themselves as capable, worthy, and in control of their lives" (Judge et al., 2004, pp. 326–327). People high in core self-evaluations believe in their performance capability, have a positive orientation towards the world, focus on their positives and not negatives, and believe they can control their destiny through their own actions (Stumpp, Hülshager, Muck, & Maier, 2009). Similarly, Neves and Champion (2015) argue that individuals with high core self-evaluations are more likely to develop their social resources. Tims et al. (2014) suggest that employees who have the confidence that they can positively impact on their work environment will be more likely to engage in proactive work behaviours.

Similarly, Tims and Bakker (2010) argue that self-efficacious employees who believe in their own agency are more likely to craft their jobs, which has also been suggested by Niessen et al. (2016). This was also demonstrated empirically when Ventura, Salanova, and Llorens (2015) found that professional self-efficacy predicted an increase in challenging demands (mental work overload) and a decrease in hindrance demands (role conflict, lack of control, and lack of social support). In another study, van den Heuvel et al. (2015) carried out an intervention that comprised one day of job crafting training, four weeks of applying job

crafting, and a half day of reflection. After the job crafting training, it was found that there was an increase in self-efficacy beliefs.

Job crafting is about taking an initiative to make changes in the job and not simply reacting to it (Wrzesniewski et al., 2013). Individuals with high core self-evaluations have self-belief, hold a high opinion of themselves, are intrinsically focused, and emotionally stable. Therefore, it seems likely that employees who have positive self-evaluations are more likely to craft their jobs to either experience congruence with their needs or to match their abilities (person-job fit). Moreover, core self-evaluations have been found to be related to positive perceptions of person-job fit (Bipp, 2010), and there is empirical evidence linking job crafting to person-job fit (Lu et al., 2014). Individuals may already enjoy a good person-job fit in their role, but they may still craft their jobs to experience enhanced meaning from their work (Wrzesniewski et al., 2013).

Although there is evidence that core self-evaluations may lead to job crafting behaviours, it is more likely that it happens because of an underlying mechanism. Niessen et al. (2016) argue that self-efficacy is an important condition for engaging in job crafting, but it may not be a sufficient condition. Niessen et al. (2016) further suggest that future research should investigate the conditions in which self-efficacy can lead to job crafting. In their model of proactive motivation, Parker et al. (2010) suggest core self-evaluations as one of the individual variables that leads to goal-striving through intrinsic motivation. This indicates that employees who possess high core self-evaluations are more likely to be intrinsically motivated, and thus make changes in their work environment. The possibility of such an association can be understood from Simbula et al.'s (2011) three-wave longitudinal study where they found reciprocal relationships between job resources, self-efficacy, and work engagement. There is a

dearth of studies that have focused on these relationships, and there is a need to understand how personal characteristics can enable individuals to craft their jobs (e.g., Berg et al., 2013; Demerouti, 2014).

Parker et al.'s (2010) model of proactive motivation suggests that core self-evaluations lead to favourable work outcomes through the sequential mediation of intrinsic motivation and proactive goal attainment. It has already been hypothesised that job crafting leads to performance. It is also possible that work engagement and job crafting sequentially mediate the positive relationship between core self-evaluations and task performance. This was somewhat demonstrated in a study by Tims et al. (2014), who conducted a daily diary study of 47 employees, and found that job crafting and work enjoyment sequentially mediated the relationship between self-efficacy and performance. Debusscher, Hofmans, and Fruyt (2016) explained the relationship between core self-evaluations and performance through approach-avoidance perspective. Approach/avoidance frameworks are related to how sensitive individuals are to positive and negative stimuli (Elliot, 2006). Debusscher et al. (2016) suggest that individuals high in core self-evaluations look for positive impetus (approach perspective) whereas those with low core self-evaluations have an avoidance outlook, and so miss the positive cues. Hence, it can be said that employees who possess core self-evaluations are high on approach motivation and low on avoidance motivation (e.g., Cheng et al., 2012; Ferris et al., 2011). Since individuals who are high on core self-evaluations take positive cues from the environment, it is likely that they become intrinsically motivated to craft their jobs, thus impacting their task performance. Thus, based on the above, it is hypothesised that:

Hypothesis 14 (H14): Core self-evaluations have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

#### **4.11.2 Moderated mediation mechanism**

Core self-evaluations may be related to task performance through two moderated mediation paths: a) through both work engagement and job crafting, and b) through only work engagement.

##### **4.11.2.1 Moderated mediation with both work engagement and job crafting as mediators**

It has been suggested in this thesis that work autonomy moderates the relationship between work engagement and job crafting (Hypothesis 3a). It was hypothesised earlier that core self-evaluations are related to task performance, through the sequential mediating roles of work engagement and job crafting (Hypothesis 8). Therefore, it is likely that work autonomy moderates the mediation of work engagement and job crafting on the relationship between core self-evaluations and task performance. Parker et al.'s (2010) model of proactive motivation suggests that individual factors, such as core self-evaluations, are distal antecedents of outcomes, through the mediating role of intrinsic motivation and proactive behaviours, and the moderating role of work context.

Personal resources impact employees' awareness of job characteristics (Judge et al., 1997) and employees with high core self-evaluations tend to perceive their job characteristics favourably (Chang et al., 2012). Tims and Bakker (2010) argue that individual differences play an important role in job crafting, and self-efficacy leads people to believe that they will succeed. Individuals with high core self-evaluations choose complex and challenging jobs because of self-belief, and engage in self-developmental activities due to greater self-awareness

(Judge & Kammeyer-Mueller, 2011). Chang et al. (2012) argue that the interaction between core self-evaluations and job characteristics, to predict outcomes, is not very clear, and thus warrants more attention, especially in the area of moderated mediation.

Bono and Judge (2003) suggest that there might be psychological as well as behavioural processes that might explain the relationship between core self-evaluations and job performance. Kachmar, Collins, Harris, and Judge (2009) used trait activation theory (TAT; Deci & Ryan, 2000) to explain how personality can interact with environment to produce results. TAT suggests that individuals possess personal characteristics that are more visible when they get the appropriate signals from the environment. In their study, Kachmar et al. (2009) used core self-evaluations as a measure of personality. They found that perceived work environment (organisational politics and leader effectiveness) moderated the positive relationship between core self-evaluations and performance (as rated by supervisors). This suggests that work context can moderate the relationship between core self-evaluations and task performance. It is possible that when individuals who possess core self-evaluations are engaged and show proactive behaviours, and perceive a more autonomous environment, it affects their performance positively. Hence, it is hypothesised that:

H15: The indirect positive relationship between core self-evaluations and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

#### **4.11.2.1 Moderated mediation with only work engagement as a mediator**

Core self-evaluations have been hypothesised to predict work engagement (Hypothesis 1) and work autonomy is hypothesized to moderate the positive relationship between work engagement and task performance (Hypothesis 6). Therefore, it is likely that work autonomy moderates the mediation of work engagement on the relationship between core self-evaluations and task performance.

Let us first explore the possibility of work engagement as a mediator between core self-evaluations and task performance. In a study of 283 Korean employees, Joo, Jeung, and Yoon (2010) showed that the relationship between core self-evaluations and in-role performance was mediated by intrinsic motivation. Erez and Judge (2001) conducted laboratory and field studies, and found that individuals who rated high on core self-evaluations reported high motivation. Erez and Judge (2001) also found that motivation mediated the positive relationship between core self-evaluations and job performance. Rich et al. (2010) conducted a study of 245 firefighters and found that core self-evaluations led to task performance through the mediating role of work engagement. Similarly, in a study of 193 teachers in USA, Haynie et al. (2017) found that engagement mediated the positive relationship between core self-evaluations and task performance. In a study of 44 flight attendants, Xanthopoulou et al. (2008) found that there was partial mediation of work engagement between self-efficacy and in-role performance. The JD-R model also posits that work engagement is a mediator between personal resources and performance. Thus, intrinsic motivation can act as a mediator in explaining the link between core self-evaluations and performance (Judge & Kamneyer-Meueller, 2011).

Now, let us turn to work autonomy as a possible moderator in the indirect relationship between core self-evaluations and task performance, through work engagement. Fullarton et al. (2014, p. 533) suggest that “future research should consider the possibility of the work environment being a moderator”. Similarly, Barrick and Mount (1993) argue that the effect of individual characteristics on behaviour is moderated by work autonomy. It is possible that individual and contextual factors interact to impact on outcomes, both at the individual and organisational level (Johns, 2006). In a study with work environment (perception of organisational politics and leader effectiveness) as a moderator, Kachmar et al. (2009) found that employee perceptions of their work environment had an impact on the relationship between core self-evaluations and supervisory ratings of performance. Specifically, when individuals with high core self-evaluations perceived their environment as favourable, they received higher performance ratings as compared to when they perceived an unfavourable environment (Kachmar et al., 2009). From this logical reasoning and empirical evidence, it can be assumed that individuals higher in core self-evaluations deliver higher performance (Judge et al., 2004), because they have intrinsic motivation and autonomy to craft their jobs. Hence, it is hypothesised that:

H16: The indirect positive relationship between core self-evaluations and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

#### **4.11.3 Direct association**

Bono and Judge (2003) suggest that core self-evaluations may be linked to task performance due to self-determination (Deci & Ryan, 1985) and self-concordance (Sheldon & Elliot, 1999).

Self-concordance suggests that self-determined goals are pursued by individuals because they find these goals interesting and intrinsically motivating to pursue, and not because they are imposed by others (Sheldon & Elliot, 1999). Apart from an indirect relationship, it is also likely that core self-evaluations are directly related to task performance, which has been demonstrated in various studies (e.g., Bono & Judge, 2003; Chang et al., 2012; Erez & Judge, 2001; Judge & Bono, 2001; Judge, Erez, Bono, & Thoresen, 2003). This may be because individuals with high core self-evaluations have confidence in their abilities and believe they can achieve favourable outcomes (Judge & Bono, 2001). Hence, it is hypothesised that:

Hypothesis 17 (H17): Core self-evaluations are positively related to task performance directly.

#### **4.12 Core self-evaluations and contextual performance**

In the theoretical model developed in this thesis, it is probable that core self-evaluations may be related to contextual performance in two ways: a) through moderated mediation, and b) a direct effect.

##### **4.12.1 Moderated mediation mechanism**

Wu and Griffin (2012) assert that people, high in core self-evaluations, who feel good about life start feeling good about themselves. Individuals who possess core self-evaluations think highly about themselves (Bono & Judge, 2003), and see “more variety, challenge, and intrinsic worth in their work” (Judge, Locke, Durham, & Kluger, 1998, p. 31). Individuals, who are high in core self-evaluations, are more likely to pursue goals for intrinsic satisfaction (Judge et al., 2005). As an example, in a study of 44 flight attendants, Xanthopoulou et al. (2008) found that

there was full mediation of work engagement between self-efficacy and extra-role performance. It is possible that when such individuals are provided with autonomy in their work, it has a positive impact on their extra-role performance. Therefore, it can be suggested that the level of autonomy influences the relationship of core self-evaluations with contextual performance, through work engagement. When engaged individuals, with high core self-evaluations, experience a more conducive environment, they are able to better capitalize on their strengths (Kacmar et al., 2009) and thus take part in activities not formally required by their job. Hence, it is hypothesised that:

H18: The indirect positive relationship between core self-evaluations and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

#### **4.12.2 Direct association**

Positive personality characteristics are related to positive organisational behaviour (Luthans & Youssef, 2007). Individuals, who possess core self-evaluations, are inclined to show extra-role behaviours as “workers who have positive self-concepts are predisposed to engage in behaviours that require initiative and self-confidence” (Bowling, Wang, & Li, 2012, p.108). Bono and Judge (2003) suggest that such individuals are intrinsically motivated, and give better performance since they have more confidence in their ability to impact on outcomes. Core self-evaluations have been related to contextual performance in previous studies (e.g., Bowling et al., 2012; Chang et al., 2012). Hence, it is hypothesised that:

H19: Core self-evaluations are positively related to contextual performance.

#### **4.13 Conclusion: overall research model**

In this chapter, a theoretical model has been developed (Figure 4.10), which is based on input from three conceptual models: a) the JD-R model, b) the model of AMO, and c) the model of proactive motivation. These three conceptual models have many similarities. They consider motivation as a key mediating mechanism, which links situational variables and individual factors to desired employee outcomes. Supervisory style was selected as the situational variable and core self-evaluations were selected as the individual resource in this study. In the research model developed in this thesis, it has been hypothesised that core self-evaluations and supportive supervisory style will enhance work engagement. Engaged employees are more likely to proactively make changes to their work environment (through job crafting), so that they can deliver better performance. Work autonomy plays a crucial role in this model. It moderates between work engagement-job crafting, work engagement-task performance, and work engagement-contextual performance, and, therefore, adds explanatory power to the indirect relationships of supportive supervisory style and core self-evaluations with performance (task and contextual). The relationships hypothesised in the research model also draw their theoretical rationale from three theories: a) conservation of resources theory, b) self-determination theory, and c) social exchange theory.

Based on theoretical reasoning, empirical studies and logical deduction, the following hypotheses were developed in this chapter to explain the theoretical research model (Figure 4.10):

H1: Supportive supervisory style is positively related to work engagement.

H2: Core self-evaluations are positively related to work engagement

H3: Work engagement is positively related to job crafting.

H3a: The direct positive relationship between work engagement and job crafting will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

H4: Job crafting is positively related to task performance.

H5: Work engagement is positively related to task performance through the mediating role of job crafting.

H5a: The indirect positive relationship between work engagement and task performance, through the mediating role of job crafting, will be moderated by work autonomy such that the indirect effect will be stronger when work autonomy is higher.

H6: The direct positive relationship between work engagement and task performance will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

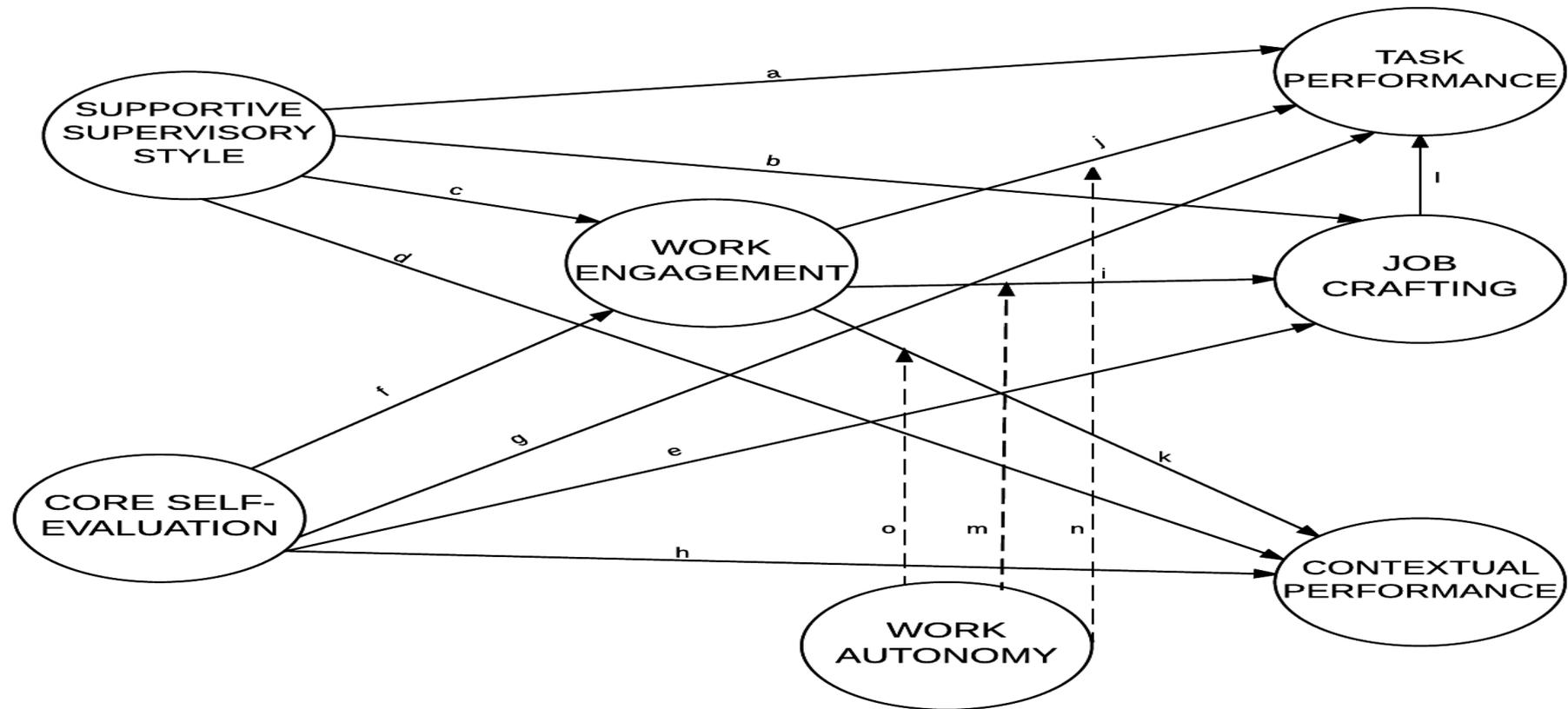
H7: The direct positive relationship between work engagement and contextual performance will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

H8: Supportive supervisory style has an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

H9: The indirect positive relationship between supportive supervisory style and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

Figure 4.10.

Conceptual research model.



Note: H1 = c ; H2 = f ; H3 = i ; H3a = m ; H4 = l ; H5 = il ; H5a = ml ; H6 = n ; H7 = o ; H8 = cil ; H9 = cml ; H10 = cn ; H11 = a ;

H12 = co ; H13 = d ; H14 = fil ; H15 = fml ; H16 = fn ; H17 = g ; H18 = fo ; H19 = h

H10: The indirect positive relationship between supportive supervisory style and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H11: Supportive supervisory style is positively related to task performance directly.

H12: The indirect positive relationship between supportive supervisory style and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H13: Supportive supervisory style is positively related to contextual performance directly.

H14: Core self-evaluations have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

H15: The indirect positive relationship between core self-evaluations and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H16: The indirect positive relationship between core self-evaluations and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H17: Core self-evaluations are positively related to task performance directly.

H18: The indirect positive relationship between core self-evaluations and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H19: Core self-evaluations are positively related to contextual performance.

After the development of hypotheses in the current chapter, the next step is to describe the research design and methods of the study, which will be discussed in Chapter 5.

## **Chapter 5**

### **Research design and methods**

This chapter will focus on the methodology and research methods used to test the theoretical model discussed in Chapter 4. The theoretical model was developed to answer two research questions: a) What factors predict work engagement? and b) How does work engagement predict performance? The theoretical model focuses on three determinants of task and contextual performance: a) the importance of work environment (supportive supervisory style) and personal resources (core self-evaluations) in predicting work engagement, b) the relationship between work engagement and job crafting, and c) the moderating role of work autonomy. Literature reviews of work engagement (Chapter 2) and job crafting (Chapter 3) created a foundation for developing the theoretical model in Chapter 4. A set of hypotheses was developed, which will be tested to understand the relationships depicted in the conceptual model.

This chapter will now focus on the decisions taken for research design, methodology, and data analysis. First of all, the research strategy will be laid out, followed by research design choices. Then, procedures used for collection and analysis of data will be discussed.

#### **5.1 Research strategy**

The first decision for the research study was whether to conduct quantitative, qualitative, or mixed-methods research. The constructs used in the study are from the fields of personality (core self-evaluations), and HRM and organisational behaviour (supportive supervisory style, work autonomy, work engagement, job crafting, task performance, and contextual

performance). These fields often adopt quantitative methodology in answering research questions, although there have been qualitative and mixed methods research too. According to Cresswell (2003), in quantitative research knowledge is developed by making cause-and-effect associations, choosing specific variables, developing hypotheses, and using measurement tools to test the theories. Although purely qualitative research has its own merits, quantitative studies benefit from several advantages. Bamberger and Ang (2016) provide various reasons for the relevance of quantitative analyses. Firstly, in a quantitative research, complex phenomena can be broken down and measured as distinct constructs. Secondly, the validity (internal and external) and reliability of conclusions can be gauged in a scientific way and generalisations made from replication studies. Lastly, quantitative methods allow aggregation of studies in the form of meta-analyses to draw conclusions. Although there are differences between the two approaches, “it is being acknowledged that philosophically the qualitative and quantitative paradigms are not as diverse or mutually incompatible as is often conveyed” (Clark, 1998, p. 1243).

In this thesis, a set of hypotheses was developed, which can be tested with a quantitative approach. Therefore, it was more appropriate to use a quantitative approach in this study. However, the measure for one of the key variables (supportive supervisory style) in the research model was created based on the unique context of the organisation under study, which involved a qualitative study at the beginning. Hence, we can say that this thesis is based on qualitatively-informed quantitative research. A similar approach to data collection, which combined qualitative and quantitative methods, was adopted by Boxall, Ang, and Bartram (2011) in their study. Boxall et al. (2011) conducted interviews with managers and studied the company documents to design the questionnaire for HRM practices, one of the main variables in their research study.

Traditionally, quantitative studies have used a positivist approach to research, which implies that scientific methods can be applied to examine a reality that already exists (Bryman, 2004). However, the limitations of positivism, such as its over-dependence on scientific inquiry and denial of “the importance of subjective, social, spiritual and interpretative aspects of the person”, led to the emergence of postpositivism (Clark, 1998, p. 1245). A postpositivist approach focuses on scientific methods, but also accepts the existence of phenomena that cannot be observed, and so have to be interpreted to derive meaning. Hence, postpositivism does not limit itself to a ‘quantitative’ approach, but strives to accept the value of data generated through any interpretative mode (Guba & Lincoln, 1994). Since my research incorporates contextualisation, it can be seen more from a postpositivist view rather than a positivist one. Similarly, although the quantitative method (surveys) used in this study points towards objectivism as an ontological position, the research model in this thesis is based on the context of the organisation. One of the variables in this study (supportive supervisory style) has emerged from qualitative data (semi-structured interviews). Thus, this research cannot be termed as purely ‘objectivist’ in nature.

To conclude, the research model in this thesis is based on a postpositivist approach, which is primarily quantitative but qualitatively informed. The contextualisation of this study allows a deeper understanding of the variables and the relationships that exist among them. Next, the decisions related to selection of research design will be discussed.

## **5.2 Research design**

A non-experimental and cross-sectional research design was selected for this research. Five variables in this study were self-reported: supportive supervisory style, core self-evaluations,

work engagement, work autonomy, and job crafting. I considered the logical rationale as well as the approach used in previous studies to finalise this method of data collection. For instance, even though supervisors can rate their own supportive style (e.g., Sikora et al., 2015), in my view it is the perception of employees that assumes significance and determines how that style has an impact on employee outcomes. A similar approach of using self-reported measures for 'supportive supervisory style' has been used previously (e.g. Chen et al., 2016). Similarly, core self-evaluations are evaluations of one's self, and self-reported measures were thought to be the best way to measure them (e.g., McLarty & Whitman, 2016). Studies related to work engagement have generally used self-reported measures (e.g. Einarsen et al., 2016; Kooij et al., 2017) although in a recent study, Wayne et al. (2016) used supervisory ratings of employees' engagement. In my view, both scenarios are possible. However, I am more inclined toward the thought that employees are in a better position to rate their own work engagement.

In the same way, I believe that although line managers may think that they are providing an autonomous work environment to the employees, it is the employees' perception of control that has an effect on their actions. It is indeed possible that others can assess work autonomy, but a decision was made to find out how the individuals themselves evaluate the opportunities available at work. Previous studies have used self-reported measures for work autonomy (e.g., Park, 2016; Reis & Hoppe, 2015). Similarly, employees may know better about their job crafting behaviours since it is possible that managers may not be fully aware of these activities (Wrzesniewski & Dutton, 2001). Self-reported measures of job crafting have been used by previous studies (e.g., Niessen et al., 2016; van Wingerden et al., 2017). The personal nature of these variables was the main determinant in the choice of this measurement approach. With regard to the method of data collection, self-reported surveys have generally been used in work engagement research (e.g., May et al., 2004; Rich et al., 2010; Saks, 2006; Xanthopoulou et

al., 2007). Leedy and Ormrod (2013) argue that an advantage of this method is that data can be collected from a large number of participants promptly, and a disadvantage is that participants may intentionally (to get a favorable impression) or unintentionally (due to any events or individual perceptions) distort responses. Hence, online self-reported questionnaires were seen as one way to mitigate the risk of surveys by assuring confidentiality to the participants.

Data for the other two variables in the study (task performance and contextual performance) were provided by the supervisors of the participants. There were two reasons for this. Firstly, I believe that supervisors are the best source to rate an employee's performance since they are responsible for performance appraisals and pay increment decisions. Many studies have used supervisory ratings of employee performance in their research (e.g., Boxall et al., 2011; Haynie et al., 2017; Weseler & Niessen, 2016). Secondly, it was important to minimise common method bias in the data by separating data of predictor variables and outcome variables. The supervisors were informed that they are not required to provide their names in the survey. The supervisors were instead asked to provide the employee ID (s) of the participant(s) so that their responses could be matched with those of the participants.

### **5.3 Methods**

This section will lay out information on the participants in this study, the procedures adopted to collect data, and the measures used to assess the variables.

### 5.3.1 Participants

The participants were 320 permanent, full-time, front-line employees from a manufacturing organisation in India. This group of employees was chosen as I was interested in understanding the engagement of employees who work at the front-line of an organisation and not those at the managerial level. These front-line employees form the ‘backbone’ of the company; they are responsible for directly overseeing the production as well as other core functions in the organisation. Therefore, their levels of engagement are likely to have a strong influence not only on their own performance but also the overall profitability and growth of the organisation.

The sample comprised 274 (85.6%) males and 46 (14.4%) females. This distribution is similar to the distribution of males (80.7%) and females (19.3%) in the organisation at that level. The participants were diverse with respect to age, time in current role, total work experience, work location, departments, and business units (Table 5.1, A-F). Due to a confidentiality agreement with the organisation, details about the business areas and work locations have not been disclosed. The mean age was 29.44 years, with a standard deviation of 7.71 years. The mean time in current role was 3.40 years, with a standard deviation of 4.30 years. The mean total work experience was 5.85 years, with a standard deviation of 6.55 years. With regard to the education levels, 75% were graduates, 13% were post-graduates, and 12% had studied only until year 12. These parameters generally reflect what is known about the employees at that level, as confirmed by the corporate HR manager of the organisation. All the participants in the study were Indian nationals.

Table 5.1. (A)

## Demographics

<b>Age</b>	<b>No.</b>	<b>%</b>
20-24 years	98	30.6
25-29 years	120	37.5
30-34 years	37	11.6
35-39 years	20	6.3
40-44 years	24	7.5
>=45 years	21	6.6
<b>Total</b>	<b>320</b>	<b>100.0</b>

Table 5.1. (B)

<b>Time in current role</b>	<b>No.</b>	<b>%</b>
0-2 years	166	51.9
2.01-4 years	70	21.9
4.01 to 6 years	33	10.3
6.01 to 8 years	15	4.7
>8.01 years	36	11.3
<b>Total</b>	<b>320</b>	<b>100.0</b>

Table 5.1. (C)

<b>Total work experience</b>	<b>No.</b>	<b>%</b>
0-2 years	108	33.8
2.01-4 years	76	23.8
4.01 to 6 years	38	11.9
6.01 to 8 years	20	6.3
>8.01 years	78	24.4
<b>Total</b>	<b>320</b>	<b>100.0</b>

Table 5.1. (D)

<b>Work location</b>	<b>No.</b>	<b>%</b>
Location 1	51	15.9
Location 2	166	51.9
Location 3	75	23.4
Location 4	28	8.8
<b>Total</b>	<b>320</b>	<b>100.0</b>

Table 5.1. (E)

<b>Department</b>	<b>No.</b>	<b>%</b>
Finance	18	5.6
Operations	216	67.5
Human resources	33	10.3
Commercial	17	5.3
Others <sup>1</sup>	36	11.3
<b>Total</b>	<b>320</b>	<b>100.0</b>

Table 5.1. (F)

<b>Business Unit</b>	<b>No.</b>	<b>%</b>
Business Unit 1	116	36.3
Business Unit 2	96	30.0
Business Unit 3	56	17.5
Business Unit 4	52	16.3
<b>Total</b>	<b>320</b>	<b>100.0</b>

<sup>1</sup> Note: These department sub-heads include related functional areas as well. For instance, finance includes accounting, costing, and taxation. 'Others' includes small departments such as administration, marketing, legal, and information technology.

### **5.3.2 Data collection procedures**

The Chief Executive Officer (CEO)-HR was contacted to gain entry into the organisation. A detailed participant information sheet (PIS) was emailed to the CEO-HR, informing him about the purpose of the study, the benefits of participation, and the procedures regarding collection, storage, and confidentiality of data (Appendix A). After getting approval from the CEO-HR in the form of a signed consent form (CF; Appendix B), the study process was initiated.

The study was conducted in two phases. As discussed in Chapter 4, the HRM practices in an organisation are sensitive to the unique context where they operate. Hence, phase one was about understanding the HRM practices and managerial behaviours in the organisation. This was essential so that a measurement scale could be developed for one of the constructs: supportive supervisory style. The organisation was requested to provide a list of line managers and HR managers who were available for interviews. This group was chosen based on their knowledge about HRM practices applicable to the sample group (Boxall et al., 2011). A PIS and CF were thereafter emailed to these HR and line managers (Appendix C and Appendix D, respectively). Semi-structured interviews (Appendix E) were finally conducted over Skype with four HR managers and four line managers, who were willing to participate in the study. The interviews lasted between 30-60 minutes. During the interviews, the HR/line managers were asked to reflect on the HRM practices and managerial behaviours prevalent in the organisation. A scale was designed for the construct of 'supportive supervisory style' based on the results of the semi-structured interviews, which will be discussed later in this chapter.

In the second phase, data were collected from participants and their supervisors through an online survey, developed in Qualtrics. The online surveys were pilot tested by 21 people

before they were actually rolled out to the participants and their supervisors. On the basis of the pilot test results, corrections, and modifications were made to the survey. At the time of collection of data, 921 employees were working in the organisation at the front-line level, which formed a sampling frame for this study. A PIS, CF (Appendices F, G, H, and I), and an online link to the survey were emailed to all the 921 front-line employees in the organisation and their supervisors. The participants were informed in the PIS that their supervisors would be contacted to obtain a rating on their performance. It was also emphasised in the PIS of the participants that in order to match their responses with those of their supervisors, it may not be possible to promise anonymity. However, the participants were informed that confidentiality would be maintained. The online questionnaire took around 25 minutes for the participants and up to 10 minutes (for each subordinate) for the supervisors, and they were given 30 days to fill-in the survey, followed by two reminders. The signed consent forms and completed questionnaires were received from 447 participants and 673 supervisors. The participants' data were matched with the supervisors' data to find out how many paired entries were there. A matching process revealed 320 participants for whom data were also provided by their supervisors (34.7 % matched response rate).

### **5.3.3 Measures**

Pre-established scales were used to measure all the constructs, except for supportive supervisory style. As discussed earlier, the items for this scale were dependent on the unique context of the organisation under study. However, as discussed in Chapter 4, the items were created keeping in mind the broad domain that has been reviewed in the HRM literature related to the management of front-line employees by line managers. The instruments (Appendix J) used to measure the constructs in this study are described below.

### **5.3.3.1 Supportive supervisory style**

This variable intended to tap the perceptions of the participants about the effectiveness of their supervisors in implementing HRM practices. Some studies have used this approach as a way of measuring the effectiveness of line managers (e.g., Gilbert, De Winne, & Sels, 2011; Kilroy & Dundon, 2015). Every organisation has its own unique context. HRM practices that may work well for one organisation may not be as useful in some other organisation (Boon et al., 2011; Boxall, 2014). Keeping this in mind, the construct was framed within the HRM literature, but the scale items were developed taking into account the unique context of the organisation under study. As mentioned earlier, this approach is similar to the one adopted by Boxall et al. (2011) in their research study.

Initially, secondary documents of the organisation were reviewed to identify the HR policies prevalent in the organisation. These secondary documents consisted of detailed written-down HRM policies of the organisation along with the standard operating procedures to implement them. Then, a basic 'content analysis' was performed on the raw data (from semi-structured interviews) to identify the key HRM practices that were applied for the management of front-line employees. As discussed in Chapter 4, HR practices intended by the organisation are implemented by line managers through their own interpretations of these practices (Gilbert et al., 2011). These practices are then perceived by employees according to their individual experiences (Kuvaas, 2008). Therefore, rather than analysing data on published policies or intended practices, perceptions assume significance. Employees' attitudes are ultimately formed through these perceptions (Nishii et al., 2008). Four dominant HRM areas emerged from the content analysis: training and development, voice, performance management, and reward. Face validity was used to examine the measurement validity of the scale by discussing

it with my supervisor. Four meetings were conducted to finalise items under the four factors. Items were designed keeping in mind development of similar scales in the literature (e.g., Gilbert et al., 2011; Kilroy & Dundon 2015). Researchers adopt different approaches for face validity (Hardesty & Bearden, 2004). Although it may not be a sufficient condition for scale development, it was thought to be the best alternative keeping in mind time constraints and lack of access to further resources.

This scale had 16 items (Table 5.2), which were measured on a seven-point Likert scale ranging from 1 = ‘strongly disagree’ to 7 = ‘strongly agree’. Sample items are: ‘My supervisor encourages me to learn new skills’ (training & development), ‘My supervisor encourages me to speak up when I disagree with a decision’ (voice), ‘My supervisor provides timely feedback on my performance’ (performance management), and ‘My supervisor praises me when I do a good job’ (reward). A score was calculated for the second-order construct of supportive supervisory style (with four latent factors: training & development, voice, performance management, and reward).

Table 5.2.

Supportive supervisory style scale.

DIMENSION(S)	QUESTION No.	QUESTION DESCRIPTION
Training & Development	Q1	My supervisor provides me with on-the-job training as and when I need it
	Q2	My supervisor encourages me to learn new skills
	Q3	My supervisor nominates me as a member for different committees or projects as and when the opportunity arises
	Q4	My supervisor supports me when I want to participate in organisation-wide initiatives
Employee Voice	Q5	My supervisor encourages me to speak up when I disagree with a decision
	Q6	My supervisor supports my decision to approach higher management with suggestions when I feel the need to
Performance Management	Q7	My supervisor allows me to deviate from my written job description when the role demands
	Q8	My supervisor provides me with clarity on the tasks I should perform
	Q9	My supervisor encourages me to take the initiative in solving problems
	Q10	My supervisor appreciates when I go out of my way to ensure that the targets are met
	Q11	My supervisor encourages me to work in collaboration with other members of the department
	Q12	My supervisor supports me when I am unable to keep up with work
	Q13	My supervisor provides timely feedback on my performance
	Q14	My supervisor helps me to develop an action plan after my formal performance review
Reward	Q15	My supervisor praises me when I do a good job
	Q16	My supervisor recommends my name to higher management for awards when I perform excellently

### **5.3.3.2 Core self-evaluations**

The 12-item Core Self-Evaluations Scale (CSES) developed by Judge et al. (2003) was used in this study. The responses were recorded on a seven-point Likert scale, with 1 = ‘strongly disagree’ to 7 = ‘strongly agree’. Six items in this scale were positively worded and six items were negatively worded. The negatively worded responses were reverse scored before testing the variables. Example items are: ‘When I try, I generally succeed’ (positively worded) and ‘Sometimes I feel depressed’ (negatively scored). The psychometric properties of this scale have been tested in previous studies (e.g., Chang et al., 2012; Haynie et al., 2017; Judge & Bono, 2001; Kong, Wang, & Zhao, 2014).

### **5.3.3.3 Work engagement**

Work engagement was measured with the short version of the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006). This scale has nine items (three items each for the three dimensions of vigour, dedication, and absorption) that are scored on a seven-point Likert scale ranging from 1 (Never) to 7 (Always). As discussed in Chapter 2, many studies exclude absorption from their scale since it has been found to be an outcome rather than a dimension of work engagement (e.g., Hakanen et al., 2017; Salanova et al., 2010). In line with that argument, in this study only two core dimensions of work engagement were used: ‘vigour’ and ‘dedication’. Example items are: ‘At my job, I feel strong and vigorous’ (vigour) and ‘I am proud of the work I do’ (dedication). The validity and reliability of UWES have been tested in many contexts (e.g., González-Romá et al., 2006; Schaufeli & Bakker, 2004; Xanthopoulou et al., 2012). According to the recommendations of Schaufeli et al. (2006), an overall work

engagement score was used in this study. A score was calculated for the second-order construct of work engagement (with two latent factors: vigour and dedication).

#### **5.3.3.4 Job crafting**

Job crafting was measured using the Job Crafting Scale (JCS), which was developed by Tims et al. (2012). This scale has 21 items in total (covering the 4 dimensions of increasing structural job resources, increasing social job resources, increasing challenging job demands, and reducing hindering job demands). The JCS has previously been used in many studies (e.g., Bipp & Demerouti, 2015; Tims et al., 2016). In the current study, items were measured on a seven-point Likert scale, ranging from 1 = 'Never' to 7 = 'Always'. As discussed in Chapter 4, 'reducing hindering job demands' was excluded from the scale because it has been found to be unrelated to work engagement (e.g., Bakker et al., 2016; Eguchi et al., 2016). Previous studies have also used only three dimensions of job crafting (excluding decreasing hindering job demands) in their research (e.g., Hakanen et al., 2017; van Wingerden et al., 2016; Vogt et al., 2016). Some sample items from this scale are 'I try to develop my capabilities' (increasing structural job resources), 'I ask my supervisor to coach me' (increasing social job resources), and 'When an interesting project comes along, I offer myself proactively as project co-worker' (increasing challenging job demands). A score was calculated for the second-order construct of job crafting (with three latent factors: increasing structural resources, increasing social resources, and increasing challenging job demands).

### **5.3.3.5 Work autonomy**

Work autonomy was measured with the scale developed by Breugh (1985). This scale has three dimensions: scheduling autonomy, method autonomy, and criteria autonomy. The nine items in the scale (three items for each of the three dimensions) were measured on a seven-point Likert scale, with 1 = ‘strongly disagree’ to 7 = ‘strongly agree’. Example items are ‘I have control over the scheduling of my work’ (scheduling autonomy), ‘I am free to choose the method(s) to use in carrying out my work’ (method autonomy), and ‘I am able to modify what my job objectives are’ (criteria autonomy). This scale has demonstrated reliability and validity in various studies (e.g., Aubé, Rousseau, & Morin, 2007; Rousseau et al., 2009). A score was calculated for the second-order construct of work autonomy (with three latent factors: scheduling autonomy, method autonomy, and criteria autonomy).

### **5.3.3.6 Task performance**

Task performance was measured with Goodman and Svyantek’s (1999) task performance scale, which has nine items in total. The responses were captured on a seven-point scale, with 1 = ‘strongly disagree’ to 7 = ‘strongly agree’. A sample item from this scale is ‘Demonstrates expertise in all job-related tasks’. This scale has previously been used in various studies (e.g., Breevaart et al., 2015; Demerouti, Xanthopoulou, Tsaousis, & Bakker, 2014; Xanthopoulou et al., 2008).

### **5.3.3.7 Contextual performance**

Goodman and Svyantek's (1999) contextual performance scale, which has seven items in total, was used in this study. The responses were captured on a seven-point scale, with 1 = 'strongly disagree' to 7 = 'strongly agree'. A sample item from this scale is 'Volunteers to do things not formally required by the job'. Many studies have used this scale and tested its psychometric properties (e.g., Demerouti et al., 2014; Demerouti et al., 2015).

In this section, the rationale for selecting the measures has been outlined. The literature on HRM was consulted to frame the items for supportive supervisory style. For the rest of the variables, those scales were selected that had demonstrated reliability and validity in previous studies. The next crucial decision was about the choice of statistical technique to analyse the data, which will be discussed in the following section.

## **5.4 Statistical analysis**

At this point, it was important to decide whether to use structural equation modelling or some other approach to examine the theoretical model in this study, which had moderated mediation with latent variables. Structural equation modelling is a statistical approach that tests hypotheses while keeping in view the relationship between the latent and the observed variables (Hoyle, 1995). Structural equation modelling accounts for variance and covariance among variables (Kline, 1998), takes into account measurement errors, and so provides accurate estimates of mediation effects (Schumacker & Lomax, 2004). Structural equation modelling is quite often used in work engagement studies (e.g., Bakker, Shimazu, Demerouti, Shimada, & Kawakami, 2013; Torrente et al., 2012).

Moderated mediation studies have mostly used a regression approach to test indirect effects. Cheung and Lau (2015) propose that regression may not be the best approach for testing conditional indirect effects with latent interactions. A conditional indirect effect occurs when the indirect effect of a variable changes with a change in the value of the moderator (Preacher, Rucker, & Hayes, 2007). Cheung and Lau (2015) argue that the problem with the regression approach is that measurement errors are underestimated and confidence intervals are inaccurate. Cheung and Lau (2015) further argue that in contrast, the latent moderated structural equations approach provides accurate estimates and confidence intervals, and can be easily implemented in Mplus. With this in mind, this study used the latent moderated structural equations approach. Mplus 7.4 with MLR (i.e., maximum likelihood estimation method with robust standard errors) was used to test the model. Confirmatory factor analyses were performed to examine the factor structures of the constructs using chi-square statistic ( $\chi^2$ ), root mean square error of approximation (RMSEA), the comparative fit index (CFI), and standardized root mean square residual (SRMR; e.g., Brown & Cudeck, 1993; Bagozzi & Edwards, 1998; Schermelleh-Engel, Moosbrugger, & Müller 2003).

Analyses were conducted by using parcelling as a technique for data aggregation (Hall, Snell, & Foust, 1999). Researchers often use parcelling to get better goodness-of-fit indices (Graham & Tatterson, 2000). Parcelling is a technique in confirmatory factor analysis where two or more individual items (randomly or non-randomly) are combined and then used as observed variables (Matsunaga, 2008). Parcels can be created by taking the mean or sum of individual items within a factor (Meade & Kroustalis, 2006). If a construct has many subscales, there can be different ways to create parcels for these sub-scales (Rocha & Chelladurai, 2012). Matsunaga (2008) argues that parcelling helps in reducing the number of observed variables, which can lead to stable estimates and better fit indices (especially in cases where there are

multiple measures and the number of items is large). This is also important since parcels have a lower chance of cross-loadings, correlated residuals, and large measurement errors, which are generally associated with individual item-level data. However, parcelling can also distort the relationships among items (as it can lead to information loss) and can be problematic if the scale is not unidimensional (Matsunaga, 2008).

In the present study, a large number of items (74) would have led to too many estimated parameters, and hence would have made the model estimation infeasible. Hence, it was considered necessary to parcel the items. The items were parcelled using the unidimensional approach (for supportive supervisory style items and work autonomy items) and simple random assignment (for task performance items and contextual performance items) by taking the mean as the composite score. In a unidimensional approach, all items are first grouped under their respective factors and then parcels are created for each factor (Graham & Tatterson, 2000). In simple random assignment, parcels are created randomly (Graham & Tatterson, 2000). Parcels were created for scales that had a high Cronbach's alpha. Therefore, four parcels were created for supportive supervisory style (one parcel for each factor), three parcels for work autonomy (one parcel for each factor), three parcels for task performance, and three parcels for contextual performance. The total number of items after parcelling was 43.<sup>2</sup>

Thereafter, the measurement model was tested by including all second-order and first-order latent variables, along with their indicators. Before testing the final model, intra-class correlations (ICC) were calculated. ICC determine the extent to which a cluster influences the responses of participants (LeBreton & Senter, 2008). The average cluster size (i.e., average number of employees) for 'supervisor' level was 2.105 and for business unit level was 80. Even

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<sup>2</sup> This is after excluding the three items with standardised factor loadings below 0.40.

extremely low values of ICC may require multilevel analysis to be performed. The ICC in the current study were all above zero and ranged from 0.005 to 0.397. It was then considered necessary to conduct multi-level modelling, by controlling the clustered effects of ‘supervisors’ and ‘business units’. Mplus does not allow for bootstrapping with multilevel models, so bias-corrected (BC) bootstrap confidence intervals were not calculated. Moderated mediation effects (conditional effects) were computed at various levels of work autonomy (mean, +/- 3, +/- 2, and +/- 1 standard deviation [SD]). Confidence intervals for each level were calculated by using path estimates as the basis for calculation (Cheung & Lau, 2015).

## **5.5 Ethical considerations**

Approval for the research was obtained from the University of Auckland Human Participants Ethics Committee (UAHPEC). The CEO-HR, line managers, HR managers, participants, and their supervisors received a PIS detailing the objectives of the research and the procedures related to collection and storage of data. It was emphasised in the communication that confidentiality will be maintained and the research will not identify the organisation or the participants in any way. It was specified in the PIS that participants could withdraw from the research any time during the study. All employees who volunteered for the research signed a consent form. No incentive was given for participation.

## **5.6 Conclusion**

This chapter has described the research design decisions and methods used in the current study. The current study is primarily quantitative but includes elements of a qualitative approach. Since one of the main constructs in the research model has been created keeping in mind the

context of the organisation under study, it cannot be termed purely as positivist or objectivist in its design. Instead, it can be seen as postpositivist in nature.

The study is based on cross-sectional data from dyads of 320 permanent, full-time, front-line employees and their supervisors working in a manufacturing organisation in India. Before collecting data, permission was given by the CEO-HR. The study involved two phases. In phase one, eight HR/line managers were interviewed to collect information on managerial behaviours, and the HRM practices that were applicable for the group of employees who formed the sampling frame. Analysis of these semi-structured interviews and secondary (HR) documents were conducted to design a measure for 'supportive supervisory style'. For the rest of the constructs in the research model, pre-established scales were used. In phase two, PISs and CFs were emailed to 921 employees to obtain consent for the study. This process led to 320 matched responses (participant-supervisor dyads).

Out of the seven variables used in the study, five were self-reported (supportive supervisory style, core self-evaluations, work engagement, job crafting, and work autonomy); data for the remaining two variables (task performance and contextual performance) were provided by the supervisors of these participants. Since the total number of items was quite high, parcels were created for four constructs. A unidimensional approach was used to create parcels for supportive supervisory style and work autonomy. Simple random assignment was the parcelling technique used for creating parcels for task and contextual performance. The current study is a form of moderated mediation research. Keeping in view the limitations of regression, data were analysed through the latent moderated structural equations approach with MLR, through Mplus 7.4.

After finalising the research design and methods, the next step was to analyse the data and test the hypotheses. Results of the analyses are presented in detail in the next chapter.

## **Chapter 6**

### **Results**

This thesis has explored supportive supervisory style and core self-evaluations as antecedents of work engagement, and the relationship between work engagement and job crafting, in predicting task and contextual performance. Work autonomy plays a moderating role in an in-depth understanding of these relationships. A theoretical model has been developed to explain the relationships and a set of hypotheses have been formulated from it (Chapter 4). To test the model, data were collected from 320 dyads of permanent, full-time, front-line employees and their supervisors in a manufacturing organisation in India. The research design and methods were described in Chapter 5.

This chapter will first report the overall results of confirmatory factor analysis of the full measurement model. Subsequently, confirmatory factor analysis results of each of the constructs in the full measurement model will be reported in greater detail along with the descriptive statistics. Explanation of the full structural model, as well as the testing of the hypotheses, will be given towards the end of the chapter.

#### **6.1 Measurement model**

Data for six variables were self-reported (supportive supervisory style, core self-evaluations-P, core self-evaluations-N<sup>3</sup>, work engagement, job crafting, and work autonomy) and for the other two (task performance and contextual performance) were provided by the supervisors of

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<sup>3</sup> Core self-evaluations emerged as a two-factor construct during confirmatory analysis; the detailed explanation for it will be provided in section 6.2.

the participants. Goodness-of-fit indices for the full measurement model were determined by checking the values of  $\chi^2$ , RMSEA, CFI, and SRMR. The  $\chi^2$  statistic is a powerful test that is used for evaluating the appropriateness of the hypothesised model. However, Schermelleh-Engel et al. (2003, p.33) argue that “not too much emphasis should be placed on the significance of the  $\chi^2$  statistic” due to the limitations associated with this test, for instance, its sensitivity to sample size.

Brown and Cudeck (1993) suggest that RMSEA values  $\leq 0.05$  can be considered a good fit, those between 0.05 and 0.08 an adequate fit, and values between 0.08 and 0.10 are taken as a mediocre fit. In the case of CFI, values  $> 0.95$  are interpreted as good fit. However, Bagozzi and Edwards (1998) suggest that values  $>0.90$  can be adequate. For SRMR, even though values less than 0.05 are considered a good fit, anything below 0.10 is acceptable (Schermelleh-Engel et al. 2003). In this thesis, a decision was made to consider  $p < 0.05$  as a cut off value for interpreting path estimates (Dancey & Reidy, 2008). As mentioned in chapter 5, since there were large number of total items (74), analyses were conducted by using parcelling as a technique for data aggregation in order to improve the overall model fit. However, parcels were only created for scales that had a high Cronbach’s alpha. Therefore, four parcels were created for supportive supervisory style, three parcels for work autonomy, three parcels for task performance, and three parcels for contextual performance. The total number of items after parcelling was 43<sup>4</sup>.

A confirmatory factor analysis was run to test the full measurement model (with all eight latent variables together). The fit indices of this model were:  $\chi^2$  (df) =1534.265 (956), RMSEA =0.043, CFI = 0.906, and SRMR = 0.063. However, in this model three items had

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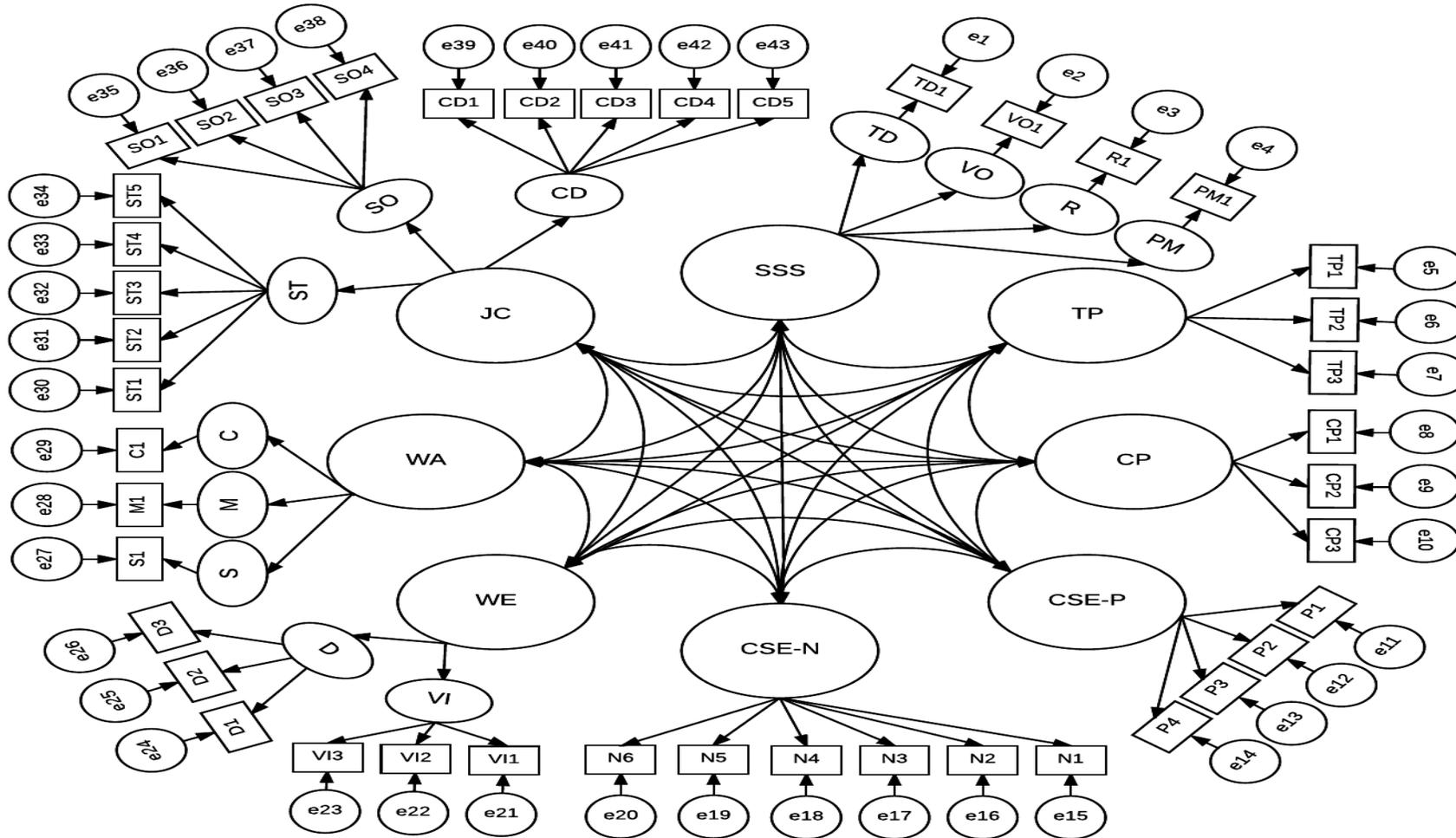
<sup>4</sup> This is after excluding the 3 items with standardised factor loadings below 0.40.

standardised factor loadings below 0.40 (one item in the job crafting scale and two items in the core self-evaluations-P scale); so the full measurement model was re-run without these three items. The values of  $\chi^2$  (df) = 1369.644 (827), RMSEA = 0.045, CFI = 0.911, and SRMR = 0.063 indicated an acceptable fit of the hypothesised model. In this model, the standardised factor loadings of all item indicators and parcels on their intended latent variables were significant at  $p < 0.001$  (range from 0.442 to 0.979). After comparing the fit indices of both the above-mentioned models, it was decided that the model where three items were excluded (Figure 6.1) would be selected as the final measurement model as it had a better fit.

In the next section, the factor structure of all the constructs, which were part of the measurement model will be discussed.

Figure 6.1.

Measurement model.



## **6.2 Factor structure(s) of the constructs**

It was also important to assess the reliability of the constructs. Cronbach's alpha (Cronbach, 1951) is a measure of internal consistency i.e., how closely items are related to each other (Cronbach & Shavelson, 2004). Miller (1995) argues that Cronbach's alpha assumes tau-equivalence where all factors loadings and error variances are constrained to be equal. Moreover, Cronbach's alpha is generally seen as a "lower bound on test reliability" (Miller, 1995, p. 270). In other words, it means that Cronbach's alpha provides a conservative estimate of the reliability of a measure. In this thesis, structural equation modelling has been used, which allows factor loadings of items to be unequal, and thus lacks tau-equivalence (Peterson & Kim, 2013). So, Cronbach's alpha may not be the best way to determine reliability in structural equation modelling.

However, there were four constructs in the research model in this thesis that have been parcelled. Parcels have been created with simple average scores, which assume tau-equivalence. Hence, in the current study, Cronbach's alpha may be appropriate for those constructs for which parcels have been created. Therefore, Cronbach's alpha has been reported only for constructs that were parcelled. A coefficient of 0.70 for Cronbach's alpha is generally considered acceptable, although this depends on the number of items in a scale (Cortina, 1993). Composite reliability (Hair, Black, Babin, & Anderson, 2014), as an alternative to Cronbach's alpha in structural equation modelling, was calculated for all the constructs (Table 6.1). Composite reliability is considered acceptable if higher than 0.60 (Hair et al., 2014). The factor structures of the constructs are presented next.

Table 6.1.

Composite reliability.

Construct	Latent Variable(s)	Composite reliability
Work engagement	Vigour	0.659
	Dedication	0.795
Job crafting	Increasing structural job resources	0.757
	Increasing social job resources	0.715
	Increasing challenging job demands	0.748
Supportive supervisory style		0.927
Core self-evaluations-P		0.716
Core self-evaluations-N		0.805
Work autonomy		0.838
Task performance		0.837
Contextual performance		0.867

### 6.2.1 Supportive supervisory style

The confirmatory factor analysis of supportive supervisory scale (before parcelling) showed an acceptable fit to the data ( $\chi^2$  (df) = 303.412 (98), RMSEA = 0.081, CFI = 0.941, SRMR = 0.035). Cronbach's alpha was 0.863 for 'training and development', 0.783 for 'voice', 0.901 for 'performance management', and 0.755 for 'reward'. There were 16 items in the supportive supervisory style scale that were combined into four parcels, based on the unidimensional approach. Under this approach, all items in the scale are first grouped into different factors, and then parcels

are created from items for each of the factors separately (Graham & Tatterson, 2000). Through this approach, one parcel was created for training and development, one for voice, one for performance management, and one for reward. The standardised factor loadings for supportive supervisory style after parcelling ranged from 0.814 to 0.946.

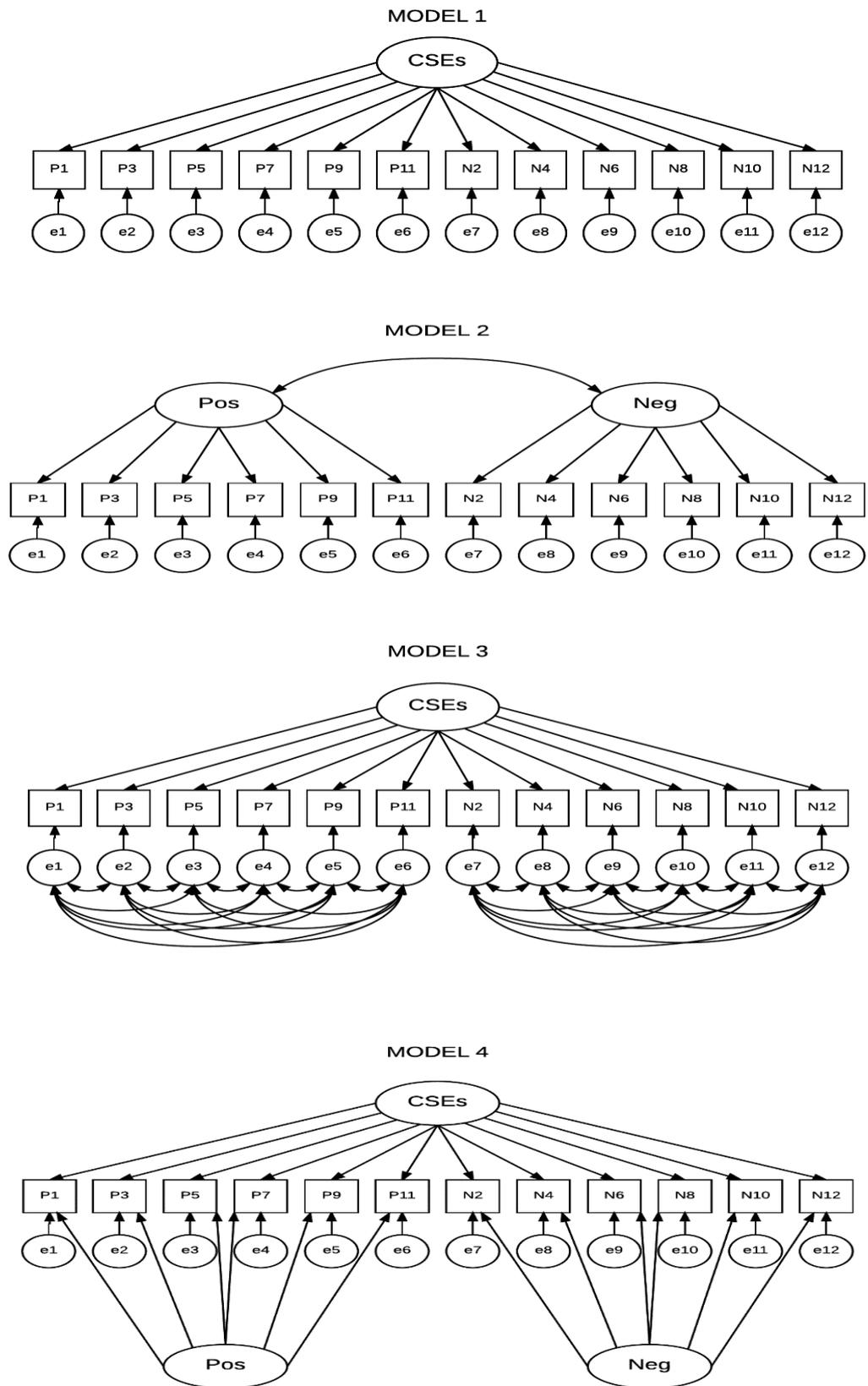
### **6.2.2 Core self-evaluations**

The fit indices for the core self-evaluations scale were not acceptable:  $\chi^2$  (df) = 362.464 (54), RMSEA = 0.134, CFI = 0.627, and SRMR = 0.114. Therefore, before moving on to the detailed analyses, the psychometric properties of the core self-evaluations scale were investigated further. Researchers often use positively and negatively worded items to investigate the same construct, such as in the case of core self-evaluations. Marsh, Scalas, and Nagengast (2010) assert that the interpretation of results from such a scale may pose problems. Similarly, Bagozzi (1993) argues that method effects, of using positively worded and negatively worded items within the same scale, can lead to biased interpretations of results. A method effect can be described as a variance because of the measurement of the construct and not the construct itself (Bagozzi, 1993). Marsh et al. (2010) argue that any psychological construct that has both positively and negatively worded items, and is based on self-report measures, if investigated according to specific strategies, will not support a unidimensional structure. Marsh et al. (2010) suggest alternative models to examine the factor structure of constructs that have both negatively worded and positively worded items to understand the construct better.

Four alternative models (Figure 6.2), as adapted from Marsh et al. (2010), were tested to find the best factor structure for core self-evaluations and to determine the presence of any method effects.

Figure 6.2.

Four alternative models of core self-evaluations.



Adapted from Marsh et al. (2010).

Method effects have been investigated with the correlated uniqueness (CU) strategy and the latent method factor (LMF) strategy. In the CU approach, correlations were included among the positively worded items and among the negatively worded items (model 3 in Figure 6.2). In the LMF approach, the latent method factors recorded the variance between items that were in the same method (model 4 in Figure 6.2).

Model 1 suggested a single core self-evaluations factor with no method effects (which means no CUs or LMFs) before parcelling. It represented the original model, which was created by Judge et al. (2003). The fit indices of this model were:  $\chi^2$  (df) = 362.464 (54), RMSEA = 0.134, CFI = 0.627, and SRMR = 0.114. In this model, the standardised factor loadings of six items were below 0.40 (with a negative estimate for one of the items).

Model 2 suggested the existence of two latent factors, one described by positively worded items and the other by negatively worded items. In this model, there was no overall core self-evaluations factor and it was assumed that the two latent factors were distinct. The fit indices of this model were:  $\chi^2$  (df) = 130.879 (53), RMSEA = 0.068, CFI = 0.906, and SRMR = 0.058. In this model, the standardised factor loadings for two items were below 0.40.

Model 3 was based on the CU strategy and proposed a single core self-evaluations factor that had distinct method effects for positively and negatively worded items respectively. The positively worded set of method effects was not correlated with either core self-evaluations or the negatively worded items. In the same way, the negatively worded set of method effects was not correlated with either core self-evaluations or the positively worded items. The fit indices of this model were:  $\chi^2$  (df) = 48.654 (24), RMSEA = 0.057, CFI = 0.970, and SRMR = 0.033. In this model, except for two items, the standardised factor loadings of all other items were below 0.40 (with a negative estimate for one of the items).

Model 4 used both negative and positive LMFs (uncorrelated with core self-evaluations as well as each other) to investigate method effects. The fit indices of this model were:  $\chi^2$  (df) = 48.654 (24), RMSEA = 0.057, CFI = 0.970, and SRMR = 0.033. In this model, the standardised factor loadings of six items were below 0.40 (with a negative estimate for one of the items).

Across the four models, the standardised factor loadings of two items were among the lowest and consistently below 0.40 ('I determine what will happen in my life' and 'I am capable of coping with most of my problems'). So, the four models were re-run after excluding these two items, to investigate them further (Table 6.2). Model 1 still had four items with standardised factor loadings below 0.40, model 2 had none, model 3 was not identified, and model 4 had five such items. After analysing the fit indices as well as the standardised factor loadings in all the four models (before excluding the two items as well as after excluding them), it was apparent that model 2 fitted the data best ( $\chi^2$  (df) = 87.472 (34), RMSEA = 0.070, CFI = 0.930, and SRMR = 0.044). It also meant that there were no method effects in the core self-evaluations scale. Instead, core self-evaluations comprised two distinct factors. Therefore, model 2 was finalised for the measurement model (without two items that had less than 0.40 standardised factor loadings)<sup>5</sup>. For the purpose of analysis, the two factors of core self-evaluations were named as core self-evaluations-P and core self-evaluations-N. The two deleted items were from the core self-evaluations-P scale.

The letters 'P' and 'N' by no means refer to a 'positive core self-evaluations trait' and a 'negative core self-evaluations trait'. At this stage, they are meant to denote two factors represented by 'positively' and 'negatively' worded items. Examination of the items showed that core self-evaluations-P was more about self-efficacy and locus of control, whereas core self-evaluations-N seemed to tap more into emotional stability and self-esteem. The conceptual differences between the

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<sup>5</sup> A supplementary analysis after including all items was also done in order to rule out the possibility of deletion of items affecting the results. The results showed that there was no such effect.

two factors will be discussed in detail in the ‘Discussions’ chapter. The standardised factor loadings for core self-evaluations-P were between 0.593 and 0.666, and for core self-evaluations-N were between 0.543 and 0.689.

Table 6.2.

Fit indices of the four alternative models of core self-evaluations.

Before excluding the two items

Model	$\chi^2$ (df)	RMSEA	CFI	SRMR
Model 1	362.464 (54)	0.134	0.627	0.114
Model 2	130.879 (53)	0.068	0.906	0.058
Model 3	48.654 (24)	0.057	0.970	0.033
Model 4	90.381 (42)	0.060	0.942	0.038

After excluding the two items

Model	$\chi^2$ (df)	RMSEA	CFI	SRMR
Model 1	284.562 (35)	0.149	0.675	0.113
Model 2	87.472 (34)	0.070	0.930	0.044
Model 3	Model not identified			
Model 4	60.380 (25)	0.067	0.954	0.037

Hypotheses 2, 14, 15, 16, 17, 18, and 19 (as discussed in Chapter 4) were thereafter split into two each to incorporate the two separate factors of core self-evaluations. The revised hypotheses are listed below:

H2a: Core self-evaluations-P are positively related to work engagement.

H2b: Core self-evaluations-N are positively related to work engagement.

H14a: Core self-evaluations-P have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

H14b: Core self-evaluations-N have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

H15a: The indirect positive relationship between core self-evaluations-P and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H15b: The indirect positive relationship between core self-evaluations-N and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H16a: The indirect positive relationship between core self-evaluations-P and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H16b: The indirect positive relationship between core self-evaluations-N and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H17a: Core self-evaluations-P are positively related to task performance directly.

H17b: Core self-evaluations-N are positively related to task performance directly.

H18a: The indirect positive relationship between core self-evaluations-P and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H18b: The indirect positive relationship between core self-evaluations-N and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H19a: Core self-evaluations-P are positively related to contextual performance.

H19b: Core self-evaluations-N are positively related to contextual performance.

### **6.2.3 Work engagement**

The confirmatory factor analysis results of a two-factor model (with the two dimensions of ‘vigour’ and ‘dedication’ as latent factors) indicated a good fit to the data ( $\chi^2$  (df) = 12.877(8), RMSEA = 0.044, CFI = 0.992, and SRMR = 0.022). The standardised factor loadings for vigour (three items) were between 0.442 and 0.737, and for dedication (three items) were between 0.660 and 0.827.

### **6.2.4 Job crafting**

The confirmatory factor analysis results indicated that the three-factor model (with the three dimensions of ‘increasing structural resources’, ‘increasing social resources’, and ‘increasing challenging job demands’ as latent factors) had an adequate fit to the data ( $\chi^2$  (df) = 234.570 (87), RMSEA = 0.073, CFI = 0.889, and SRMR = 0.055). One of the items from increasing social resources (‘I ask colleagues for advice’) was excluded from the scale as it had a factor loading below 0.40<sup>6</sup>. After deletion of this item, the range of standardised factor loadings were from 0.455 to 0.710 for

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<sup>6</sup> A supplementary analysis after including all items was also done in order to rule out the possibility of deletion of items affecting the results. The results showed that there was no such effect.

increasing structural resources (five items), from 0.507 to 0.689 for increasing social resources (five items), and from 0.447 to 0.728 for increasing challenging demands (five items). The CFI increased to 0.895 after excluding the item with the low factor loading, thus making the fit acceptable.

### **6.2.5 Work autonomy**

Cronbach's alpha was 0.845 for 'method autonomy', 0.783 for 'scheduling autonomy', and 0.840 for 'criteria autonomy'. There were nine items in the work autonomy scale that were combined into three parcels, based on the unidimensional approach. One parcel was created for method autonomy, one for scheduling autonomy, and one for criteria autonomy. The standardised factor loadings for work autonomy after parcelling ranged from 0.783 to 0.811.

### **6.2.6 Task performance**

There were nine items in the task performance scale, with Cronbach's alpha of 0.857. A total of three parcels were created using simple random assignment. Graham and Tatterson (2000) assert that if the individual items come from a unidimensional scale (as was the case with the current task performance scale), then parcels can simply be created randomly. The standardised factor loadings after parcelling were between 0.661 and 0.884.

### **6.2.7 Contextual performance**

There were seven items in the contextual performance scale, with Cronbach's alpha of 0.841. Three parcels were created using simple random assignment, after which the standardised factor loadings ranged from 0.798 to 0.831.

After conducting confirmatory factor analyses for all constructs, zero-order correlations were calculated (Table 6.3). As can be seen from Table 6.3, work engagement had a significant positive correlation of 0.635 with job crafting, 0.566 with supportive supervisory style, 0.612 with work autonomy, 0.534 with core self-evaluations-P, and 0.322 with core self-evaluations-N. On the other hand, work engagement had a negative correlation with task performance as well as contextual performance. However, these negative correlations were not significant. Job crafting had a significant positive correlation with supportive supervisory style ( $r = 0.484$ ), work autonomy ( $r = 0.571$ ), task performance ( $r = 0.120$ ), contextual performance ( $r = 0.091$ ), and core self-evaluations-P ( $r = 0.750$ ), but non-significant positive correlation with core self-evaluations-N. Supportive supervisory style had a significant positive correlation with work autonomy ( $r = 0.797$ ) and core self-evaluations-P ( $r = 0.451$ ), non-significant positive correlation with core self-evaluations-N and contextual performance, and non-significant negative correlation with task performance.

Core self-evaluations-P had a significant positive correlation with work autonomy ( $r = 0.507$ ) and core self-evaluations-N ( $r = 0.264$ ), a non-significant positive correlation with contextual performance, and a non-significant negative correlation with task performance. Core self-evaluations-N had a non-significant positive correlation with work autonomy and task performance, and a non-significant negative correlation with contextual performance. Work autonomy had a non-significant negative correlation with task performance and a non-significant positive correlation with contextual performance. Task performance and contextual performance were significantly positively correlated at 0.778.

Table 6.3.

Zero-Order Correlations.

Variable	1	2	3	4	5	6	7	8
1. Work engagement	1							
2. Job crafting	0.635***	1						
3. Supportive supervisory style	0.566***	0.484***	1					
4. Core self-evaluations-P	0.534***	0.750***	0.451***	1				
5. Core self-evaluations-N	0.322**	0.172	0.135	0.264**	1			
6. Work autonomy	0.612***	0.571***	0.797***	0.507***	0.069	1		
7. Task performance	-0.066	0.120*	-0.070	-0.018	0.089	-0.031	1	
8. Contextual performance	-0.063	0.091***	0.025	0.019	-0.039	0.016	0.778***	1

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ ; two tailed. N=320.

Overall, confirmatory factor analysis of the constructs played a key role in determining the representation of the constructs in the measurement model. The latent means and standard deviations are depicted in Table 6.4. Since I have used latent variables in this thesis, ‘latent means’ instead of ‘simple average scores’ have been reported here. The means of latent variables have been calculated as per the method recommended by Bollen (1989) for a single group setting. According to Bollen (1989), this method uses the referent item to represent the latent variables by fixing the factor loading to one and intercept to zero.

Table 6.4.

Descriptive statistics.

Variable	Latent Mean	Standard Deviation
1. Work engagement	5.755	0.915
2. Job crafting	6.434	0.426
3. Supportive supervisory style	5.706	0.818
4. Core self-evaluations-P	6.037	0.523
5. Core self-evaluations-N	3.912	1.015
6. Work autonomy	5.452	0.738
7. Task performance	6.003	0.303
8. Contextual performance	5.733	0.622

### 6.3 Full model

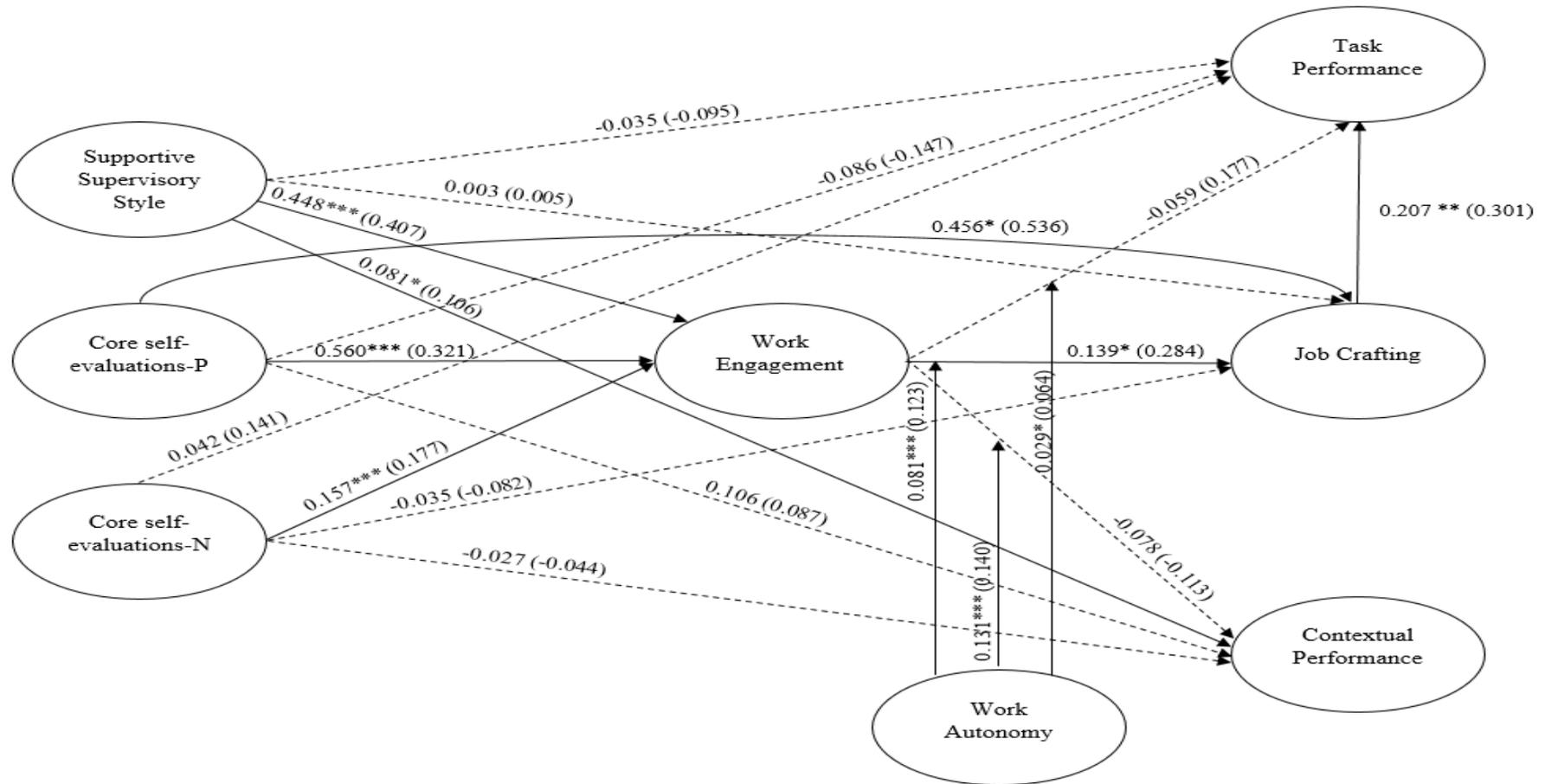
After testing the measurement model, analyses were conducted with Mplus 7.4 on the full hypothesised model (including all latent interactions). It was done by adopting latent moderated structural equations approach with MLR (i.e., maximum likelihood estimation method with robust standard errors). The analyses controlled for clusters (of supervisors and business units) when estimating the standard errors, by taking into account complex sampling features.

Regression paths were first added to the final measurement model (but without adding any interaction effects, as suggested by Cheung & Lau, 2015) to further assess fit before running the full structural model with latent interactions. Cheung and Lau (2015) suggest that if a) the fit of the model without the latent interaction and b) the standardised factor loadings are acceptable, then it can be assumed that the items measure the construct satisfactorily. The values of  $\chi^2$  (df) = 1385.776 (829), RMSEA = 0.046, CFI = 0.908, and SRMR = 0.064 indicated an adequate fit of the hypothesised model. The standardised factor loadings had a range of 0.441 to 0.981.

The unstandardised path coefficients of the full model are depicted in Figure 6.3 whereas Table 6.5 shows a summary of the unstandardised and standardised path coefficients, standard errors, and p-values. Bias-corrected (BC) bootstrap confidence intervals were not calculated for testing the indirect effects because Mplus does not allow bootstrapping with multilevel models. An index of moderated mediation, which provides a direct evidence of moderated-mediation (Hayes, 2015), was calculated initially (Table 6.6). According to Hayes (2015, p. 15), “an interval estimate of the index of moderated mediation provides an inferential test as to whether the indirect effect depends linearly on the moderator”. Thereafter, moderated mediation effects (conditional effects) were calculated at various levels of work autonomy (mean, +/- 3, +/- 2, and +/- 1 standard deviation [SD]). The standardised moderated mediation effects at various levels of work autonomy are reported in Table 6.7. While reporting the results in the hypotheses section, I have tried to find out the exact point of work autonomy where the effects turn from non-significant to significance, hence some results are mentioned in decimal points of standard deviation. As per the suggestion of Hayes (2015), hypotheses related to moderated mediation were considered to be supported only when the index of moderated-mediation was significant (at the 95% confidence interval) for that indirect effect. Confidence intervals for each level were calculated by using estimates as the basis for calculation (Cheung & Lau, 2015).

Figure 6.3.

Full Model.



Note: Entries are unstandardised path coefficients, with standardised coefficients in parenthesis; \* =  $p < .05$ ; \*\* =  $p < .01$ ; \*\*\* =  $p < .001$ ; non-significant paths are in dotted lines.

Table 6.5.

Path coefficients for the structural model.

Structural regression path	Unstandardised estimate	Standard Error	p-value (two tailed)
	(standardised) B ( $\beta$ )		S.E. p
SSS ----> WE	0.448 (0.407)	0.087	0.000
CSEP ----> WE	0.560 (0.321)	0.106	0.000
CSEN ----> WE	0.157 (0.177)	0.044	0.000
SSS ----> JC	0.003 (0.005)	0.050	0.954
CSEP ----> JC	0.456 (0.536)	0.222	0.040
CSEN ----> JC	- 0.035 (-0.082)	0.020	0.074
WE ----> JC	0.139 (0.284)	0.069	0.044
WE ----> JC (WA as moderator)	0.081 (0.123)	0.022	0.000
SSS ----> TP	- 0.035 (-0.095)	0.038	0.354
CSEP ----> TP	- 0.086 (-0.147)	0.059	0.149
CSEN ----> TP	0.042 (0.141)	0.026	0.112
JC ----> TP	0.207 (0.301)	0.077	0.007
WE ----> TP	- 0.059 (0.177)	0.051	0.246
WE ----> TP (WA as moderator)	0.029 (0.064)	0.013	0.028
SSS ----> CP	0.081(0.106)	0.037	0.031
CSEP ----> CP	0.106 (0.087)	0.146	0.466
CSEN ----> CP	- 0.027 (-0.044)	0.074	0.713
WE ----> CP	- 0.078 (-0.113)	0.093	0.397
WE ----> CP (WA as moderator)	0.131 (0.140)	0.040	0.001

Note: SSS = supportive supervisory style; CSE-P = core self-evaluations - P; CSE-N = core self-evaluations- N; WE = work engagement; JC = job crafting; WA = work autonomy; TP = task performance; CP = contextual performance  
Standardized path coefficients are mentioned in parenthesis ( ).

Table 6.6.

Index of moderated mediation (with work autonomy as moderator).

Regression path	Index (CI_Lo , CI_Hi)
WE through JC on TP	0.017*** (0.007, 0.027)
SSS through WE direct on TP	0.013* (0.002, 0.024)
SSS through WE & JC on TP	0.007*** (0.003, 0.012)
SSS through WE on CP	0.059*** (0.042, 0.075)
CSE-P through WE direct on TP	0.016* (0.002, 0.030)
CSE-P through WE & JC on TP	0.009* (0.001, 0.018)
CSE-P through WE on CP	0.073** (0.024, 0.123)
CSE-N through WE direct on TP	0.005 (0.000, 0.009)
CSE-N through WE & JC on TP	0.003*** (0.001, 0.004)
CSE-N through WE on CP	0.021 (-0.002, 0.044)

Note: SSS = supportive supervisory style; CSE-P = core self-evaluations - P; CSE-N = core self-evaluations- N, WE = work engagement; JC = job crafting; WA = work autonomy; TP = task performance; CP = contextual performance. \*p<=0.05 \*\*p<=0.01 \*\*\*p<= 0.001 , N=320. CI\_Lo = lower limit of 95% confidence interval, CI\_Hi = higher limit of 95% confidence interval.

Table 6.7. Moderated Mediation (standardised results).

Regression path	Type of effect	Conditional effects at various levels of work autonomy (95% confidence interval)						
		3 SD (CI_Lo , CI_Hi)	2 SD (CI_Lo , CI_Hi)	1 SD (CI_Lo , CI_Hi)	0 (Mean) (CI_Lo , CI_Hi)	-1 SD (CI_Lo , CI_Hi)	-2 SD (CI_Lo , CI_Hi)	-3 SD (CI_Lo , CI_Hi)
WE on JC	direct	0.394 (0.315, 0.472)	0.320 (0.222, 0.418)	0.246 (0.116, 0.375)	0.172 (0.005, 0.338)	0.098 (-0.109, 0.305)	0.024 (-0.226, 0.274)	-0.050 (-0.342, 0.242)
WE on TP	direct	0.016 (-0.428, 0.460)	-0.049 (-0.444, 0.346)	-0.114 (-0.460, 0.232)	-0.179 (-0.480, 0.122)	-0.243 (-0.501, 0.015)	-0.308** (-0.531, -0.084)	-0.373*** (-0.569, -0.177)
WE through JC on TP	indirect	0.198* (0.045, 0.350)	0.161* (0.017, 0.304)	0.124 (-0.011, 0.259)	0.086 (-0.043, 0.215)	0.049 (-0.080, 0.178)	0.012 (-0.119, 0.143)	-0.025 (-0.162, 0.112)
WE on TP	total	0.214 (-0.230, 0.658)	0.112 (-0.272, 0.496)	0.010 (-0.313, 0.333)	-0.092 (-0.358, 0.174)	-0.194 (-0.409, 0.021)	-0.296*** (-0.470, -0.121)	-0.398*** (-0.548, -0.247)
WE on CP	direct total	0.313 (-0.016, 0.642)	0.170 (-0.122, 0.462)	0.028 (-0.242, 0.298)	-0.115 (-0.381, 0.151)	-0.258 (-0.542, 0.026)	-0.401* (-0.718, -0.083)	-0.544** (-0.906, -0.181)
SSS through WE direct on TP	indirect	0.006 (-0.172, 0.184)	0.020 (-0.176, 0.136)	-0.046 (-0.181, 0.089)	-0.072 (-0.187, 0.043)	-0.097* (-0.191, -0.002)	-0.123*** (-0.195, -0.050)	-0.149*** (-0.200, -0.098)
SSS through WE & JC on TP	indirect	0.079*** (0.047, 0.110)	0.064*** (0.032, 0.095)	0.050** (0.014, 0.085)	0.035 (-0.004, 0.074)	0.020 (-0.025, 0.065)	0.005 (-0.046, 0.056)	-0.010 (-0.066, 0.046)
SSS through WE on TP	indirect total	0.086 (-0.086, 0.258)	0.045 (-0.105, 0.195)	0.004 (-0.125, 0.133)	-0.037 (-0.146, 0.072)	-0.078 (-0.170, 0.014)	-0.119** (-0.197, -0.040)	-0.160*** (-0.230, -0.089)
SSS on TP	total	-0.007 (-0.083, 0.069)	-0.048 (-0.142, 0.046)	-0.089 (-0.204, 0.026)	-0.130 (-0.267, 0.007)	-0.171* (-0.331, -0.010)	-0.212* (-0.396, -0.027)	-0.253* (-0.460, -0.045)
SSS through WE on CP	indirect	0.125* (0.007, 0.242)	0.068 (-0.043, 0.179)	0.011 (-0.096, 0.118)	-0.046 (-0.153, 0.061)	-0.103 (-0.212, 0.006)	-0.161** (-0.276, -0.045)	-0.218*** (-0.343, -0.092)
SSS on CP	total	0.232*** (0.185, 0.279)	0.175*** (0.128, 0.222)	0.118*** (0.061, 0.174)	0.060 (-0.008, 0.128)	0.003 (-0.081, 0.087)	-0.054 (-0.154, 0.046)	-0.111 (-0.228, 0.006)
CSE-P through WE direct on T	indirect	0.005 (-0.136, 0.146)	-0.015 (-0.140, 0.110)	-0.036 (-0.145, 0.073)	-0.056 (-0.154, 0.042)	-0.077 (-0.163, 0.009)	-0.097* (-0.177, -0.016)	-0.118** (-0.194, -0.041)
CSE-P through WE & JC on T	indirect	0.063* (0.006, 0.119)	0.051 (0.000, 0.102)	0.039 (-0.006, 0.084)	0.027 (-0.014, 0.068)	0.016 (-0.025, 0.057)	0.004 (-0.037, 0.045)	-0.008 (-0.053, 0.037)
CSE-P through WE on TP	total indirect	0.067 (-0.078, 0.212)	0.035 (-0.086, 0.156)	0.003 (-0.098, 0.104)	-0.029 (-0.113, 0.055)	-0.061 (-0.135, 0.013)	-0.093** (-0.163, -0.022)	-0.126*** (-0.200, -0.051)
CSE-P on TP	total	0.082 (-0.051, 0.215)	0.050 (-0.077, 0.177)	0.018 (-0.109, 0.145)	-0.014 (-0.147, 0.119)	-0.047 (-0.188, 0.094)	-0.079 (-0.233, 0.075)	-0.111 (-0.281, 0.059)
CSE-P through WE on CP	indirect	0.099 (-0.001, 0.199)	0.054 (-0.036, 0.144)	0.009 (-0.075, 0.093)	-0.036 (-0.122, 0.050)	-0.081 (-0.173, 0.011)	-0.126* (-0.227, -0.024)	-0.172** (-0.287, -0.056)
CSE-P on CP	total	0.187* (0.022, 0.351)	0.142 (-0.028, 0.312)	0.097 (-0.083, 0.277)	0.052 (-0.140, 0.244)	0.007 (-0.198, 0.212)	-0.038 (-0.257, 0.181)	-0.084 (-0.319, 0.151)
CSE-N through WE direct on T	indirect	0.003 (-0.075, 0.081)	-0.009 (-0.079, 0.061)	-0.020 (-0.082, 0.042)	-0.031 (-0.089, 0.027)	-0.042 (-0.098, 0.014)	-0.054 (-0.108, 0.000)	-0.065* (-0.123, -0.006)
CSE-N through WE & JC on T	indirect	0.035 (-0.004, 0.074)	0.028 (-0.007, 0.063)	0.022 (-0.011, 0.055)	0.015 (-0.014, 0.044)	0.009 (-0.018, 0.036)	0.002 (-0.021, 0.025)	-0.004 (-0.025, 0.017)
CSE-N through WE on TP	total indirect	0.037 (-0.045, 0.119)	0.020 (-0.048, 0.088)	0.002 (-0.054, 0.058)	-0.016 (-0.063, 0.031)	-0.034 (-0.073, 0.005)	-0.052** (-0.087, -0.016)	-0.070*** (-0.107, -0.032)
CSE-N on TP	total	0.153** (0.037, 0.268)	0.136* (0.026, 0.245)	0.118* (0.010, 0.225)	0.100 (-0.005, 0.205)	0.082 (-0.023, 0.187)	0.064 (-0.043, 0.171)	0.047 (-0.064, 0.158)
CSE-N through WE on CP	indirect	0.055 (-0.027, 0.137)	0.030 (-0.030, 0.090)	0.005 (-0.042, 0.052)	-0.020 (-0.067, 0.027)	-0.045 (-0.105, 0.015)	-0.070 (-0.150, 0.010)	-0.095 (-0.198, 0.008)
CSE-N on CP	total	0.010 (-0.258, 0.278)	-0.015 (-0.263, 0.233)	-0.040 (-0.271, 0.191)	-0.065 (-0.278, 0.148)	-0.090 (-0.289, 0.109)	-0.115 (-0.305, 0.075)	-0.140 (-0.322, 0.042)

Note: SSS = supportive supervisory style; CSE-P = core self-evaluations - P; CSE-N = core self-evaluations- N, WE = work engagement;

JC = job crafting; WA = work autonomy; TP = task performance; CP = contextual performance

\*p<=0.05 \*\*p<=0.01 \*\*\*p<= 0.001 , two tailed. N=320.

CI\_Lo = Lower limit of 95% confidence interval, CI\_Hi = Higher limit of 95% confidence interval

Next, results for the hypotheses will be reported.

Hypothesis 1 (H1) posited that supportive supervisory style would be positively related to work engagement. Results showed that supportive supervisory style was positively related to work engagement ( $B = 0.448, p = 0.000$ ). Hence, H1 was supported.

Hypothesis 2a (H2a) postulated that core self-evaluations-P would be positively related to work engagement. Results showed that core self-evaluations-P were positively related to work engagement ( $B = 0.560, p = 0.000$ ). Hence, H2a was supported.

Hypothesis 2b (H2b) stated that core self-evaluations-N would be positively related to work engagement. Results showed that core self-evaluations-N were positively related to work engagement ( $B = 0.157, p = 0.000$ ). Hence, H2b was supported.

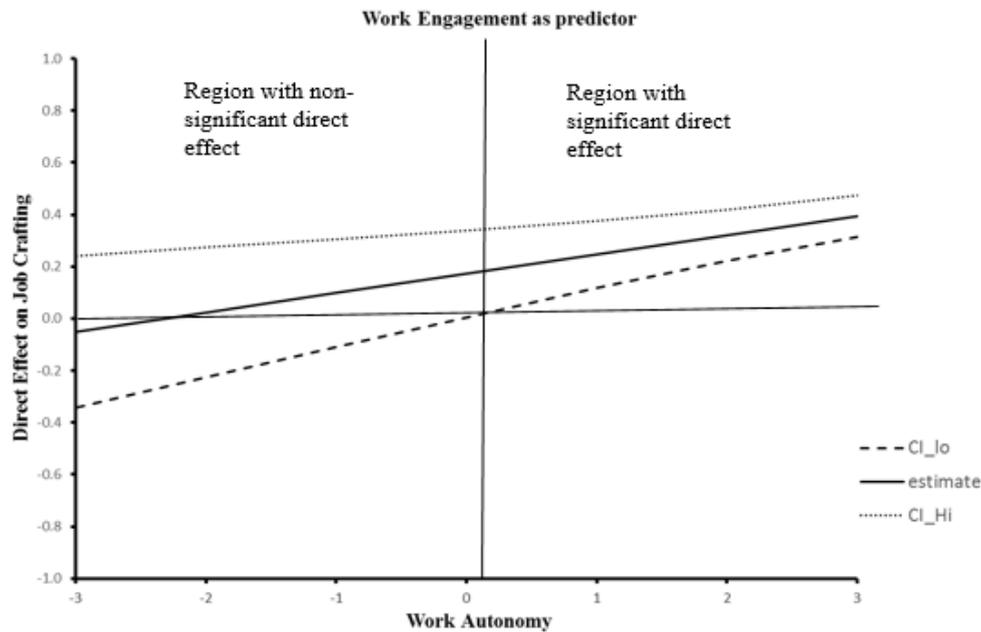
Hypothesis 3 (H3) posited that work engagement would be positively related to job crafting. Results indicated that there was a significant positive relationship between work engagement and job crafting ( $B = 0.139, p = 0.044$ ). Thus, H3 was supported.

Hypothesis 3a (H3a) stated that the direct positive relationship between work engagement and job crafting would be moderated by work autonomy such that the relationship would be stronger when work autonomy was higher. Figure 6.3 shows that the moderating effect of work autonomy on the relationship between work engagement and job crafting was positive and significant ( $B = 0.081, p = 0.000$ ). The conditional direct effect (standardised) between the two became significantly positive when the level of work autonomy was above the mean ( $\beta = 0.172, p = 0.044, 95\% \text{ CI } [0.005, 0.338]$ ). The significant area is toward the right

of the vertical line and above the horizontal line. As evident from Figure 6.4, this direct effect was stronger at higher levels of work autonomy and weaker at lower levels of work autonomy. Thus, H3a was supported.

Figure 6.4.

Moderated mediation results: Hypothesis 3a.



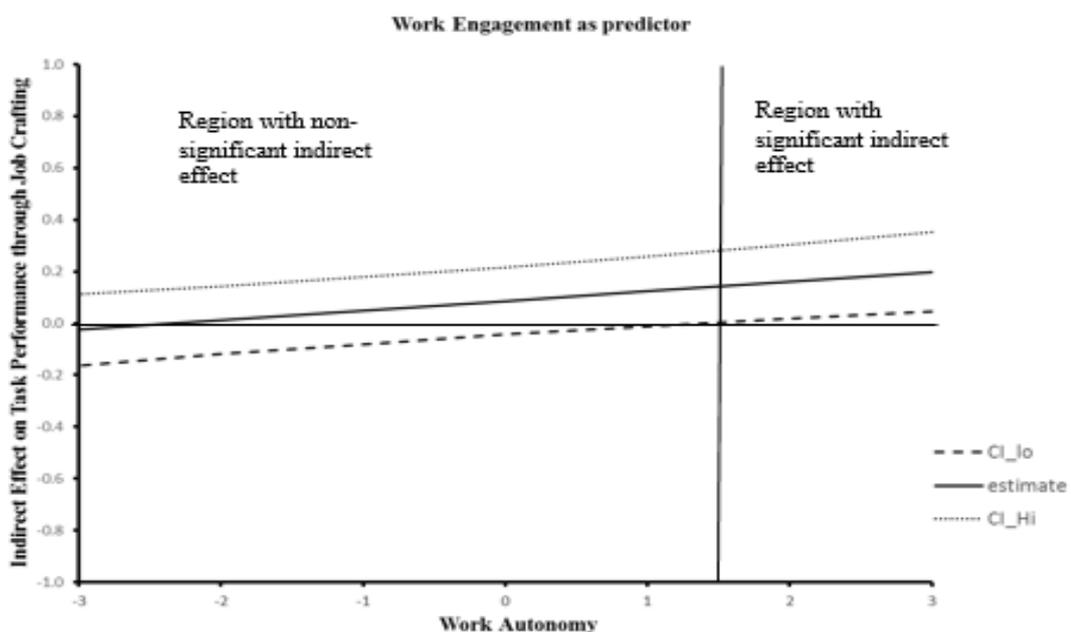
Hypothesis 4 (H4) posited that job crafting would be positively related to task performance directly. Results showed that job crafting was positively related to task performance directly ( $B = 0.207, p = 0.301$ ). Hence, H4 was supported.

Hypothesis 5 (H5) postulated that work engagement would be positively related to task performance through the mediating role of job crafting. Results demonstrated that work engagement was positively related to job crafting ( $B = 0.139, p = 0.044$ ) and job crafting was further positively related to task performance ( $B = 0.207, p = 0.301$ ). The direct relationship between work engagement and task performance was not significant. So, job crafting fully mediated the relationship between work engagement and task performance. Hence, H5 was supported.

Hypothesis 5a (H5a) stated that the indirect positive relationship between work engagement and task performance, through the mediating role of job crafting, would be moderated by work autonomy such that the indirect effect would be stronger when work autonomy was higher. The index of moderated mediation was significant for this indirect effect ( $B = 0.017, p = 0.001, 95\% \text{ CI } [0.007, 0.027]$ ). Furthermore, the moderated mediation analysis revealed that the conditional indirect effect (standardised) of work engagement on task performance, through the mediating role of job crafting, became significantly positive when work autonomy was at 1.4 SD above the mean ( $\beta = 0.139, p = 0.049, 95\% \text{ CI } [0.001, 0.276]$ ). The significant area is toward the right of the vertical line and above the horizontal line. The direction of the slope (Figure 6.5) suggested that in a work environment with greater autonomy, the positive indirect relationship between work engagement and task performance, through job crafting, was stronger. As work autonomy decreased, the positive indirect effect between work engagement and task performance got weaker. Thus, H5a was supported.

Figure 6.5.

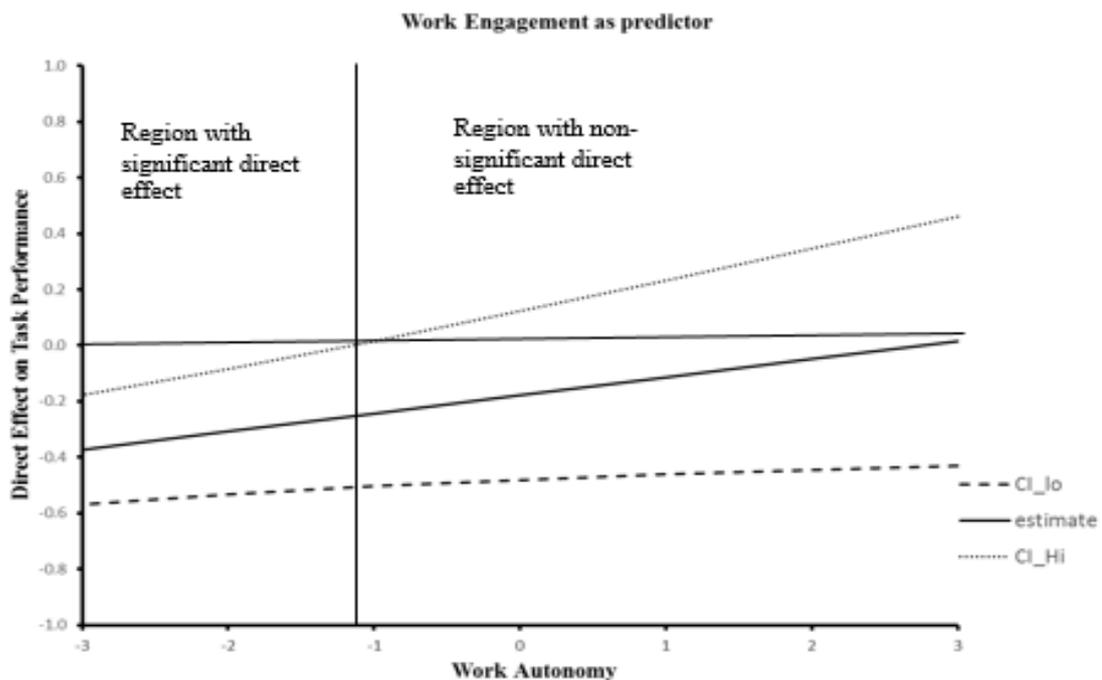
Moderated mediation results: Hypothesis 5a.



Hypothesis 6 (H6) posited that the direct positive relationship between work engagement and task performance would be moderated by work autonomy such that the relationship would be stronger when work autonomy was higher. Figure 6.6 shows that the moderating effect of work autonomy on the relationship between work engagement and task performance was positive and significant ( $B = 0.029$ ,  $p = 0.028$ ). Results of moderated mediation analysis revealed that the conditional direct effects (standardised) of work engagement on task performance were weaker at lower levels of autonomy and stronger at higher levels of autonomy (Figure 6.6). However, this direct effect became significantly negative when work autonomy was at -1.2 SD below the mean ( $\beta = -0.256$ ,  $p = 0.046$ , 95% CI [-0.506, -0.005]). The significant area is toward the left of the vertical line and below the horizontal line. Thus, H6 was partially supported.

Figure 6.6.

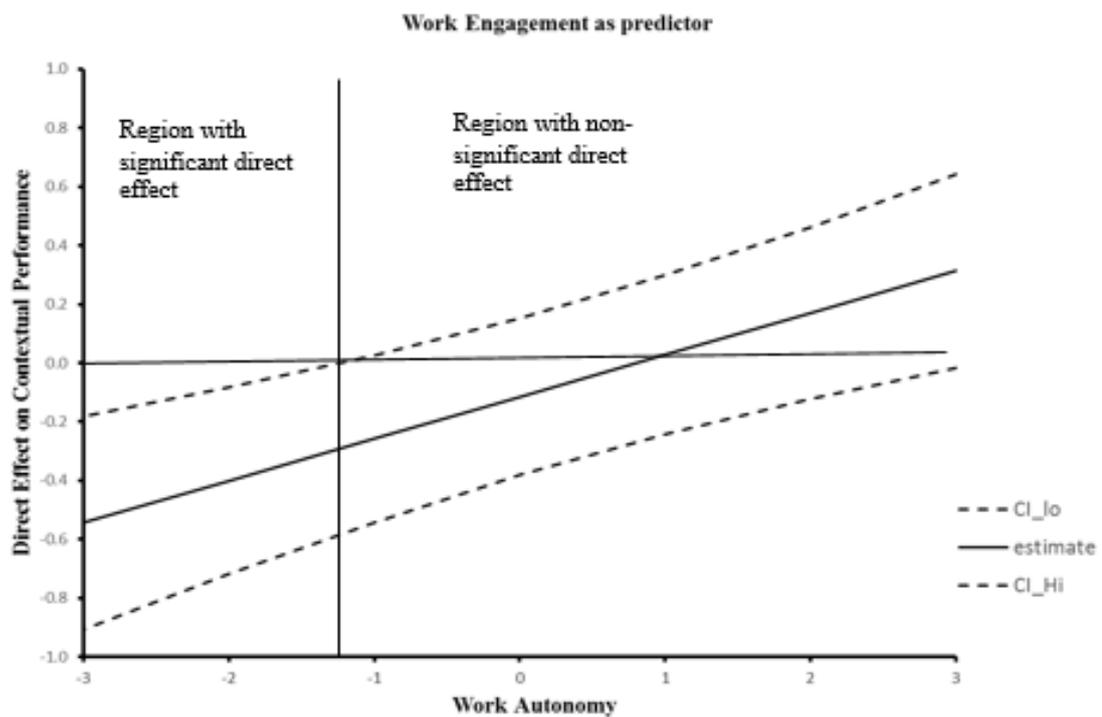
Moderated mediation results: Hypothesis 6.



Hypothesis 7 (H7) stated that the direct positive relationship between work engagement and contextual performance would be moderated by work autonomy such that the relationship would be stronger when work autonomy was higher. Figure 6.3 shows that the moderating effect of work autonomy on the relationship between work engagement and contextual performance was positive and significant ( $B = 0.131, p = 0.001$ ). Moderated mediation analysis and the direction of the slope (Figure 6.7) revealed that the conditional direct effects (standardised) of work engagement on contextual performance were weaker at lower levels of autonomy and stronger at higher levels of autonomy. However, this conditional direct effect became significantly negative when work autonomy was at -1.3 SD below the mean ( $\beta = -0.301, p = 0.043, 95\% \text{ CI } [-0.593, -0.009]$ ). The significant area is toward the left of the vertical line and below the horizontal line. Thus, H7 was partially supported.

Figure 6.7.

Moderated mediation results: Hypothesis 7.

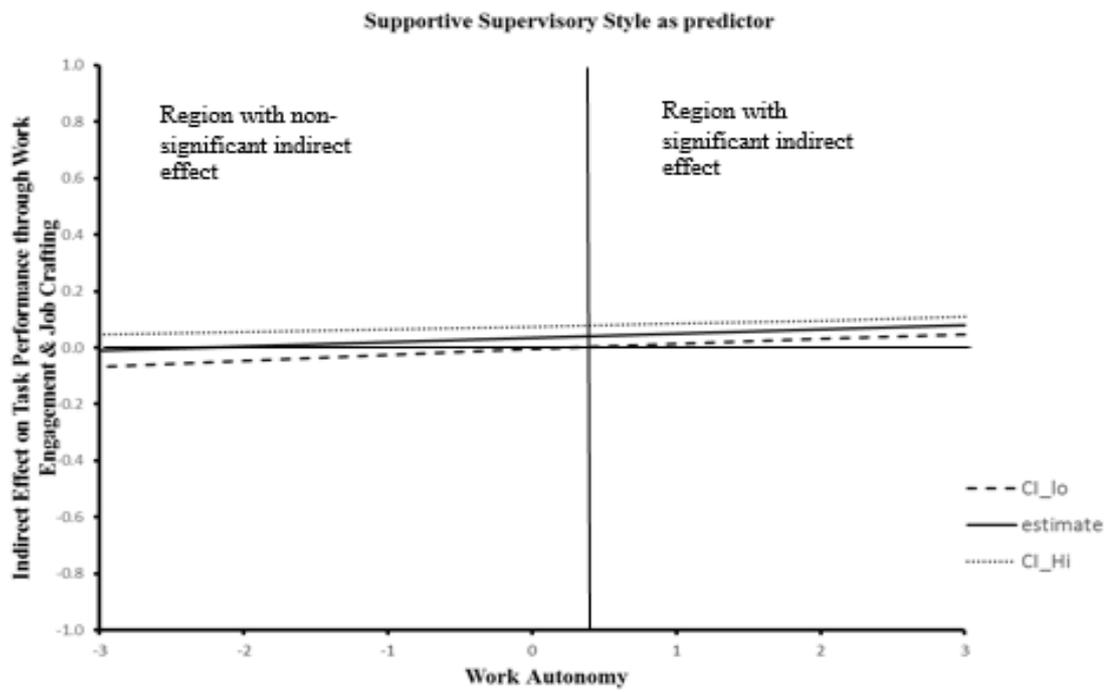


Hypothesis 8 (H8) posited that supportive supervisory style would have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting. Results demonstrated that supportive supervisory style was positively related to work engagement ( $B = 0.448, p = 0.000$ ), work engagement was positively related to job crafting ( $B = 0.139, p = 0.044$ ), and job crafting was further positively related to task performance ( $B = 0.207, p = 0.301$ ). Work engagement by itself did not mediate the relationship between supportive supervisory style and task performance since the direct relationship between work engagement and task performance was not significant. The direct path from supportive supervisory style and task performance was not significant either. So, work engagement and job crafting fully and sequentially mediated the relationship between supportive supervisory style and task performance. Thus, H8 was supported.

Hypothesis 9 (H9) stated that the indirect positive relationship between supportive supervisory style and task performance, through the sequential mediating roles of work engagement and job crafting, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results showed that the index of moderated mediation was significant for this indirect effect ( $B = 0.007, p = 0.001, 95\% \text{ CI } [0.003, 0.012]$ ). Moderated mediation analysis further revealed that the conditional indirect effect (standardised) of supportive supervisory style on task performance, through the sequential mediating roles of work engagement and job crafting became significantly positive when work autonomy was at 0.3 SD above the mean ( $\beta = 0.039, p = 0.044, 95\% \text{ CI } [0.001, 0.076]$ ). The significant area is toward the right of the vertical line and above the horizontal line. The direction of the slope (Figure 6.8) suggested that in a work environment with greater autonomy, the indirect relationship between supportive supervisory style and task performance was stronger. Thus, H9 was supported.

Figure 6.8.

Moderated mediation results: Hypothesis 9.

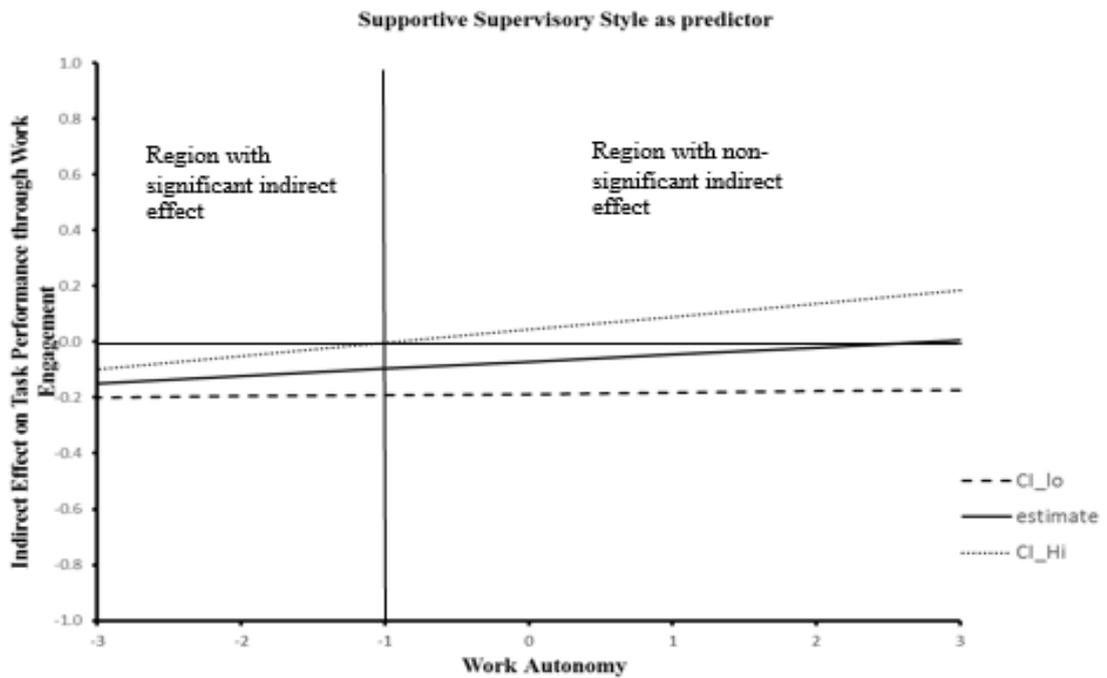


Hypothesis 10 (H10) stated that the indirect positive relationship between supportive supervisory style and task performance, through the mediating role of work engagement, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results indicated that the index of moderated mediation was significant for this indirect effect ( $B = 0.013$ ,  $p = 0.026$ , 95% CI [0.002, 0.024]). The direction of the slope (Figure 6.9) suggested that the indirect relationship between supportive supervisory style and task performance, through work engagement, became stronger when work autonomy was higher and got weaker when work autonomy was lower. Specifically, moderated mediation analysis revealed that the conditional indirect effect (standardised) of supportive supervisory style on task performance, through the mediating role of work engagement, became significantly negative when work autonomy was at -1 SD below the mean ( $\beta = -0.097$ ,  $p =$

0.041, 95% CI [-0.191, - 0.002]). The significant area is toward the left of the vertical line and below the horizontal line. Thus, H10 was partially supported.

Figure 6.9.

Moderated mediation results: Hypothesis 10.



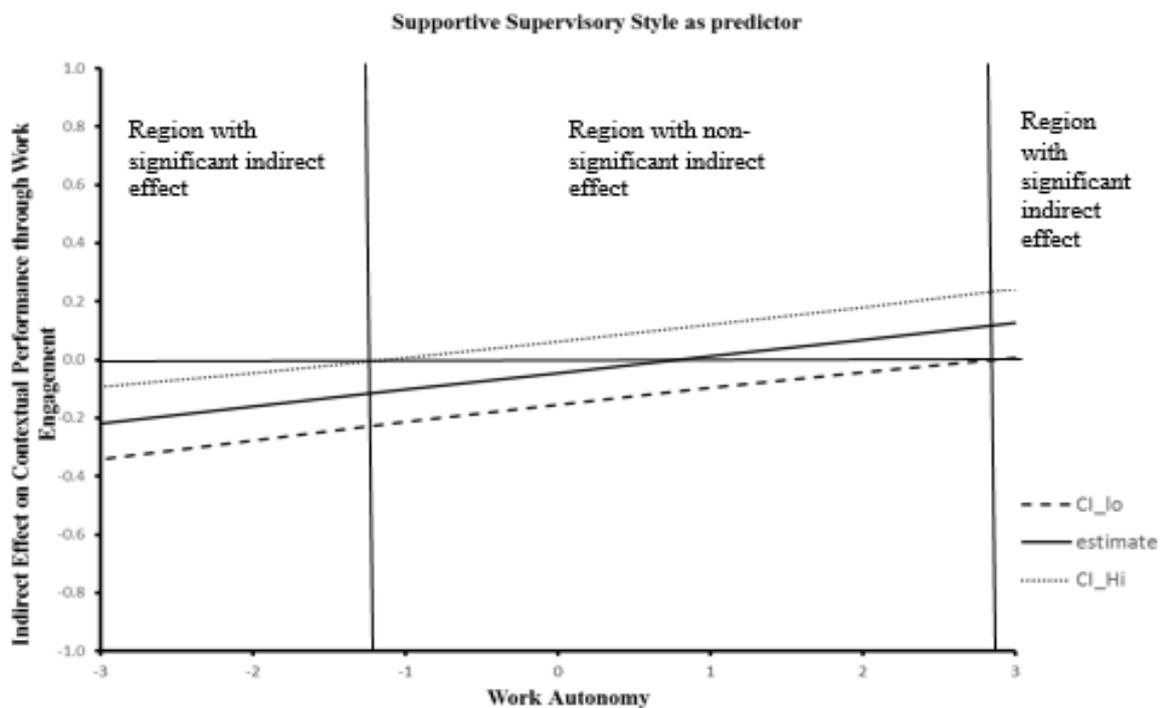
Hypothesis 11 (H11) stated that supportive supervisory style would be positively related to task performance directly. The results showed that the direct path from supportive supervisory style to task performance was not significant ( $B = - 0.035, p = 0.354$ ). Therefore, H11 was not supported.

Hypothesis 12 (H12) posited that the indirect positive relationship between supportive supervisory style and contextual performance, through the mediating role of work engagement, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results showed that the index of moderated mediation was significant for this indirect effect ( $B = 0.059, p = 0.000, 95\% \text{ CI } [0.042, 0.075]$ ).

Furthermore, moderated mediation analysis revealed that the conditional indirect effect (standardised) of supportive supervisory style on contextual performance, through the mediating role of work engagement, became significantly positive when work autonomy was at 2.9 SD above the mean ( $\beta = 0.120, p = 0.045, 95\% \text{ CI } [0.002, 0.237]$ ) and significantly negative when work autonomy was at -1.2 SD below the mean ( $\beta = -0.115, p = 0.043, 95\% \text{ CI } [-0.226, -0.003]$ ). The significant area is toward the right of the vertical line and above the horizontal line as well as toward the left of the vertical line and below the horizontal line. The direction of the slope (Figure 6.10) suggested that the indirect relationship between supportive supervisory style and contextual performance, through work engagement, was stronger at higher levels of work autonomy and weaker at lower levels of work autonomy. Thus, H12 was partially supported.

Figure 6.10.

Moderated mediation results: Hypothesis 12.



Hypothesis 13 (H13) stated that supportive supervisory style would be positively related to contextual performance directly. Results indicated that supportive supervisory style had a significant positive relationship with contextual performance directly ( $B = 0.081, p = 0.031$ ). Therefore, H13 was supported.

Hypothesis 14a (H14a) posited that core self-evaluations-P would have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting. Results demonstrated that core self-evaluations-P were positively related to work engagement ( $B = 0.560, p = 0.000$ ), work engagement was positively related to job crafting ( $B = 0.139, p = 0.044$ ), and job crafting was further positively related to task performance ( $B = 0.207, p = 0.301$ ). Work engagement did not by itself mediate the relationship between core self-evaluations-P and work engagement since the direct relationship between work engagement and task performance was not significant. The direct path from core self-evaluations-P and task performance was not significant either. So, work engagement and job crafting fully and sequentially mediated the relationship between core self-evaluations-N and task performance. Thus, H14a was supported.

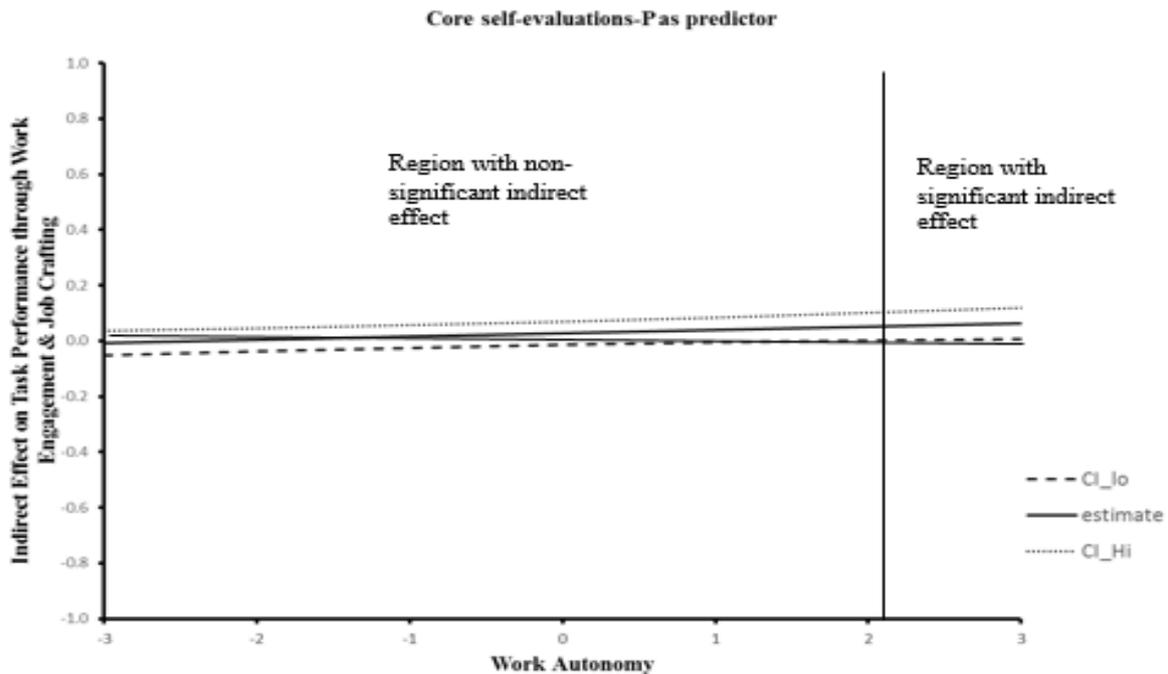
Hypothesis 14b (H14b) posited that core self-evaluations-N would have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting. Results demonstrated that core self-evaluations-N were positively related to work engagement ( $B = 0.157, p = 0.000$ ), work engagement was positively related to job crafting ( $B = 0.139, p = 0.044$ ), and job crafting was further positively related to task performance ( $B = 0.207, p = 0.301$ ). Work engagement by itself did not mediate the relationship between core self-evaluations-N and work engagement since the direct relationship between work engagement and task performance was not significant. The direct

path from core self-evaluations-N and task performance was not significant either. So, work engagement and job crafting fully and sequentially mediated the relationship between core self-evaluations-N and task performance. Thus, H14b was supported.

Hypothesis 15a (H15a) stated that the indirect positive relationship between core self-evaluations-P and task performance, through the sequential mediating roles of work engagement and job crafting, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results indicated that the index of moderated mediation was significant for this indirect effect ( $B = 0.009$ ,  $p = 0.033$ , 95% CI [0.001, 0.018]). Moderated mediation analysis further revealed that the conditional indirect effect (standardised) of core self-evaluations-P on task performance, through the sequential mediating roles of work engagement and job crafting, became significantly positive when work autonomy was at 2.1 SD above the mean ( $\beta = 0.052$ ,  $p = 0.049$ , 95% CI [0.001, 0.103]). The significant area is toward the right of the vertical line and above the horizontal line. The direction of the slope (Figure 6.11) suggested that in a higher work autonomy environment, the indirect relationship between core self-evaluations-P and task performance, through work engagement and job crafting sequentially, was stronger. Thus, H15a was supported.

Figure 6.11.

Moderated mediation results: Hypothesis 15a.

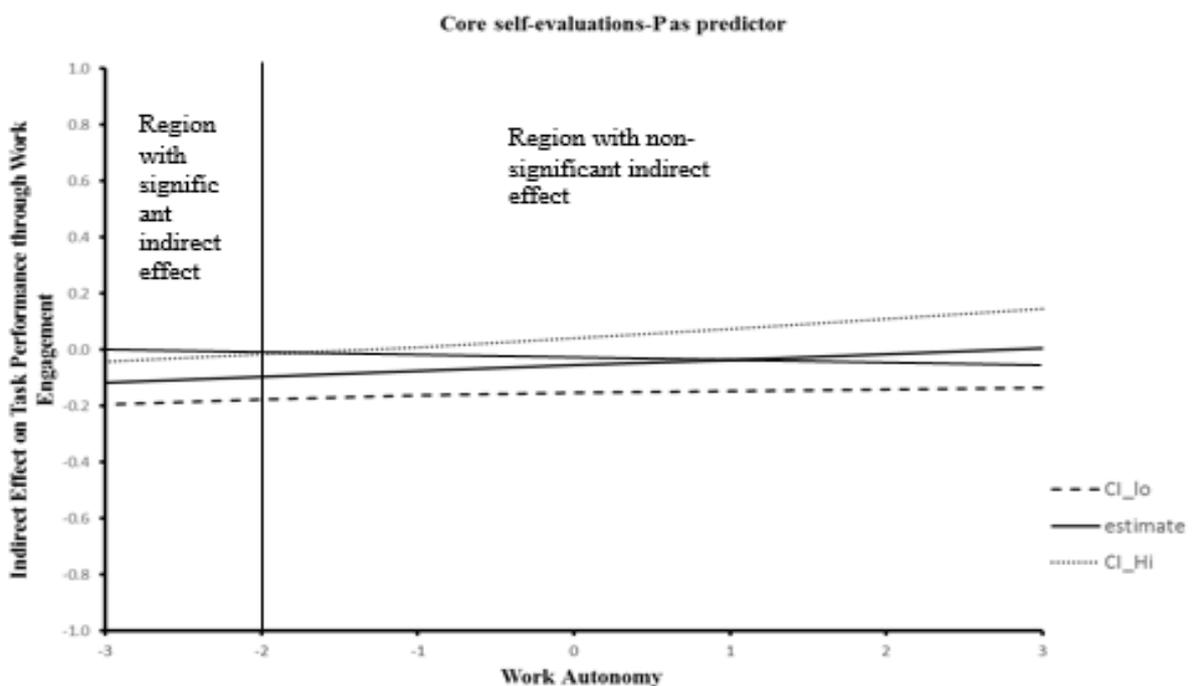


Hypothesis 15b (H15b) stated that the indirect positive relationship between core self-evaluations-N and task performance, through the sequential mediating roles of work engagement and job crafting, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results indicated that the index of moderated mediation was significant for this indirect effect ( $B = 0.003$ ,  $p = 0.001$ , 95% CI [0.001, 0.004]). However, moderated mediation analysis revealed that the conditional indirect effect of core self-evaluations-N on task performance, through the sequential mediating roles of work engagement and job crafting, was not significant. Thus, H15b was not supported.

Hypothesis 16a (H16a) posited that the indirect positive relationship between core self-evaluations-P and task performance, through the mediating role of work engagement, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results showed that the index of moderated mediation was significant for this indirect effect ( $B = 0.016, p = 0.025, 95\% \text{ CI } [0.002, 0.030]$ ). The direction of the slope (Figure 6.12) suggested that the indirect relationship between core self-evaluations-P and task performance, through work engagement, became stronger when work autonomy was higher and got weaker when work autonomy was lower. However, moderated mediation analysis revealed that the conditional indirect effect (standardised) of core self-evaluations-P on task performance, through the mediating role of work engagement, became significantly negative when work autonomy was at -2 SD below the mean ( $\beta = -0.097, p = 0.016, 95\% \text{ CI } [-0.177, -0.016]$ ). The significant area is toward the left of the vertical line and below the horizontal line. Thus, H16a was partially supported.

Figure 6.12.

Moderated mediation results: Hypothesis 16a.



Hypothesis 16b (H16b) posited that the indirect positive relationship between core self-evaluations-N and task performance, through the mediating role of work engagement, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results indicated that the index of moderated mediation was not significant for this indirect effect ( $B = 0.005$ ,  $p = 0.062$ , 95% CI [0.000, 0.009]). Hence, H16b was not supported.

Hypothesis 17a (H17a) posited that core self-evaluations-P would be positively related to task performance directly. The results showed that the relationship between core self-evaluations-P and task performance was not significant ( $B = -0.086$ ,  $p = 0.149$ ). So, H17a was not supported.

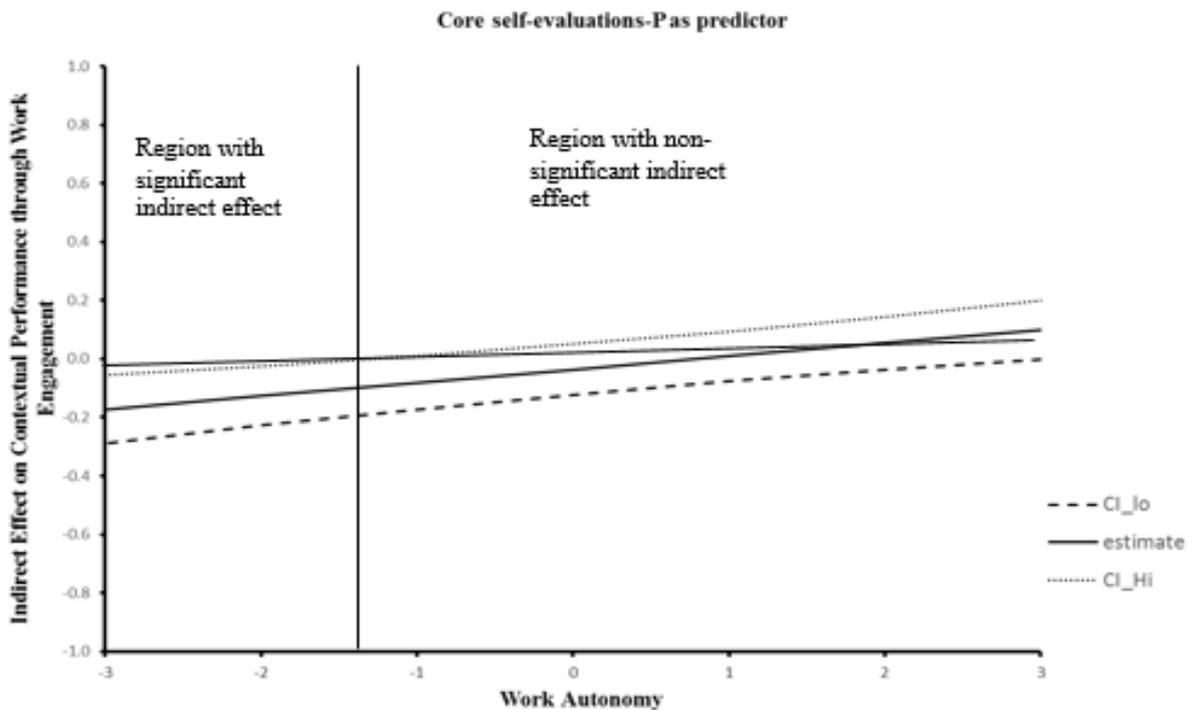
Hypothesis 17b (H17b) posited that core self-evaluations-N would be positively related to task performance directly. The results indicated that the relationship between core self-evaluations-N and task performance was not significant ( $B = 0.042$ ,  $p = 0.112$ ). So, H17b was not supported.

Hypothesis 18a (H18a) postulated that the indirect positive relationship between core self-evaluations-P and contextual performance, through the mediating role of work engagement, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results indicated that the index of moderated mediation was significant for this indirect effect ( $B = 0.073$ ,  $p = 0.004$ , 95% CI [0.024, 0.123]). The direction of the slope (Figure 6.13) indicated that in a lower work autonomy environment, the indirect relationship between core self-evaluations-P and contextual performance was weaker as compared to a higher autonomy environment. However, moderated mediation

analysis revealed that the conditional indirect effect (standardised) of core self-evaluations-P on contextual performance, through work engagement, became significantly negative when work autonomy was at -1.3 SD below the mean ( $\beta = -0.095$ ,  $p = 0.049$ , 95% CI [-0.189, -0.000]). The significant area is toward the left of the vertical line and below the horizontal line. Thus, H18a was partially supported.

Figure 6.13.

Moderated mediation results: Hypothesis 18a.



Hypothesis 18b (H18b) postulated that the indirect positive relationship between core self-evaluations-N and contextual performance, through the mediating role of work engagement, would be moderated by work autonomy. Specifically, this indirect effect would be stronger when work autonomy was higher. The results indicated that the index of moderated mediation was not significant for this indirect effect ( $B = 0.021$ ,  $p = 0.079$ , 95% CI [-0.002, 0.044]). Thus, H18b was not supported.

Hypothesis 19a (H19a) stated that core self-evaluations-P would be positively related to contextual performance. The results showed that the direct relationship between core self-evaluations-P and contextual performance was not significant ( $B = 0.106, p = 0.466$ ). Hence, H19a was not supported.

Hypothesis 19b (H19b) stated that core self-evaluations-N would be positively related to contextual performance. The results showed that the direct relationship between core self-evaluations-N and contextual performance was not significant ( $B = -0.027, p = 0.713$ ). Hence, H19b was not supported.

After testing all the hypotheses, a supplementary analysis was conducted on the full structural model by including the three items that were initially excluded from the model (due to low standardised factor loadings). This was done to rule out the effect of deletion of items on full model results. Results (Table 6.8) indicated that there were minor changes in path coefficients, with no change in the significance and direction of the hypothesised relationships. These results suggested that excluding the three items did not adversely affect the research model.

Table 6.8.

Path coefficients for the structural model (after including one deleted item of job crafting and two deleted items of core self-evaluations-P).

Structural regression path	Unstandardized estimate B	Standard Error S.E.	p-value (two tailed) P
SSS ---> WE	0.449	0.087	0.000
CSEP ---> WE	0.556	0.084	0.000
CSEN ---> WE	0.167	0.042	0.000
SSS ---> JC	0.012	0.052	0.814
CSEP ---> JC	0.451	0.208	0.030
CSEN ---> JC	-0.027	0.016	0.092
WE ---> JC	0.134	0.065	0.039
WE ---> JC (WA as moderator)	0.077	0.02	0.000
SSS ---> TP	-0.036	0.039	0.347
CSEP ---> TP	-0.078	0.046	0.088
CSEN ---> TP	0.040	0.026	0.118
JC ---> TP	0.203	0.072	0.005
WE ---> TP	-0.059	0.052	0.258
WE ---> TP (WA as moderator)	0.030	0.014	0.034
SSS ---> CP	0.083	0.041	0.042
CSEP ---> CP	0.100	0.153	0.515
CSEN ---> CP	-0.025	0.075	0.742
WE ---> CP	-0.078	0.095	0.41
WE ---> CP (WA as moderator)	0.130	0.042	0.002

Note: SSS = supportive supervisory style; CSE-P = core self-evaluations - P;  
 CSE-N = core self-evaluations- N; WE = work engagement; JC = job crafting;  
 WA = work autonomy; TP = task performance; CP = contextual performance

Based on structural equation modelling results, the following hypotheses were fully supported:

H1: Supportive supervisory style is positively related to work engagement.

H2a: Core self-evaluations-P are positively related to work engagement.

H2b: Core self-evaluations-N are positively related to work engagement.

H3: Work engagement is positively related to job crafting.

H3a: The direct positive relationship between work engagement and job crafting will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

H4: Job crafting is positively related to task performance.

H5: Work engagement is positively related to task performance through the mediating role of job crafting.

H5a: The indirect positive relationship between work engagement and task performance, through the mediating role of job crafting, will be moderated by work autonomy such that the indirect effect will be stronger when work autonomy is higher.

H8: Supportive supervisory style has an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

H9: The indirect positive relationship between supportive supervisory style and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H13: Supportive supervisory style is positively related to contextual performance directly.

H14a: Core self-evaluations-P will have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

H14b: Core self-evaluations-N will have an indirect positive relationship with task performance through the sequential mediating roles of work engagement and job crafting.

H15a: The indirect positive relationship between core self-evaluations-P and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

Based on structural equation modelling results, the following hypotheses were partially supported:

H6: The direct positive relationship between work engagement and task performance will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

H7: The direct positive relationship between work engagement and contextual performance will be moderated by work autonomy such that the relationship will be stronger when work autonomy is higher.

H10: The indirect positive relationship between supportive supervisory style and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H12: The indirect positive relationship between supportive supervisory style and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H16a: The indirect positive relationship between core self-evaluations-P and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H18a: The indirect positive relationship between core self-evaluations-P and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

Based on structural equation modelling results, the following hypotheses were not supported:

H11: Supportive supervisory style is positively related to task performance directly.

H15b: The indirect positive relationship between core self-evaluations-N and task performance, through the sequential mediating roles of work engagement and job crafting, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H16b: The indirect positive relationship between core self-evaluations-N and task performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H17a: Core self-evaluations-P are positively related to task performance directly.

H17b: Core self-evaluations-N are positively related to task performance directly.

H18b: The indirect positive relationship between core self-evaluations-N and contextual performance, through the mediating role of work engagement, will be moderated by work autonomy. Specifically, this indirect effect will be stronger when work autonomy is higher.

H19a: Core self-evaluations-P are positively related to contextual performance

H19b: Core self-evaluations-N are positively related to contextual performance.

## 6.4 Conclusion

To summarise, this chapter presented the results from analyses of data of 320 dyads of permanent, full-time, front-line employees and their supervisors in a manufacturing organisation in India. Mplus 7.4 was used to analyse the data. Parcels were created for items in the scales of supportive supervisory style, work autonomy, task performance, and contextual performance to improve the overall model fit. As a preliminary step, factor structures of all the constructs were investigated independently. Results indicated a two-factor structure for core self-evaluations, which were thereby named core self-evaluations-P and core self-evaluations-N. One item from job crafting scale and two item from core self-evaluations-P were excluded from the analysis as they had standardised factor loadings below 0.40.

The model was tested in two stages. In stage one, the measurement model (without regression paths) was tested to examine the goodness-of-fit indices. The fit was acceptable and so in stage two, all regression paths were added (but without any latent interaction) to check the model fit. The results indicated an adequate fit of the model. Thereafter, structural equation modelling with latent moderated structural equations approach was used to test the hypotheses and the moderated mediation effects at various levels of work autonomy.

The results indicated that work autonomy moderated the positive direct relationship between work engagement and job crafting. Job crafting was further directly related to task performance. Work autonomy played an important role in understanding the hypothesised relationships of the variables with task performance. It emerged that when work autonomy was higher, there was a positive indirect effect of work engagement on task performance, through job crafting. However, there was no negative effect when work autonomy was lower.

Interestingly, the direct effect of work engagement on task performance was significantly negative when work autonomy was lower.

Results also showed that supportive supervisory style, core self-evaluations-P, and core self-evaluations-N were not directly related to task performance. However, when work autonomy was higher, there was a positive indirect effect of supportive supervisory style as well as core self-evaluations-P on task performance, through the sequential mediating effects of work engagement and job crafting. But, there was no negative effect when work autonomy was lower. Core self-evaluations-N did not have any significant indirect effect on task performance (through the sequential roles of work engagement and job crafting).

The direct effect of work engagement on contextual performance was negative when work autonomy was lower, but was not positive when work autonomy was higher. On the other hand, supportive supervisory style had both a direct as well as an indirect effect (through work engagement) on contextual performance. Core self-evaluations-P and core self-evaluations-N did not show any direct effects on contextual performance. The indirect effect of core self-evaluations-P on contextual performance, through work engagement, was negative when work autonomy was lower but was not positive when work autonomy was higher. On the other hand, the results did not support any indirect relationship between core self-evaluations-N and contextual performance, through work engagement.

These results provided full support for many hypothesised relationships and partial support for others. However, there were some hypothesised paths, which were not supported by the results. Apart from that, there have been some unexpected findings, such as the two-

factor structure of core-self evaluations. These results will now be discussed in detail in the next chapter.

## **Chapter 7**

### **Discussion**

The central aim of this study was to understand the nomological network of work engagement: its antecedents, outcomes, mediators, and moderators. Data were collected from 320 dyads of employees and supervisors, and analysed using the latent moderated structural equations approach. The detailed findings of the study were reported in Chapter 6. The aim of the current chapter is to discuss those results and understand their significance. This chapter will begin by presenting a summary of key findings. Next, a detailed discussion of each hypothesis will be presented. Thereafter, the theoretical contributions of the study will be highlighted. Towards the end, the limitations of the study and areas for future research will be discussed.

#### **7.1 A summary of key findings**

The findings of the present study provide support for a comprehensive model in which situational and personal factors impact on the work engagement of employees, who then exhibit greater job crafting and better performance, particularly in more autonomous environments. Although previous work engagement studies have examined the role of situational and personal factors in predicting performance, the current study adds into the picture the mediating role of job crafting and the moderating role of work autonomy. Specifically, it was found that work autonomy played an important role in determining whether engaged employees will deliver better performance. These findings are consistent with Bakker and Demerouti's (2014) JD-R model, Boxall and Purcell's (2016) model of AMO, and Parker et al.'s (2010) model of proactive motivation. The hypotheses formulated in Chapter 4 will now be discussed in detail.

## **7.2 Detailed discussion of the results**

In the following sections, I will discuss all hypotheses individually, keeping in view the current literature, the three models described above and the three theories: conservation of resources, self-determination, and social exchange.

### **7.2.1 Predictors of work engagement**

The results indicate that supportive supervisory style (as a situational variable) predicts work engagement (Hypothesis 1), which is consistent with prior research (e.g., Hakanen et al., 2006; Holland et al., 2016). This suggests that employees feel more engaged when they perceive their supervisors to be supportive; their perception of support defined as the implementation of HRM practices by their supervisors (Hutchinson & Purcell, 2010). This is in line with Kahn's (1990) argument that when supervisors are supportive, it makes employees feel psychologically safe, thus creating positive conditions for engagement to occur. It can also be understood through the lens of social exchange theory (Blau, 1964): when employees perceive that their supervisors are supporting them through positive actions, they feel obligated to reciprocate through greater engagement. The current study signifies the impact of supportive supervisory style on the engagement levels of employees. Next, I will elaborate on core self-evaluations as another predictor of work engagement.

In Chapter 6, I reported that rather than being unidimensional, the CSES scale has two distinct dimensions: one with positively worded items (core self-evaluations-P) and the other with negatively worded items (core self-evaluations-N), with a correlation of only 0.260. The results suggest that the two-factor structure is not because of any method effects since the

models with method effects were rejected during analysis. Hence, these two factors are indeed distinct. Based on the wording of the items, it seems that the factor with positive items taps more into generalised self-efficacy and locus of control, whereas the one with negative items is more about emotional stability and self-esteem. Although prior research has demonstrated the validity and reliability of the unidimensional core self-evaluations scale (e.g., Kong et al., 2014; Rich et al., 2010), some studies have reported a two-factor structure, which is similar to my research (e.g., Arias & Arias, 2017; Gu, Wen, & Fan, 2015; Mäkikangas, Kinnunen, Mauno, & Selenko, 2016; Sun & Jiang, 2016; Zenger et al., 2015). As an illustration, in their study of 449 Chinese students, Gu et al. (2015) found that the unidimensional CSES demonstrated a poor fit to the data as compared to a bi-factor model (with two factors comprising positively and negatively worded items, respectively). However, unlike my study, where there were no method effects, Gu et al.'s (2015) study found a method effect for negative worded items. Arias and Arias (2017) replicated Gu et al.'s (2015) study and found similar results. Similarly, in a study of 435 Chinese volunteers, Sun and Jiang (2016) found that core self-evaluations were a two-factor scale, comprising positively and negatively worded items.

Mäkikangas et al. (2016) conducted a two-year longitudinal study (with three time points) in Finland to investigate the psychometric properties of the CSES. Based on their results, Mäkikangas et al. (2016) argue that the CSES is bi-dimensional, and does not exhibit any method effects for negatively worded items. Mäkikangas et al. (2016) named their two dimensions as external self-evaluations (mainly consisting of positively worded items) and internal self-evaluations (comprising negatively worded items). Unlike my study, where the two factors are made up of purely positively or negatively worded items, in Mäkikangas et al.'s (2016) study, external self-evaluations consist of seven items, with one negatively-worded item: 'I do not feel in control of my success in my life'. Moreover, Mäkikangas et al. (2016)

found that the two dimensions correlated strongly, whereas in my study, they were weakly correlated. In a study based on a German sample, Zenger et al. (2015) found that the CSES was a two-dimensional scale, represented by positively and negatively worded items, respectively, with no method effects. In Zenger et al.'s (2015) study, the two dimensions were moderately related, although they suggest that researchers should use them separately. At this point, there is accumulating evidence that the CSES may not be a unidimensional scale. Future studies can further examine whether the CSES is a unidimensional or a two-factor construct, or whether it tends to behave differently depending on the context.

Apart from the empirical evidence, the two distinct core self-evaluations factors can be understood from a theoretical angle too. Ferris et al. (2011, p. 141) argue that core self-evaluations indicate “both approach and avoidance temperaments”. Employees with an approach outlook are more sensitive to positive cues whereas avoidance-oriented employees have sensitivity towards negative stimuli (Elliot & Thrash, 2002). Seen through that angle, it is possible that individuals with high core self-evaluations-P, as described through self-efficacy and internal locus of control, may have an approach outlook. Such individuals believe in their capability and believe they can control the events in their life. On the other hand, individuals with high core self-evaluations-N, may be more neurotic and conscious about their self-esteem, and hence have an avoidance approach to life. Such individuals may get affected easily by events happening around them and, hence, may be constantly worrying about their self-worth. This is consistent with Chen, Gully, and Eden's (2004, p. 376) arguments that generalised self-efficacy has a stronger connection with “achievement/approach motivational processes” and self-esteem is linked more to “anxiety/avoidance affective processes”. The differences between the two factors will be further explored during discussion of various hypotheses related to them.

Now, turning onto the hypotheses, results show that both core self-evaluations-P (Hypothesis 2a) and core self-evaluations-N (Hypothesis 2b) are significantly positively related to work engagement. Drawing parallels to conservation of resources theory (Hobfoll, 1989), this suggests that when employees believe they have individual resources, which they can devote towards their work, they feel more engaged (Kahn, 1990). In this study, core self-evaluations-P had a higher effect on work engagement ( $\beta = 0.321$ ) as compared to core self-evaluations-N ( $\beta = 0.177$ ). This can again be linked back to the ‘approach’ temperament, which is likely to be present in individuals who are high in core self-evaluations-P. These results suggest that beliefs of self-efficacy play a greater role in the engagement of employees, as compared to emotional stability or perceptions of self-worth. Employees need to believe in their capability and control over events, to be more engaged. Although previous studies have found a positive relationship between core-self evaluations and work engagement (e.g., Haynie et al., 2017; Rich et al., 2010), the current study adds explanatory power between the two by suggesting core self-evaluations to be a two-factor construct.

### **7.2.2 Relationship between work engagement and job crafting**

The findings demonstrate that work engagement relates positively to job crafting (Hypothesis 3). This is consistent with prior research, where it was found that when employees are engaged, they are more likely to make proactive changes in their job demands and resources (e.g., Hakanen et al., 2017; Lu et al., 2014) since they are intrinsically motivated (Schaufeli, 2012). This relationship has also been suggested by Parker et al. (2010). The results of the current study indicate that engaged employees have the inner driver to be proactive and hence, are on the lookout for ways to make their work more interesting. By accepting challenging job demands, or increasing their structural and social resources, engaged employees are able to put

their abundant energy to use. This view is aligned with the tenets of conservation of resources theory (Hobfoll, 1989): individuals try to obtain more resources, and this is more likely for engaged employees, who are intrinsically motivated to do so. The current research adds evidence to the limited studies that have explored the relationship between work engagement and job crafting.

Importantly, the results suggest that engaged employees are more likely to craft their jobs when they perceive they have greater work autonomy (Hypothesis 3a). In Chapter 6, it was reported that as work autonomy increased, greater work engagement was associated with greater job crafting behaviours. This suggests that while engaged employees may have the intrinsic motivation to change their work environment, a higher degree of autonomy is needed for the desired benefits to be more fully realised. As discussed in Chapter 6, so far, only a few studies have researched the link from work engagement to job crafting (e.g., Hakanen et al., 2017; Harju et al., 2016) and the results have been mixed. Where the studies of Lu et al. (2014) and Harju et al. (2016) found a link between work engagement and job crafting, Vogt et al.'s (2016) study did not. The findings from this study suggest that work autonomy can be one of the variables that may explain these conflicting results. It is possible that engaged employees will be more motivated to change their work environment when they feel they have greater freedom and control over their work. Without this discretion, engaged employees may be unable to modify their work characteristics. Similarly, there have been mixed findings with respect to the relationship of work autonomy with job crafting. Where Lyons (2008) found that work autonomy was related to job crafting, Kanten (2014) did not find any such association. An alternate explanation for this could be that even if employees have the autonomy to craft their jobs, they are less likely to take the initiative unless they have the intrinsic motivation (for instance, work engagement) to do so. Therefore, the relationship between work engagement

and job crafting may not be as straightforward as found in various studies. Also, since the results indicate that the interaction effect is significant (H3a), the main effect (H3) should only be interpreted with consideration of the levels of the moderator (work autonomy). To the best of my knowledge, this is the first study that has examined work autonomy as a moderator between work engagement and job crafting, although Wrzesniewski and Dutton (2001) and Tims et al. (2012) suggested such an association in their conceptual articles.

### **7.2.3 Job crafting and task performance**

The findings suggest that when employees engage in job crafting behaviours, they perform better (Hypothesis 4). As discussed in Chapter 4, employees craft their jobs so that they can enjoy a better person-job fit (Demerouti & Bakker, 2014) and, therefore, perform better (Tims & Bakker, 2010). This suggests that after crafting their jobs, employees have an enhanced perception of fit between the work and their needs and abilities. This is likely to reflect in positive individual outcomes, such as better task performance, for the employees. Therefore, when employees increase their structural or social job resources, or take up challenging job demands, it positively impacts on their task performance. The findings in the current hypothesis are in line with prior research (e.g., Demerouti et al., 2015; Leana et al., 2009).

### **7.2.4 Work engagement and performance**

As discussed in Chapter 4, the association between work engagement and performance may be more complex and nuanced. In this thesis, job crafting was studied as a mediator and work autonomy was investigated as a moderator to understand how and why engaged employees deliver better task performance. The results show that job crafting can function as a mechanism

through which engaged employees deliver better performance (Hypothesis 5), which is consistent with the arguments of Schaufeli (2012). When engaged employees change their work environment so that it fits more with their needs and abilities, their performance increases to reflect this change. Therefore, job crafting can be one pathway that can explain why engaged employees perform better (Schaufeli, 2012). Again, there is an important role of work autonomy in this relationship (Hypothesis 5a). As is evident from the results in Chapter 6, the greater the perception of work autonomy, the stronger the mediating effect of job crafting between work engagement and task performance. It is likely that more engaged employees build more resources and accept more challenging tasks (Tims et al., 2012) when they have greater control over their job (Wrzesniewski & Dutton, 2001), which then enables them to deliver better performance.

The results also provide support for the idea that the direct effects of work engagement on task and contextual performance are moderated by work autonomy (Hypotheses 6 and 7). Figures 6.6 and 6.7 in Chapter 6 indicate that as work autonomy increases, work engagement relates more strongly to task/contextual performance. Interestingly, when work autonomy is very low, higher work engagement has a significant negative effect on task and contextual performance. Here, negative performance may be seen as a counterproductive work behaviour. This tends to support the argument that counterproductive work behaviours are more likely to occur when employees perceive low autonomy in their work (Fox, Spector, & Miles, 2001). More highly engaged employees may be particularly susceptible to frustration when the work context severely restricts their opportunities to use their potential (Balducci, Schaufeli, & Fraccaroli, 2011). Self-determination theory (Gagné & Deci, 2005) also underlines the importance of autonomy for intrinsically motivated individuals. Deci, Olafsen, and Ryan (2017) argue that lower work autonomy environments are more likely to produce negative

consequences. In a two-week, within-individual study, Reis, Sheldon, Gable, Roscoe, and Ryan (2000) found that autonomy was positively related to favourable aspects of well-being (measured as positive affect and vitality) and negatively related to unfavourable aspects of well-being (negative affect and physical symptoms). This suggests that when employees have greater work autonomy, they feel happy, positive and suffer lower physical distress, which enables them to perform better. Additionally, Boxall and Purcell (2016) argue that according to the AMO model, performance is a function of motivation (for instance, work engagement) and opportunity (for instance, work autonomy). It is also important to note that there was a significant negative relationship between work engagement and task/contextual performance when the work autonomy was very low (at the bottom 30%) in my sample. These results help to accentuate the importance of work autonomy in providing the conditions under which work engagement will have positive effects on task and contextual performance. However, these results also need to be understood in the context of previous studies that have investigated the work engagement-performance association, which will be discussed next.

The correlation table (Table 6.3) in Chapter 6 shows that there is no direct relationship between work engagement and task/contextual performance, although there is a vast stream of research that has provided evidence of a direct positive relationship between the two (e.g., Rich et al., 2010; van Wingerden et al., 2016). These results can be interpreted in different ways, as discussed below.

Firstly, the correlation table is bivariate and does not reflect the interaction effects of work autonomy. Moreover, in my study, I have hypothesised the interaction effect (through work autonomy), and not the main effect between work engagement and performance. Since

the results indicate that the interaction effect is significant, the main effect should only be interpreted with consideration of the levels of the moderator (work autonomy).

Secondly, researchers have suggested the possibility of moderators between engagement and performance (e.g., Halbesleben, 2011; Parker & Griffin, 2011). Empirically, perceived organisational support has been studied and validated as a boundary condition between engagement and contextual performance (Alfes et al., 2013), thus indicating that there can be moderators in this relationship. To my knowledge, this is the first study that has investigated work autonomy as a moderator between work engagement and task/contextual performance. Therefore, I do not have any other study to compare my results with. However, based on conceptual arguments by researchers and limited empirical evidence, it is possible that autonomy can act as a boundary condition, which enables engaged employees to perform better. Thus, work autonomy can explain the circumstances under which work engagement leads to task/contextual performance.

Lastly, these results can be understood keeping in mind two factors: a) the characteristics of the industry of which the sample organisation in the current research is a part, and b) a general profile of front-line employees. I will now discuss the results with the sample in my study, which can be generalised to other organisations with similar characteristics. The participants in my study (front-line employees in a manufacturing organisation) directly interact with other stakeholders: banks, suppliers, customers, and blue-collared employees. For instance, 67.5% of the participants in my study directly supervise blue-collared employees, who work on highly complex and automated machines. The smallest delay could cost the company millions of dollars. In such a challenging work environment, these front-line employees need the autonomy to conduct their work effectively and efficiently. They may not

have the time to get every decision approved from their supervisors. Time delays can affect the performance of machines, which can have a drastic impact on the key performance indicators of these employees. Therefore, even if these employees are engaged, they may not be able to perform better unless they have the autonomy to do their work. Similarly, 5.3% of the participants, who directly interact with the suppliers, may feel constrained and unable to perform, unless they have the autonomy to negotiate deals and manage relationships.

The above-mentioned examples are about task performance. A similar scenario is possible for contextual performance too. As an illustration, highly engaged front-line employees expect to have control over how and when they do their work, so that they can decide when and how to engage in extra-role behaviours. There is evidence that when employees have a higher degree of autonomy, they feel motivated to enlarge the scope of their work, thus engaging in contextual performance (Nesheim et al., 2017). Future research can further explore the relationship between work engagement and task/contextual performance, with work autonomy as a moderator, for front-line employees in a manufacturing context.

### **7.2.5 Supportive supervisory style and performance**

The results demonstrate that supportive supervisory style is a distal predictor of task performance, through the sequential mediating mechanism of work engagement and job crafting (Hypothesis 8). In other words, when employees perceive that their supervisors are providing them support through performance management, training, and rewards, they are more likely to be engaged in their work. This relates back to social exchange theory (Blau, 1964): relationships are based on reciprocity. Engaged employees then proactively initiate changes in their work environment to perform better. This highlights the crucial role that

supervisors play in impacting employee outcomes. Specifically, autonomy plays an important role in these relationships (Hypothesis 9). It was found that when employees had a greater perception of autonomy, the indirect effects of supportive supervisory style on task performance, through work engagement and job crafting, were stronger. This emphasises the significance of autonomy in the work context, as argued in self-determination theory (Gagné & Deci, 2005) and Parker et al.'s (2010) model of proactive motivation. As discussed in Chapter 4, prior studies have found evidence of positive dynamics in models involving supportive supervisory style, work engagement, work autonomy and employee outcomes (e.g., Breevaart et al., 2015; Chen et al., 2016).

Interestingly, results show that with only work engagement as a mediator, the indirect relationship between supportive supervisory style and task performance becomes significantly negative in a lower work autonomy environment (Hypothesis 10). Specifically, there was a significant negative relationship when the work autonomy was very low (at the bottom 30%) in my sample. This reiterates the significance of autonomy for engaged employees. It is possible that supportive supervisors may impact positively on the engagement of employees, but employees need to have work autonomy, as a basic need to perform better. It may be particularly important for engaged employees because they are vigorous and have a positive outlook. Hence, when such engaged employees do not get some freedom in carrying out their tasks, this energy becomes a double-edged sword: rather than going up, the performance comes down.

Contrary to expectations, supportive supervisory style was not directly related to task performance (Hypothesis 11), although there is evidence of a direct association between the two (e.g., DeConinck & Johnson, 2009; Sikora et al., 2015). One reason for this could be that

in this research model, supervisory style was a distal variable, and hence its direct impact on task performance was not visible. Another reason could be that supervisory support may not be a sufficient condition for task performance: employees need to be engaged in their work, need the relevant abilities, and have the opportunity to make changes in their work environment for a relationship to exist.

Similarly, when employees perceive their supervisors to be supportive, they feel engaged with their work and display extra-role behaviours, especially when their environment provides them greater control over their work (Hypothesis 12). The results suggest that the greater the perception of work autonomy, the stronger the mediating effect of work engagement between supportive supervisory style and contextual performance. However, when autonomy was very low (at bottom 30% in my sample), there was a significant negative indirect relationship of supportive supervisory style with contextual performance. This indicates that in a highly controlled work environment, engaged employees tend to feel frustrated, even if their supervisors are very supportive. Hence, they may intentionally avoid helping colleagues or supervisors, thus demonstrating counter-productive behaviours. As hypothesised, the results show that supportive supervisory style was directly related to contextual performance (Hypothesis 13). This suggests that when employees perceive their supervisors to be supportive, they like to reciprocate by displaying extra-role behaviours, such as helping colleagues or their supervisor, volunteering, or assisting new employees to adjust. They do not have to be necessarily engaged to do so. This also resonates with the reciprocity principle of social exchange (Blau, 1964).

Hypothesis 10 and 12 indicate a complex relationship between supportive supervisory style, work engagement, autonomy, and performance. It seems that supervisors play an

important role in initiating task-related and extra-role behaviours in employees. However, when employees are highly engaged, they expect autonomy, otherwise, they may start being counter-productive. It reaffirms the earlier findings that if organisations provide excellent working conditions (e.g. supportive supervisors) to engage employees, but do not provide them with enough control, the highly energised state of such engaged employees may make them frustrated. Due to this frustration of not being able to control their work environment, engaged employees will start deploying their energy in counter-productive behaviours.

### **7.2.6 Core self-evaluations and performance**

Results show that both core self-evaluations-P (Hypothesis 14a) and core self-evaluations-N (Hypothesis 14b) are indirectly related to task performance, through the sequential mediation of work engagement and job crafting. This indicates that when employees believe they are capable, worthy, and can control their destiny, they are more likely to be engaged with their work. Such engaged employees, who possess high core-self evaluations, will initiate changes in their work environment because they believe in their capabilities. Therefore, they are able to perform better. Interestingly, Figure 6.3 in Chapter 6 indicates that only core self-evaluations-P have a significant positive relationship with job crafting ( $\beta = 0.536$ ) directly. This suggests that both self-efficacious (core self-evaluations-P) and emotionally stable (core self-evaluations-N) individuals can be engaged. But, to craft their jobs, engaged employees need self-efficacy and belief in themselves; emotional stability or self-esteem may not provide enough personal resources to do so. It also indicates that employees with high core self-evaluations-P can craft their jobs directly, whereas those with high core self-evaluations-N need to be engaged to do so. In chapter 4, I suggested that based on empirical evidence from prior studies, it is possible that work engagement and job crafting can sequentially mediate the

indirect relationship between core self-evaluations and performance (e.g., Tims et al., 2014; Ventura et al., 2015).

When self-efficacious employees, who are high in core self-evaluations-P, get greater autonomy in their work, it indirectly affects their task performance, through their engagement with work and job crafting behaviours (Hypothesis 15a). This suggests that as perceptions of work autonomy increase, the mediating effects of work engagement and job crafting, between core-self evaluations-P and task performance, become stronger. This highlights the importance of autonomy for engaged employees, who are self-efficacious. Surprisingly, employees high in core self-evaluations-N were not affected by the level of autonomy present in their work (Hypothesis 15b). A possible reason could be that maybe self-efficacy and locus of control (which form core self-evaluations-P) are more related to outcomes, whereas self-esteem and emotional stability (which form core self-evaluations-N) are more about perceptions regarding one's own worthiness or state of mind. In other words, employees high in core self-evaluations-P may be more outcome-focused and hence, would need autonomy to deliver better performance. Future research should investigate the link between core self-evaluations-N and work autonomy to understand this more.

The results demonstrate that core self-evaluations-P are indirectly related to both task and contextual performance; mediated only by work engagement, and moderated by work autonomy (Hypotheses 16a and 18a, respectively). Specifically, this indirect effect was found to be higher under conditions of greater autonomy. However, when autonomy was very low, this effect was significantly negative. This suggests that when engaged employees, who are high in core self-evaluations-P, do not get enough autonomy, they display counter-productive behaviours. This tendency of engaged employees to deliver negative performance, in a low

autonomy environment, constantly signifies the theoretical arguments of self-determination theory (Deci & Ryan, 1985): autonomy is a fundamental need. Interestingly, core self-evaluations-N demonstrated an indirect relationship with task performance, mediated by work engagement, and moderated by work autonomy (Hypothesis 16b), but not with contextual performance (Hypothesis 18b). These findings suggest that employees, who are conscious about themselves, are more likely to divert efforts towards their role-related performance, rather than going the extra-mile by volunteering or helping others.

These results suggest the possibility that emotional stability and self-esteem traits, which mainly form core self-evaluations-N, are related to different outcomes as compared to self-efficacy and locus of control, which are more related to core self-evaluations-P. In line with this argument, Chen et al. (2004) found that generalised self-efficacy and self-esteem are empirically and conceptually distinct, and are related differently to outcomes. Chen et al. (2004) further suggest that research, which focuses on the underlying processes as to how or why core self-evaluations are related to performance, must consider them separately, rather than as one construct. This difference in results between core self-evaluations-P and core self-evaluations-N lends further support to the presence of two factors in the CSES.

Although previous studies have found a direct link of core self-evaluations with task performance (e.g., Judge et al., 2003) and contextual performance (e.g., Bowling et al., 2012; Chang et al., 2012), this study did not find any such association (Hypothesis 17a, 17b, 19a, and 19b). One reason for this could be that performance was a distal variable of core self-evaluations in this research model. Another reason could be the possibility that the relationship between core self-evaluations-performance is culturally dependent, as suggested by Bono and Judge (2003).

Overall, the results of core-self evaluations as a two-factor construct put up a thought-provoking question. Do we dismiss these results as ‘sample-related’ or is there a need to look deeply into the dimensional nature of core self-evaluations? When Judge et al. (1997) introduced the core self-evaluations construct, they measured it indirectly by measuring the four core traits of generalised self-efficacy, self-esteem, locus of control, and neuroticism separately; an approach followed by many researchers until 2003, when Judge and colleagues developed the unidimensional core self-evaluations scale. Judge et al. (2003) provided several reasons for treating core self-evaluations as a unidimensional construct, measured through a unidimensional scale: a) the four core traits loaded strongly on a single factor in many previous studies, b) conceptual similarities among the four core traits, c) considerable redundancy among the four core traits, d) high correlation between the unidimensional core self-evaluations scale and the four core traits, e) positive results of a ‘usefulness analysis’, which predicted that the unidimensional core self-evaluations scale was a better predictor of set criteria as compared to the four individual core traits, and f) reliability and validity of the unidimensional scale.

However, Judge et al. (2003) also mentioned some concerns regarding the unidimensional scale. Firstly, they found that locus of control correlated moderately with the core self-evaluations scale. Secondly, based on their results, they reflected on whether the core self-evaluation scale is simply measuring emotional stability. This suggests that the unidimensional scale may have certain issues, which need further exploration. As discussed earlier, although the unidimensionality of the core self-evaluations scale has been found in several studies, there is accumulating evidence that this may not necessarily be the case (Arias & Arias, 2017; Zenger et al., 2015). Based on these few studies and my own research evidence it is possible that core self-evaluations may conceptually comprise two different dimensions, which relate differently to predictors and outcomes. It may, therefore, be more useful to

measure these two dimensions separately as two latent factors rather than as a unidimensional construct.

### **7.3 Theoretical contributions**

This thesis has contributed to the literature on organisational behaviour and HRM (supportive supervisory style, work engagement, work autonomy, job crafting, and performance), and personality (core self-evaluations). These contributions cover three aspects: a) adding evidence to prior research, b) assertions that were conceptually proposed by researchers and have been tested in this thesis, and c) unexpected results.

Consistent with prior research, this thesis contributes to the literature by providing evidence of supportive supervisory style and core self-evaluations as predictors of work engagement (e.g., Rich et al., 2010; Schmitt et al., 2016). The results also add to the limited research that has found that work engagement predicts job crafting (e.g., Hakanen et al., 2017; Harju et al., 2016) and job crafting predicts task performance (e.g., Demerouti et al., 2015; Leana et al., 2009).

Parker et al.'s (2010) model of proactive motivation suggests work context (such as work autonomy) as a boundary condition for engaged employees to proactively initiate changes. Additionally, Gagné and Deci (2005) argue that autonomy is a very important need for intrinsic motivation. In their conceptual article, Wrzesniewski and Dutton (2001) argue that work autonomy can be a boundary condition for intrinsically motivated employees to engage in job crafting behaviours; an argument highlighted by Tim et al. (2012) too. In this thesis, work autonomy has been found to play an important moderating role between work

engagement and job crafting, thus lending support to these arguments. Additionally, the results find that job crafting mediates the work engagement-task performance relationship, which has been suggested by Schaufeli (2012), with work autonomy as a boundary condition. In a work environment with higher autonomy, the indirect effects of job crafting are greater. Moreover, this study demonstrates that work autonomy acts as a boundary condition between work engagement and task/contextual performance, which has not been tested before, but has been suggested by researchers (e.g., Alfes et al., 2013; Parker & Griffin, 2011). In conditions of lower work autonomy, the effects of work engagement on task/contextual performance are negative. Previous research on work engagement and task/contextual performance has focused on the direct relationship between the two (e.g., Christian et al., 2011; Rich et al., 2010). This study adds another perspective to this relationship by suggesting work autonomy as a boundary condition. Similarly, the JD-R model (Bakker & Demerouti, 2014), the model of AMO (Boxall & Purcell, 2016), and the model of proactive motivation (Parker et al., 2010) conceptually argue that situational and individual factors are distal predictors of performance. The results in this thesis show that supportive supervisory style and core self-evaluations predict task performance, with work engagement and job crafting as sequential mediators. This also suggests that supportive supervisory style and core self-evaluations are distal predictors of job crafting, through work engagement. There was also partial support for work autonomy in these relationships. These findings are in line with self-determination theory that autonomy is a basic need of employees for optimal functioning (Deci & Ryan, 2000).

In this thesis, there were some unexpected results that share similarities with some prior studies (e.g., Arias & Arias, 2017; Gu et al., 2015; Mäkikangas et al., 2016; Sun & Jiang, 2016; Zenger et al., 2015). These results are regarding the two-factor structure of core self-evaluations: one factor comprising positively worded items and the other factor consisting of

negatively worded items. A closer look at the wording of these items suggests that core self-evaluations-P mainly measure generalised self-efficacy and locus of control, whereas core self-evaluations-N taps more into emotional stability and self-esteem. The results show that core self-evaluations-P and core self-evaluations-N may be associated with different outcomes. In line with this, Mäkikangas et al. (2016, p. 5) argue that “the CSES appears to be a somewhat more complex multidimensional measure of core self-evaluations than initially expected”, a suggestion put forth by Arias and Arias (2017) too. Undertaking a deeper investigation into the conceptual meaning of these two factors can provide a better understanding of their relationships with different outcomes.

#### **7.4 Strengths and limitations of the study, and areas for future research**

This study has some key strengths. Firstly, it uses moderated mediation analysis to reach at a nuanced understanding of the hypothesised relationships. Secondly, the data has come from multiple sources. The data for supportive supervisory style, core self-evaluations, work engagement, work autonomy, and job crafting were provided by the participants. Supervisors provided the data for task and contextual performance.

At this juncture, I note the main limitations of my study and suggest avenues for future research. First, the design of the study is cross-sectional, which does not allow me to infer causality. There is evidence that work engagement and job crafting are reciprocally related to each other (Harju et al., 2016). Moreover, the job demands-resources model (Bakker & Demerouti, 2014) suggests a two-way relationship between work engagement and job crafting. Future longitudinal studies should investigate this further.

The second limitation is that I have not studied in detail the reversed relationship between job crafting and work engagement, although prior research has found that job crafting predicts work engagement (e.g., Bakker et al., 2012; van Wingerden et al., 2016). However, I conducted a supplementary analysis by reversing the order of work engagement and job crafting in my research model. The results in this new model were different than the results in my original research model. For instance, in this new model, some of the hypothesised paths became non-significant, which were earlier significant. Specifically, the path between job crafting and work engagement was not significant. This suggests that there are different dynamics involved when work engagement is a predictor of job crafting than when it is an outcome. Future studies can consider this further and test under what conditions work engagement mediates between job crafting and task performance.

Third, I did not measure the ‘decreasing hindering job demands’ dimension of job crafting as it has been found to be either negatively related or unrelated to work engagement (e.g., Hakanen et al., 2017; van Wingerden et al., 2016). Future research can consider including this dimension in their scale to test these relationships.

Fourth, I did not follow a scale development process for supportive supervisory style with an independent sample. However, the items were selected based on semi-structured interviews and face validity. Moreover, the Cronbach’s alpha (0.950) and composite reliability (0.927) of the supportive supervisory scale were good. The confirmatory factor analysis of the scale also demonstrated an acceptable fit to the data ( $\chi^2$  (df) = 303.412 (98), RMSEA = 0.081, CFI = 0.941, SRMR = 0.035). Additionally, the standardised factor loadings for supportive supervisory style after parcelling ranged from 0.814 to 0.946. Hence, the psychometric properties of the scale were considered acceptable for use in this research.

Fifth, the participants in this study were all employees of a single Indian manufacturing organisation, which may limit the generalisation of the results. Future research can examine whether these findings can be applied to other industries or other countries.

Besides the avenues for future research mentioned in this section, there are some other potential research areas related to work autonomy, which I have mentioned elsewhere in this chapter. Future research can investigate the moderating role of work autonomy between various relationships: work engagement and job crafting, work engagement and task/contextual performance.

## **7.5 Conclusion**

The goal of this study was to more fully explore the network of linkages involving the antecedents and consequences of engagement, including important questions around the connection between work engagement and job crafting, and the moderating role of work autonomy at various links in the chain. I find that having a more supportive supervisor and better personal resources (measured here as core self-evaluations) are positively associated with the work engagement of employees. More engaged employees are then more likely to report that they craft their jobs, a relationship that is strengthened when employees enjoy greater autonomy. Greater job crafting is associated with better task performance. Emphasising the importance of employee control in their working environment, I find that the mediating role of job crafting between engagement and task performance is enhanced by greater work autonomy. The degree of work autonomy also influences whether greater work engagement leads to better task or contextual performance.

The study contributes to the literature of work engagement and job crafting by highlighting the role of work autonomy in this relationship. The study also adds to the HRM literature by suggesting that supportive supervisors need to provide an autonomous work environment to influence employee performance. The personality literature may also benefit from the findings of this study by implying a two-factor structure of the CSES. As implied in the model of proactive motivation, AMO, and JD-R frameworks, autonomy is an important variable that affects the opportunity to craft the job and to perform.

## **Chapter 8**

### **Conclusion**

The thesis had the objective of exploring the nomological network of work engagement, by examining supportive supervisory style and core self-evaluations as predictors, and performance (task and contextual) as an outcome. Job crafting as a mediator, and work autonomy as a moderator, were expected to add a deeper understanding to the relationship between work engagement and performance. A summary of the thesis will be presented at the beginning, followed by practical implications.

#### **8.1 Summary of the thesis and contributions to theory**

To address these objectives, the literature on work engagement, job crafting, supportive supervisory style, core self-evaluations, and work autonomy was explored. A set of hypotheses was developed based on theoretical reasoning and empirical evidence. The overall conceptual research model developed in this thesis was based on the tenets of some key models and theories: the JD-R model (Bakker & Demerouti, 2007), the model of AMO (Boxall & Purcell, 2003), the model of proactive motivation (Parker et al., 2010), conservation of resources' theory (Hobfoll, 1989), self-determination theory (Deci & Ryan, 1985), and social exchange theory (Blau, 1964). The hypotheses were tested on data from 320 dyads of permanent, full-time, front-line employees and their supervisors in a manufacturing organisation in India. The data were analysed using the latent moderated structural equations approach.

I found that when employees had a supportive supervisor and possessed core self-evaluations, they felt more engaged with their work. When employees were more engaged,

they reported greater job crafting behaviours, especially when they had greater autonomy in their work. Greater job crafting was associated with better task performance. Furthermore, it was demonstrated in the study that when engaged employees had greater control over their work, they delivered better task and contextual performance. It was also found that the mediating effects of job crafting between work engagement and task performance were stronger under conditions of greater work autonomy. This study showed that supportive supervisory style, core self-evaluations-P, and core self-evaluations-N predicted task performance, with work engagement and job crafting as sequential mediators. When both work engagement and job crafting were sequential mediators, work autonomy moderated the indirect effects for supportive supervisory style and core self-evaluations-P, but not core self-evaluations-N. However, there was partial support for the indirect moderated mediation effects of these three independent variables with task performance, with only work engagement as a mediator. Similarly, I found that when work engagement was a mediator in the association with contextual performance, work autonomy moderated the indirect effects for supportive supervisory style and core self-evaluations-P, but not core self-evaluations-N. I found that supportive supervisory style directly predicted contextual performance, but not task performance. Additionally, I did not find evidence of a direct relationship of core self-evaluations-P and core self-evaluations-N with both task and contextual performance.

The thesis makes significant contributions to the literature of organisational behaviour, HRM, and personality. It adds to the work engagement literature in several ways. First, it provides evidence of supportive supervisory style and core self-evaluations as key predictors. Second, it suggests that work engagement leads to job crafting, and highlights work autonomy as a boundary condition in this relationship. Third, it provides a profound understanding of the relationship between work engagement, and task and contextual performance by providing

evidence of job crafting as a mediator, and work autonomy as a moderator. The thesis expands the research on job crafting by suggesting that a) supportive supervisory style and core self-evaluations act as distal predictors, with work engagement acting as a mediator, b) work autonomy acts as an important contextual variable that strengthens the relationship between work engagement and job crafting, and c) there is a direct positive relationship with task performance. The thesis found that core self-evaluations behaved as a two-factor construct: with one factor exhibiting the characteristics of self-efficacy and locus of control (named as core self-evaluations-P), and the other factor tapping more into emotional stability and self-esteem (named as core self-evaluations-N). The literature on core self-evaluations can benefit from this finding, especially since there are some other studies that have found a similar two-factor structure of the CSES. These two factors were found to be related differently to various outcomes, thus suggesting that they are indeed distinct.

## **8.2 Practical implications**

In terms of their practical implications, the results show the importance of both organisational and personal resources in fostering engagement, underline the positive value for organisations that can arise from job crafting, and remind us of the ways in which the scope for autonomy can affect the potential for employees to shape, succeed and contribute in their jobs.

Engaged employees deliver better performance and, thus, are more likely to be valued by their supervisors. Having a supportive supervisor and personal resources (such as core self-evaluations) influence the work engagement of employees. The perception of implementation of the HRM practices by supervisors determines whether the employees will feel engaged or not. Thus, supervisors can ensure that they are effectively implementing the practices related

to performance management, reward, and training. The literature argues that supervisors may not always be aware of job crafting activities of employees. The current study suggests that supervisors may be unaware but can still indirectly influence the job crafting activities of employees through work engagement. Since job crafting is related to task performance, the employees can benefit by proactively making changes to their work environment.

Engaged employees are intrinsically motivated to craft their jobs and providing them with work autonomy enhances this proactive behaviour. However, work engagement may not always lead to better performance. Thus, it is important for supervisors to understand under what circumstances the energy and dedication of engaged employees is directed towards performance. This study offers an explanation for work engagement-performance dynamics by suggesting the role of work autonomy in this relationship. The results demonstrate that work engagement can lead to task performance, both directly as well as indirectly (through job crafting), under conditions of higher work autonomy. Similarly, engaged employees require more work autonomy to exhibit extra-role behaviours.

Supervisors can focus on increasing the core self-evaluations of employees through training and development. Additionally, supervisors can give employees a supportive work environment so that they are more engaged with their work. However, unless all these efforts are complemented by giving employees adequate control over how they perform their tasks, it may not have the desired effect on performance. Hence, supervisors should design jobs in a way that employees have the necessary autonomy to conduct their work. However, the degree of control that employees have in their work depends on contextual factors, for instance, the type of work. When engaged employees have autonomy in their work, it might encourage them to proactively change their work characteristics so that they can perform better. Without

autonomy, there is a possibility that engaged employees may get disheartened, which can have a negative impact on their performance.

Purcell and Hutchinson (2007) argue that since supervisors have such an important effect on employee outcomes, it is important to understand how these supervisors are themselves being managed. Providing supervisors the necessary support through coaching and development can have an influence on their behaviours, which can further impact on employee outcomes. Thus, practitioners can also focus on the crucial role of managers of the supervisors in the employee-performance link.

To conclude, the findings in this study imply that work engagement, as an intrinsic motivational state, has important implications for performance. In today's competitive working environment, having an engaged workforce is crucial for organisational success. Supervisors can influence the work engagement of employees by providing them with necessary support. Moreover, employees who possess high core self-evaluations possess the necessary personal resources to be engaged with their work. By providing employees adequate control over their work, supervisors can encourage job crafting behaviours, which can have a positive impact on employee performance. Even if employees do not craft their jobs, having the required discretion and autonomy to carry out their work is important for them to achieve their targets. I found that all variables in the theoretical model have a key role to play in impacting on performance. However, work autonomy stood out as a powerful boundary condition that can have a considerable effect on employee performance. Therefore, the key takeaway from this research is that employees need adequate work autonomy to perform better. As a concluding remark, I believe that the researchers involved in the field of work engagement, job crafting,

and personality can benefit from the findings in this study, which can provide an impetus for future research.

## Appendix A

### Participant Information Sheet (Chief Executive Officer-HR)

**Project title:** Employee Engagement: A study of antecedents, mediators and outcomes

**Name of Researcher:** Deepika Jindal

**Name of PhD Supervisors:** Dr. Peter Boxall

#### Researcher introduction

I am a PhD student with the University of Auckland Business School. I am also employed as a Graduate Teaching Assistant with the Business School.

#### Project description

My research aims at understanding the factors that lead to employee engagement and how this impacts performance. Employee engagement is defined as a work related state of mind wherein an employee feels vigorous, dedicated and absorbed. The participants for my study will be permanent front-line employees (across functional areas). So, I need to conduct my study in an organisation with a large base of employees at this level. Hence, I seek your permission to approach the front-line employees of your organisation to be the prospective participants for my research. This research is expected to finish within 24 months.

#### Benefit of participation

Based on the results of my research, you will be able to reflect on the level of employee engagement in your organisation as well as on the factors that can have an impact on the engagement level of the employees. A presentation on results will be given to you/your key team on completion of the research (without identifying the participants).

#### Project procedures

The study will be conducted in two phases. In phase 1, I wish to understand the HRM practices prevalent in your organisation. For this, I seek your permission to interview 4-5 line managers and 4-5 HRM managers. These interviewees will be asked to comment on the HRM practices of your organisation. Each interview will last for 30-60 minutes and will be conducted over skype/phone. I might interact with the interviewees a second time (over skype/phone) for any clarification or further input. After seeking your consent, I would also need to go through any secondary data available as paper copies, on the intranet or the company's website which can provide information on the HRM practices intended by the organisation. In phase 2, based on your approval, I would be administering an online questionnaire to the participants, which will take up to 25 minutes of their time. The questionnaire aims to capture the participants' individual characteristics, their experience of work and perception of the work environment. At the same time, on your approval, the respective supervisor(s) of the participants will be requested to devote 10 minutes to fill in an online questionnaire stating the performance of each participant(s). The participation of all employees will be voluntary.

I may send out a reminder to everyone again seeking responses from those who may not have responded within 30 days. The Participant Information Sheet (PIS) and Consent Form (CF)

will be routed to the participants and supervisors through the organisation. I will directly email the questionnaires to the participants and their supervisors.

### **Data storage/retention/destruction/future use**

The online questionnaires will be electronically stored on my computer. The interviews will not be recorded electronically but I will type them and store them electronically on my computer. I will assign codes to all participants and their supervisors while recording the final data in the excel file for analysis. A list of participant and supervisor codes and linking it to names will be stored separately on my supervisor's computer, which is in a different office. The codes and names will not be printed or used in paper format at all. Paper copies of the interview sheets will be used during the initial data analysis period and then stored in my supervisor's locked filing cabinet. The online questionnaires and the other electronic files will be stored for six years and subsequently deleted. All Consent Forms will also be stored in my supervisor's locked cabinet (separate from data) and will be then destroyed after six years.

### **Right to withdraw from participation**

The organisation (as represented by you) can withdraw from the study within ten days of signing the Consent Form. Individual participants/supervisors/interviewees will have the right to withdraw up to ten days after the filled questionnaires have been sent to me/they have been interviewed. I request your assurance that participation or non-participation by your staff in this study will have no influence on their employment within this organisation.

### **Confidentiality**

I will need the names of the participants on the online questionnaire. However after recording the results electronically and assigning a code to each participant, I will then delete all name-related records as per the procedures mentioned above. All information/data will be treated as confidential and only my supervisor and I will be privy to it. When writing up the research for thesis/publication, the data will be used for statistical purposes only and will not identify the organisation or participants in any way.

### **Contact details**

	Name	E-mail id	Postal address	Contact No.
Researcher	Deepika Jindal	d.jindal@auckland.ac.nz	The University of Auckland Business School, Private Bag 92019 Auckland 1142, New Zealand	+64 9 373 7999
Supervisor	Dr. Peter Boxall	p.boxall@auckland.ac.nz		093737599 Ext. 87355
Head of Department	Professor Nigel Haworth	n.haworth@auckland.ac.nz		099235235

Chair contact details: “For any concerns regarding ethical issues you may contact the Chair, the University of Auckland Human Participants Ethics Committee, at the University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711. Email: ro-ethics@auckland.ac.nz”

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10th September 2015 for (3) years, reference Number **015785**

## APPENDIX B

### Consent Form

(Chief Executive Officer-HR)

THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

**Project title:** Employee Engagement: A study of antecedents, mediators and outcomes

**Name of Researcher:** Deepika Jindal (d.jindal@auckland.ac.nz)

**Name of PhD Supervisor:** Dr. Peter Boxall (p.boxall@auckland.ac.nz)

I have read the Participant Information Sheet, have understood the nature of the research and why my organisation has been selected. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I give consent for the employees of my organisation to take part in this research as per the timelines mentioned in the Participant Information Sheet.
- I agree to make available secondary data related to HRM practices of the organisation, to the researcher.
- I understand that a reminder may be sent out to participants who have not filled the questionnaire.
- I understand that the online questionnaires will be kept confidential and subsequently destroyed as mentioned in the Participant Information Sheet.
- I understand that data will be kept for 6 years, after which they will be destroyed.
- I understand that I am free to withdraw participation of my organisation within 10 days of signing the Consent Form.
- I give my assurance that participation or non-participation by my staff in this study will have no influence on their employment within this organisation.
- I wish/do not wish to receive the summary of findings.
- I wish/do not wish that the name of my organisation be kept anonymous in any publications related to the research.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Email: \_\_\_\_\_

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10th September 2015 for (3) years, reference Number **015785**

## APPENDIX C

### Participant Information Sheet (HR/Line Manager)

**Project title:** Employee Engagement: A study of antecedents, mediators and outcomes

**Name of Researcher:** Deepika Jindal

**Name of PhD Supervisors:** Dr. Peter Boxall

#### Researcher introduction

I am a PhD student with the University of Auckland Business School. I am also employed as a Graduate Teaching Assistant with the Business School.

#### Project description

My research aims at understanding the factors that lead to employee engagement and how this impacts performance. Employee engagement is defined as a work related state of mind wherein an employee feels vigorous, dedicated and absorbed. The Chief Executive Officer of your organisation has given his consent to undertake my study here. As part of my research, I need to interview 4-5 HRM managers in order to understand the HRM practices prevalent in your organisation. Hence, I would like your consent to be one of the interviewees for the same. This research is expected to finish within 24 months.

#### Benefit of participation

Based on the results of my research, you will be able to reflect on the level of employee engagement in your organisation as well as on the factors that can have an impact on the engagement level of the employees.

#### Project procedures

Your participation is entirely voluntary. It is a semi-structured interview and will last for 30-60 minutes over skype/phone. I might interact with you a second time (over skype/phone) for any clarification or further input. During these interviews, you will be asked to comment on the HRM practices prevalent in your organisation.

#### Data storage/retention/destruction/future use

The interviews will not be recorded electronically but I will type them and store them electronically. The interview sheets will be electronically stored on my computer, with no identifying information (i.e., no information that identifies the interviewee). Paper copies of the interview sheets will be used during the initial data analysis period, stored in my supervisor's locked filing cabinet and then destroyed within 6 years of recording the data. All electronic files will be stored for six years and subsequently deleted. All Consent Forms will also be stored in my supervisor's locked cabinet (separate from data) and will be then destroyed after six years.

#### Right to withdraw from participation

You can withdraw from the study within ten days of giving the interview. No adverse action related to your employment will be taken as a result of this. The CEO has also given the

assurance that your decision to participate or not in this study will have no influence on your employment within this organisation.

### **Confidentiality**

I do not need to record your name on the interview sheet. All information/data will be treated as confidential and only my supervisor and I will be privy to it. When writing up the research for thesis/publication, the data will be used for statistical or research purposes only and will not identify you in any way.

### **Contact details**

	Name	E-mail id	Postal address	Contact No.
Researcher	Deepika Jindal	d.jindal@auckland.ac.nz	The University of Auckland Business School, Private Bag 92019 Auckland 1142, New Zealand	+64 9 373 7999
Supervisor	Dr. Peter Boxall	p.boxall@auckland.ac.nz		093737599 Ext. 87355
Head of Department	Professor Nigel Haworth	n.haworth@auckland.ac.nz		099235235

Chair contact details: “For any concerns regarding ethical issues you may contact the Chair, the University of Auckland Human Participants Ethics Committee, at the University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711. Email: ro-ethics@auckland.ac.nz”

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10th September 2015 for (3) years, reference Number **015785**

## APPENDIX D

### Consent Form

(HR/Line Manager)

THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

**Project title:** Employee Engagement: A study of antecedents, mediators and outcomes

**Name of Researcher:** Deepika Jindal (d.jindal@auckland.ac.nz)

**Name of PhD Supervisor:** Dr. Peter Boxall (p.boxall@auckland.ac.nz)

I have read the Participant Information Sheet, have understood the nature of the research and why I have been selected. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I give consent to be interviewed as per the timelines mentioned in the Participant Information Sheet.
- I understand that the information will be kept confidential and subsequently destroyed as mentioned in the Participant Information Sheet.
- I understand that data will be kept for 6 years, after which they will be destroyed.
- I understand that I am free to withdraw participation within 10 days of providing the interview. The CEO has given his assurance that my decision to participate or not in this study will have no influence on my employment within this organisation.
- I wish / do not wish to receive the summary of findings.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Email: \_\_\_\_\_

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10th September 2015 for (3) years, reference Number **015785**

## **APPENDIX E**

### **Interview Framework (Semi-structured Interview-Line Managers)**

- Have you hired any permanent front-line employees in the past one year?
- What is the process that you followed in recruiting them? Can you take me through the different steps that you followed?
- What steps do you take to assimilate these newly hired front-line employees into the organisation?
- What do you think are the expectations of the management from these newly hired permanent front-line employees?
- How do you decide who does what? In other words, how is work organized for these permanent front-line employees?
- What are your expectations from your HRM department?
- What practices do you follow for training your permanent front-line employees?
- Do you think these training practices have any significant impact on the knowledge, skills and abilities of these employees?
- What kind of developmental opportunities do you provide to your permanent front-line employees?
- How often do you appraise the performance of your permanent front-line employees?
- What performance appraisal tools do you use?
- What are the key practices that you follow to manage the performance of your permanent front-line employees?
- What role do you think the HRM employees play in ensuring the performance of your permanent front-line employees?
- What is your view of the reward and recognition practices in the organisation?
- What voice mechanisms are available in the organisation for these front-line employees? Can you take me through these voice mechanisms?
- How do you measure the effectiveness of these voice mechanisms?

- How do you ensure that your permanent front-line employees remain in the organisation for long?
- Can you think of any other HRM practices that you follow in your organisation for your front-line employees, which may have an impact on their performance or retention?

### **Interview Framework**

#### **(Semi-structured Interview-HRM employees)**

- Have you hired any permanent front-line employees in the past one year?
- What is the process that you followed in recruiting them? Can you take me through the different steps that you followed?
- What steps do you take to assimilate these newly hired front-line employees into the organisation?
- What do you think are the expectations of management from these newly hired permanent front-line employees?
- How do you decide who does what? In other words, how is work organized for these permanent front-line employees?
- What practices do you follow for training your permanent front-line employees?
- Do you think these training practices have any significant impact on the knowledge, skills and abilities of these employees?
- What kind of developmental opportunities do you provide to your permanent front-line employees?
- How often do you appraise the performance of your permanent front-line employees?
- What performance appraisal tools do you use?
- What are the key practices that you follow to manage the performance of your permanent front-line employees?
- What are your expectations from your line managers as to how they should manage their front-line employees?
- What is your view of the reward and recognition practices in the organisation?
- What voice mechanisms are available in the organisation for these front-line employees? Can you take me through these voice mechanisms?

- How do you measure the effectiveness of these voice mechanisms?
- How do you ensure that your permanent front-line employees remain in the organisation for long?
- What role do your line managers play in retaining your full-time front-line employees?
- Can you think of any other HRM practices that you follow in your organisation for your front-line employees, which may have an impact on their performance or retention?

## APPENDIX F

### Participant Information Sheet

(Participant)

**Project title:** Employee Engagement: A study of antecedents, mediators and outcomes

**Name of Researcher:** Deepika Jindal

**Name of PhD Supervisors:** Dr. Peter Boxall

#### Researcher introduction

I am a PhD student with the University of Auckland Business School. I am also employed as a Graduate Teaching Assistant with the Business School.

#### Project description

My research aims at understanding the factors that lead to employee engagement and how this impacts performance. Employee engagement is defined as a work related state of mind wherein an employee feels vigorous, dedicated and absorbed. The participants for my study will be permanent front-line employees (across functional areas). The Chief Executive Officer

of your organisation has given his consent to undertake my study here. So, I seek your consent to be one of the participants for this study. This research is expected to finish within 24 months.

#### Benefit of participation

Based on the results of my research, you will be able to reflect on the factors that can have an impact on your engagement level. You can also understand different ways through which you may be able to influence your own engagement.

#### Project procedures

The online questionnaire will take up to 25 minutes of your time. The questionnaire aims to capture your individual characteristics, experience of work, and perception of the HRM practices prevalent in your organisation. At the same time, your respective supervisor will be requested to devote 10 minutes to fill in an online questionnaire stating your performance. The information that I seek from the supervisors relates to general aspects of your overall performance. This information is needed to study the relationship among different variables in my study. I may send out a reminder to everyone again seeking responses from those who may not have responded within 30 days. In case you have submitted the questionnaire, please do ignore this second reminder. The Participant Information Sheet (PIS) and Consent Form (CF) will be emailed to you by the organisation. However, I will directly send the questionnaire link to you through a separate email. Please note that your participation is entirely voluntary.

#### Data storage/retention/destruction/future use

The online questionnaires will be electronically stored on my computer. I will assign codes to all participants while recording the final data in the excel file for analysis. A list of participant codes and linking it to names will be stored separately on my supervisor's computer, which is in a different office. The names and codes will not be printed or used in paper format at all. The online questionnaires and all and other electronic files will be stored for six years and

subsequently deleted. All Consent Forms will also be stored in my supervisor's locked cabinet (separate from data) and will be then destroyed after six years.

### **Right to withdraw from participation**

You can withdraw from the study within ten days of providing the filled questionnaire. No adverse action related to your employment will be taken as a result of this. The CEO has also given the assurance that your decision to participate or not in this study will have no influence on your employment within this organisation.

### **Confidentiality**

I will need your employee id and name on the online questionnaire. However, after recording the results in an excel file and assigning a code to each participant, I will then arrange to store and destroy the online questionnaires as per the process mentioned above. All information/data will be treated as confidential and only my supervisor and I will be privy to it. When writing up the research for thesis/publication, the data will be used for statistical purposes only and will not identify the participants in any way.

### **Contact details**

	Name	E-mail id	Postal address	Contact No.
Researcher	Deepika Jindal	d.jindal@auckland.ac.nz	The University of Auckland Business School, Private Bag 92019 Auckland 1142, New Zealand	+64 9 373 7999
Supervisor	Dr. Peter Boxall	p.boxall@auckland.ac.nz		093737599 Ext. 87355
Head of Department	Professor Nigel Haworth	n.haworth@auckland.ac.nz		099235235

Chair contact details: “For any concerns regarding ethical issues you may contact the Chair, the University of Auckland Human Participants Ethics Committee, at the University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711. Email: ro-ethics@auckland.ac.nz”

**APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10th September 2015 for (3) years, reference Number 015785**

## APPENDIX G

### Consent Form

(Participant)

THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

**Project title:** Employee Engagement: A study of antecedents, mediators and outcomes

**Name of Researcher:** Deepika Jindal (d.jindal@auckland.ac.nz)

**Name of PhD Supervisor:** Dr. Peter Boxall (p.boxall@auckland.ac.nz)

I have read the Participant Information Sheet, have understood the nature of the research and why I have been selected. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I give consent to take part in this research as a participant according to the timelines mentioned in the Participant Information Sheet.
- I also understand that a reminder may be sent out to participants who have not filled the questionnaire.
- I understand that the online questionnaires will be kept confidential and subsequently destroyed as mentioned in the Participant Information Sheet.
- I understand that general information related to my overall performance will be sought from my supervisor as part of the study.
- I understand that data will be kept for 6 years, after which they will be destroyed.
- I understand that I am free to withdraw participation within 10 days of submitting the filled questionnaire. The CEO has given his assurance that my decision to participate or not in this study will have no influence on my employment within this organisation.
- I wish / do not wish to receive the summary of findings.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Email: \_\_\_\_\_

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10th September 2015 for (3) years, reference Number **015785**

## APPENDIX H

### Participant Information Sheet

(Supervisor)

**Project title:** Employee Engagement: A study of antecedents, mediators and outcomes

**Name of Researcher:** Deepika Jindal

**Name of PhD Supervisors:** Dr. Peter Boxall

#### Researcher introduction

I am a PhD student with the University of Auckland Business School. I am also employed as a Graduate Teaching Assistant with the Business School.

#### Project description

My research aims at understanding the factors that lead to employee engagement and how this impacts performance. Employee engagement is defined as a work related state of mind wherein an employee feels vigorous, dedicated and absorbed. The participants for my study will be permanent front-line employees (across functional areas). One of the variables that I will study is the performance of the participants. The Chief Executive Officer of your organisation has given his consent to undertake my study here. So, I seek your consent to participate in this study and provide performance related data for the participant(s) who is/are your subordinate(s). This research is expected to finish within 24 months.

#### Benefit of participation

Based on the results of my research, you will be able to reflect on the level of employee engagement in your organisation as well as on the factors that can have an impact on engagement.

#### Project procedures

The online questionnaire will take up to 10 minutes of your time. The online questionnaire aims to capture the performance of your subordinates. This information is needed to study the relationship among different variables in my study. I may send out a reminder to everyone again seeking responses from those who may not have responded within 30 days. In case you have submitted the questionnaire, please do ignore this second reminder. The Participant Information Sheet (PIS) and Consent Form (CF) will be emailed to you by the organisation. However, I will directly send the questionnaire link to you through a separate email. Please note that your participation is entirely voluntary.

#### Data storage/retention/destruction/future use

The online questionnaires will be electronically stored on my computer. I will assign codes to all supervisors while recording the final data in the excel file for analysis. A list of supervisor codes and linking it to the participants will be stored separately on my supervisor's computer, which is in a different office. The codes will not be printed or used in paper format at all. The online questionnaires and all other electronic files will be stored for six years and subsequently deleted. All Consent Forms will also be stored in my supervisor's locked cabinet (separate from data) and will be then destroyed after six years.

### Right to withdraw from participation

You can withdraw from the study within ten days of submitting the filled questionnaire. No adverse action related to your employment will be taken as a result of this. The CEO has also given the assurance that your decision to participate or not in this study will have no influence on your employment within this organisation.

### Confidentiality

I do not require your name on the questionnaire but I will need to know the employee id and name of your subordinate for whom you are providing the performance related information. After recording the results in an excel file and assigning a code to each participant/supervisor, I will then arrange to store and destroy the online questionnaires as per the process mentioned above. All information/data will be treated as confidential and only my supervisor and I will be privy to it. When writing up the research for thesis/publication, the data will be used for statistical purposes only and will not identify the participants or the supervisors in any way.

### Contact details

	Name	E-mail id	Postal address	Contact No.
Researcher	Deepika Jindal	d.jindal@auckland.ac.nz	The University of Auckland Business School, Private Bag 92019 Auckland 1142, New Zealand	+64 9 373 7999
Supervisor	Dr. Peter Boxall	p.boxall@auckland.ac.nz		093737599 Ext. 87355
Head of Department	Professor Nigel Haworth	n.haworth@auckland.ac.nz		099235235

Chair contact details: “For any concerns regarding ethical issues you may contact the Chair, the University of Auckland Human Participants Ethics Committee, at the University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711. Email: ro-ethics@auckland.ac.nz”

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10th September 2015 for (3) years, reference Number **015785**

## APPENDIX I

### Consent Form

(Supervisor)

THIS FORM WILL BE HELD FOR A PERIOD OF 6 YEARS

**Project title:** Employee Engagement: A study of antecedents, mediators and outcomes

**Name of Researcher:** Deepika Jindal (d.jindal@auckland.ac.nz)

**Name of PhD Supervisor:** Dr. Peter Boxall (p.boxall@auckland.ac.nz)

I have read the Participant Information Sheet, have understood the nature of the research and why I have been selected. I have had the opportunity to ask questions and have them answered to my satisfaction.

- I give consent to take part in this research according to the timelines mentioned in the Participant Information Sheet.
- I also understand that a reminder may be sent out to the supervisors who have not filled the questionnaire.
- I understand that the names of the supervisors will not be captured on the questionnaire but those of the subordinates (participants) will be captured on the questionnaires, kept confidential and subsequently destroyed as mentioned in the Participant Information Sheet.
- I understand that data will be kept for 6 years, after which they will be destroyed.
- I understand that I am free to withdraw participation within 10 days of submitting the filled questionnaire. The CEO has given his assurance that my decision to participate or not in this study will have no influence on my employment within this organisation.
- I wish / do not wish to receive the summary of findings.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Email: \_\_\_\_\_

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 10th September 2015 for (3) years, reference Number **015785**

## APPENDIX J

### Questionnaire items

#### Supportive supervisory style

##### *Training & Development*

- My supervisor provides me with on-the-job training as and when I need it
- My supervisor encourages me to learn new skills
- My supervisor nominates me as a member for different committees or projects as and when the opportunity arises
- My supervisor supports me when I want to participate in organisation-wide initiatives

##### *Employee Voice*

- My supervisor encourages me to speak up when I disagree with a decision\*
- My supervisor supports my decision to approach higher management with suggestions when I feel the need to

##### *Performance Management*

- My supervisor allows me to deviate from my written job description when the role demands
- My supervisor provides me with clarity on the tasks I should perform
- My supervisor encourages me to take the initiative in solving problems
- My supervisor appreciates when I go out of my way to ensure that the targets are met
- My supervisor encourages me to work in collaboration with other members of the department
- My supervisor supports me when I am unable to keep up with work
- My supervisor provides timely feedback on my performance
- My supervisor helps me to develop an action plan after my formal performance review

##### *Reward*

- My supervisor praises me when I do a good job
- My supervisor recommends my name to higher management for awards when I perform excellently

#### Core self-evaluations

- I am confident I get the success I deserve in life
- Sometimes I feel depressed (r)

- When I try, I generally succeed
- Sometimes when I fail I feel worthless (r)
- I complete tasks successfully
- Sometimes, I do not feel in control of my work (r)
- Overall, I am satisfied with myself
- I am filled with doubts about my competence (r)
- I determine what will happen in my life
- I do not feel in control of my success in my career (r)
- I am capable of coping with most of my problems
- There are times when things look pretty bleak and hopeless to me.

## **Work engagement**

### *Vigour*

- When I get up in the morning, I feel like going to work
- At my work, I feel bursting with energy
- At my job I feel strong and vigorous

### *Dedication*

- My job inspires me
- I am enthusiastic about my job
- I am proud of the work that I do

## **Job crafting**

### *Increasing structural job resources*

- I try to develop my capabilities
- I try to develop myself professionally
- I try to learn new things at work
- I make sure that I use my capacities to the fullest
- I decide on my own how I do things

### *Increasing social job resources*

- I ask my supervisor to coach me
- I ask whether my supervisor is satisfied with my work
- I look to my supervisor for inspiration
- I ask others for feedback on my job performance
- I ask colleagues for advice

### *Increasing challenging job demands*

- When an interesting project comes along, I offer myself proactively as project co-worker
- If there are new developments, I am one of the first to learn about them and try them out
- When there is not much to do at work, I see it as a chance to start new projects
- I regularly take on extra tasks even though I do not receive extra salary for them
- I try to make my work more challenging by examining the underlying relationships between aspects of my job

### **Work autonomy**

#### *Method*

- I am allowed to decide how to go about getting my job done (the methods to use)
- I am able to choose the way to go about my job (the procedures to utilize)
- I am free to choose the method(s) to use in carrying out my work

#### *Scheduling*

- I have control over the scheduling of my work
- I have some control over the sequencing of my work activities (when I do what)
- My job is such that I can decide when to do particular work activities

#### *Criteria*

- My job allows me to modify the normal way we are evaluated so that I can emphasize some aspects of my job and play down others
- I am able to modify what my job objectives are (what I am supposed to accomplish)
- I have some control over what I am supposed to accomplish (what my supervisor sees as my job objectives)

### **Task performance**

- Achieves the objectives of the job
- Meets criteria for performance
- Demonstrates expertise in all job-related tasks
- Fulfils all the requirements of the job
- Could manage more responsibility than typically assigned
- Appears suitable for a higher level role
- Is competent in all areas of the job, handles tasks with proficiency
- Performs well in the overall job by carrying out tasks as expected

- Plans and organizes to achieve objectives of the job and meet deadlines

### **Contextual performance**

- Helps other employees with their work when they have been absent
- Volunteers to do things not formally required by the job
- Takes initiative to orient new employees to the department even though it is not part of his/her job description
- Helps others when their workload increases (assists other until they get over the hurdles)
- Makes innovative suggestions to improve the overall quality of the department
- Willingly attends functions not required by the organisation but that help in its overall image
- Assists me with my duties

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