

**Antecedents and Outcomes of Psychological Contract
Fulfillment: An Empirical Study Conducted in India**

by

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DECLARATION

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DEDICATION

.....to God, without him nothing happens

.....to my dear parents, for making me who I am today

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ॐ श्री गणेशाय नमः

(Praise to Lord Ganesha)

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ABSTRACT

Although human resources have been positioned as a key enabler for gaining and maintaining competitive advantage for organisations, the processes through which such advantage is achieved are poorly understood. As the psychological contract is considered a central construct in studying the employee-organisation relationship, this thesis proposes that it is likely to be an important mechanism explaining the relationship between HRM practices and employee outcomes. A framework in which psychological contract fulfillment acts as a mediator of the relationship between both human and structural agents (HRM practices, frontline management leadership behaviour and co-worker support) and employee outcomes (affective commitment, job satisfaction, intention to quit and absenteeism) is proposed and empirically tested. Theories of social exchange, organisational support, signalling and social information processing are used to explain these relationships. Data were collected through a staff survey based on 1,051 frontline employees employed in 35 private-sector work units in India. The proposed model was tested using PLS-SEM. A unique methodological contribution of this thesis is the treatment of high performance work systems and psychological contract fulfilment (facet) as formative constructs. The results largely support the proposed theoretical framework. Specifically, HRM practices, frontline management leadership behaviour and co-worker support had significant positive relationships with psychological contract fulfillment. In turn, psychological contract fulfillment was found to be positively linked to affective commitment and job satisfaction and negatively related to intention to quit and absenteeism. Moreover, the results provide substantial support for the partial mediation hypotheses, thus psychological contract fulfillment is an important conduit of the relationships between the three antecedents and employee outcomes.

This thesis also considered two-way and three-way interactive associations among HRM practices, frontline management leadership behaviour and co-worker support while predicting psychological contract fulfillment. A significant positive interaction effect was observed for HRM practices and co-worker support, and a negative interaction effect between frontline management leadership behaviour and co-worker support. Thus, where co-worker support was high, the effects of HRM practices on psychological contract fulfillment was stronger. Whereas, co-worker support reduced the effects of frontline management leadership behaviour on psychological contract fulfillment, thus acted as a substitute.

Keywords: Psychological contract fulfillment, HRM practices, Frontline management leadership behaviour, Co-worker support, Employee Outcomes, PLS-SEM, India

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LIST OF ABBREVIATIONS

AIMA	All India Management Association
AMO	Ability-Motivation-Opportunity
CB-SEM	Covariance-based Structural Equation Modelling
CIPD	Chartered Institute of Personnel and Development
EFA	Exploratory Factor Analysis
FLM	Frontline Manager
HPWS	High Performance Work Systems
HRM	Human Resource Management
MOAS	Michigan Organisational Assessment Scale
OB	Organisational Behaviour
PCI	Psychological Contract Inventory
PLS-SEM	Partial Least Squares Structural Equation Modelling
RBV	Resource Based View
SEM	Structural Equation Modelling
SHRM	Strategic Human Resource Management
SPOS	Survey of Perceived Organisational Support
SPSS	Statistical Package for the Social Sciences
VIF	Variance Inflation Factor

CHAPTER 1

INTRODUCTION

1.1 Introduction

The management of employees is a key organisational issue as scholars have demonstrated their potential as a source of sustained competitive advantage in a dynamically changing business environment. In this context, psychological contract has emerged as the dominant explanatory mechanism for investigating the relationship between the employee and organisation (Rousseau, 1995; Guest & Conway, 2002; Dabos & Rousseau, 2013). While psychological contract has made significant inroads into the organisational psychology research, its relevance to the field of HRM cannot be undermined.

Strategic HRM scholars are increasingly turning their focus to examine intermediate variables that could potentially help unlock the “black box” between HRM and performance (Becker & Huselid, 2006; Snape & Redman, 2010; Guest, 2011; Katou & Budhwar, 2012; Jiang, Takeuchi & Lepak, 2013; Boxall, 2014). Psychological contract has been identified as one such intermediate variable that could provide a compelling explanation of the causal mechanisms through which HRM practices influence performance outcomes (Guest & Conway, 2002; Uen, Chien & Yen, 2009; Bal, Kooij & De Jong, 2013). Hence, it is evident that the concept of psychological contract fits well in both HRM and organisational psychology perspective, owing to its role as an explanatory mechanism to understand the employee-organisation relationship; as well as a means to examine the HRM and performance linkages.

While HRM practices have been identified as an important predictor of psychological contract, far less is known about the role of human agents including frontline managers and co-workers in predicting the employee perceptions of psychological contract fulfillment (Conway & Briner, 2005, 2009). This is a potentially critical shortcoming, given that it has been documented that employees often depend on proximal organisational representatives, such as supervisors and co-workers to form views about their organisations (Suazo, Martinez & Sandoval, 2009; Tomprou & Nikalou, 2011; McDermott, Conway, Rousseau & Flood, 2013). To address this issue, this thesis investigates the role of frontline managers and co-workers along with HRM practices in influencing psychological contract fulfillment.

Prior research has indicated that the psychological contract influences important employee attitudes and behaviours, such as affective commitment, job satisfaction and intention to quit (Guest & Conway, 2000; Tomprou, Nikolaou & Vakola, 2012). Overall, the purpose of this thesis is to shed light on the antecedents (HRM practices; frontline management¹ leadership behaviour; co-worker support) and outcomes (affective commitment; job satisfaction; intention to quit; absenteeism) of psychological contract fulfillment in India.

This chapter traces the broad research area of psychological contract. Further, it provides a brief overview of this study, identifying the aims and specific research questions that this thesis sets out to answer, highlighting the study's significance. Finally, an outline of research methodology is presented along with the structure of this thesis.

¹Frontline manager will be subsequently referred to as FLM for parsimony except when being mentioned for the first time in a new chapter or in hypotheses, headings, tables and figures.

1.2 Broad research area

Various disciplines have contributed to the study of psychological contract, more narrowly HRM and organisational behaviour (OB). It is important to set out the concept of psychological contract in its broader context. Researchers suggest that the psychological contract is a part of the employee-organisation relationship which also encompasses perceived organisational support and employment relationship (Coyle-Shapiro & Shore, 2007; Shore & Coyle-Shapiro, 2012). Seeking to understand the relationships between employees and organisations is at the heart of the academic study of HRM. Further, the employee-organisation relationship draws upon multidisciplinary perspectives including OB, and employment relations (Boxall, 2013).

Researchers have often emphasised the need to transcend the boundaries created between these disciplines by academics as the concepts, like high performance work practices can rarely be compartmentalised as emanating from just one discipline. For instance, it has been proposed that several academic disciplines should be considered in conjunction if a better understanding of the role of the psychological contract should be achieved (see Boxall, 2013). Therefore, this thesis draws upon multiple theoretical perspectives from the fields of OB (social exchange, organisational support and social information processing) and HRM (signalling) to explain the relationships between the antecedents and outcomes of the psychological contract. Specially, this study examines whether the psychological contract serves as a mediating mechanism through which HRM practices, line managers and co-workers are associated with affective commitment, job satisfaction, intention to quit and absenteeism. This study is situated between HRM and OB, integrating key theoretical perspectives from these areas.

1.3 Motivation for this study

Despite a plethora of studies in the field of psychological contract, the review of relevant literature revealed several gaps in the current understanding of the concept, which constitutes the motivation for the present research.

1.3.1. Lack of research integrating different theoretical perspectives

Most prior psychological contract research is centred around social exchange theory. Social exchange, based on the norms of reciprocity, posits that employees would be more willing to participate and display desirable work-related behaviours, if they perceive a beneficial exchange relationship with their organisation. In the context of this thesis, HRM practices (e.g. career enhancement opportunities, training and developmental opportunities, attractive pay and benefits) could be viewed as organisational investments in employees. The quality of frontline managers also reflects the extent to which organisations care about their employees as frontline managers display positive leadership behaviours (such as ensuring fair treatment and providing participative mechanisms). Furthermore, co-workers may also influence the employee's perceptions of organisational investments as they discuss their own experiences with their fellow workers, and take an interest in their wellbeing.

It can be argued that there are a number of theories that jointly facilitate an explanation of how HRM practices, frontline managers and co-workers influence the psychological contract and subsequently employee outcomes, as discussed in the previous section. Thus, it is vital that the psychological contract theory and research draws upon the features of other theories, such as signalling, organisational support and social information processing, to explain the relationship between HRM practices, FLM leadership behaviour, co-worker support and employee outcomes.

Signalling theory (Suazo et al., 2009) posits that organisational actions (HRM practices, FLM leadership behaviour, and co-worker support) can be viewed as *signals* from the organisation, and thus effect the employee perceptions of psychological contract fulfillment. Similarly, organisational support theory (Conway & Coyle-Shapiro, 2012) notes that organisational actions, if viewed as a source of support by the employees, will elicit positive perceptions of the psychological contract. Also, previous research has not considered the role of co-workers in *facilitating* or *influencing* employee perceptions of the psychological contract. This is an important omission given that social information processing theory advocates that co-workers may impact employee perceptions of the psychological contract fulfillment through their interactions with fellow workers. These arguments will be further developed in Chapter 2 and 3. It is with these debates in mind, I suggest a more integrative approach to studying psychological contract fulfillment, rather than a sole reliance on social exchange theory.

1.3.2 Call for research examining key antecedents of the psychological contract fulfillment

HRM practices have been consistently proposed, both theoretically and empirically, as a central explanatory variable in explaining psychological contract fulfillment (Guest & Conway, 2002; Katou & Budhwar, 2012). Yet, this explanation does not account for the possibility that the employees engage in a series of interactions with their line managers and co-workers, which could influence their perceptions of the psychological contract fulfillment (Conway & Briner, 2005, 2009). I argue that adding these two key organisational representatives of the workplace, along with the more familiar mechanism, HRM practices, will provide a more comprehensive explanation of the psychological contract fulfillment.

Additionally, this thesis examines HRM practices both as High performance Work Systems² (HPWS) and a set of HRM bundles. This is quite relevant to the psychological contract fulfillment research, since researchers (Subramony, 2009; Gardner, Wright & Moynihan, 2011; Jiang et al., 2012a; Jiang, Lepak, Hu & Baer, 2012b) have argued that different HRM bundles could influence the same outcomes in heterogeneous ways (as will be further discussed in Section 3.4).

1.3.3 The study of the role of the psychological contract fulfillment as a mediator

Most prior research has largely neglected the role of psychological contract in investigating *how* HPWS practices influence outcomes, with a few exceptions (see Uen et al., 2009; Katou & Budhwar, 2012; Raeder, Knorr & Hilb, 2012; Scheel, Rigotti & Mohr, 2013; Bal et al., 2013). Also, there has been mixed empirical support for psychological contract fulfillment as an intermediate variable, (e.g. Katou & Budhwar, 2012; Scheel et al., 2013), which suggests a lack of consensus in the field concerning the influence of the psychological contract on the relationship between HPWS and employee outcomes. This thesis attempts to resolve this debate by empirically examining the psychological contract fulfillment as an intermediate variable expounding the HPWS-employee outcomes linkages.

While there is evidence on the direct effects of FLM leadership behaviour and co-worker support on employee outcomes (Purcell & Hutchinson, 2007; Rousseau & Aube, 2010), no prior studies have looked at the potential mechanisms that could explain the relationships between the human agents (frontline managers and co-workers) and employee outcomes. This study is the first to systematically investigate the potential role of psychological contract fulfillment by theorising and testing it as a mediating variable between the other two antecedents (FLM leadership behaviour and co-worker

² High performance work systems will be subsequently referred to as HPWS for parsimony except when being mentioned for the first time in a new chapter or in hypotheses, headings, tables and figures.

support) and employee outcomes respectively. This argument is consistent with the theoretical foundations of social exchange, organisational support and signalling theories.

1.3.4 Studying interactive associations of high performance work systems, frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment

Also, previous research has analysed HPWS or other antecedents in isolation or has treated them independently, which is too simplistic. Researchers have recently begun to examine whether HPWS and frontline manager leadership behaviours are contingent upon each other (Purcell & Hutchinson, 2007). It is worth noting that the empirical context of the psychological contract studies, although broad, has overlooked the role of human agents, supervisors and co-workers. Also, there is no study that has examined the interactive associations of HPWS, FLM leadership behaviour and co-worker support. Thus, it would be valuable to investigate whether the effects of these three antecedents are contingent upon one another in predicting psychological contract fulfillment.

1.3.5 Methodological issues

Most studies have treated HPWS and psychological contract fulfillment (facet) as reflective constructs. Researchers tended to model these constructs as reflective without any theoretical or empirical support to defend their approach. In other words, the HPWS and psychological contract (facet) measures could be considered as reflective *or* formative scales (see Section 6.2). For instance, some researchers argue that the HPWS (Jiang et al., 2012a, 2012b) and the facet measure of the psychological contract fulfillment (Tetrick, 2004) should be regarded as formative measures³. Therefore, this study will outline the rationale for treating the HPWS and psychological contract fulfillment (facet) as formative rather than reflective constructs.

³ The word construct and measure have been used interchangeably in this thesis.

Furthermore, this study makes a further methodological contribution by comparing the two measures of the psychological contract fulfillment: the global and facet measures. Although the relevance of each measure has been contested by researchers (see Conway & Briner, 2005; Freese & Schalk, 2008), this is the first study to provide empirical evidence of their convergent and discriminant validity and differential effects on their antecedents and outcomes. This is important, as the facet measure of psychological contract fulfillment consists of 13 items, whereas the more parsimonious global measure consists of just 4 items. Further, if the differential effects are small, or the measures are found to be empirically as well as conceptually similar, then researchers will be able to make an informed decision as to which measure will be more relevant for their particular study. This thesis will also empirically test the differential effects of both the global and facet (multi-dimensional) measures of psychological contract fulfillment on employee outcomes.

1.3.6 Lack of psychological contract fulfillment research in the Indian context

Virtually most extant psychological contract research has been highly concentrated in Anglo-Saxon countries, revealing a dearth of studies in the non-Western contexts (Krishnan, 2011; Katou & Budhwar, 2012; Agarwal & Bhargava, 2014). The focus on India is very timely as it is touted to become the fourth largest economy by 2020 (Budhwar & Varma, 2010), thus forming a key emerging market. Budhwar (2012) notes that India is marked with “unique local socio-cultural, economic, legal, institutional and political factors” (p. 2516). Further, the review of psychological contract research in India (see Section 2.7) revealed that there was not a single study that examined psychological contract fulfillment in this context. To address this gap in the extant literature, this thesis investigates the antecedents and outcomes of psychological contract fulfillment in the Indian context, and therefore will determine whether the findings reported by scholars in the predominantly Anglo-Saxon countries, are generalisable to the Indian context.

Summarising, this review identifies a number of theoretical and methodological gaps that have been identified from prior psychological contract research. The thesis aims to address these fundamental issues in the literature, thus adding to the existing body of knowledge.

1.4 Aim, objectives and research questions

The overarching aim of this thesis is to examine the antecedents and outcomes of psychological contract fulfillment. The three main research objectives are:

1. To examine the relationships between employee perceptions of HRM practices, frontline management leadership behaviour, co-worker support, psychological contract fulfillment and employee outcomes in the Indian private sector.
2. To examine the mediating effects of psychological contract fulfillment on the relationships between a) high performance work systems and employee outcomes, b) frontline management leadership behaviour and employee outcomes, and c) co-worker support and employee outcomes.
3. To examine the two-way and three-way interaction effects on the relationships between high performance work systems, frontline management leadership behaviour, and co-worker support in predicting psychological contract fulfillment.

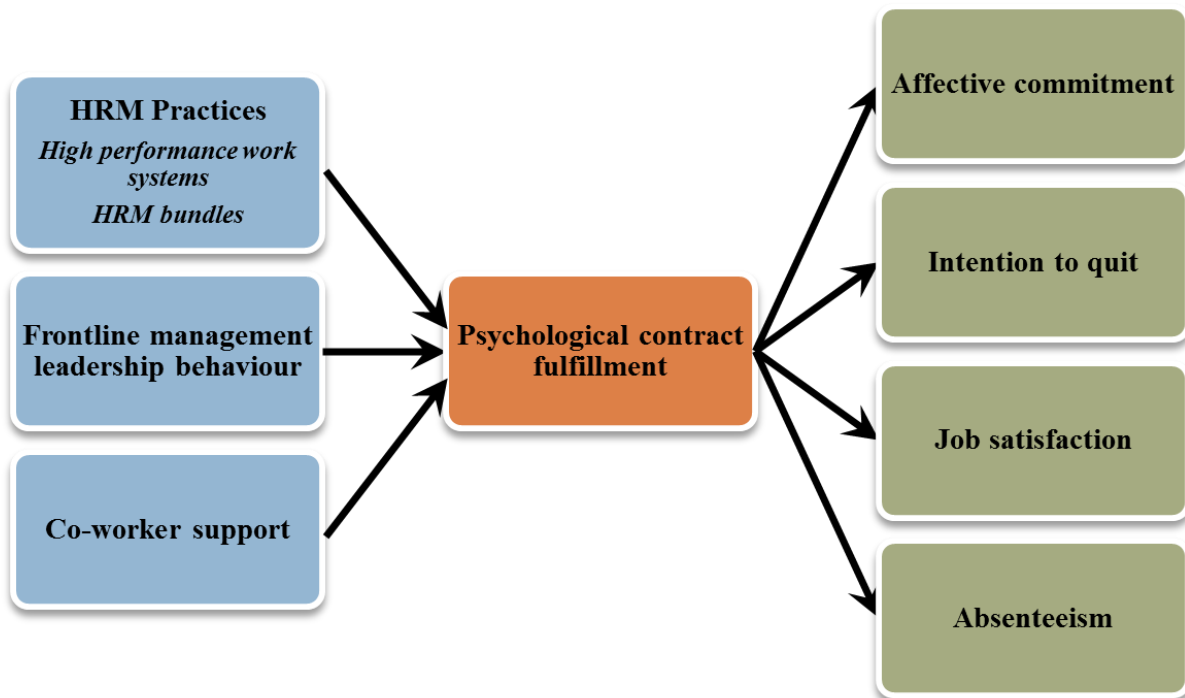
The research questions associated with these objectives are presented:

1. What is the relationship between high performance work systems and psychological contract fulfillment?
2. What is the relationship between HRM bundles and psychological contract fulfillment?

3. What is the relationship between frontline management leadership behaviour and psychological contract fulfillment?
4. What is the relationship between co-worker support and psychological contract fulfillment?
5. What is the relationship between psychological contract fulfillment and employee outcomes?
6. Does psychological contract fulfillment partially mediate the relationship between high performance work systems and employee outcomes?
7. Does psychological contract fulfillment partially mediate the relationship between frontline management leadership behaviour and employee outcomes?
8. Does psychological contract fulfillment partially mediate the relationship between co-worker support and employee outcomes?
9. Is there a two-way interaction between high performance work systems and frontline management leadership behaviour while predicting psychological contract fulfillment?
10. Is there a two-way interaction between high performance work systems and co-worker support while predicting psychological contract fulfillment?
11. Is there a two-way interaction between frontline management leadership behaviour and co-worker support while predicting psychological contract fulfillment?
12. Is there a three-way interaction between high performance work systems, frontline management leadership behaviour and co-worker support while predicting psychological contract fulfillment?

Based on the research questions, Figure 1.1 presents a model of proposed relationships among primary variables examined in this thesis.

Figure 1.1: Simplified version of the conceptual model⁴



For answering the research questions and testing the conceptual model, a quantitative survey design is used, which is outlined in the next section.

1.5 Research methodology

This thesis is situated within the positivist research paradigm, applying a deductive logic of hypotheses testing. The study adopted a cross-sectional design to achieve the research objectives. A questionnaire survey was used to collect the study data. The questionnaire was distributed to 2000 frontline employees in 35 Indian private-sector work units, including a variety of manufacturing and service organisations. 1051 usable questionnaires were returned, giving an effective response rate of 52.55 percent.

⁴ Conceptual model with direct effects only depicted. The indirect effects are inferred.

The data were analysed using partial least squares-structural equation modelling (PLS-SEM) with SmartPLS 2.0. The study followed Anderson and Gerbing's (1988) two-step procedure adopted by Hair, Hult, Ringle and Sarstedt (2013), which involves estimating the measurement model prior to estimating the proposed structural model.

1.6 Significance of this study

Theoretically, this thesis contributes to previous knowledge in a number of ways. First, this thesis offers an alternative lens to view the concept of the psychological contract integrating social exchange, organisational support, signalling and social information processing theories. Second, it expands the scope of prior research that examined HRM practices as a key antecedent of psychological contract fulfillment, by treating HRM practices both as a system and a set of HRM bundles. Further, this thesis responds to calls for psychological contract research to examine the role of human agents like frontline managers and co-workers who may influence employees' perceptions of the psychological contract. Thirdly, this thesis addresses the need warranted in the extant literature to examine the psychological contract in a non-Western context, India.

Methodologically, this thesis uses PLS-SEM to analyse data, which accounts for the formative nature of two constructs in the study, HPWS and psychological contract fulfillment (facet). In the absence of prior evidence of such treatment, the analyses of this study provide a number of useful findings which future researchers may find informative. Additionally, this study is one of the first empirical tests of global (reflective) versus facet (formative) specifications of psychological contract fulfillment.

From a practitioner standpoint, this thesis adds to the attempts at bridging the gap between theory and practice. Concurrent with the prior research, this thesis helps to convey messages to practitioners

regarding the crucial role HRM practices play in shaping the employees' evaluation of psychological contract. Further, this study identifies the importance of frontline managers and co-workers for enhancing employee perceptions of psychological contract, together with HRM practices. It suggests that frontline managers, through their leadership behaviours, play an active part in influencing the psychological contract. Similarly, high levels of co-worker support enable employees to form positive perceptions of psychological contract. These findings will allow organisations to apply appropriate HRM practices, along with building a positive work environment consisting of empowering frontline managers and supportive co-workers.

1.7 Organisation of this study

This study consists of eight chapters in total and the layout is given in Figure 1.2. The structure of the thesis is as follows:

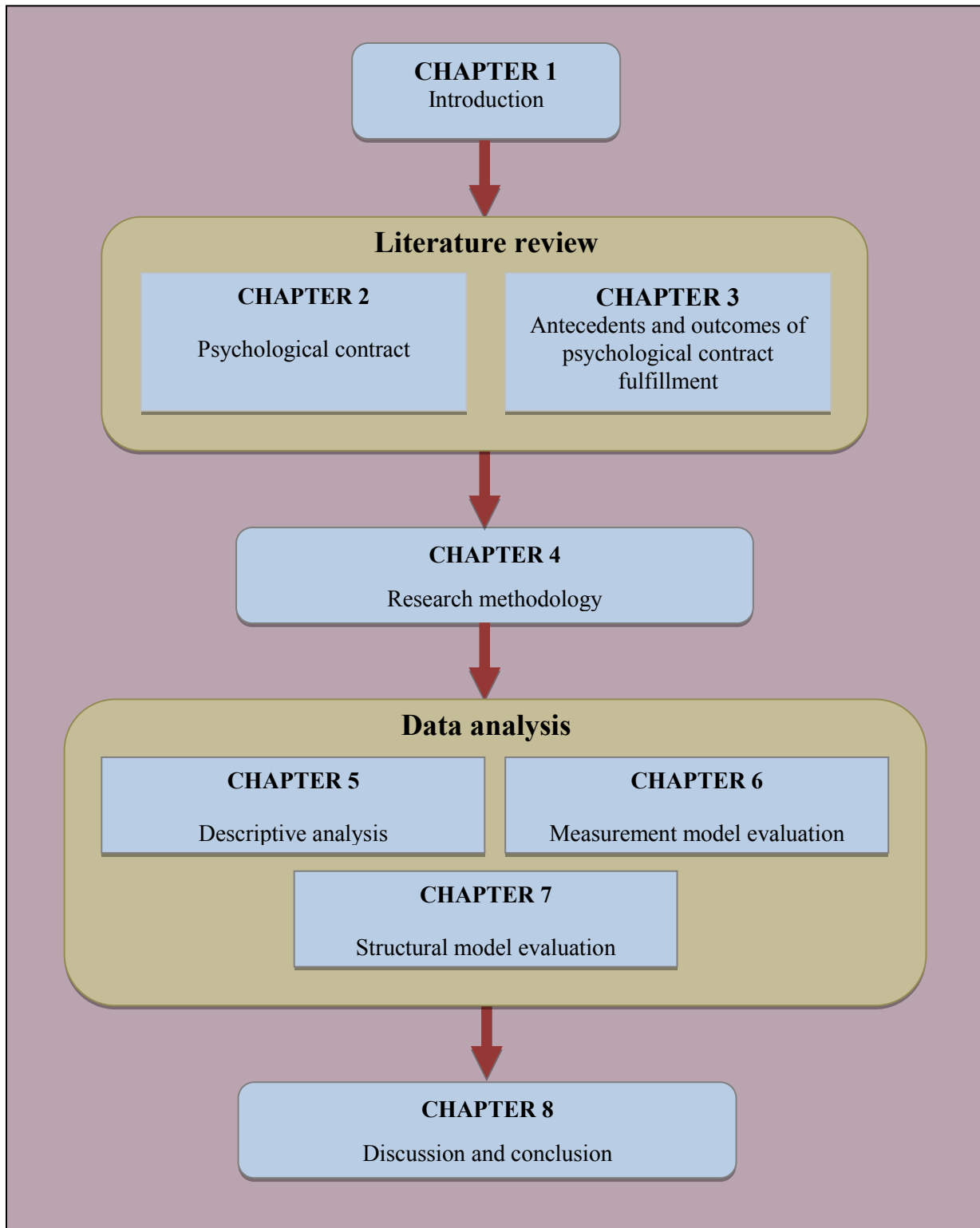
As an introductory chapter, **Chapter 1** outlines the main issues included in the thesis. It briefly presents the research background, which is followed by a clarification of the key research aims, objectives, research questions and contributions of this study. An overview of the structure of the thesis is discussed at the end.

Chapter 2 and **Chapter 3** present a review of existing research drawing on both conceptual and empirical studies. These chapters build the theoretical foundation upon which this study is based. **Chapter 2** focuses on a review of psychological contract, starting with its historical origins, definitions and theoretical perspectives. Further, it discusses the various approaches to study psychological contract. Finally, following a review of the psychological contract literature in India, this chapter examines the relevance of this study in the Indian context.

Chapter 3 concurrently examines the antecedents and outcomes of psychological contract fulfillment. This chapter explicates the theoretical and empirical justification for the variables examined in this thesis. Further, it propounds a research model that postulates three antecedents (HRM practices, FLM leadership behaviour and co-worker support) and four outcomes (affective commitment, intention to quit, job satisfaction and absenteeism) of psychological contract fulfillment. Subsequently, the chapter develops relevant hypotheses to test the relationships proposed in the theoretical model.

Chapter 4 presents an overview of the methodology used in this study. This chapter includes a discussion on the ontological, epistemological, methodological and axiological assumptions which then guide the adopted method in line with the research questions. Further, it justifies the choice of research method in connection with the criteria of validity, reliability, replicability, and generalisability. Additionally, the chapter presents the operationalisation of all variables to be tested, and discusses the main instrument of administration, the questionnaire, at length. Finally, this chapter discusses ethical considerations with reference to informed consent, anonymity and confidentiality.

Figure 1.2: Structure of this thesis



Chapter 5, Chapter 6 and Chapter 7 comprise the empirical constituents of this thesis. **Chapter 5** provides a descriptive analysis of the constructs included in the questionnaire survey data collected from 1051 frontline employees employed in 35 work units in India. The demographic characteristics of the respondents and the profile of sample organisations are examined. This section also includes preliminary data screening referring to the analysis of missing data, outliers and normality.

Chapter 6 and Chapter 7 presents the analyses of data based on the two-step approach Anderson and Gerbing's (1988) two-step procedure adopted by Hair et al. (2013), using PLS-SEM. This approach requires estimating the measurement model prior to assessing the proposed structural model.

Chapter 6 reports the results of the measurement model. This thesis includes both reflective and formative models. The results of the reflective measurement model are assessed using the criteria of internal consistency (composite reliability), indicator⁵ reliability, convergent validity (average variance extracted) and discriminant validity. The formative model assessment focuses on the convergent validity, collinearity among indicators and significance and relevance of outer weights.

Chapter 7 presents the results of the structural model related to the direct effects, including assessing collinearity, significance of path coefficients, and coefficient of determination (R^2). Next, this chapter reports the mediation and interaction analyses. Further, it outlines and conducts various robustness tests related to common method bias, control variables, comparison of the global and facet measures of psychological contract fulfillment, and blindfolding.

⁵ The terms, indicator and item, have been used interchangeably in this thesis.

Chapter 8, the final chapter of this study, focuses on the interpretation of the results and conclusions drawn from them, in relation to the existing psychological contract literature. It also discusses the implications of these results for organisations and practitioners and the limitations of this study. Finally, recommendations about future research are provided.

CHAPTER 2

PSYCHOLOGICAL CONTRACT

2.1 Introduction

This chapter is first of the two literature review chapters. The main aim of the chapter is to present a critical evaluation of the psychological contract literature. The chapter starts with a brief review of the historical origins, the definitions and the theoretical perspectives of the psychological contract arriving at its conceptualisation in the present study. It also examines the various approaches used to study psychological contract. The need to focus on psychological contract fulfillment is then elucidated. Finally, this chapter also reviews psychological contract research in India.

2.2 History and definitions of the psychological contract

Psychological contract is being increasingly used as an explanatory framework for understanding the employment relationship. Given that considerable attention is being paid to psychological contract, it would be useful to trace the development of major trends and developments that have directed the psychological contract research over the last fifty years. This discussion aims to highlight the ways in which the various perspectives influenced one another and identifying seminal contributions. The understanding of the historical evolution of the psychological contract is very crucial as it not only shapes the current literature but also influences future research directions.

The historical review by Roehling (1997) is one of the first widely-cited articles focusing on the foundations and initial development of the psychological contract construct. Roehling (1997) argued that the influential article by Rousseau (1989) reconceptualised the psychological contract and marked the “transition from early developments to recent developments in the psychological

contract literature” (p. 213). Predicated on Roehling’s classification, more recently Conway and Briner (2005, 2009) divided the psychological contract research into two broad phases: Pre-Rousseau period and Rousseau period, which are further discussed below.

2.2.1 Pre-Rousseau period

Menninger (1958) was one of the first researchers to initiate a discussion on the concept of the psychological contract in his book *Theory of Psychoanalytic Technique*. The ideas that helped in origination of this concept were expressed in the following excerpt:

In any engagement between two individuals in which a transaction occurs, there is an exchange, a giving and a gain of something by both parties with a consequent meeting of the needs in a reciprocal way, mutual way. When this balance is not achieved, either because one does not need what the other has to offer or because one does not give what the other needs or because there is a feeling on the part of one that the exchange is not a fair one, the contract tends to break up prematurely (Menninger, 1958, p. 21).

Menninger’s work emphasised the importance of reciprocity and fairness. He discussed the exchange relationship in context of a psychotherapist-patient relationship. Additionally, he suggested that this concept could be extended to other relationships such as barber-client. It is thus important to note that his work was not limited to the relationship between the employee and organisation.

March and Simon (1958) introduced the inducement-contribution model in their book *Organizations*. This model is based on Barnard (1938)’s equilibrium theory and acknowledged the existence of an exchange relationship between the worker (employee) and the organisation, one of the key postulates of equity and social exchange theory. March and Simon (1958) proposed that “in joining the organisation, he (the employee) accepts an authority relationship, i.e., he agrees that within some limits (defined both explicitly and implicitly by the terms of the employment contract) he will accept as the premise of his behaviours, orders and instructions supplied by the organisation” (p. 90). Their work referred to the concept of unwritten contractual obligations between the

employee and the organisation, which is more aligned with the contemporary psychological contract research, as compared to Menninger's work. Though the inducement-contribution model is seldom recognised, the concept of exchange of contributions for inducements is similar to psychological contract.

Argyris used the term *psychological work contract* to describe the relationship between foreman and employees in his book *Understanding Organizational Behavior* in 1960. He observed that "since the foremen realise the employees in this system will tend to produce optimally under passive leadership, and since employees agree, a relationship may be hypothesised to evolve between the employees and the foremen which might be called the 'psychological work contract'" (Argyris, 1960, p. 97). Argyris conceptualised the psychological work contract as an exchange relationship between the employees and foremen, which is a narrower perspective than the earlier work by Menninger and March and Simon.

Levinson, Price, Munden, Mandl and Solley (1962) used the term *psychological contract* formally for the first time in their book titled *Men, Management, and Mental Health*. Psychological contract was defined as "a series of mutual expectations of which the parties to the relationship may not themselves be dimly aware but which nonetheless govern their relationship to each other (Levinson et al., 1962, p. 21)". This term was used to illustrate the set of expectations and obligations employees mentioned when talking about their work experiences. The authors also captured the dynamic nature of the psychological contract and viewed it as often evolving or changing over time as a result of the changing needs of the individual or the organisation.

Another widely-cited work in the pre-Rousseau period is by Edgar H. Schein. Schein's (1965) book placed a strong emphasis on matching expectations between the employee and the organisation. He emphasised that the "notion of a psychological contract implies that the individual has a variety of

expectations of the organisation and that the organisation has a variety of expectations of him (Schein 1965, p. 11).” Schein attributed the theoretical underpinning of the psychological contract to the inducement-contribution model proposed by March and Simon.

There are two key empirical studies in the pre-Rousseau period. Kotter (1973) differentiated psychological contract from legal or labour contract. This empirical study focused on the implicit nature of newcomers’ psychological contract and was based on a quantitative survey comprising middle managers from MIT’s Sloan School of Management. The study argued that the psychological contract involve matches in the expectations of employees and their organisation. Results found that the psychological contract with higher matches led to greater job satisfaction, productivity and reduced turnover than the contracts with more mismatches. Portwood and Miller (1976) conducted a longitudinal study based on a measure of organisational contract compliance and linked it with job satisfaction and evaluations of employee work behaviour. Results indicated that job satisfaction and evaluations of employee work behaviour were positively correlated with the measure of organisation contract compliance.

In the pre-Rousseau period, most authors defined psychological contract as an exchange between two parties. However, the definitions were often inconsistent with each other, especially, over the notion of the parties involved in the psychological contract. For instance, March and Simon (1958) and Kotter (1973) conceptualised psychological contract as an exchange relationship between employees and their organisation. Alternatively, Argyris (1960) proposed that the psychological contract developed on the basis of interactions between foremen and employees. Finally, Schein (1980) suggested that the psychological contract forms between an employee and managers and other parties. Schein (1980) argued that the “notion of a psychological contract implies there is a set of unwritten expectations operating at all times between every employee of an organisation and the

various managers and others in that organisation” (p. 22). He reinforced the importance of employer perspective along with the employee view.

Coyle-Shapiro and Parzefall (2008) noted that the “initial phase in the development of the psychological contract is marked by divergences between the early contributors” (p. 19). The work forming this period has also been described as ambiguous (Conway & Briner, 2009). Roehling (1997) lamented that the articles published in a special edition of *Human Resource Management* in 1994 on psychological contract proposed different definitions of the concept, yet there was no attempt by either the guest editors or the contributing authors to reconcile these differences. Yet, the work from the pre-Rousseau phase is critical in laying the foundational ideas for the evolution of psychological contract during the Rousseau period.

2.2.2 Rousseau period

Denise M. Rousseau is credited as having the greatest influence on the psychological contract research and being instrumental in the renaissance of the psychological contract (Cullinane & Dundon, 2006). The Rousseau period is marked with Rousseau’s (1989) seminal article in *Employee Responsibilities and Rights Journal* which is considered pivotal in reviving scholarly interest in psychological contract research. The article distinguished between psychological and implied contract in an organisation, taking into account, the development, maintenance and violation of psychological contract and subsequent organisational implications. It also drew a conceptual distinction between transactional and relational contracts. Relational contracts are less formal, possess a broader scope and are subjectively comprehended by the parties involved, whilst the transactional contracts are very specific and narrow as well as being normally time-limited. These are a part of the content-based measure of psychological contract, further discussed in Section 2.4.3.

Rousseau developed the concept of human and structural contract makers in the year, 1995. The human contract makers include managers, co-workers, mentors and recruiters who could have an influence on the exchange relationships between the employees and their organisation. The structural contract makers are used as vehicles to convey information about the organisation, for instance, human resource practices could be used to convey intentions of the organisation. These concepts will be subsequently discussed in detail in Section 2.4.1.

Rousseau (1989) defined psychological contract as “an individual’s belief regarding the terms and conditions of a reciprocal exchange agreement between the focal person and another party” (p. 123). This definition focused on the individual employee beliefs, and not the organisation, though it acknowledged the existence of reciprocity. Also, it emphasised on the perceived agreement not on the actual agreement between the involved parties in the psychological contract.

In 1996, David E. Guest and Neil Conway published an analysis of the annual survey of employee attitudes undertaken by Chartered Institute of Personnel Development (CIPD). This was among the first empirical studies studying the concept of psychological contract, linking it with a broad range of employee outcomes. Over the years, the authors published various CIPD reports including constructs linked to psychological contract including motivation (1997), fairness (1998), organisational change (2001a) and supervisory leadership (2004). The survey report, in 2000, focused on psychological contract in the public sector followed by a comparative analysis of psychological contract from public and private sector perspectives.

The year 1997 saw the emergence of a theoretical model by Morrison and Robinson outlining various conditions that may contribute to perceptions of psychological contract breach. This model helped in distinguishing between the two distinct concepts: breach and violation which were till then being used interchangeably (Coyle-Shapiro & Parzefall, 2008). In 1998, Rousseau and Tijoriwala

focused on a review of three forms of psychological contract assessment: content, feature, and evaluation, further elaborated in Section 2.4.3. In the same year, Guest (1998) reiterated the importance of the employer in the employee-organisation relationship. As discussed earlier, the research by Rousseau and Morrison and Robinson focused largely on the individual employee view of the psychological contract, which thus overlooked the organisational perspective on psychological contract. Conway and Briner (2009) argued that while Rousseau's conceptualisation is quite popular, "it is clearly at odds with previous researchers' views and not without its own limitations" (p. 80). While Rousseau's work is heavily credited with bringing clarity to this concept, her work also marked a departure from most pre-Rousseau period research that suggested psychological contract involves a two-way exchange.

Guest (1998, 2004) called for a return to the exploration of the psychological contract as a two-way exchange, and the inclusion of the employer perspective. Guest and Conway (2002) defined the psychological contract as the "perceptions of both parties to the employment relationship – organisation and individual- of the reciprocal promises and obligations implied in that relationship" (p. 22). There is a high emphasis on reciprocity in the proposed definition. There are issues which arose from this conceptualisation of the psychological contract. It is important to identify who is seen as representing the organisation. Schalk and Rousseau (2001) noted that "the organisation cannot be considered as a single party to the psychological contract and it does not always speak with one voice" (p. 136). Thus, it is not easy to identify who constituted the employer in context of the psychological contract: the recruiter, or the supervisor, or top management. This notion of multiple parties has also been observed earlier as *agency problem* by Guest (1998). Other parties to the employment relationship could also influence whom employees look to for contract fulfillment and whom they are likely to blame for any violations that occur (Guest & Conway, 2000).

A lot of research was focused on the evaluation of the psychological contract with limited research on the formation of the psychological contract. Rousseau (2001) was among the first researchers to examine the constructs associated with the formation of psychological contracts. This is further considered in detail in Section 2.4.2.

Conway and Briner (2005) published a review of psychological contract in their book *Understanding Psychological Contracts at Work*. This is inarguably the most extensive critique of psychological contract to date, covering history, development, definitions, content, challenges and future research directions of psychological contract. The book provided a comprehensive review of the psychological contract research and theory. Beginning with an historical overview of the psychological contract theory and research from its origins in the 1960s through to its fuller acceptance in the 1990s, the changing definitions, often conflicting, have been traced. The ways in which the meanings attributable to the psychological contract have changed over time provide an opportunity to seek out and examine both potential methodological and conceptual challenges.

They summarised some of the key conceptual and theoretical challenges identified by earlier reviews: a) What is meant by an implicit promise?, b) What are the precise links between what employees offer and what they get back from the organisation?, c) How are psychological contracts negotiated?, d) Who or what do employees perceive to be the other party to the contract?, and e) How can we begin to understand the psychological contract as a process?. Among the methodological challenges, the main issue is the dominance of quantitative methods. Conway and Briner (2005) stated that the empirical studies studying psychological contract have been dominated primarily by the use of questionnaire surveys, with very few studies adopting the qualitative approach. Within the survey method, data were generally collected from a single source and were usually cross-sectional, which posed causality issues.

Conway and Briner (2005) noted that despite these challenges, the psychological contract remains of interest in organisational research. Their most recent review, Conway and Briner (2009) hinted that the reviews “do not recommend abandoning the idea, they do, taken collectively, represent a very wide-ranging assessment of the numerous limitations of existing research, covering issues such as definitional ambiguity, concept redundancy, inadequate explanatory power, the use of tired and inappropriate methodologies, and the lack of practical application” (p. 72-73).

The historical review covered in this section discussed the origins of psychological contract and its current state. It is evident that while research in the pre-Rousseau period was sporadic, more empirical studies have been published in the Rousseau period. Conway and Briner (2005) advocated that the psychological contract research has now moved into a more *mature* phase. Both the pre-Rousseau and Rousseau period have commonalities in terms of subjective nature and reciprocal exchange. On the other hand, different authors came up with their own definitions and models, resulting in many interpretations of psychological contract. Comparing the two periods raise a number of important issues which govern the interpretation of psychological contract. Despite its introduction more than five decades ago, a consensus has not been reached about the definition and conceptualisation of the psychological contract. Progress continues in developing a better understanding of the concept. The state of contemporary psychological contract research will be discussed at length in Section 2.5 covering the key themes.

For the purposes of this study, the psychological contract is defined as the perceptions of both parties to the employment relationship, organisation and the individual employees, of the reciprocal promises and obligations implied in that relationship. Several reviewers have considered the organisation from one identity rather than a broad perspective including multiple agents such as co-workers and supervisors. This study takes into account the employee’s view of the exchange

relationship, using a key structural contract maker (HRM practices) and two human agents based within the organisation (frontline managers and co-workers). The next section discusses the theoretical underpinnings of the psychological contract.

2.3 Theoretical foundations of the psychological contract

A number of theoretical perspectives have been used to explain the psychological contract and related constructs. Conway and Briner (2009) stated that the psychological contract shares some features with other approaches including social exchange, organisational support and socialisation theory. This section discusses these predominant theoretical frameworks in more detail. Also, it reflects upon the theoretical approaches which are more applicable to this thesis and justifies the rationale for their inclusion/exclusion. This theoretical review aims to provide a framework that can inform the study of the psychological contract as captured by multiple theoretical perspectives, further expanded upon in Chapter 3.

2.3.1 Social exchange theory While social exchange theory was initially developed to examine the development and maintenance of interpersonal relationships, it has since been applied to explain the nature of the employee-organisation relationship (Aryee, Walumbwa, Mondejar & Chu, 2013). Cropanzano and Mitchell (2005) proposed that social exchange relationships develop when an organisation shows concern for its employees, it usually results in favourable consequences for the organisation. In other words, positive social exchange relationships engender effective employee attitudes and behaviours.

Social exchange theory and psychological contract theory share two features: reciprocity and exchange relationship. The norm of reciprocity (Gouldner, 1960) is a central element in explaining the dynamics of the psychological contract. It supports the notion of the psychological contract as an

exchange construct (Rousseau, 1995; Shore & Tetrick, 1994). Researchers have stated that reciprocity plays a key role in explaining the relationship between the psychological contract evaluation and employee attitudes and behaviours (e.g., Robinson & Morrison, 1995; Conway & Briner, 2002; Turnley, Bolino, Lester & Bloodgood, 2003; Uen et al., 2009; Bal et al., 2013). Prior research suggests that the level of reciprocity is contingent upon the value of the exchange as perceived by employees (Cropanzano & Mitchell, 2005; Gould-Williams, 2007; Bagger & Li, 2014).

2.3.2 Socialisation theory Researchers have investigated the formation of psychological contract as a sense-making process that takes place during organisational socialisation (Louis, 1980). The socialisation period is generally considered as an important stage in the formation of employees' psychological contracts (e.g., Shore & Tetrick, 1994; Rousseau, 1995; Anderson & Thomas, 1998; De Vos, Buyens & Schalk, 2003; De Vos & Freese, 2011). Socialisation research has shown that sensemaking plays a significant role in the adjustment of the newcomer to the organisation, especially during the first months after entry (Morrison, 1993; Saks & Ashforth, 1997; Rousseau, 2001). The theory is widely used to study newcomers' psychological contract during the encounter and acquisition stage of socialisation (DeVos et al., 2003). Thus, socialisation theory is more apt to study the process of the psychological contract formation rather than evaluating the state of the psychological contract, making it less relevant to this thesis.

2.3.3 Social information processing theory Social information processing theory (Salancik & Pfeffer, 1978) posits that the information that employees obtain from other parties in the organisation (e.g. co-workers) play an important role in how they shape their opinions of what they owe to the organisation and are owed in return. The basic tenets of social information processing theory are that: a) the social environment provides cues as to which aspects of the work environment should be considered salient or weighted heavily and, b) the social context provides cues concerning the

reasons why others have evaluated the work environment positively or negatively (Pfeffer, 1981). For instance, co-workers could provide information about the organisation including its management style and treatment of employees. Rousseau (2004) discussed the notion of multiple contract makers and how the employees' interpretation of psychological contract could be shaped by many sources of information. The next chapter will focus on the role of two human agents, frontline managers and co-workers, in influencing the employees' perceptions of psychological contract.

2.3.4 Control theory Control theory also provides a useful perspective on understanding employees' likely response to the psychological contract (Ng, Feldman & Lam, 2010; Bernhard-Oettel, Rigotti, Clinton & de Jong, 2013). According to this theory, employees initiate unfavourable attitudes or behaviours (e.g. absenteeism, intention to quit) when they perceive a discrepancy between what they were promised by the organisation and what they receive (Carver and Scheier, 1982). From the employee perspective, such discrepancies represent imbalances in the social exchange relationship between themselves and their organisation. Control theory proposes that employees work towards eliminating or at least lowering such imbalances. This theory is more in line with psychological contract measures which emphasise discrepancies or exchange imbalance, breach and violation, and their related outcomes. Thus, control theory does not lend itself to psychological contract fulfillment, which is the focus of this thesis.

2.3.5 Cognitive dissonance theory From the negative reciprocity perspective, when an employee perceives psychological contract breach (i.e., an employer's failure to fulfil his or her promised obligations), the employee may perceive these apparent broken promises as wrongdoings on the part of his or her employer. Whenever an employer makes promises to an employee in exchange for the employee's contributions in an employment relationship, the employer's act of breaking a promise (i.e., breach) limits or negates the possibility that the employee will exhibit the desired work-related

outcomes. As a consequence, the perceived broken promises may lead the employee to feel dissatisfied or unbalanced with the employment relationship and to experience cognitive dissonance (Ho, Weingart & Rousseau, 2004). To restore equity and to reduce this cognitive dissonance in the relationship, the employee is likely to reduce his or her positive behaviours (e.g., organisational citizenship behaviour), or even display negative behaviours (e.g., employee deviance) as a form of revenge (Uhl-Bien & Maslyn, 2003). Like control theory, cognitive dissonance theory is also more likely to have stronger implications for studies focusing on breach or violation rather than fulfillment, thus not expected to lend support to the arguments put forth in this thesis.

2.3.6 Perceived organisational support theory This theory postulates that employees form global beliefs regarding the extent to which the organisation values their contributions and cares about their well-being. These beliefs are founded in the perceptions of the organisation's readiness to reward increased work effort and satisfy socio-emotional needs (Eisenberger, Huntington, Hutchinson & Sowa, 1986; Eisenberger, Stinglhamber, Vandenberghe, Sucharski & Rhoades, 2002). Usually, studies use the global measure of organisational support which adopts the traditional conceptualisation of organisation as a "monolithic, undifferentiated identity" (Reichers, 1985, p. 469). This is also consistent with Levinson's (1965) view that employees embody the organisation, viewing it as having dispositional characteristics including benevolent or malevolent intentions toward them. Employees could view high performance human resource practices as a form of investment by the organisation (Allen, Shore & Griffeth, 2003; Gavino, Wayne & Erdogan, 2012). For instance, growth opportunities could be viewed as an indicator of the organisation's recognition of an employee's contribution, thus a form of support by the organisation. Thus, HRM practices could influence employees' perceptions of psychological contract fulfillment and subsequently their attitudes and behaviours towards the organisation.

More recently, researchers (Lavelle, Rupp & Brockner, 2007; Hayton, Carnabuci & Eisenberger, 2012) support the notion of considering the organisation as a coalitional entity. They contend that while most research on organisational support has involved the favourable treatment attributed to the organisation as a whole, perceptions of organisational support could also be contingent on the more proximal organisational representatives, such as supervisors and workgroups (Eisenberger et al., 2002; Self, Holt & Schaninger, 2005; Coyle-Shapiro & Shore, 2007). In line with this argument, employees would be expected to generalise the favourable treatment from organisational representatives, such as supervisors and co-workers, to the entire organisation. This suggests that frontline manager's behaviour and co-worker support could be viewed as a form of support by the employees and thus influence their evaluation of psychological contract. The next chapter will discuss the focus on the role of HRM practices, FLM leadership behaviour and co-worker support in influencing psychological contract fulfillment in detail.

2.3.7 Signalling theory The origins of signalling theory, now widely used in OB/HRM, can be traced back to the research by Spence (1973, 1974) on job market signalling. Spence (2002) argued that “the idea behind the job market signalling model is that there are attributes of potential employees that the employer cannot observe and that affect the individual's subsequent productivity and, hence, value to the employer on the job” (p. 436). In the absence of precise information about the organisation, researchers contended that the job applicants could use signals from the organisation as a guide to form opinions about the organisation's intentions (Rynes, Bretz & Gerhart, 1991; Suazo, Martinez & Sandoval, 2011; Kutcher, Bragger & Masco, 2013). Further, Suazo et al. (2009) proposed that signalling theory may be a particularly useful lens for examining the means for creating psychological contracts through HRM practices. For instance, higher levels of training

provided to employees may indicate that the organisation wants to invest in them and thus influence their attitudes and behaviours positively. These linkages are discussed in detail in Section 3.3.

2.3.8 Creating synergies within the theoretical perspectives The intent of this section is to identify and compare some features across the aforementioned theories with psychological contract. The predominant theoretical perspectives in the psychological contract research appear to have much in common with each other, yet they have largely evolved independently of one another. Conway and Briner (2009) asserted that while the psychological contract draws upon the aforementioned theories, it also contributes uniquely to the understanding of the exchange literature. Social exchange theory provides a theoretical foundation for psychological contract and perceived organisational support. Thus, the two theories share two key features: presence of an exchange relationship and reciprocity. Aselage and Eisenberger (2003) conceptually integrated psychological contract and perceived organisational support. It is important to note that employees use both psychological contract and perceived organisational support to evaluate their employment relationship. While there are similarities, Coyle-Shapiro and Conway (2005) and Coyle-Shapiro and Parzefall (2008) also drew out the differences between the two perspectives.

The first key difference is owing to the interpretation of perceptions and beliefs in psychological contract and perceived organisational support. By definition, perceived organisational support captures employees' beliefs regarding the level of the organisation's commitment to them, while psychological contract encapsulates perceived mutual obligations and the extent of fulfillment of these obligations in the employee-employer exchange relationship. Perceived organisational support focuses on the employer's side of the exchange as perceived by employees. However, the psychological contract includes an employee and employer perspective, thus at the very least it involves two or more parties. Perceived organisational support captures an individual's perception of

organisational treatment regardless of the explicit or implicit promises made by the organisation. In contrast, psychological contract focuses on the discrepancy of what is fulfilled rather than the actual treatment alone.

Most prior psychological contract research has drawn on one theoretical perspective, social exchange (for exceptions, see Aselage & Eisenberger, 2003). I argue for an integrated approach to studying psychological contract, which ties multiple theoretical perspectives. This thesis is positioned within the realm of psychological contract simultaneously drawing upon features of social exchange, signalling, organisational support and social information processing theories. The argument for the linkages between HRM practices, psychological contract and employee outcomes presented in the study hinges on the notions of social exchange theory: reciprocity and exchange relationship. Alternatively, signalling theory can be used to study the role of human resource practices as signals from the organisation, which subsequently influence psychological contract.

Organisational support theory lends support to examination of the influence of human resource practices on the psychological contract. It is also particularly useful for understanding the influence of supervisors and co-workers on the employee perceptions of psychological contract. Social information processing theory also lends support to the premise that co-workers play a substantial role in *shaping* employees' psychological contract owing to the frequent interaction with them on work-related issues. In sum, I argue that these theories share a common interest in examining the impact of HRM practices, FLM leadership behaviour and co-worker support on psychological contract fulfillment. These arguments are developed and further discussed in Chapter 3, following which the framework of this thesis is presented based on the interaction of social exchange, signalling, organisational support and social information processing theories. The next section outlines the key themes underlying contemporary psychological contract research.

2.4 Psychological contract research themes

This section examines and presents a snapshot of the current state of the extant psychological contract literature and the topical themes that are presently being debated. In addition, this discussion aims to tease out the relevance of these themes to the current study. The themes include: a) human and structural contract makers, b) the formation of the psychological contract, c) the approaches to the psychological contract, d) the state of the psychological contract (fulfillment, breach and violation), e) antecedents and outcomes of psychological contract fulfillment. The first three themes are further discussed as sub-sections. The fourth theme, state of psychological contract, is discussed within the evaluation-oriented measure in Section 2.4.3 and subsequently psychological contract fulfillment is discussed in Section 2.5. The last theme will form the basis of the next chapter.

2.4.1 Human and structural contract makers

Rousseau (1995) defined a contract maker as “any person who conveys some form of future commitment to another person” (p. 60). She distinguished contract makers in an organisation into two types: Human (Primary) and Administrative (Secondary) (Table 2.1). The human (primary) contract makers are those individuals who act on behalf of the organisation. For instance, managers and co-workers can be viewed as human contract makers. On the other hand, the administrative (secondary) contract makers refer to messages or signals conveyed by the organisation itself. HRM practices like training, compensation and benefits and participation mechanisms are examples of secondary contract makers. Given that there can be multiple contract makers in an organisation, it would be important to identify the contract makers, how they influence the contract and how the employees respond to the different contract makers. Rousseau also identified three possible mechanisms through which these contract makers could influence employees: interaction, observation, and structural signals.

Table 2.1: Contract makers (Rousseau, 1995, p. 63)

Human contract makers (Primary contract makers)	Administrative contract makers (Secondary contract makers)
Through interaction • Recruiters • Managers • Co-workers • Mentors	Structural signals • Compensation • Benefits • Career path • Performance review • Training • Personnel manuals
Through observation • Managers • Top management • Co-workers	

Interaction refers to the direct oral or written form of communication in the form of directives, advice, or actual statement of promises from managers, co-workers, recruiters. Observations can be used by the individual employee to monitor behaviours of co-workers, managers and other members to collect social cues. For instance, employees may use information received from co-workers about organisational policies including promotion and suspension to evaluate the psychological contract. Structural signals convey information through HRM practices and documentation including personnel manuals and mission statements. An example of structural signal would be compensation and benefits, which could be interpreted as a form of organisational investment by the employees. Rousseau (1995) suggested that in order to effectively manage the psychological contract and communication in an organisation, it is crucial to understand how both primary contract makers (such as managers and co-workers) and secondary contract makers (such as HRM practices and organisational culture) shape the employee's psychological contract. She identified managers as one of the key agents in an organisation as they are usually responsible for communicating promises or future commitments to employees. Similarly, Coyle-Shapiro and Kessler (2000) acknowledged that employees often view actions of supervisors as representing the organisation itself. They also

suggested that managers do not completely represent contract makers in the organisation. To illustrate, other parties like co-workers engaging in supportive conversations, could influence the employees' evaluation of the psychological contract positively. Thus, it is not only important to study the role of frontline managers but also other human agents like co-workers in influencing the employee psychological contract.

Since this thesis studies both frontline managers and co-workers in relation to psychological contract, it is important to distinguish between them (Rousseau, 1995; Tomprou & Nikolaou, 2011). This discussion stems from the inherent differences between the two parties (see Table 2.2). Supervisors, unlike co-workers have a vertical, power-based relationship with the employee as a result of their position (Frone, 2000; Chiaburu, Lorinkova & Van Dyne, 2013). They “represent an organisation,” so their behaviour could be implied as being directed or supported by the organisation (Rhoades & Eisenberger, 2002). In contrast, the relationship that employees have with their co-workers may be more informal, and horizontal in nature.

Table 2.2: Differences between supervisors and co-workers

	Supervisors	Co-workers
Direction of relationship	Vertical	Horizontal/ lateral
Position	Power-based	Social
Nature of relationship with employee	Formal, Obligatory	Informal, Discretionary
Role in influencing psychological contract	Contract maker ⁶	Facilitator

Further, supervisors usually have to have the power to fulfil promises at least to some degree; and are given the authority to make promises on behalf of the organisation. Thus, they are more likely to be viewed as contract makers by employees. On the other hand, co-workers usually do not have any

⁶ In psychological contract terminology, organisational representatives with whom the employee interacts and perceives to have his/her contract with have been labeled as contract makers (Rousseau, 1995).

power or authority over each other, thus they would assume the role of facilitators in influencing the employees' psychological contract.

Co-workers usually employ informal modes of sense-giving which is more *facilitating than participating* in contract making. This also implies that unlike the supervisors, facilitators cannot make any official promises about employer's obligations. Additionally, supporting colleagues is more discretionary than obligatory. The present study is designed to increase further understanding of two vital human agents- supervisors and co-workers along with a key structural contract maker, HRM practices in influencing employees' perceptions of psychological contract fulfillment.

2.4.2 Formation of psychological contract

Rousseau (2001) argued that the psychological contract is grounded in an individual's cognitive perception of the employee-organisation relationship. There is limited research on how the psychological contract changes over time and the conditions under which it is more responsive to change. As seen in Figure 2.1, the phases of the psychological contract formation include pre-employment experiences, recruiting practices, early socialisation and later experiences which subsequently influence the employees' evaluation of psychological contract. Employees may have perceptions about their work, jobs and organisations even before employment. Recruitment experiences involve promises that employees and employers make to each other. For example, promotion opportunities highlighted by a recruiter may influence employee's potential psychological contract even though the employee is aware that the decision regarding the promotion would not be made by the recruiter (Shore & Tetrick, 1994).

Figure 2.1: Phases in formation of psychological contract (Rousseau, 2001, p. 512)

Pre-employment	Recruitment	Early socialisation	Later experiences	Evaluation
<ul style="list-style-type: none"> • Professional norms • Societal beliefs 	<ul style="list-style-type: none"> • Active promise and exchange • Evaluation of signals by both firm and worker 	<ul style="list-style-type: none"> • Continuing promise exchange • Active information seeking by workers/ agents • Multiple sources of information from firm 	<ul style="list-style-type: none"> • Intermittent promise exchange • Less information seeking by workers/ agents • Firm reduces its socialisation efforts • Changes often incorporated into existing psychological contract 	<ul style="list-style-type: none"> • Discrepant information leads to evaluation • Incentives/ costs of change impact revision

The socialisation period is a very crucial phase in influencing the employees' psychological contract. Once an individual's perception is formed, it becomes highly resistant to change. Post-hire socialisation continues the processing of new information regarding employment relationship and related promises. The psychological contract phases are not necessarily static. In case of any change in information or experience, the psychological contract may be revised, which subsequently impacts the evaluation of psychological contract.

Socialisation research highlighted that newcomers test their expectations against the work experiences during the encounter stage, which is usually within the first six months (De Vos et al., 2003). Further, this is the period during which perceived promises are most likely to change as a consequence of newcomers' interpretations of their experiences. From six months until a year, the employee's adjustment to the organisation further occurs and thus this stage is referred to as acquisition stage. As the employees start developing more stable opinions about the employment relationship, they are less uncertain about their employment relationship. Using this line of reasoning, this study limits its sample to employees who have spent at least six months in the present

organisation as after this period, as employees would be more acquainted with their organisation and thus display more stable perceptions of the psychological contract fulfillment.

2.4.3 Approaches to studying the psychological contract

Rousseau and Tijoriwala (1998) noted that there were numerous studies which led to distinct assessments of the psychological contract amounting to a “veritable embarrassment of riches from a measurement perspective” (p. 680). They reviewed and categorised the measures used in the prior psychological contract studies into three aspects: a) content-oriented, b) feature-oriented, and c) evaluation-oriented. *Content-oriented* measures evaluate the specific terms of the contract. The measure includes specific obligations based on promises made by the employer and employee. Based on the work of Blau (1964) and MacNeil (1980), psychological contract research (Chong et al., 2012; Restubog, Zagencyk, Bordia & Tang, 2013) provides strong support for the existence of two types of contract: transactional (i.e., short-term and economic aspects of the contract) and relational (i.e., long-term and socio-emotional aspects).

The transactional-relational distinction has dominated the psychological contract content literature (Rousseau, 1990, 1995; Robinson & Rousseau, 1994; Millward & Hopkins, 1998). Transactional contracts involve highly specific exchanges, of narrow scope, which take place over a finite period of time. These types of contracts are fundamental to the employee’s behaviours and the organisational actions which could infer cooperation or disagreement. However, relational contracts are broader, more amorphous, open-ended, and subjectively understood by the parties involved in the exchange. Relational contracts accentuate loyalty, support and longer term commitment. While the conceptual distinctions between transactional and relational contract is quite clear, issues arise due to crossover of items (Taylor & Tekleab, 2004; Coyle-Shapiro & Parzefall, 2008). For instance,

training has been considered both as a transactional item (Rousseau, 1990) and relational item (Robinson, Kraatz & Rousseau, 1994). One study (Coyle-Shapiro & Kessler, 2000) treated training as an independent dimension, along with transactional and relational obligations.

Feature-oriented measures relate the contract to one or more underlying attributes or dimensions. The commonly included forms or dimensions are: time-frame, tangibility, scope, stability, contract level and exchange symmetry. The first four dimensions were adopted from the theoretical framework of Rousseau and McLean Parks (1993), and originally based on Macneil's (1985) contract theory. The latter two dimensions were derived from Rousseau and Schalk (2000) and Sels, Janssens and Van den Brande (2004). The dimensions are further defined and supported by examples pertaining to both ends of the continuum for each dimension in Table 2.3.

Table 2.3: Feature-oriented measures of psychological contract

Dimension	Theoretical Definition	Continuum
Time frame	Perceived duration of the employment relationship.	Short Term-----Long Term (e.g., Job mobility) (e.g Job security)
Tangibility	Degree to which the employee perceives the terms of the contract as unambiguously defined and explicitly specified.	Tangible-----Intangible (e.g., employment relationships (e.g., Reliance on trust) Formal laws and written labour agreements)
Scope	Extent to which the boundary between one's employment relationship and other aspects of one's life is seen as permeable.	Narrow-----Wide (e.g., Strict division between work and personal life) (e.g., extra-role behaviour)
Stability	Degree to which the psychological contract is limited in terms of its ability to evolve and change without an implied renegotiation of the terms.	Static-----Dynamic (e.g., Few flexibility practices) (e.g., continuous reinterpretation of practices)

Dimension	Theoretical Definition	Continuum
Exchange symmetry	Expectations concerning the degree of hierarchy and inequality.	Equal-----Unequal (e.g., High participation) (e.g., high managerial control, large pay differentials)
Contract level	Distinction between individually regulated versus collectively regulated employment relationships.	Individual-----Collective (e.g., Personal achievement) (e.g., Union, solidarity)

Evaluation-oriented measures assess the extent of employees’ experience of psychological contract fulfillment, breach or violation. According to this perspective, the state of the psychological contract can be studied using two approaches. The first approach, also called the global approach, involves explicitly asking respondents to indicate the degree to which the employer has fulfilled their obligations as perceived in the psychological contract, on a scale from ‘not at all’ to ‘very well fulfilled’. This approach has been adopted by many studies (Robinson & Morrison, 1995; Robinson & Rousseau, 1994). The second approach involves evaluating the state of psychological contract on the basis of contract fulfillment, breach or violation.

Psychological contract fulfillment is defined as the degree to which an employee believes his or her organisation has fulfilled the obligations of the employer (Conway & Briner, 2005), whereas psychological contract violation is conceptualised as the opposite of fulfillment (Morrison & Robinson, 1997; Turnley & Feldman, 1999; Grimmer & Oddy, 2007). Breach is typically operationalised as a discrepancy between what the employee perceives was promised to him or her and what was delivered by the employer. This study will focus on psychological contract fulfillment rather than breach or violation. The rationale for using the measure of psychological contract fulfillment will be presented in the next section.

Of the three types of measures (content, feature and evaluation), the feature-oriented measure is a comparatively less-developed measure. McInnis, Meyer & Feldman (2009) found support for patterns of features that correspond to transactional and relational contracts, as well as to balanced contracts. For instance, transactional contracts tend to include economic or monetisable terms (e.g. pay and benefits), whereas relational contracts include socio-emotional terms (e.g. support and development).

2.5 Psychological contract fulfillment: Rationale

Much prior empirical work in psychological contract research has focused on psychological contract breach and violation (Morrison & Robinson, 1997; Turnley et al., 2003; Zhao, Wayne, Glibkowski & Bravo, 2007; Grimmer & Oddy, 2007; Nelson & Tonks, 2007). The inclusion of psychological contract fulfillment in this thesis is very relevant owing to the following reasons.

First, researchers have increasingly proposed fulfillment as the fundamental measure for judging the performance of the psychological contract (Lee, Liu, Rousseau, Hui & Chen, 2011). Psychological contract fulfillment measures the extent to which one party to the contract (employee) deems the other (employer⁷) has met its obligations. From an employee perspective, it takes two forms: perceived employer fulfillment and perceived employee fulfillment (see Figure 2.2).

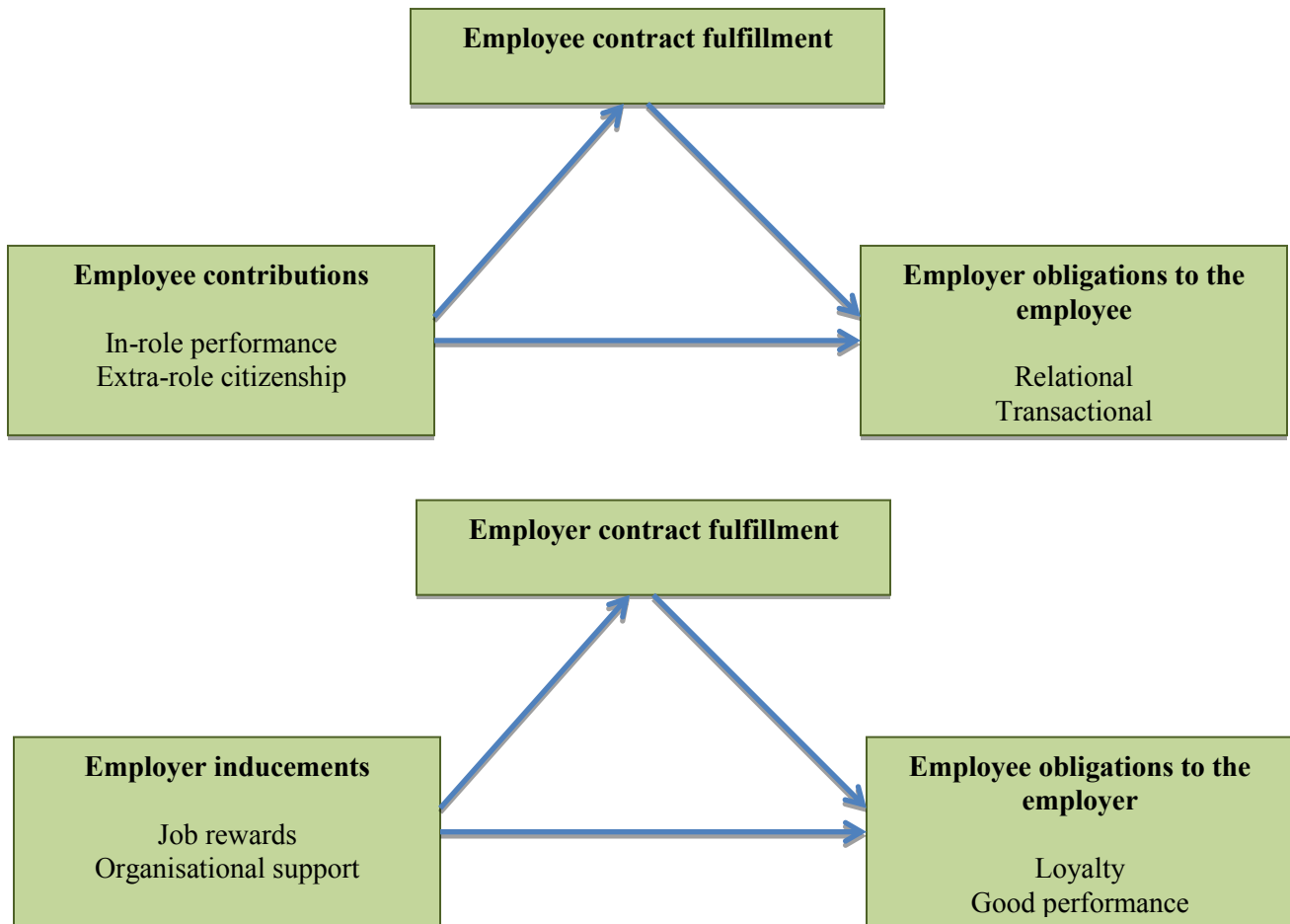
In the case of perceived employer fulfillment, the employee assesses the extent to which the employer fulfills its obligations to them. The second form, perceived employee fulfillment emphasises the employee perceptions of his or her own fulfillment of obligations to the employer.

This thesis focuses on perceived employer fulfillment instead of perceived employee fulfillment, as

⁷ The use of term employer has been used to maintain consistency with the work of Lee et al. (2011). Employer or organisation is treated synonymously in this thesis.

this has been found to be the most important aspect of the psychological contract with respect to explaining employee outcomes (Robinson & Rousseau, 1994; Scheel et al., 2013).

Figure 2.2: Forms of psychological contract fulfillment (Lee et al., 2011, p. 204)



Second, answering psychological contract fulfillment questions when compared to breach/ violation questions might be perceived as providing more neutral ratings. Breach/ violation with their negative connotations polarises the employee responses more, as people react stronger to negative cues as compared to positive ones. While psychological contract fulfillment focuses on positive aspects meaning that promises or obligations were kept, breach emphasises negative aspects of the contract. Related to that, one can thus regard fulfillment as the more *conservative* measure.

Lastly, most studies claim to measure something they don't operationalise. The very impressive meta-analysis of Zhao et al. (2007) on psychological contract breach includes many studies which actually measure fulfillment and subsequently recode the variable to then measure breach or violation. This approach is surprising as numerous studies (Conway & Briner, 2002; Lambert, Edwards & Cable, 2003) challenged the traditional view that the breach-fulfillment continuum is linear with opposing outcomes.

As psychological contract addresses the perceptions of the reciprocal promises and obligations between organisation and employee, the *state* of the psychological contract is concerned with the extent to which the promises and obligations have been met, whether the employees perceive their organisation to be fair, and whether they trust their organisation (Guest and Conway, 2002). Further, Guest and Conway (2000) argued that delivery of promises, fairness and trust “lie at the heart of the employment relationship” (p. 19). This study is consistent with Guest and Conway's conceptualisation of psychological contract fulfillment as it is measured through the extent to which the contract has been met and also through indicators of fairness and trust.

An important measurement issue concerning the psychological contract fulfillment construct is whether it should be treated as a global or a facet measure. Prior studies have investigated psychological contract fulfillment using either facet-specific or global-item measures (Conway & Briner, 2005). However, similar to other psychological constructs, such as job satisfaction, there is little consensus over whether one measure captures the meaning of the construct better than the other proposed measure. Judge and Kammeyer-Mueller (2012) argued that the “the answer to this question—*are general or specific measures more useful to organisational behaviour?*—is often ambiguous and never unanimous” (p. 161-162, emphasis added).

This thesis uses both forms of measures in order to comprehensively study psychological contract fulfillment. The first measure examined psychological contract fulfillment as a multi-dimensional construct consisting of three facets: delivery of the deal, fairness and trust. This measure has been previously used in Guest and Conway (2000, 2001a, 2000b, 2002). The first facet is the delivery of the deal which examines the extent to which employees believe the promises made by the organisation have been kept. The focus on delivery of the deal is appropriate as Conway and Briner (2009) asserted that "... what matters to employees is *what they actually perceive they get* rather than the discrepancy between what they get and what they were told they will get (p. 102, emphasis added)." In a similar vein, Scheel et al. (2013) stated that "employees have a tendency to care primarily about what they get...compared to what they were promised" (p. 301).

The second facet involves the fairness of the deal. For this thesis, fairness covers two aspects of reward equity. The first aspect covers the effort-reward bargain, which includes the perceptions of whether the employees feel they are fairly rewarded for what they do. The second aspect focuses on the social comparison dimension which refers to the employee beliefs on whether they feel fairly rewarded as compared with other people doing similar kind of work.

The third facet of the psychological contract fulfillment is trust. Researchers argue that trust is indispensable to psychological contract (Guest & Conway, 1998; Rousseau, 2004; Atkinson, 2007). Guest and Conway (2000) note that while fairness and delivery of promises reflect past or current behaviour, trust is more oriented towards expectations of future treatment. Guest (2004) argues that in the "context of employment relations, both fairness and trust are closely implicated with the psychological contract" (p. 549). For this reason, it can be argued that there is utility in developing and incorporating into the model of the employment relationship the concept of the *state* of the psychological contract.

The basis for adopting the facet measure used by Guest and Conway (1999, 2000, 2001a, 2000b, 2002) warrants discussion. One of the main aims of this thesis is to assess the state of the psychological contract from the employees' perspective. The measure proposed by Guest and Conway reflects the extent to which management fulfills its promises related to the context of pay, promotion opportunities and job requirements, employees' level of trust in the organisation and the perceived fairness of management. So far, this operationalisation is the most comprehensive for examining psychological contract fulfillment, and thus most relevant for this thesis.

The global assessment of psychological contract as employed by Conway and Briner (2002) is an alternative means of measuring psychological contract fulfillment which has been adopted in this thesis. It is contended that there is a substantial difference between the facet and global measures, since each of them is predicated upon different theoretical assumptions as to how employees assess their psychological contracts (Conway & Briner, 2005; Freese & Schalk, 2008). The facet measure makes the assumption that employees assess the psychological contract fulfillment by reflecting upon how each aspect of the contract has been fulfilled, whereas the global measure assesses the extent of fulfillment on an overall basis.

There are clearly both advantages and disadvantages in each method: by examining the different facets it becomes possible to identify which aspects of the psychological contract are being fulfilled and which are not. However, this assessment entails the risk of omitting specific aspects, and if the system is scored by averaging the total this risks missing how the employee feels about the complete process. Whilst the global assessments are briefer than the facet measures, if they are employed alone, they risk failing to provide information specific to organisational promises. Whilst the preferred method for measuring contract fulfillment is that of employing facet-specific measures, incorporation of global evaluation lends a greater completeness to the evaluation of psychological

contract fulfillment (Freese & Schalk, 2008). Building on these arguments, this thesis measures psychological contract fulfillment by employing both facet and global measures.

A related measurement issue stemming from the use of the global and facet measure has been raised by Tetrick (2004), which is whether psychological contract fulfillment needs to be defined as a reflective or a formative measure. If psychological contract fulfillment is treated as a reflective measure, it is implied that the items “reflect” the content of the construct. Alternatively, when it is treated as a formative measure, it is suggested that psychological contract fulfillment is defined as the outcome of the three facets that constitute it. This issue has been discussed in detail in Sections 6.2 and 7.7.3.

2.6 Psychological contract in India

The mainstream research on psychological contract is dominated by literature on Western economies, especially, the US and UK (Krishnan, 2011; Katou & Budhwar, 2012). While Asia is gaining prominence on the world map, there has been very little empirical research related to the psychological contract in the region. It is only recently that scholars have begun to examine psychological contract in the developing countries. There are a few studies conducted in some Asian countries like China (Lo & Aryee, 2003; Hui, Lee & Rousseau, 2004), Hong Kong (Kickul, Lester & Belgio, 2004) and Philippines (Restubog & Belgio, 2006). Responding to the call for more research on psychological contracts outside Western contexts (Westwood, Sparrow & Leung, 2001; Hui et al., 2004; Restubog, Bordia & Tang, 2007), this study focuses on India. India is being increasingly recognised as a crucial part of the emerging economies group (BRICS), which impelled

major financial institutions such as the World Bank to forecast that India will become the world's fourth largest economy by 2020 (Budhwar & Varma, 2010).⁸

The decision to conduct the present study in India is based on the following rationale: First, the majority of research has been conducted in the Western contexts which are mainly individualist cultures. Aryee, Budhwar and Chen (2002) argued that “an examination of the emergence and functioning of social exchange processes in collectivist Eastern cultures where values differ dramatically from those typically found in a Western context, should enhance our understanding of the motivational underpinnings of employee work attitudes and behaviours in a competitive globalised economy” (p. 268).

Moreover, India is a multi-faceted society, consisting of various caste systems, languages, ethnic backgrounds and religions (Budhwar, 2003; Budhwar & Debrah, 2009; Jain, Budhwar, Varma & Ratnam, 2012). Therefore, scholars argue that India's culture is more complex than what Hofstede's indices suggest, in that people exhibit both collectivistic traits pertaining to family members, and individualistic traits concerning the fulfillment of personal interests and desires (Varma, Budhwar & Pichler, 2011; Kim & Tung, 2013). Strengthening this argument, Gupta and Singh (2014) stated that “India of today is composed of two parts: one that is traditional, inward looking, and characterised by values like collectivism and high power distance; and the other that is unconventional, outward-looking, and characterised by values like individualism and low power distance” (p. 11). Since this study focuses on the employee perceptions of key variables including psychological contract and HRM practices, the emergent findings will add to the understanding of psychological contract in India.

⁸ International association of emerging national economies. Referred to as BRIC. South Africa joined the group in 2010 and thus the group was renamed as BRICS.

Second, Rousseau and Schalk (2000) argued that the psychological contract is a subjective concept and thus could vary culturally. Studies have found empirical evidence that a perception of a variable could differ across cultures. For instance, Rousseau (2000) conducted a study using the Psychological Contract Inventory (PCI), a tool designed to assess the generalisable content of the psychological contract for use in organisational research in two countries, Singapore and US. One of the key findings of the study was that though the concept of psychological contract is generalisable across the sample countries, employee expectations from organisational representatives varied in the two contexts. For instance, in Singapore, employees tended to believe that their co-workers were obligated to fulfil the contract the employers made with the employee. In contrast, American employees generally believed that their supervisors were obligated to do so.

Furthermore, Thomas, Au and Ravlin (2003) suggested that cultural variations may exist in responses to breach and violation. They illustrated this argument using the impact of psychological contract breach on employees based on the collectivist-individualist orientation. They indicated that collectivist employees may exhibit higher levels of breach than the individualist employees. This is because the collectivist employees tend to have higher expectations for the organisation to be fair. In cases of unfavourable situations, these employees would attribute the breach to be organisational and thus display high levels of stress, tension and internal conflict as compared to individualists. This thesis contends that since psychological contract fulfillment is an evaluation-oriented measure like breach and violation, it could also be affected by cultural context.

Lastly, cross-national differences could influence how participants respond to survey questionnaire items and consequently variables in this thesis. For instance, Aycan et al. (2000) noted that usually in collectivist cultures, people respond in a more socially desirable way despite being assured

anonymity of responses by the researcher. This could lead to spurious differences among the country scores for the same construct.

An example would be the study by Raja, Johns and Ntalianis (2004) in Pakistan, wherein their results exhibited unacceptable reliability for a key construct in their study, Agreeableness. A possible explanation could be owing to negative connotations associated with not being agreeable in a predominantly collectivist setting. While some of the measures used in the HRM literature have been validated in the Anglo-Saxon context, their nature and dimensionality might vary across cultures. For instance, the study by Cheng and Stockdale (2003) examines the validity of the measure of organisational commitment proposed by Meyer and Allen (1991) in the Chinese context. They found that the measure did not conform to a three-factor model as expected. The authors attributed this to either the Chinese translation, which in their view did not sufficiently reproduce the wording of the English version, or the possibility that the Chinese workers interpreted the items differently than expected. Thus, it would be important to test the validity of constructs in India, more so, as some of them (e.g. psychological contract fulfillment) have not been tested previously in the Indian context.

2.6.1 Summary of research evidence

The objective of this section is to provide an overview of the psychological contract research in India by presenting principal findings organised broadly around psychological contract studies in the Indian context. Studies are included in the review if they have analysed data from organisations in India and used psychological contract as one of the variables. Because of the paucity of empirical psychological contract research in India, all the available literature was reviewed not taking into account the journal rankings. A search for studies was made using psychological contract, fulfillment, breach, violation, and India as key words in the university's electronic journal database.

One of the first review studies on the psychological contract in India was the book chapter by Shah (2000) in the book *Psychological Contracts in Employment: Cross-National Perspectives* by Denise Rousseau and Rene Schalk. The book chapter, taking a macro view, traced the role of social and national-level context in influencing the psychological contract by focusing on how promises and mutual obligations are made and met. Further, she provided a historical perspective of the nature of employment practices set in the context of social, legal and political climate in India, based on mythology, historical events and religious texts.

This book chapter indicated that the employment relationship between the private sector white-collar professionals and managers tended to be open ended, flexible and less restricted by socio-political and legal systems, while, socio-political environment exerted greater influence on the employment relationships of blue-collar employees and their managers in the Indian public sector. She concluded that the public sector was moving towards the participative practices used in the private sector, though the differences were still evident. This shift is even more visible against the backdrop of liberalisation and the advent of multinational corporations in 1990s (Budhwar & Varma, 2010; Budhwar, 2012).

Other theoretical studies include Krishnan (2011). He proposed a conceptual model based on six published Indian organisational contexts. The author argued that employees could perceive a higher sense of psychological contract breach in a market-based HRM system⁹ as compared to a commitment-based HRM system. He also proposed that trust could act as a potential mediator between perceptions of psychological contract breach and HR systems. More recently, Agrawal, Khatri and Srinivasan (2012) identified some of the key human resource management challenges

⁹ The author distinguished between the market-based and commitment-based HRM system grounded in the strategy of structuring employment adopted by the organisations. The organisation leaning towards commitment-based HRM system intends to develop employees or “build” from within which entails long-term employment. In contrast, the organisation following the market-based HRM system seeks to “buy” employees from the market.

facing the Indian software industry based on content analysis of 25 cases. The findings revealed that when team members found that the promises made to them were not fulfilled, they experienced pain, anger and frustration.

The empirical psychological contract research in India can be categorised into two dominant themes: evaluation and content. A review of empirical studies involving psychological contract as a variable, based on the Indian context, is given in Table 2.4. The first theme is centered around the evaluation-oriented measures of psychological contract, including breach and violation. For example, in the article by Agarwal and Bhargava (2014), results indicated that leader–member exchanges and perceived organisation support were related to psychological contract breach, which, subsequently, had an influence on affective commitment, intention to quit and innovative work behaviours. Further, trust in employer was found to mediate the relationship between psychological contract breach and work outcomes. They adopted survey questionnaire method using a sample of 1302 managers from eight Indian organisations.

Table 2.4: Empirical studies on psychological contract in India

Author and citation details	Psychological contract theme	Other variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
Bhatnagar (2007)	Relational contract Transactional contract	Employee engagement	Questionnaire survey, Principal component analysis	210 employees in the Indian I.T. sector,	42	Relational contract rather than transactional contract was found to be a significant predictor of employee engagement.
Patrick (2008)	Relational contract Transactional contract	-	Questionnaire survey, Descriptive statistical analysis	202 employees in 15 Indian (Information Technology) I.T. companies.	34	Patrick (2008) who employed a sample of His findings revealed relational psychological contracts were found more dominant than transactional psychological contracts in the sample organisations. Also, employee obligations to employers were higher than employer obligation to employees.
Agarwal & Bhargava (2009)	Psychological contract content	-	Questionnaire survey, Principal component analysis	401 employees and 66 employer representatives (functional heads) from 6 organisations	20-Employees 17-Employer representative	Employees ascribed great importance to employers and immediate supervisors as providers and carers of employee needs and interests (especially regarding growth and development opportunities at work).
Shahnawaz & Goswami (2011)	Psychological contract violation	Organisational commitment Trust	Questionnaire Survey, Multiple regression	100 middle-level managers	n.r.	Affective commitment, trust and employee turnover were more influenced by contract violation in public sector than

Author and citation details	Psychological contract theme	Other variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
		Turnover intention		from private and 100 from public sector organisations		in the private sector. On the other hand, continuance and normative commitment were influenced more by contract violation in private sector than in the public sector.
Bhatnagar & Biswas (2012)	Relational contract Transactional contract	Procedural justice Perceived organisational support Person-organisation fit Employee engagement Organisational commitment	Questionnaire Survey, Multiple regression	297 managers from six organisations	n.r.	Results provided support for procedural justice, perceived organisational support and person-organisation fit as the antecedents of psychological contract and mediated the relationship between psychological contract and employee engagement and organisational commitment.
Agarwal & Bhargava (2013)	Psychological contract breach	Educational level Tenure Affective commitment Work engagement	Questionnaire Survey, Confirmatory factor analysis, Hierarchical multiple regression	1302 managers from eight organisations	30.1	Tenure moderated the psychological contract breach-affective commitment relationship, it did not influence the relationship between psychological contract breach and work engagement. Further, the educational level moderated the effects of breach on both affective commitment and work engagement.
George (2013)	Psychological contract breach	Motivation	Questionnaire Survey, Chi-square test	50 employees from three departments of a public sector unit, Bharat	n.r.	Breach of employee expectations on job security, mutual trust and employee friendliness influenced employee motivation.

Author and citation details	Psychological contract theme	Other variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
				Heavy Electricals Limited, Bangalore.		
Agarwal & Bhargava (2014)	Psychological contract breach	Leader-member exchange Trust in employer Perceived organisation support Affective commitment Intention to quit Innovation work behaviours Workplace bullying	Questionnaire survey, Structural equation modelling	1302 managers from eight Indian organisations	30.1	Leader–member exchanges and perceived organisation support were related to psychological contract breach, which, subsequently, had an influence on affective commitment, intention to quit and innovative work behaviours. Further, trust in employer mediated the relationship between psychological contract breach and work outcomes.
Bhatnagar (2014)	Relational contract Transactional contract	Perceived supervisor support Management of innovation Turnover intention	Questionnaire survey, Structural equation modelling	312 R&D employees	n.r.	Psychological contract and rewards and recognition were strong mediators between perceived supervisor support, innovation and turnover intentions.

The second theme revolved around *psychological contract content* which includes transactional and relational psychological contract. The key studies included that of Bhatnagar (2007), employing a sample of 210 employees in the Indian I.T. sector, found that relational rather than transactional contract was a significant predictor of employee engagement. Other relevant studies on psychological contract content in India include Aggarwal and Bhargava's (2009) examination of 401 employees and 66 employer representatives (functional heads) which found employees ascribing great importance to employers and immediate supervisors as providers and carers of employee needs and interests (especially regarding growth and development opportunities at work). More recently, Bhatnagar (2014), using a sample of 312 R & D employees, found that the psychological contract and rewards and recognition were strong mediators between perceived supervisor support, innovation and turnover intentions.

The theoretical review of psychological contract research in India brought out a major shortcoming. Most of the studies conducted in India have focused on either negative psychological contract measures (breach or violation) or psychological contract content (transactional or relational). There is no study that has examined psychological contract fulfillment in the Indian context.

The focus of this thesis on studying psychological contract fulfillment is very relevant to the Indian context. Shah (2000) argued that the words *promise* and *fulfillment of promise* have very significant connotations in the Indian society. Using similar arguments from mythological accounts and religious texts, more recently, Agarwal and Bhargava (2014) reiterated the paramount importance of keeping promises and maintaining trust in Indian context, in the following excerpt:

In India, *upholding trust and fulfillment of promises* – explicit and implicit – hold immense significance. Historic Indian texts are replete with instances that describe heroic tales of warriors who sacrificed their lives to *keep promises* and *maintain the trust* of their subjects. Mythology and religious texts narrate accounts of revered figures such as Lord Rama and the Prophet

Mohammed who made personal sacrifices to *fulfil promises*. The fulfillment of promises is a defining characteristic of dignity and upbringing (Shah, 2000) – *Pran jaye par vachan na jaye* (I can let go of my life but not my promise) (p. 1490, emphasis added)

This excerpt is particularly interesting as it illustrates the essence of trust and fulfilling promises in India, drawing upon instances from mythology and religious texts. This could also imply that the employee perceptions of psychological contract fulfillment could be stronger in India when compared with its Western counterparts.

Further, this thesis is unique in nature as it brings together the two vital human agents (frontline managers and co-workers) and a key structural contract maker (HRM practices) capturing psychological contract fulfillment. Additionally, the impact of psychological contract fulfillment on employee outcomes is also examined. Including these antecedents and outcomes together is designed to enable a more complete understanding of psychological contract in India. This study would be significant for scholars exploring the “transportability of Western organisational concepts and practices to other cultural contexts” (Chiu and Feng, 2008, p. 427). In summary, this section proposes to extend psychological contract research in a country of growing significance, India.

2.7 Chapter summary

In summary, this chapter reviewed the concept, the definitions and the theoretical underpinnings of psychological contract with a specific focus on psychological contract fulfillment. Further, it presented an overview of psychological contract research conducted in India, the research context of this thesis. The next chapter examines the antecedents and outcomes of psychological contract fulfillment and outlines the research framework and hypotheses guiding this thesis.

CHAPTER 3

ANTECEDENTS AND OUTCOMES OF PSYCHOLOGICAL CONTRACT FULFILLMENT

3.1 Introduction

Chapter 2 covered an overview of the psychological contract including its definitions, theoretical foundations, and key challenges. Following the review, this chapter aims to examine the antecedents and outcomes of psychological contract fulfillment. This chapter discusses the theoretical and empirical rationale for the variables included in this thesis. Further, it proposes a model that postulates three antecedents (HRM practices, FLM leadership behaviour and co-worker support) and four outcomes (affective commitment, intention to quit, job satisfaction and absenteeism). Subsequently, research hypotheses are then posited to test the antecedents and outcomes of the psychological contract.

3.2 Antecedents of the psychological contract fulfillment

A wide range of antecedents can be expected to predict the employee perceptions of promises and obligations (Conway & Briner, 2009). I start with examining the antecedents which have been previously theoretically and empirically linked to the psychological contract fulfillment to assess the overall progress that has been made in the study of the antecedents of the psychological contract fulfillment. This examination is imperative as Suazo et al. (2009) affirmed that "...most of what is 'known' about the antecedents or causes of the psychological contract is speculative since most of the research addressing this issue has been theoretical in nature" (p. 157-158). Following this discussion, I review the three antecedents investigated in this thesis: HRM practices, frontline

management (FLM) leadership behaviour, and co-worker support, each of which is subsequently discussed in detail the next three sections.

Broadly speaking, the antecedents of the psychological contract fulfillment (see Figure 3.1) can be categorised into: extra-organisational, organisational and employment contract factors, and individual and social factors (Conway & Briner, 2009).

Figure 3.1: Antecedents of psychological contract (adapted from Conway & Briner, 2009)

Extra-organisational factors	Intra-organisational and employment contract factors	Individual factors
<ul style="list-style-type: none"> • Work experience related • Previous organisations • Family • Friends • Media • Schools • Nonwork experience related • Parenthood • Marriage • Personal relationship issues 	<ul style="list-style-type: none"> • Human agents • HRM practices • Employment contracts 	<ul style="list-style-type: none"> • Individual differences • Exchange ideology • Personal and social identity • Work values • Personality • Social interaction and social comparison among co-workers • Socialisation process

The first category comprises the extra-organisational factors (factors outside organisation) which can further be classified on the basis of work and non-work experiences. An employee's own employment experiences prior to joining an organisation could shape his or her subsequent psychological contract with an employer. They could also be influenced by broader social experiences such as work experiences of family and friends. Non-work related factors such as parenthood and marriage could have implications on the employee performance and need for flexibility. For example, Millward (2006) noted that women returning to work after maternity leave often needed to revalidate themselves upon re-entry as a valued employee. This coupled with their

dilemma pertaining to dealing with two roles (employee and mother) simultaneously led to a change in expectations from the organisation and thus their interpretation of the psychological contract.

The second category of antecedents comprise factors within the organisation and relate to the employment contract. Organisations are known to play a critical role in shaping the employee psychological contract. As mentioned earlier in Section 2.5.1, organisations can shape psychological contracts through either human agents or structural contract makers. Organisations communicate promises to employees in many forms including HRM practices. Likewise, human contract makers like line managers and co-workers could also play a key role in communicating to employees what is expected of them and what they could gain in return from the organisation. (Conway & Briner, 2005, 2009).

The last category is that of individual and social factors. Research examining the individual and social factors has been sparse (Conway & Briner, 2009; Bal & Kooij, 2011). These factors include occupational and exchange ideologies, personal and social identities, work values and personality. For example, Bal and Kooij (2011) investigated the relationship between work centrality and psychological contracts. Another study, Zagenczyk, Restubog, Kiewitz, Kiazad & Tang (2014) examined the role of Machiavellianism, a personality construct, as a mediator between transactional psychological contract and employee citizenship and deviant behaviours.

This study investigates the HRM practices, FLM leadership behaviour and co-worker support as antecedents of the psychological contract fulfillment. HRM practices as an antecedent of the psychological contract fulfillment have been investigated in a few studies (Guest & Conway, 2000, 2004; Uen et al., 2009; Katou & Budhwar, 2012). Nevertheless, there is little prior empirical research on the role of organisational representatives including frontline managers and co-workers, in particular, as antecedents of psychological contract fulfillment. Conway and Briner (2005)

articulated that a “small number of studies...have considered the effects of structural rather than human psychological contract makers by focusing on the influence of the human resource policies and practices in shaping psychological contracts” (p. 51). This suggests a noteworthy gap in the literature because it can be argued that the overall level of support provided by an organisation in the form of HRM practices, frontline managers and co-workers is critical in forming the employee perceptions of psychological contract fulfillment. Thus, examining these three antecedents will help develop an integrated psychological contract model.

3.3 High performance work systems and psychological contract fulfillment

Organisations can communicate the psychological contract through policy documents and various practices, particularly human resource practices (Guest & Conway, 2000). Human resource practices are often labeled as structural or secondary contract makers. Human resource practices have a strong impact on how employees construe their exchange relationship with the employer. Rousseau (1995) highlighted the significant role that HRM practices play in managing employees’ psychological contract as they “send strong messages to individuals regarding what the organisation expects of them and what they can expect in return” (p. 162). Suazo et al. (2009) argued that HRM practices affect the accuracy of employees’ perceptions of the psychological contract. They illustrated this argument using the following example:

Likewise, employment manuals may imply permanent employment with statements such as ‘an employee can expect job security.’ We believe that these HR practices may be harmful to both individuals and organisations. For example, if employees do not have an accurate perception of their psychological or legal contract with employers then they may assume they have a permanent job when they in fact do not. If these same individuals are laid off they are likely to perceive that their employment contract has been violated, and file a grievance or lawsuit against the employer. Similarly, employees who do not expect to be laid off may not be prepared for the negative consequences associated with job loss (e.g., loss of income, lack of skills needed to get another job). (p. 155)

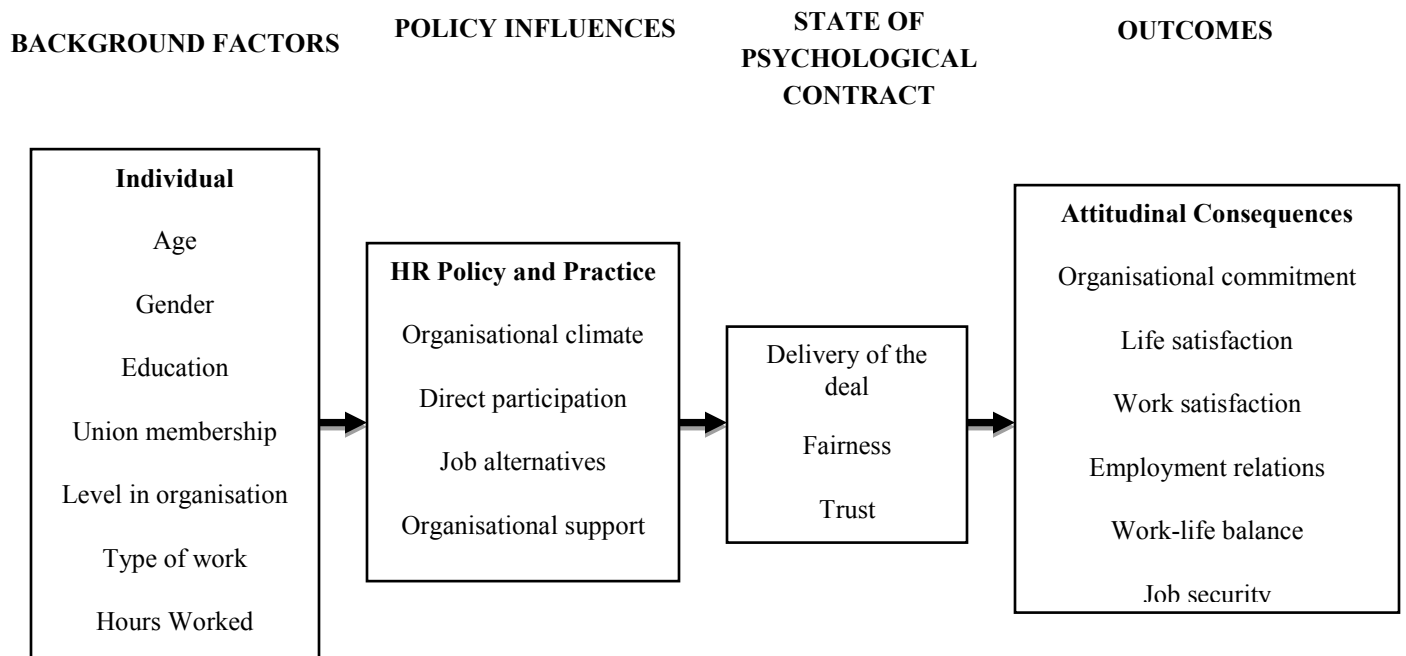
Following this argument, it is important that the employer ensures that employees have accurate perceptions of the psychological contract. Further, parties within the organisation (including line managers, senior management and HR professionals) could use HRM practices to encourage a positive psychological contract which would consequently impact organisational performance (Katou & Budhwar, 2012).

These arguments are consistent with signalling, social exchange and organisational support theories, which have been discussed before in Section 2.4. Drawing upon signalling theory, HRM practices can be viewed as flagging the intentions of an organisation towards employees (Casper & Harris, 2008; Suazo et al., 2009). Additionally, social exchange theory has been widely used as a lens to study the relationship between HRM practices and the psychological contract fulfillment (Katou & Budhwar, 2012). Social exchange theory proposes that if employees view HRM practices as being supportive, they will perceive higher levels of psychological contract fulfilled. Thus, HRM practices are expected to affect the psychological contract because they form part of the employer obligations towards the employees (see Suazo et al. 2009; Uen et al., 2009).

Investments in HRM practices signals the organisation's commitment to employees (Eisenberger et al., 1986, 2002; Allen et al., 2003; Kuvaas, 2008). Piening, Baluch and Salge (2013) stated that some HRM practices such as growth opportunities imply that the organisation recognises employees' contribution and reflects its willingness to invest in them. The fulfillment of the psychological contract has a positive effect on employee attitudes and behaviours as employees tend to reciprocate the favourable treatment from the organisation by displaying positive employee outcomes. In line with this argument, as previously mentioned in Section 2.4.6, this study asserts that HRM practices can be used as a proxy to measure organisational support.

There is now well-established evidence to show that effective application of HRM practices influences employee psychological contract in a favourable manner (Rousseau & Wade-Benzoni, 1994; Pate, Martin & McGoldrick, 2003; Guest & Conway, 2004; Katou & Budhwar, 2012), which in turn, is associated with a range of desirable attitudes and behaviours such as organisational commitment, intention to quit, job satisfaction and organisational citizenship behaviour (Bal et al., 2013; Marescaux, De Winne & Sels, 2013). Similar findings were obtained in a series of studies conducted by Guest and Conway (2000; 2001a; 2001b, 2002b, 2004) who suggested that more progressive HRM practices are positively associated with a more positive psychological contract, also illustrated in Figure 3.2.

Figure 3.2: Model of antecedents and outcomes of psychological contract (Guest & Conway, 2001, p. 2)



Suazo et al. (2009) argued that HRM practices, such as, recruitment, training, performance appraisal and compensation play a vital role in creating psychological contract. Training and development activities are an important source of beliefs regarding psychological contract terms, as well as their

degree of fulfillment. In particular, the quality of training shapes whether employees believe commitments have been made, and kept, regarding career development. Employees perceive the presence of practices like internal promotion opportunities and informal mentoring as enablers for fostering a developmentally focused and supportive organisational climate.

This thesis adopts a systems approach to examining the role of HRM practices on psychological contract fulfillment. The underlying assumption of the systems approach is that the effectiveness of one HRM practice is contingent upon the other HRM practices. If all the practices fit within a coherent system, the effect of that system on performance should be greater than the sum of the individual effects on performance from each practice alone (Veld, Paauwe & Boselie, 2010; Guest & Conway, 2011).

Purcell and Hutchinson (2007) asserted that collectively, a system of HRM practices plays a vital part in communicating to employees the organisational norms and the behaviours expected from them. Bowen and Ostroff (2004) argued that when HRM practices are considered as distinct, individual practices, they play a more functional role, but when HRM practices are treated as a system, they bolster a wider organisational climate. High performance work systems is commonly defined as a set of mutually reinforcing HRM practices (Kehoe & Wright, 2013). Considering these arguments, the treatment of HRM practices as a system is more appropriate than examining them separately. This is also aligned with the proposition that the broader implications of the HPWS is more important than the different signals conveyed by individual HRM practices.

This study examines HPWS, based on employees' perceptions or experiences of HRM practices that have been implemented. Kinnie, Hutchinson, Purcell, Rayton & Swart (2005) termed perceived HRM practices as the “fulcrum” of the HRM-performance causal chain (p. 11). Because individuals act on the basis of their own perceptions, assessing employees' HR attributions is critical, as

individual cognitions impact the state of the psychological contract. For instance, Guzzo and Noonan (1994) asserted that employees' psychological contract is strongly affected by how employees interpret their organisation's HRM practices. Further, Westwood et al. (2001) argued that "it is in interaction with the HRM system that the strongest promissory messages are imparted and those which play the biggest role in the formation of psychological contracts" (p. 625).

Drawing on these arguments, the following hypothesis can be proposed:

Hypothesis 1: High performance work systems will be positively related to psychological contract fulfillment.

In this section, I reviewed the literature on HPWS and psychological contract and developed arguments for the main effect of HPWS on psychological contract fulfillment. I will now discuss the case for studying differential effects of HRM bundles on psychological contract.

3.4 HRM bundles and psychological contract fulfillment

The previous section discussed the role of HPWS in influencing psychological contract fulfillment. Although there is a lack of consensus on which HRM practices are included in a HPWS, the HRM practices constituting any high-performance approach are inherently directed at increasing employee ability, motivation, and opportunity (Subramony, 2009). Prior psychological contract research has not differentiated the HPWS on the basis of HRM bundles. This section aims to address this gap by taking a bundle approach which is consistent with ideas advanced in prior strategic HRM research (Becker & Gerhart, 1996; Boselie, Brewster & Paauwe, 2009; Subramony, 2009; Gardner et al., 2011; Jiang et al., 2012a, 2012b).

As discussed in the previous section, prior research has linked HRM bundles to organisational performance and posited that the HRM bundles create combined synergistic effects that are

substantially greater than those of individual best practices (MacDuffie, 1995; Ichniowski, 1997; Guest, 2004). More recently, Subramony (2009) categorised the HRM bundles as: ability-enhancing, motivation-enhancing, and opportunity-enhancing.

This thesis draws upon the classification suggested by Subramony (2009). This is deemed appropriate as this classification is based on the Ability-Motivation-Opportunity (AMO) framework, which focuses on the importance of taking into account variables at the individual level like employees' skills and competencies, their motivation and their opportunity to participate (Appelbaum et al., 2000; Boselie et al., 2009; Paauwe, 2009; Boselie, 2010). In contrast, other frameworks like Contingency theory and Resource Based View (RBV) are situated at the macro (organisational) level and are primarily drawn to study the performance effects. Sanders et al. (2013) noted that the AMO framework "...is more likely to be invoked in the study of phenomena at the individual level" (p. 3). Further, Wright and Boswell (2002) argued when distinguishing micro and macro approaches in the context of HRM practices, assigned the psychological contract and the employment relationship to the individual or micro level of analysis allowing researchers to link HRM practices to the psychological contract. Thus, AMO framework is more relevant to this study as it examines the focal constructs like HRM practices and psychological contract fulfillment at the micro (employee) level.

The ability-enhancing HRM bundle refers to the bundle that augments the knowledge and skill levels of the workforce. This bundle includes recruitment and selection and training practices. Recruitment and selection could be used as a form of signal by an organisation that can help an employee to develop an accurate picture of the psychological contract regarding job security or any other aspect related to working for the organisation. Suazo et al. (2009) further elaborated that a realistic job preview could be used to enable employees to form perceptions about the psychological contract as

it presents both the favourable and unfavourable aspects of working in an organisation. Scheel et al. (2013) argued that organisational actions like training can be viewed as a source of promises by the organisation to the employees. Their study included data from 2180 employees working in six European countries (Sweden, Germany, Netherlands, Belgium, Spain, UK) and Israel. Results showed that training contributed to building employees' perceptions of psychological contract fulfillment, in case of both temporary and permanent employees.

The motivation-enhancing HRM bundle represent those HRM practices that provide employees with adequate levels of direction and inducements. This bundle includes clear career progression paths, internal promotional opportunities, performance evaluation, compensation and other benefits and job security. Sturges et al. (2005) noted that when employees believed "organisational career management help is forthcoming, it seems probable that this will contribute to the fulfillment of the psychological contract..." (p. 823). Conway and Briner (2005) suggested that performance appraisal could be used as an opportunity by the organisation to establish and clarify employee expectations. Other practices like compensation and benefits are viewed as significant signals to predict the perceptions of psychological contract (Rousseau, 1995; Lee et al., 2011). Additionally, if the employee is assured about the stability of their employment status, they are more likely to feel more positive about their psychological contract (Ye, Carden & Rivera, 2012).

Finally, the opportunity-enhancing HRM bundle comprises those HRM practices that boost employee autonomy and responsibility levels. This bundle consists of employee participation and feedback mechanisms including attitude surveys and work-life balance policies. Gardner et al. (2011) argued that the "organisations that allow employee input into decisions, share information, and treat employees with respect strengthen shared perceptions of congruence between employee and organisational values, increase employees' identification with the firm, and enhance feelings of

relatedness, autonomy, and commitment” (p. 321). This positive valuation of the organisation by the employees could translate into favourable perceptions about the psychological contract.

It is important to explore the differential effects of the three HRM bundles. This is because most existing research presumes that all the bundles of the HPWS have the same impact on outcomes. This reasoning is flawed as different HRM bundles could impact the same outcomes in heterogeneous ways (Wright & Kehoe, 2008; Shaw, Dineen, Fang & Vellella, 2009; Gardner et al., 2011; Jiang et al., 2012a, 2012b). In support of the differential effect argument, Wright and Kehoe (2008) proposed that the motivation and opportunity enhancing bundles are expected to have a positive influence on organisational commitment, the ability enhancing HRM bundle may have no, or even a negative impact on organisational commitment, especially, continuance commitment. Additionally, the meta-analytic study by Jiang et al. (2012b) found that ability-enhancing practices were more positively related to human capital and less positively related to employee motivation than motivation-enhancing practices and opportunity-enhancing practices.

Given these issues, this thesis aims to test the value of bundling HRM practices on the basis of their ability, motivation, and opportunity enhancing effects. This interplay may be particularly insightful if HPWS can be deconstructed and the effect of each HRM bundle on psychological contract fulfillment can be predicted. In line with Hypothesis 1, as HRM bundles are components of the overall HPWS, it is expected that these bundles would be positively related to psychological contract fulfillment. Extending this logic, I propose that while each of the three HRM bundles will have a *positive* association with the psychological contract fulfillment, they will have a *differential* effect in that the effect size may be higher for one bundle in comparison with another.

Therefore, the following hypothesis is posited:

Hypothesis 2: a) Ability-enhancing HRM bundle, b) motivation-enhancing bundle and c) opportunity-enhancing bundle will be positively related to psychological contract fulfillment.

3.5 Frontline management leadership behaviour and psychological contract fulfillment

The primary objective of this thesis is to examine the state of the psychological contract of front line employees. Front line employees are those employees who are in a non-supervisory position. As a result, the term supervisor used in previous studies will be limited to front line manager. The frontline managers are typically designated as team leaders, group leaders, section managers and tend to be at the lower end of the hierarchy (Purcell, 2006). Hales (2005) defines a first-line/front-line manager as a manager “to whom non-managerial employees report” (p. 473). For the purposes of this study, the performance of HRM activities is included in the definition and classifies front line managers as the lowest line managers at the operational level, who manage a team of operational employees on a day-to-day basis and are responsible for carrying out the HRM activities like training and performance appraisal.

Psychological contract is usually conceptualised as an employee-employer relationship. Previous research (Rousseau, 1995; Guest & Conway, 2004) reaffirmed that supervisor as the most important organisational representative in the employee-organisation relationship. As noted in Chapter 2, there is little consensus over the definitions of psychological contract. Regardless of the definition, it is a key responsibility of the supervisor to ensure that the psychological contract is fulfilled. Also, employees tend to view behaviours of their immediate supervisors as representing the organisation (Stinglhamber & Vandenberghe, 2003). Also, the supervisor is an important source of information, which could be attributed to proximity and immediacy of the relationship. This suggests that supervisors play an important role in the development and maintenance of psychological contracts (Suazo et al., 2009).

This study draws on the prior research using social exchange and organisational support theory that outlines the importance of frontline managers in implementing HRM practices and subsequently having an influence on the frontline employees (Rhoades & Eisenberger, 2002; Den Hartog, Boselie & Paauwe, 2004; Macky & Boxall, 2007). Social exchange theory provides the dominant theoretical basis for this proposition (Sparrowe & Liden, 1997; Hutchinson & Purcell, 2010). This theory suggests that an exchange relationship evolves between supervisors and subordinates in an organisation. This exchange relationship posits that each party must offer something the other party sees as valuable and each party must see the exchange as reasonably equitable or fair (Eisenberger et al., 2002). Supervisors are able to jointly influence the exchange relationships that they have with the employee and that the employee has with the organisation.

Leadership is an important aspect of people management activities of frontline managers. Purcell and Hutchinson (2007) note that the “way FLMs undertake their HR duties of selecting, appraising, developing, communicating, involving... is inextricably linked to a wider set of what are increasingly called leadership behaviours, which aim to influence employee attitudes and behaviour and give direction” (p. 3). Guest and Conway (2004), in their empirical study including 1000 employees from the United Kingdom, found that the measure of effective supervisory leadership provided an indication of organisational support, reflected specifically in the behaviour of the immediate supervisor. Results also indicated that supervisory leadership was also the strongest, or among the most important factors, explaining positive psychological contracts and a range of work-related attitudes and behaviours.

Additionally, Purcell and Hutchinson (2007) reiterated that the relationship between employees and frontline managers is important in influencing the employees' views of the support received or available from the organisation at the functional practice level and the organisational climate. They

also propose that perceptions of leadership behaviour could be seen as a form of organisational support. Summarising, FLM leadership behaviours could influence the extent to which employees perceive support from their immediate supervisor and the extent to which they perceive it as an organisational investment in them.

Conway and Briner (2005) illustrated how the line manager, as an organisational representative, could communicate a possible promise and thus influence the employees' psychological contract. I have reproduced one example from their book below (see Table 3.1).

Table 3.1: How line managers communicate the psychological contract (Conway & Briner, 2005, p. 50)

Line manager behaviour	Possible promise communicated
Line manager tells Jack that if he continues to perform well he will get ahead in the organisation.	<p>Explicit: That advancement is contingent on performance</p> <p>Implicit: The line manager has the authority to make promotions happen and should, in return, be respected by the employee as an influential agent.</p>

The aforementioned example demonstrated how the line manager could extend potential implicit and explicit promises to the employees on behalf of the organisation. Also, this exemplified the role of the line manager as communicating promises to the employees they manage. Boxall et al. (2011) further elaborated that the "...employees can be expected to pick up key signals on what matters from the behaviour of their first-line and higher-level managers" (p. 1513).

More recently, McDermott et al. (2013) noted that strategically consistent leader behaviours further strengthen psychological contracts. They argued that leadership influences perceptions of psychological contract fulfillment "...by creating obligations, promising rewards for certain contributions, and fulfilling these commitments by giving appropriate recognition and support" (p. 296). Consistent with signalling theory, they argue that both line manager leadership style and HPWS, are treated as signals from the organisation by the employees. These signals play a vital role in forming employee opinions about their exchange relationship with their organisation, also referred

to as psychological contract. There is a strong resonance between the alignment of these signals and the consistency on the messages modelling the employee psychological contract. Further, they argued that this consistency enhances the possibility that employees will recognise their organisation as fulfilling their commitments and consequently will reciprocate by delivering what is expected from them.

Having outlined the relevance of FLM leadership behaviour in influencing psychological contract fulfillment, I posit:

Hypothesis 3: Frontline management leadership behaviour will be positively related to psychological contract fulfillment.

3.6 Co-worker support and psychological contract fulfillment

Contemporary organisations are characterised by increasing autonomy and responsibilities being given to co-workers. Also, organisations are moving away from traditional command and control leadership to increased emphasis on informal networks and interdependent relationships among colleagues (Burt, 2005; Hershcovis & Barling, 2010; Aryee et al., 2013). Reflecting these trends, the role of co-workers becomes increasingly crucial in influencing organisational support and provides an additional perspective to literature dominated by vertical relationships. Schneider (1987) argues that social environment “only exist through the people behaving in them knowing them” (p. 439). The position of co-workers is unique as it is marked by the duality of roles that they play as an individual employee and at the same time having a potential influence on another employee’s psychological contract. Workgroup interactions, especially support received from co-workers, could influence employees’ perceptions of psychological contract fulfillment.

Co-workers could be termed as employees' colleagues who are at the same level of hierarchy and interact with them on work-related issues and with whom no supervision is implied (Chiaburu & Harrison, 2008; Moreau & Mageau, 2012). Ladd and Henry (2000) defined co-worker support as "employees' global beliefs concerning their co-workers' attitudes towards them" (p. 2034). In other words, co-worker support could be measured basis the extent of assistance provided by work colleagues (Liao et al., 2004). Another definition by Eisenberger et al. (2002) referred to co-worker support as the degree to which employees perceive that their co-workers care about their well-being and respect their contributions.

Most research, with a few exceptions, has studied the psychological contract as involving the employee–manager relationship. For instance, Svensson and Wolven (2010) tested the role of co-workers in influencing the temporary workers' psychological contract, using a sample of 67 employees from three organisations in Sweden. The study concluded that temporary agency workers held contracts with both management and co-workers, thus reinforcing the importance of studying the role of co-worker while ascertaining the employee perceptions of the psychological contract. Tomprou and Nikolaou (2011) developed a theoretical framework based on the sense-making perspective. The model focuses on the role of newcomers' pre-entry expectations and emotions on the psychological contract creation process. Since co-workers have received little attention in relation to the psychological contract literature, it is important to justify why co-workers are important stakeholders in *influencing* the psychological contract. Also, no previous study has deliberated and empirically tested the impact of co-worker support on the perceptions of psychological contract fulfillment.

Social information processing theory could be employed to explain the role of co-workers in shaping the perceptions of psychological contract fulfillment. Employees who experience high levels of

social support at work through supportive conversations with co-workers, are more likely to have positive perceptions of the psychological contract. Ho and Levesque (2005) consider co-workers as important “social referents” as they provide social cues to employees. According to Tomprou and Nikolaou (2013), social cues have three key functions: “conveying information regarding psychological contract, helping how individuals interpret organisational actions, and pressuring members to conform to social understandings of contract terms” (p. 409).

Conway and Briner (2005) shared an example of a social cue provided by co-workers and the possible promise it could convey to the employees (see Table 3.2).

Table 3.2: How co-workers communicate the psychological contract (Conway & Briner, 2005, p. 50)

Co-worker behaviour	Possible promise communicated
A colleague constructively criticises the work methods of his line manager and is subsequently publicly humiliated.	<p>Explicit: Employee dissent will be punished by the management.</p> <p>Implicit: The organisation does not support constructive feedback and hence is not supportive and should not receive employee loyalty.</p>

This example reaffirmed that the co-workers could help shape employee perceptions of promises and obligations based on their own experiences. A co-worker is likely to give cues regarding the social exchange quality based on how they interpret events and their exchange relationship in the workplace. In other words, co-workers play the role of facilitators and informal socialisation agents (Rousseau, 2001; Tomprou & Nikalou, 2011). While co-workers *cannot make promises on behalf of the organisation*, they could *confirm* or *clarify* contract makers' promises, especially when information is missing or unavailable. Also, they may influence their co-workers' perceptions of the psychological contract through informal modes, such as chatting, storytelling and advising. They may, for instance, influence the way their fellow workers perceive HRM practices or even supervisors' behaviours towards them. As such, I hypothesise:

Hypothesis 4: Co-worker support will be positively related to psychological contract fulfillment.

3.7 Psychological contract fulfillment and employee outcomes

This section reviews the theoretical basis and empirical support for the relationship between psychological contract fulfillment and employee outcomes. A key factor triggering the interest in the psychological contract is its consequences on the employee attitudes and behaviours (Rousseau, 1995; Guest, 1998; Coyle-Shapiro & Kessler, 2000; Guest & Conway, 2000, 2001a, 2001b, 2002b, 2004; Raja et al., 2004; D'Art & Turner, 2006). The norms of social exchange and perceived organisational support present the main explanatory mechanisms in the psychological contract (Rousseau, 1995). When employees are treated well by organisations, they are more willing to contribute to the organisations in return.

Most psychological contract research has applied the social exchange theory to explicate the linkages between psychological contract fulfillment and employee outcomes (Turnley et al., 2003; Katou & Budhwar, 2012). This theory posits that employees engage in positive attitudes and behaviours if they perceive the organisation as fulfilling their psychological contract. This view is consistent with the basic premise underlying the social exchange theory, norms of reciprocity. Katou and Budhwar (2012) argued that the “employees keep their promises according to the behaviour of the ‘good employer,’ or the ‘history’ of the organisation in keeping its promises to employees”. They further elaborated that “...if the employer upholds his side of the bargain, this will make employees satisfied, committed, and motivated, and so they will reciprocate by upholding their side of the bargain” (p. 796) For instance, Lee et al. (2011) illustrated the norm of reciprocity by suggesting that an employee could become even more dedicated towards his job and organisational interests after being promoted, which is likely to be evident in his/her increased commitment and reduced intention to leave the organisation.

Perceived organisational support theory presents an alternative explanation to interpret the role of psychological contract in predicting employee outcomes. Promises and obligations made by the organisation to employee could be used to identify the extent to which the organisation is willing to invest in the employees. Subsequently, employees who believe that their expectations are fulfilled are more likely to contribute positively to the organisation. Overall, it is proposed that social exchange and perceived organisational support underpin the relationship between the psychological contract fulfillment and employee outcomes.

This review includes a number of empirical studies, the vast majority have been undertaken in the US and Europe (Katou & Budhwar, 2012). There is a need to broaden the evidence base to other contexts. This would help confirm or contradict empirical evidence in other cultural contexts. This thesis extends psychological contract fulfillment research in India.

I used Table 3.3 to identify the employee outcomes which have been linked previously to psychological contract fulfillment. The top three employee outcomes which have been studied in prior psychological contract fulfillment research are **commitment** (Rousseau, 1990; Guzzo, Noonan & Elron, 1994; Herriot, Manning & Kidd, 1997; Millward & Hopkins, 1998; Coyle-Shapiro & Kessler, 2000; Guest & Conway, 2000, 2002; Hornung & Glaser, 2010; Parzefall & Hakanen, 2010; Conway, Guest & Trenberth, 2011; Antoni & Syrek, 2012; Chambel & Castanheira, 2012a; Katou, 2013), **job satisfaction** (Guest & Conway, 2000; Conway et al., 2011; Tomprou et al., 2012) and **intention to quit** (Chi & Chen, 2007; Willem, De Vos & Buelens, 2010). Thus, it was imperative to use these three variables in this thesis. There are only a few studies (e.g. Sturges, Conway, Guest & Liefoghe, 2005) that have studied the impact of psychological contract fulfillment on absenteeism, thus warranting more empirical support. I build a case of inclusion for absenteeism based on the aforementioned reason.

As noted above, prior research posits that the psychological contract is positively associated with desirable employee outcomes and negatively related to undesirable employee outcomes. I argue that using a combination of desirable and undesirable employee outcomes in the study would adequately represent a broad range of employee outcomes. Also, intention to quit is an important behaviour-oriented¹⁰ outcome while absenteeism is a key undesirable behavioural outcome. Therefore, including both attitudinal and behavioural outcomes allows this study to determine if the psychological contract has a differential effect on employee outcomes.

Other outcomes that have been studied in relation to psychological contract fulfillment are organisational citizenship behaviour (Turnley & Feldman, 1999; Coyle-Shapiro & Kessler, 2003; Shih & Chen, 2011), turnover (Blomme et al., 2010; Liu et al., 2013) and task performance (Conway & Coyle-Shapiro, 2012). While I acknowledge these outcomes could provide additional understanding while investigating their relationships with psychological contract fulfillment, they were omitted from the present study.

The exclusion of these outcomes was owing to the space issues associated with creating a respondent-friendly questionnaire. It is recommended that the respondents are asked to fill in information related to constructs which are absolutely essential to the study (Saunders et al., 2012). Adding more constructs will increase the time respondents take to fill in the questionnaire and could result in fatigue, which could lead to errors in capturing the true employee perceptions.

Thus, this thesis focuses on four employee outcomes- affective commitment and job satisfaction, intention to quit and absenteeism, each of which is further discussed in detail.

¹⁰ I acknowledge that intention to quit is not a true behavioural outcome measure, it does measure an intention to engage in a behaviour. This conceptualisation is consistent with the study by Kehoe and Wright (2013).

Table 3.3: Empirical studies on psychological contract fulfillment and employee outcomes

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
Rousseau (1990)	USA	Affective commitment	Questionnaire survey, Canonical correlation analysis	224 recent hires	35	Affective commitment is strongly related to the state of psychological contract.
Guzzo et al. (1994)	Multiple countries	Organisational commitment Intent to quit Intent to return early to domestic assignment Turnover	LISREL analysis	148 expatriates, SHRM members, diverse industries	7	Psychological contract was found to mediate the relationship between HRM practices and three retention-relevant outcomes.
Herriot et al. (1997)	UK	Affective commitment	Critical incident technique , Content analysis, Chi-square test	184 employees and managers	42.9 (Employees) 23.4 (Managers)	Affective commitment is strongly related to the state of psychological contract.
Millward & Hopkins (1998)	UK	Job commitment Organisational commitment	Questionnaire survey, hierarchical regression analyses and Structural equation modelling	476 employees, Private sector, service industry	53.6	Both job and organisational commitment are related psychological contracts. In particular, organisational commitment was negatively related to transactional contracts. Relational contracts have been shown to be positively related to organisational commitment.
Turnley & Feldman (1999)	USA	Job search behaviours (intent to	Mail survey, hierarchical	4 samples (213 recent	45	Violations result in increased levels of exit, voice and neglect behaviours and

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
		quit) Voice behaviours Loyalty Neglect OCB Job satisfaction	regression analyses and Structural equation modelling	MBA alumni, 263 expatriate managers, 223 managers and 105 employees)		decreased levels of job satisfaction and loyalty to organisation.
Coyle-Shapiro & Kessler (2000)	UK	Organisational commitment OCB Job satisfaction	Questionnaire survey, Hierarchical regression analysis	703 managers and 6953 employees	82.5 (53-managers)	The extent of perceived employer contract fulfillment has a significant effect on employees' perceived organisational support, organisational commitment and OCB.
Guest & Conway (2000)	UK	Organisational commitment Life satisfaction Work satisfaction Employment relations Work-life balance Job security Motivation Effort OCB Intention to stay/ quit	Questionnaire survey collected through telephone interviews, path analysis	2006 workers (central government, local government, health sector and private industry)	61	More HRM practices, more direct participation and a friendly dynamic organisational climate are associated with a positive psychological contract and employee outcomes.
Guest & Conway (2001)	UK	Organisational commitment Life satisfaction	Questionnaire survey collected through telephone	493 employees	50.3	A positive psychological contract was a good predictor of an increase in work satisfaction, commitment, job security,

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
		Work satisfaction Security Employment relations Motivation Effort OCB Intention to stay/ quit Innovation Performance	interviews, path analysis			employment relations and reduced intention to change employment.
Coyle-Shapiro (2002)	UK	OCB	Questionnaire survey at three time points, Hierarchical regression analysis	480 employees, public sector	65	Perceived employer obligations explained unique variance in three dimensions of OCB (helping, advocacy and functional participation) beyond that accounted for by perceived employer inducements.
Guest & Conway (2002a)	UK	Organisational commitment Life satisfaction Work satisfaction Security Employment relations Motivation Effort Employee OCB Intention to stay/	2 phases 1) qualitative interviews in four organisations with a total of 80 managers and staff at different levels 2) survey questionnaire to 1306 managers, Hierarchical	1,306 senior HR managers	n.r.	All the outcomes are reported to be positive where managers reported that the organisation has kept more of its promises, where there is greater application of HRM practices, where there is effective use of communication and where psychological contract is used to manage employment relationship.

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
		quit Employee innovation Employee performance Employee involvement Employee commitment Employee cooperation	regression analysis			
Guest & Conway (2002b)	UK	Commitment Life satisfaction Work satisfaction Work-life balance satisfaction Security Harmful conditions Stress Motivation Intentions to quit	Questionnaire survey using telephone interviews, path analysis, multiple regression analysis , logistic and discriminant analysis	1000 workers	49	Majority of workers report a positive state of psychological contract which is further associated with positive attitudinal and behavioural outcomes.
Coyle-Shapiro & Kessler (2003)	UK	Employee commitment OCB Job satisfaction	Questionnaire survey, Hierarchical regression analysis	5,709 employees, public sector	82.5	Perceptions of psychological contract fulfillment are positively associated with employees' reported organisational commitment and OCB.
Turnley et al. (2003)	USA	In-role performance OCB-O	Questionnaire survey, Multigroup	134 supervisor-subordinate	56- subordinate 45- supervisor	Extent of the psychological contract is positively related to performance of all three types of employee behaviours.

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
		OCB-I	structural equation modelling	dyads (samples from MBA students employed and their supervisors from large health care company)		
Guest & Conway (2004)	UK	Organisational commitment Life satisfaction Work satisfaction Work-life balance satisfaction Stress Excitement Loyalty Motivation Intentions to quit OCB	Questionnaire survey using telephone interviews	1000 employees	47	Employees reported a positive state of psychological contract. Workers report higher levels of satisfaction with life as a whole, work-life balance, loyalty.
Sutton & Griffin (2004)	Australia	Job satisfaction Turnover intentions	Structured interviews to design the questionnaire, Questionnaire survey, longitudinal study	235 students	n.r.	Post-entry experiences regarding supervision were found to predict psychological contract violation. Post-entry experiences and psychological contract violations were found to jointly predict job satisfaction, with psychological contract violations

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
			(14 months)			demonstrating the stronger relationship. Pre-entry expectations were positively correlated with job satisfaction, but this relationship was fully mediated by post-entry experiences.
Sturges et al. (2005)	UK	Organisational Commitment (affective and continuance commitment) Absence Job performance Voluntary turnover	Questionnaire survey, Regression analyses	151 employees, Media company	51	Psychological contract fulfillment played a key role in mediating the relationship between career management help and such attitudes and behaviours.
Castaing (2006)	France	Affective commitment Continuance commitment Normative commitment	Questionnaire survey, Principal component analysis, stepwise regression analysis	754 civil servants	n.r.	Psychological contract and public service motivation could both explain organisational commitment in French public administration.
Conway & Coyle-Shapiro (2006)	UK	Sales made Sales targets met	Questionnaire survey, Panel regression analyses, longitudinal study (data collected at four time points)	153 sales advisers, Banking industry	n.r.	Employee performance and psychological contract fulfillment relate reciprocally.
Coyle-Shapiro & Morrow (2006)	UK	Affective organisational commitment	Questionnaire survey, Hierarchical	99 employees in 4	36	Employees' affective attachment to their employing organisation mediates the effects of psychological contract

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
		Affective client commitment	multiple regression	contracting organisations		fulfillment on client affective commitment.
Thompson & Heron (2006)	n.r.	Affective commitment Innovative performance Knowledge sharing behaviour	Questionnaire survey, Structural equation modelling	429 R&D employees from six science and technology based organisations	25	Affective commitment plays an important role in mediating psychological contract fulfillment on knowledge-sharing behaviour, which in turn is strongly related to innovative performance.
Chi & Chen (2007)	Taiwan	Turnover intent Organisational commitment	Questionnaire survey, Hierarchical regression	Analysis 135 employees from 16 companies (Banking and financial services, manufacturing, electronics and equipment, transportation companies, public services and government-related	8	Repatriates' perceived fulfillment of their psychological contracts was negatively related to turnover intent and positively related to organisational commitment, after controlling for the variables of change assessments.

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
				agencies)		
Grimmer & Oddy (2007)	Australia	Organisational commitment	Questionnaire survey, one-way ANOVA	90 MBA students	54.4	Fulfillment of expectations was a significant predictor of trust. Relational scores were positively correlated with organisational commitment and trust.
Guerrero & Herrbach (2008)	France	Workplace affect Dispositional affectivity	Questionnaire survey, Structural equation modelling	249 managers, Longitudinal study	53	Psychological contract fulfillment is fully mediated by perceived organisational support with respect to the affective states.
Henderson, Wayne, Shore, Bommer & Tetrick (2008)	USA	In-role performance Sportsmanship	Questionnaire survey, Hierarchical linear modelling	393 employees and 41 managers, 4 plants of subsidiary of fortune 500 companies	2.5	Psychological contract fulfillment is positively related to employees' in-role performance and OCB.
Newton, Blanton & Will (2008)	USA	OCB (Helping, Loyalty, Obedience, Functional Participation, Advocacy Participation) Innovative work behaviour	Questionnaire survey, Regression analysis	209 IT professionals, IT industry	35	Higher perceptions of fulfillment of their employers' obligations of the psychological contract will be positively related to higher levels of OCB dimension- loyalty, obedience, functional participation, and advocacy participation and higher levels of innovative work behaviour.
Parzefall (2008)	Finland	Affective commitment Intentions to leave	Questionnaire survey, Regression	118 employees, Public sector	79.6	Perceptions of generalised reciprocity are found to mediate the relationship between perceived psychological

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
		Continuance commitment	analysis, Meditational analysis	organisation		contract fulfillment and affective commitment and intentions to leave.
Roehling (2008)	Multiple countries	Job Satisfaction Turnover Intentions	Questionnaire survey, hierarchical regression analysis	1054 employees	62	Obligation fulfillment measures explain significantly more variance in job satisfaction, trust in the employer, and turnover intentions than the expectation based fulfillment measures.
Chen & Chiu (2009)	Taiwan	Organisational commitment	Questionnaire survey, Structural equation modelling	219 business expatriates	23	Perceived fulfillment of the psychological contracts of expatriates significantly influenced their organisational commitment.
Lee & Liu (2009)	Taiwan	Achievement Motivation (Mastery of needs, Work orientation and Competition) Organisational identification Work devotion Work satisfaction	Questionnaire survey, Structural equation modelling	340 employees, Banking industry	n.r.	Psychological contract significantly influenced work attitudes.
Uen et al. (2009)	Taiwan	In-role behaviour Extra-role behaviour	Questionnaire survey, Hierarchical linear modelling	146 knowledge workers and 28 immediate manager, 25 high-tech firms	13 (Managers) 32 (knowledge workers)	Relational psychological contracts mediated the relationship between commitment-based HR systems and in-role behaviours, as well as OCBs. Transactional psychological contracts did not significantly mediate these relationships.

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
Blomme, Van Rheeде & Tromp (2010)	Multiple countries	Affective commitment Turnover	Questionnaire survey, Hierarchical stepwise multiple regression analyses	247 employees, Hospitality industry	36	Moderate to strong correlations were found between psychological contract measures (job content, development opportunities, Work atmosphere, autonomy and promotion opportunities) on one hand; and affective commitment and intention to leave on the other. Affective commitment is a mediator in relation between psychological contract and turnover intentions.
Collins (2010)	US	Turnover intentions	Online questionnaire survey, Structural equation modelling	328 managers, from 4 organisations that operate franchised casual, limited-service restaurants	43.3	Psychological contract fulfillment served as a mediator between LMX and turnover intention. Psychological contract fulfillment is found to be a statistically significant predictor of turnover intention.
Hornung & Glaser (2010)	Germany	Affective commitment OCB	Questionnaire survey, Structural equation modelling	947 civil servants (telecommuting organisation)	25.9	Trust and affective commitment consecutively mediated between relational fulfillment of the psychological contract and OCB.
Parzefall & Hakanen (2010)	Finland	Work engagement Affective commitment	Questionnaire survey, Structural equation	178 employees from a social	79.6	Perceived psychological contract fulfillment has both motivational (work engagement, affective commitment,

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
		Turnover intentions Mental health	modelling	and health services public sector organisation		reduced turnover intentions) and health-enhancing (work engagement, mental health) effects.
Webster & Adams (2010)	US	In-role performance Extra-role performance	Questionnaire survey, Moderated multiple regression	164 employees, Health and fitness organisation	89	The relationship between preferred work status and extra-role performance was positive when contract fulfillment was lower but not when it was higher. No moderating effects were found when examining in-role performance.
Willem et al. (2010)	Belgium	Intention to leave	Questionnaire survey, Linear regression analysis	4956 employees, public and private sector	40.7	High intention to leave was correlated with perceived high importance for the dimensions of the psychological contract.
Conway et al. (2011)	UK	Organisational commitment Work satisfaction	Questionnaire survey, Longitudinal study at 2 points (8 months), Regression analysis, Structural equation modelling	Study 1- 166 employees, pharmaceutical Study 2- 493 employees	52- T1 49- T2	Increase in reported breach had greater effects on outcomes than increases in fulfillment, for the outcomes of affective wellbeing, job satisfaction, and organisational commitment.
Shih & Chen (2011)	Taiwan	OCB	Questionnaire survey, Moderated structural	485 supervisor-subordinate dyads from	49.8- Subordinate	OCB has the strongest relationship with the balanced psychological contract.

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
			equation modelling	58 companies		
Antoni & Syrek (2012),	Germany	Job satisfaction Commitment Pay satisfaction	Questionnaire survey, Structural equation modelling	421 employees from 9 charitable institutions	67	Relational psychological contracts partially mediated the relationship between transformational leadership, job satisfaction, and commitment, while transactional psychological contracts partially mediated the relationship between transformational leadership and pay satisfaction.
Chambel & Castanheira (2012a)	Portugal	Affective commitment Exhaustion	Questionnaire survey, Structural equation modelling	393 blue-collar temporary agency workers	46.3	Training was positively related to workers' affective commitment and negatively to workers' exhaustion.
Chambel & Castanheira (2012b)	Portugal	Exhaustion	Questionnaire survey, Structural equation modelling	412 call centre operators	62.9	Fulfillment of balanced obligations, and not relational obligations mediated the relationship between training and exhaustion.
Conway & Coyle-Shapiro (2012)	UK	Task performance	Longitudinal study (4 time points), Questionnaire survey, CFA, Regression analysis	146 sales advisors, Bank	70- T4	A supportive relationship buffered failing to deliver at earlier time points, but at later time points employee performance and psychological contract fulfillment associate more strongly as both parties prioritise delivery.

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
Liu, Hui, Lee & Chen (2012)	China	Turnover	Longitudinal study (2 time points), Questionnaire survey, Logistic regression analysis	136 employees	51- T2	Traditional employees are more likely to leave their employers when they fail to fulfil their psychological contracts than less traditional employees.
Raeder et al. (2012)	Switzerland	Organisational performance	Questionnaire survey (CRANET), Regression analysis	92 HR managers from finance, engineering, retail, hotels, public administration etc., employer perspective	33.7	High-investment HRM system index predicted the fulfillment of the psychological contract, and some of the individual HRM practices were correlated with the fulfillment of the psychological contract. A mediation effect was not found for the psychological contract nor an association with organisational performance.
Tomprou et al. (2012)	Greece	Organisational commitment Job satisfaction	Questionnaire survey, Structural equation modelling	236 employees, Banks	54.2	Employees who perceive that their psychological contract is being fulfilled actually tend to demonstrate higher levels of organisational commitment and job satisfaction.
Bal et al. (2013)	Netherlands	Work engagement Turnover intentions	Questionnaire survey; Longitudinal study; Structural equation modelling	727 employees-T1 240 employees-T2;	40-T2	Psychological contract fulfillment was longitudinally related to higher work engagement and lower turnover intentions, but only for employees with low tenure.

Author and citation details	Country	Attitudinal and Behavioural variables	Research design			Findings
			Methods	Sample	Demographics (% female)	
				Risk management organisation		
Katou (2013)	Greece	Employee satisfaction Commitment Motivation	Questionnaire survey; Longitudinal study; Structural equation modelling	912 employees-T1 897 employees-T2, Multiple industries.	46.1- T1 44.9-T2	Employee attitudes are positively influenced by employer promises fulfillment and HRM practices.
Vantilborgh (2014)	Belgium	Exit Aggressive Voice and neglect behaviour Considerate voice behaviour	Questionnaire survey; Structural equation modelling	215 volunteers from 43 non-profit organisations	60.4	Results indicated that fulfillment related negatively to exit, aggressive voice, and neglect behaviour and positively to considerate voice behaviour.

*T1- Time 1, T2- Time 2, T4- Time 4; **n.r. – not reported

Affective commitment refers to the degree to which employees experience an emotional attachment with their organisation (Allen & Meyer, 1996). Restubog et al. (2006) argued that in the context of psychological contracts, the affective commitment dimension emerged to be the most relevant in compared to the other two dimensions: continuance and normative commitment. This is because affective commitment is influenced by the extent to which individuals' needs and expectations about an organisation are matched by their actual experiences. As mentioned earlier, existing research provides strong support for the positive relationship between psychological contract fulfillment and affective commitment (Coyle-Shapiro & Kessler, 2000; Hornung & Glaser, 2010; Antoni & Syrek, 2012; Chambel & Castanheira, 2012a). Based on these empirical and theoretical considerations, I propose that psychological contract fulfillment will result in increased affective commitment.

Job satisfaction has been defined by Locke (1976), as a "pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1304). Often the promises made by an organisation may be those aspects of one's work which are important sources for job satisfaction. This suggests that employees who experience a positive state of psychological contract will display higher levels of job satisfaction. Strong support for this argument have been made in prior research (Turnley & Feldman, 1999; Coyle-Shapiro & Kessler, 2000; Guest & Conway, 2000; Conway et al., 2011; Antoni & Syrek, 2012; Tomprou et al., 2012).

In addition to being a potential predictor of affective commitment and job satisfaction, psychological contract fulfillment has also been theoretically and empirically linked to several forms of withdrawal behaviour. These behaviours include intention to quit as well as absenteeism (Sheridan, 1985). In explaining these relationships, researchers have posited that withdrawal behaviours are a strategy used by employees to avoid work if they are not satisfied with the fulfillment of promises made by the organisation. The psychological contract binds the employee and employer, a form of guarantee

that if each does his or her part, the relationship will be symbiotic. Higher levels of psychological contract fulfillment suggest that the employees are likely to have strong faith in the benefits of staying in the relationship and are therefore, less likely to be absent from work or leave their current organisation (Kehoe & Wright, 2013). Krishnan and Singh (2010) further expanded that “an individual’s desire to quit an organisation is based on the poor quality of reciprocation for his or her efforts by the organisation, poor supervisory support, lack of justice, and unmet expectations in terms of various facets of the organisational life” (p. 422) A summary of research provided in Table 3.4 demonstrated the negative relationship between psychological contract fulfillment and intention to quit (Turnley & Feldman, 1999; Chi & Chen, 2007; Collins, 2010; Parzefall & Hakanen, 2010; Willem et al., 2010; Bal et al., 2013); and psychological contract fulfillment and absenteeism (Sturges et al., 2005).

For the aforementioned reasons, I propose the following hypothesis:

Hypothesis 5: Psychological contract fulfillment will be positively related to a) affective commitment; b) job satisfaction; and negatively related to c) intentions to quit and d) absenteeism.

To summarise, the review of psychological contract fulfillment literature compared and contrasted empirical research based on relationship between psychological contract fulfillment and employee outcomes. A key limitation of this review is that it is narrative in nature, and a meta-analysis has not been conducted. A meta-analysis could allow the size of the relationships to be more accurately estimated, and the hypothesised models to be more directly tested. However, a systematic review enables inclusion of all the empirical quantitative studies available, thereby giving a representative overview of quantitative research on psychological contract fulfillment and employee outcomes. Given the enormous variation in measures used to assess psychological contract fulfillment, and in the level of analysis, as well as in the study designs, aggregating the results of the various studies

through a meta-analysis did not seem appropriate. Also, the review did not include qualitative studies owing to the quantitative research design adopted in the current study.

3.8 Mediating role of psychological contract fulfillment

In the earlier sections, the role of HPWS, FLM leadership behaviour and co-worker support as antecedents of psychological contract fulfillment has been discussed. This section aims at exploring the potential role of psychological contract fulfillment as a mediator of the relationship between- a) high performance work systems and employee outcomes, b) frontline management leadership behaviour and employee outcomes, and c) co-worker support and employee outcomes.

3.8.1 High performance work systems and employee outcomes

Prior research has established that HPWS is often related to employee outcomes such as organisational commitment, job satisfaction, well-being, intention to quit and absenteeism (Gavino et al., 2012; Alfes, Shantz, Truss & Soane, 2013; Kehoe & Wright, 2013). Despite this consistent pattern of results, little is known about the mechanisms underlying these relationships. Jensen, Patel and Messersmith (2013) echoed that "...the question of possible mediating or moderating effects has been growing in importance, as several scholars have advocated for increased attention to understanding how HPWS relates to employee outcomes" (p. 1704). I aim to provide more insight into the processes by which HPWS translates into employee outcomes by examining the role of psychological contract fulfillment.

Scholars have offered explanations of social exchange, signalling and perceived organisational support theory that define HPWS as signals of organisation's willingness to invest in the employees, which subsequently impact the psychological contract fulfillment. In turn, the more the employees perceive the organisation as fulfilling their promises and obligations, the more likely they will display

positive attitudes and behaviours. This explanation could account for the role of the psychological contract fulfillment as an intermediate mechanism between HPWS and employee outcomes.

Further, there is empirical evidence to support the role of psychological contract as a mediator in the relationship between HPWS and employee outcomes (Paauwe, 2009; Uen et al., 2009; Scheel et al., 2013; Bal et al., 2013). Uen et al. (2009) is one of the first studies that proposed and tested the role of psychological contract as an intermediate mechanism to examine the links between the HRM system and employee outcomes (in-role behaviour and organisational citizenship behaviour). The authors stated that the "...employees' perceptions regarding the exchange agreement between themselves and their organisations mediate the relationships between HRM systems and employees' role behaviours..." (p. 217). They conducted a multi-level survey study gathering questionnaire data from 146 knowledge workers and 28 immediate managers in 25 Taiwanese high-technology organisations. The results indicated that while the relational psychological contracts partially mediated the relationship between commitment-based HR systems and in-role behaviours, as well as organisational citizenship behaviours, the transactional psychological contracts did not significantly mediate these relationships.

Bal et al. (2013) using a survey sample of 1058 employees from a healthcare organisation in Netherlands, found that the relationship between developmental HRM and commitment was also fully mediated by transactional and relational contract. Similar support was found for the link between developmental HRM and engagement. In other words, they found that developmental HRM relates to employees having a more relational and less transactional contract, and this is associated with higher engagement and commitment. In contrast, the results of the study by Raeder et al. (2012) did not find support for mediation effect of the psychological contract for the relationship between the HRM system and firm performance. Similarly, Chein and Lin (2013) too did not find evidence

for the hypothesis that both relational and balanced psychological contracts mediated the relationship between developmental HR configurations and in-role behaviour. Their sample consisted of 170 immediate managers and 788 subordinates from 34 organisations in Taiwan.

It is important to note that the psychological contract fulfillment may represent one of the mechanisms through which HPWS has an influence on employee outcomes. Previous research has identified other mediators examining the relationship between HPWS and employee outcomes including perceived organisational support (Meyer & Smith, 2000; Kuvaas, 2008; Snape & Redman, 2010); psychological empowerment (Butts et al., 2009; Ehrnrooth & Bjorkman, 2012); employee engagement (Alfes et al., 2013). Given the potential for other mechanisms to mediate the relationship between HPWS and employee outcomes, I hypothesise that the psychological contract fulfillment will be a partial mediator. By encapsulating the mediation argument, the following hypothesis is proposed:

Hypothesis 6: Psychological contract fulfillment will partially mediate the relationship between high performance work systems and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.

3.8.2 Frontline management leadership behaviour and employee outcomes

Alfes et al. (2013) have pointed out the relative neglect of the topic of frontline managers when examining the HRM-performance relationship. Previously, Purcell and Hutchinson (2007) contended all studies investigating HRM and organisational performance linkages should include discussion on frontline managers as they play a key role in delivering HRM practices and influencing employees' perceptions of support. Prior research has conceptually stated and empirically shown positive relationships between FLM leadership behaviour and employee outcomes. For instance, Guest and

Conway (2004) indicated that supervisory leadership was an important factor associated with organisational commitment. In a similar vein, the study by Purcell and Hutchinson (2007) suggested that perceptions of FLM leadership behaviour were significant in explaining commitment.

The mediating role of psychological contract fulfillment between FLM leadership behaviour and employee outcomes can be explained by social exchange and perceived organisational support theory. The display of FLM leadership behaviours is often viewed by the employees as a form of organisational support. This is because the frontline manager being the immediate supervisor is viewed as the key organisational representative responsible for psychological contract fulfillment (see Section 3.5). Further, Walumbwa, Lawler & Avolio (2007) noted that the more employees perceive their supervisors and the organisations treating them appropriately, the more they will feel obligated to pay back or reciprocate by becoming more committed to the organisation.

Consistent with social exchange and organisational support theories, it can be implied that employees experiencing a favourable state of psychological contract would subsequently exhibit positive employee outcomes. Thus, it can be argued that in addition to the direct influence on employee outcomes, the FLM's leadership influence may also cascade down through influencing the psychological contract fulfillment of the frontline employee and then to attitudes and behaviours. However, there is no research to date that has examined the role of psychological contract fulfillment as a mediator between FLM leadership behaviour and employee outcomes.

Given that I have hypothesised the effects of FLM leadership behaviour on psychological contract fulfillment (i.e., Hypothesis 3) and the established positive relationship between FLM leadership behaviour and employee outcomes, I propose a path to employee outcomes from FLM leadership behaviour, both directly and indirectly through psychological contract fulfillment:

Hypothesis 7: Psychological contract fulfillment will partially mediate the relationship between frontline management leadership behaviour and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.

3.8.3 Co-worker support and employee outcomes

Co-worker support only assesses the perceptions of being supported by work colleagues and thus does not directly take into account the reciprocity aspect of the exchange relationship. However, it is anticipated that co-worker support creates a sense of indebtedness to the one providing such support, and a corresponding obligation to reciprocate in kind by the recipient worker (Settoon & Mossholder, 2002; Chiaburu & Harrison, 2008; Love & Justin, 2014). Having discussed the direct effects between co-worker support and psychological contract fulfillment in Section 3.6, it is proposed that psychological contract fulfillment could potentially act as mediator in the relationship between co-worker support and employee outcomes.

Previous studies have found direct effects between co-worker support and employee outcomes. Empirical studies confirm the positive relationship between co-worker support and commitment (Ng & Sorensen, 2008; Rousseau & Aubé, 2010). Co-workers can provide support that creates positive work experiences and that may lead individuals to become affectively committed to the organisation. Support from co-workers has also been suggested to influence job satisfaction (La Rocco & Jones, 1978; Brough & Frame, 2004; Ferguson, Carlson, Zivnuska & Whitten, 2012; Moreau & Mageau, 2012; Sloan, 2012; Tang, Siu & Cheung, 2012). Additionally, co-worker support is related to lower levels of intention to quit (AbuAlRub, 2010; Moreau & Mageau, 2012; Woo & Chelladurai, 2012) and absenteeism (Chiaburu & Harrison, 2008; Bacharach, Bamberger & Biron, 2010).

The existence of empirical support for direct links between co-worker support and employee outcomes suggest a partial mediation. The role of psychological contract fulfillment as mediator between co-worker support and employee outcomes remains to be tested empirically, thus offering a new, relatively unexplored set of mechanism to study this relationship.

Based on the above arguments, I propose that:

Hypothesis 8: Psychological contract fulfillment will partially mediate the relationship between co-worker support and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.

3.9 Interaction effect between high performance work systems and frontline management leadership behaviour in predicting psychological contract fulfillment

While HPWS is a strong driver of psychological contract fulfillment, frontline managers also play active roles in shaping the perceptions of employees' psychological contract fulfillment. A strong HRM system *in conjunction with* effective supervisor behaviours, is likely to further reinforce perceptions of psychological contract fulfillment compared with each being considered independently (see Bowen & Ostroff 2004). For instance, Purcell and Hutchinson (2007) proposed that "there is a symbiotic relationship between frontline managers and HR practices....." (p. 16). Illustrating this argument, they contended that high quality frontline manager-employee relationships are a prerequisite for successful implementation of HRM practices.

More recently, McDermott et al. (2013) reasoned that "HR systems and line managers' leadership styles each have the potential to influence employee behaviours and attitudes, through their impact on ability, motivation, and opportunity for employees to perform". This view has been extended by several scholars who suggest that there is an interplay between HRM systems and front line leaders'

behaviours on employees' perceptions of the psychological contract (Purcell & Hutchinson, 2007; Bapiste, 2008; Brandl, Masen & Madsen, 2009; Stanton, Young, Bartram & Leggat, 2010). Boxall et al. (2011) concurred with this view, stating:

...the problem of internal fit in HRM is not about reinforcing a single set of messages in which all HR practices salute the same flag. It is better understood as a blending process in which a *mixed set of messages*, embedded in *HR practices* and in the *personal behaviour of first-line* and higher-level managers, supports the operating model underpinning the business's success (p. 1528-1529, emphasis added).

In the context of this thesis, employees are likely to be influenced both by the HRM practices they experience and by their line managers' leadership behaviour. The interplay between these relationships may influence the perceptions of the psychological contract fulfillment. Furthermore, it is clear that just as good management has the capacity to overcome the failings of poor HRM system, poor frontline management could potentially offset a progressive HRM system.

Based on these theoretical arguments, I propose the following hypothesis:

Hypothesis 9: There is a two-way interaction between high performance work systems and frontline management leadership behaviour in predicting psychological contract fulfillment.

3.10 Interaction effect between high performance work systems and co-worker support in predicting psychological contract fulfillment

Kehoe and Wright (2013) argued that while employees develop their own exchange relationships with the organisation, this is not done in isolation. Rather, the relationships are built in the context of constant interactions with co-workers with whom they share their daily experiences. This argument is in accordance, with the ambit of social information processing theory (Salancik & Pfeffer, 1978), as discussed in Section 2.4.3. It is proposed that the ways in which employees develop their opinions regarding their obligation to and from the organisation is predicated upon the information they

receive from their co-workers. There is also theoretical support for the idea that HPWS could influence an employee's ability to make sense of the work environment as well as of the relationships with peers (Bowen & Ostroff, 2004; Mossholder, Richardson & Settoon, 2011). For example, Frenkel and Sanders (2007) emphasised that HPWS where social partnerships inherent in employer-employee relationships are extended to the bonds employees share with peers, and thus will positively influence co-worker support.

The role of co-workers can be considerably crucial in interpreting HPWS, especially evident in cases, where the employee has not had any personal experience with a particular HRM practice (Nishii, Lepak & Schneider, 2008; Frenkel, Restubog & Bednall, 2012; Kehoe & Wright, 2013). In such situations, as noted by van Knippenberg et al. (2007), employees often have little choice but to “rely on others to make sense of issues for which no ‘objective’ reference point exists” (p. 55). Hence, employees depend on an informal peer reference group comprising of their co-workers. This reference group are likely to be most trusted and hence relied upon to interpret HRM practices. Thus, co-workers influence employees' perceptions of HPWS, which in turn, exerts a strong influence on their perceptions of the psychological contract fulfillment (Ho & Levesque, 2005; Mossholder et al., 2011).

Accordingly, I propose the following hypothesis:

Hypothesis 10: There is a two-way interaction between high performance work systems and co-worker support in predicting psychological contract fulfillment.

3.11 Interaction effect between frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment

This thesis conceptualises that leadership behaviours of frontline managers interact with co-worker support to predict psychological contract fulfillment. On a conceptual level, this interaction is deemed to be logical since they are both an integral part of the work environment. Notwithstanding this, the nature of the interaction merits closer scrutiny, as employee relationships with frontline managers and co-workers could be positive or negative (Chiaburu & Harrison, 2008). Similarly, Ng, Feldman and Butts (2014) suggested that employees forge multiple social relationships, and the salience of one relationship may increase (or decrease) at the expense of other relationships.

It is argued that there is a need to understand if the impact of co-workers is substituting or overlapping with the impact originating from other social entities such as frontline managers or leaders (Chiaburu & Harrison, 2008). Taking this argument further, it could be suggested that co-worker support could have the ability to diminish the efficacy of FLM leadership behaviour in the fulfillment of the psychological contract. It is therefore both relevant and important that the interaction of co-worker support and frontline leaders' behaviour be studied concurrently. I am not aware of any previous studies that have examined the interaction effects of frontline leaders' behaviour and co-worker support in predicting the psychological contract fulfillment. The current study tests the interplay between HPWS and co-worker support on psychological contract fulfillment.

For the aforementioned reasons, I make the following prediction:

Hypothesis 11: There is a two-way interaction between frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment.

3.12 Interaction between high performance work systems, frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment

Employees develop distinct social exchange relationships specific to parties they encounter at work including employer, line manager and co-workers (Conway, Kiefer, Hartley & Briner, 2014). Specifically, Chiaburu and Harrison (2008) suggested that the influences originating from co-workers, leaders, and the organisation should be examined simultaneously as it would be beneficial in advancing theory. They further lamented what they perceived to be a lack of attention in the extant literature, and theory development regarding these inter-relationships. From the foregoing, it is logical to examine HPWS in conjunction with FLM leadership behaviour and co-worker support, rather than as distinct and separate aspects of the work environment. This is an important but as yet untested proposition, which leads to the following hypothesis:

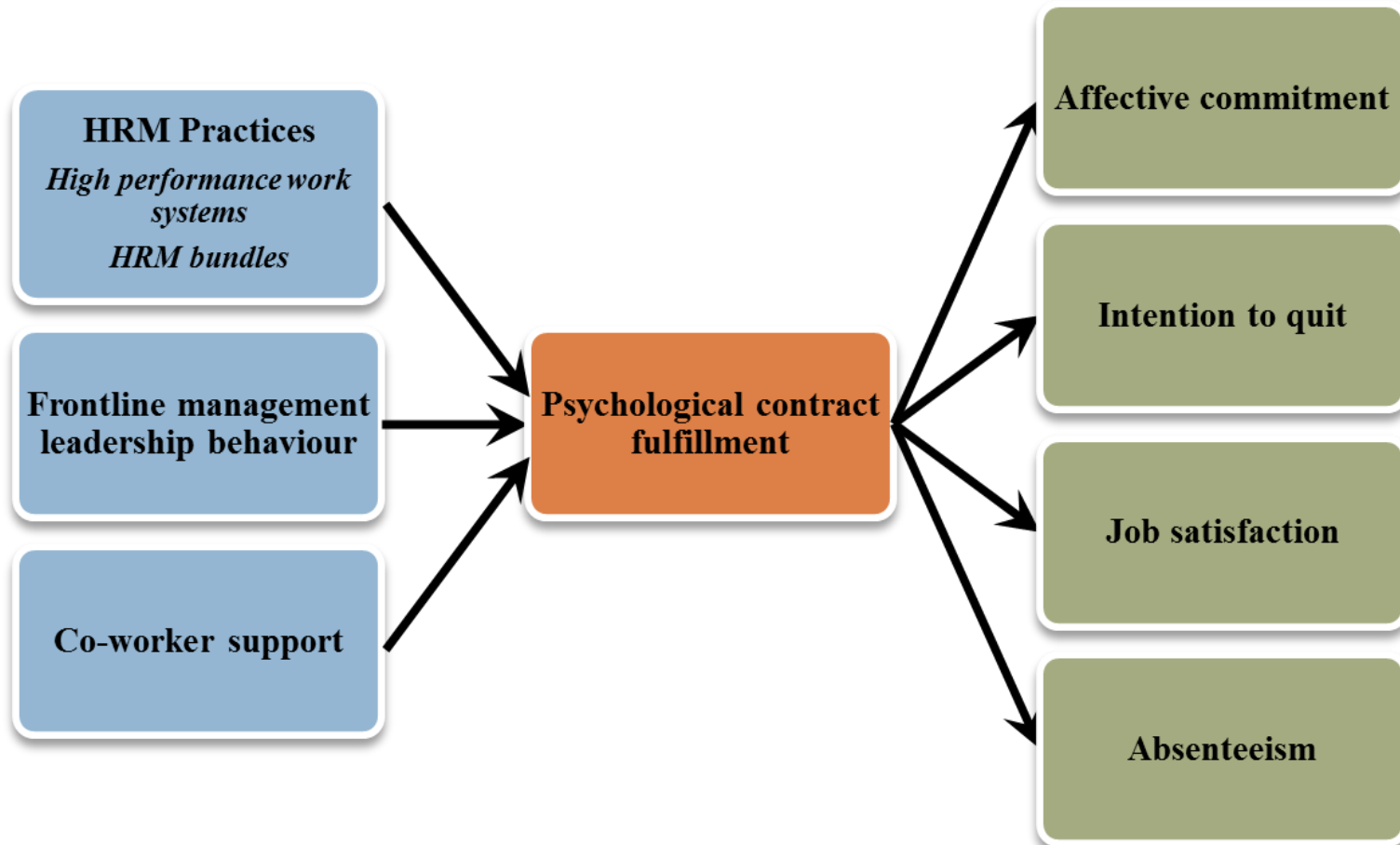
Hypothesis 12: There will be a three-way interaction among high performance work systems, frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment.

3.13 Chapter summary

The present chapter set out to provide a comprehensive review of the antecedents and outcomes of psychological contract fulfillment. Three antecedents were highlighted: HRM practices, FLM leadership behaviour and co-worker support. Each play a significant role in informing and extending the understanding of the psychological contract. The role of psychological contract fulfillment on the four key employee outcomes: affective commitment, job satisfaction, intention to quit and absenteeism was also reviewed. This chapter also examined psychological contract fulfillment as a partial mediator between: a) HPWS and employee outcomes, b) FLM leadership behaviour and

employee outcomes, and c) co-worker support and employee outcomes. Finally, it was also proposed that two-way and three-way interaction effects exist amongst HPWS, FLM leadership behaviour and co-worker support, in predicting the psychological contract fulfillment. Figure 3.3 presents the hypothesised model for the current study and Table 3.4 summarises the hypotheses proposed in this study. The next chapter provides an overview of the methodology used to test the hypotheses proposed in the current research.

Figure 3.3: Hypothesised model¹¹



¹¹ Conceptual model with direct effects only depicted. The indirect (mediation and interaction) effects are inferred.

Table 3.4: Summary of relationships hypothesised in this thesis

Hypothesis	Hypothesised relationship
Hypothesis 1	High performance work systems will be positively related to psychological contract fulfillment.
Hypothesis 2	a) Ability-enhancing HRM bundle, b) motivation-enhancing HRM bundle, and c) opportunity-enhancing HRM bundle will be positively related to psychological contract fulfillment.
Hypothesis 3	Frontline management leadership behaviour will be positively related to psychological contract fulfillment.
Hypothesis 4	Co-worker support will be positively related to psychological contract fulfillment.
Hypothesis 5	Psychological contract fulfillment will be related positively to a) affective commitment; b) job satisfaction; and negatively related to c) intentions to quit and d) absenteeism.
Hypothesis 6	Psychological contract fulfillment will partially mediate the relationship between high performance work systems and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.
Hypothesis 7	Psychological contract fulfillment will partially mediate the relationship between frontline management leadership behaviour and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.
Hypothesis 8	Psychological contract fulfillment will partially mediate the relationship between co-worker support and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.
Hypothesis 9	There is a two-way interaction between high performance work systems and frontline management leadership behaviour in predicting psychological contract fulfillment.
Hypothesis 10	There is a two-way interaction between high performance work systems and co-worker support in predicting psychological contract fulfillment.
Hypothesis 11	There is a two-way interaction between frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment.
Hypothesis 12	There will be a three-way interaction among high performance work systems, frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

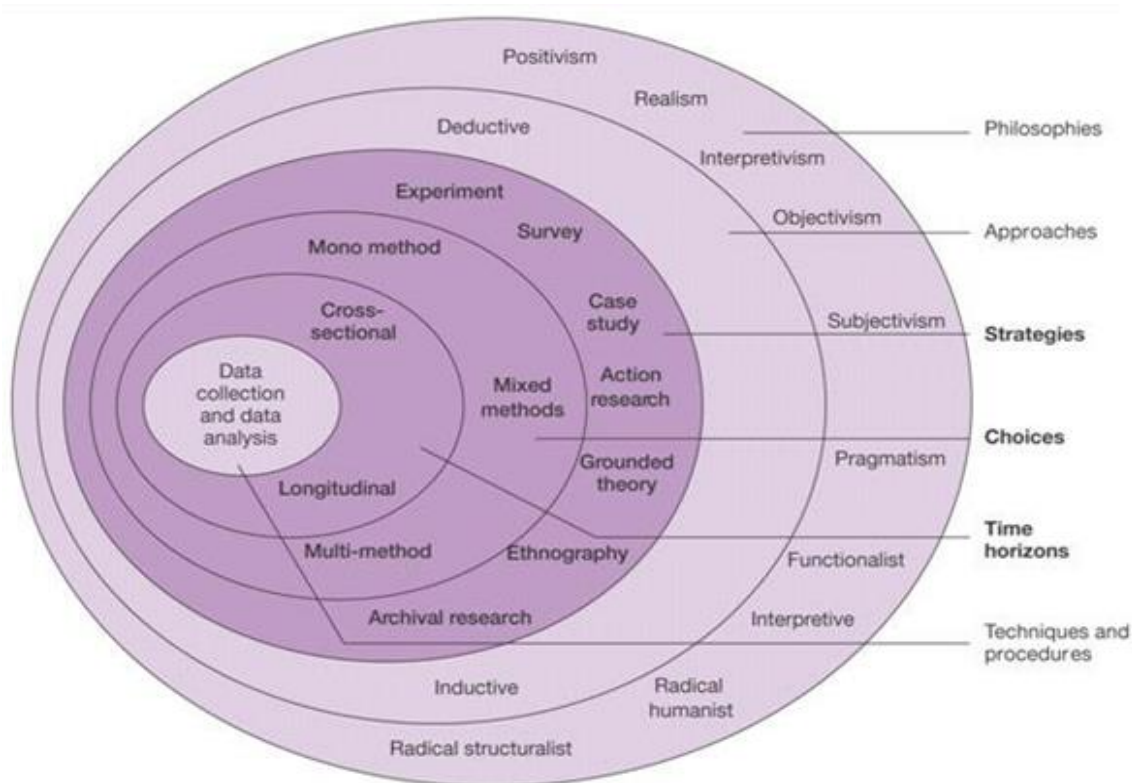
Research design is often referred to as a “framework for the collection and analysis of data” (Bryman, 2012, p. 46). The choice of research design reflects the decisions about the priority being given to a range of dimensions of the research process. Each research study is guided by the choice of methodology, which in turn is driven by the research paradigm concerning the nature of reality (ontology), how the knowledge about reality is understood (epistemology) and the role of values (axiology). Crotty (1998) notes that in any research study, two questions are pivotal: the methodologies and methods we propose to use and justification of the present choice.

Chapter 2 and 3 provided a comprehensive review of literature, built a proposed research framework and developed a number of hypothesised relationships. This chapter presents the research design adopted for the present study based on the elements of the research framework proposed by Saunders, Lewis and Thornhill (2012). It expounds the research paradigm based on the ontological, epistemological, methodological and axiological assumptions informing the decision to utilise the method in relation to the research questions. Further, this chapter justifies the choice of research method and addresses the fit of the current study to the criteria for evaluating social research: validity, reliability and replicability, generalisability respectively. Additionally, this chapter outlines the preferred data analysis techniques and the time frame. Finally, it discusses the ethical considerations in relation to informed consent, anonymity and confidentiality within the context of this research.

4.2 Research typology

Saunders et al. (2012) use the metaphor of an ‘onion’ to present the aspects of research once the research questions have been finalised. The layers of the onion can be classified into six elements: philosophy, approach, strategy, choice, time horizon and data collection and analysis and is illustrated in Figure 4.1.

Figure 4.1: Research typology (Saunders et al., 2012, p. 128)



The data collection methods belong to the centre of this research onion. These along with other layers are explained in the next sections.

4.3 Research philosophy

Research philosophy is a comprehensive concept that details the development of knowledge and the nature of that knowledge. The two main ways of examining the research philosophy are: ontology

and epistemology. This concept draws upon the work by Burrell and Morgan (1979) work in the book, *Sociological Paradigms and Organizational Analysis* on which the four paradigms- Pragmatism, Positivism, Realism and Interpretivism are based. They identified five sets of assumptions on which the subjectivist/objectivist dimension vary: *ontological, epistemological, axiological, methodological assumptions and assumptions about human nature*. These assumptions further trickle through to lower levels and influence the research process. The next sections elucidate the ontological and epistemological beliefs for the four paradigms.

4.3.1 Ontology

Ontology is concerned with the nature of reality. The key point is to examine whether social entities can be considered as objective entities that have a reality external to social actors or whether this reality is built up from the perceptions and actions of social actors between them. The consideration of “ontology is fundamental, not optional” (Delbridge, 2006, p. 1210). Burrell and Morgan (1979) suggest that the philosophies of social science are either ‘subjectivist’ or ‘objectivist’ in orientation. Objectivism refers to the position that social entities exist in reality external and independent of social actors (see Table 4.1). On the other hand, subjectivism suggests social phenomena are created from the perceptions and actions of the social actors. Both pragmatism and positivism, in line with objectivist orientation, view social entities as external. Pragmatists believe that no single point of view can ever give the entire picture and there maybe multiple realities. Positivists suggest that the reality is independent of the social actors. Realists are situated at a point between subjectivist and objectivist orientation, thus share aspects of both orientation types. They believe reality is objective and independent of human thoughts and beliefs. Their point of departure from positivists is that they believe reality can be interpreted through social conditioning. The last paradigm, Interpretivists, believe reality can be socially constructed; could be changed and may have multiple interpretations.

The literature on psychological contract draws upon a number of disciplines, namely, HRM and organisational psychology. Most of the studies in HRM have been dominated by positivist paradigm, with a strong focus on cause-effect relationships, statistical tests and predominantly linear thinking (Brewster, 1999; Watson, 2004; Legge, 2005; Hesketh & Fleetwood, 2006; Delbridge & Keenoy, 2010).

The key ontological debates in this area are those by Karen Legge (Legge, 2001, 2005) and David Guest (Guest, 1999, 2011). Both scholars have focused on the gap between the rhetoric and reality in HRM and have called for more empirical work (Harley & Hardy, 2004). While Guest increasingly advocates more positivistic research, Legge has called for more qualitative and longitudinal work adopting a social constructivist position. This thesis contributes and extends to the psychological contract model proposed by Guest and Conway. Guest (1987) argued that “if the concept is to have any social scientific value, it should be defined in such a way as to . . . allow the development of testable hypotheses about its impact” (p. 503). Thus, in line with his arguments, espousing a positivistic stance was considered appropriate for this thesis.

4.3.2 Epistemology

Epistemology considers what makes acceptable knowledge i.e., the nature of knowledge and principles and procedures governing that knowledge (Bryman, 2012). As noted in Table 4.1, Pragmatists focus primarily on practical applied research and use different perspectives to interpret the data. Positivism is an epistemological position that applies a natural science, hypothetico-deductive, approach to phenomenon of interest (Cook & Reichardt, 1979). Realists argue that observable phenomena provide credible data and facts. In contrast, the interpretivists emphasise subjective meanings and social phenomena.

Table 4.1: *Ontology and epistemology of research paradigms (Saunders et al., 2012, p. 140)*

	Pragmatism	Positivism	Realism	Interpretivism
Ontology	External, multiple, view chosen to best enable answering of research question	External, objective and independent of social actors	Is objective. Exists independently of human thoughts and beliefs or knowledge of their existence (realist), but is interpreted through social conditioning (critical realist)	Socially constructed, subjective, may change, multiple
Epistemology	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data	Only observable phenomena can provide credible data, facts. Focus on causality and law like generalisations, reducing phenomena to simplest elements	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations (direct realism). Focus on explaining within a context or contexts.	Subjective meanings and social phenomena. Focus upon the details of situation, a reality behind these details, subjective meanings motivating actions

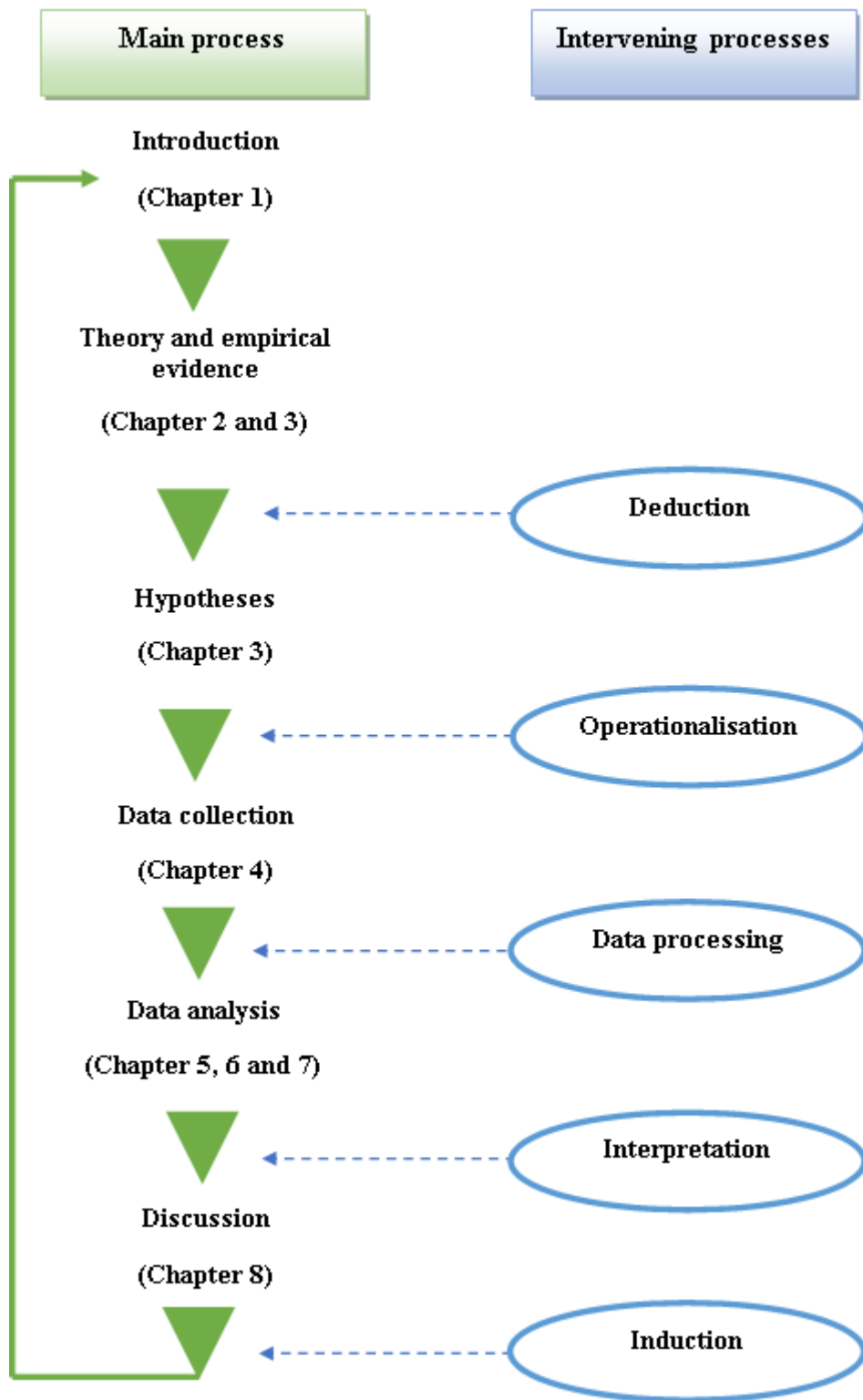
This study is positioned in the positivistic paradigm. It is argued that quantitative researchers within a positivist and psychological paradigm are using increasingly sophisticated data analysis techniques which provide key insights into the debates relevant to this field (Truss, Shantz, Soane, Alfes & Delbridge, 2013). Studies adopting the positivistic view also extend prior quantitative research, and are able to shed a more nuanced light on the antecedents and outcomes of psychological contract, thus advancing the understanding of this concept.

4.4. Research approach

This thesis implements a hypothetico-deductive approach. The process of deduction (as explained in Bryman, 2012) is that a researcher deduces hypotheses on the basis of what is known about a particular domain (i.e. the strategic HRM and psychological contract in the context of this research) and then translate them into operational terms.

This translation process (see Figure 4.2) can be referred to as operationalisation; in other words, to devise measures of the concept that the researcher is interested in. Data are then collected and analysed in order to test the hypotheses. The researcher's findings are finally fed back into the body of the knowledge (or theory in the domain).

Figure 4.2: Research process (adapted from Bryman, 2012)



4.5 Methodological choice

The methodological choice is driven by the research philosophy and approach. As discussed in the previous sections, this study takes a positivist view and thus is deductive in nature. Studies could either be quantitative, qualitative or mixed, basis the methodology. Based upon Saunders et al. (2012), Table 4.2 distinguishes between quantitative and qualitative research.

Table 4.2: Differences between quantitative and qualitative research (Adapted from Saunders et al. (2012))

	Quantitative	Qualitative
Research philosophy	Positivism. May be used within the realist and pragmatist philosophies.	Interpretivism. May be used within the realist and pragmatist philosophies.
Research approach	Predominantly deductive	Predominantly inductive
Research objective	Examines relationships between variables.	Studies participants' meanings and relationships between them.
Position of researcher	Seen as independent from respondents	Plays a more active role
Research strategy	Principally associated with experimental and survey research	Key strategies used include case study, ethnography, action research, grounded theory and narrative inquiry.

The first difference between these two types of research design is based on research philosophy. As quantitative research is highly structured, it usually adopts the positivist view. In contrast, researchers make sense of the subjective and socially constructed meanings expressed about the phenomenon being explored. Thus, most qualitative research falls into the interpretivist paradigm. Second, quantitative approach is generally linked to a deductive approach as the key aim is to test theory. The foundation underlying the majority of qualitative research is inductive approach. There may be some exceptions where the objective is to test an existing theoretical perspective using qualitative procedures.

The key objective of quantitative research is to examine the relationships between variables measured numerically and analysed using statistical techniques. Qualitative research focuses on studying the interpretations of the respondents and relationships between them. In case of quantitative research, the role of researcher is usually limited to data collection instrument. As qualitative research involves data collection using methods like interviews and observations; the role of researcher is more active. Quantitative research is mainly conducted using experimental and survey strategies. On the contrary, qualitative research uses a variety of strategies like case study, ethnography, action research, grounded theory and narrative inquiry.

Employing either quantitative or qualitative research is usually referred to as mono method. Studies could also follow multiple methods research design, which refers to using more than more method for collecting and analysing data. The multiple methods research design is further classified into multimethod and mixed methods research. Multimethod research refers to use of more than one data collection method, but is restricted to either qualitative or quantitative research. For instance, use of survey and archival data for quantitative research would be termed as multimethod quantitative research. On the other hand, mixed methods research combines both quantitative and qualitative research in one research design. The methodology adopted for this thesis is mono-method quantitative research as it is more appropriate for answering the research questions posed by the current study.

4.6 Research strategy

Research strategy is the linchpin aimed at converging the discussion of philosophy with the consequent choice of data collection and analysis methods (Denzin & Lincoln, 2005). Research strategy is thus dependent upon the nature of study which could be exploratory, descriptive or

explanatory. Some examples of research strategies include experiment, survey, archival research, case study, ethnography, action research, grounded theory and narrative inquiry.

Within the survey method, data are generally collected from a single source and are usually cross-sectional. This is also true about psychological contract research which has been dominated by quantitative studies. To illustrate, Conway and Briner (2005) estimated that about 90% of the psychological contract empirical studies used questionnaire surveys (of this 70% were cross-sectional and 20% longitudinal surveys) and 10% of empirical studies were based on qualitative interview data.

Apart from being appropriate to answer the research questions, this study uses quantitative survey for collecting data for the following reasons. First, researchers argue that quantitative methods like survey help in collecting data that can be used to test hypotheses proposed after reviewing extant literature. For instance, Guest (1999) stated that the quantitative methods often “involve rigorous testing of theoretical claims using survey data” (p. 9), also echoed in mainstream psychological contract research (Katou & Budhwar, 2012; Conway et al., 2014). Second, survey method is seen as being easy to explain and to understand (Saunders et al., 2012). Third, results obtained using a survey instrument, if based on appropriate sampling techniques, usually exhibit high generalisability that are representative of the whole sample at a lower cost as compared to attempting to collect data from entire population. This strategy also has wide-ranging limitations. There is a limit to the constructs that can be measured using one questionnaire. As the questionnaire is pre-structured, it is not possible to change the order/ content of items for each respondent. This will be further examined in the data collection methods section.

4.7 Time horizon

The time horizon of a study is based upon the research questions it seeks to address. Differentiating on the basis of time horizon, the studies can be classified into: cross-sectional and longitudinal. Cross sectional research involves collecting data on one occasion only from the participants while longitudinal studies gather data at multiple time points. Thus, cross sectional designs only allow for examining relationships between variables, because there is no time ordering to the variables and data is collected simultaneously. This creates a problem in establishing the direction of causal relationships between variables. Extant research in HRM and organisational psychology has argued that this research design does not imply causality between the relationships it tests, which is a serious limitation (Paauwe, 2009; Guest, 2011; Jiang et al., 2013).

Though this study recognises the strengths of longitudinal research, a cross-sectional data collection method was employed. This choice was governed by time, data access and resource constraints. It takes a longer period of time to gather data for longitudinal studies. In addition, since access to participants was approved by the senior management of participant organisations, to reduce uncertainty over future access, data were collected at a given point of time. Also, since data were collected from 35 work units in India, it would incur a significant time and monetary investment to collect data at future time points.

4.8. Data collection

This section presents a case for using quantitative survey in the study. While employing the quantitative and qualitative methods, it's important to focus on what the study wants to achieve. As argued earlier, the choice of methods rests on the assumptions regarding the nature of knowledge and the method used to obtain that knowledge (Bryman, 2012).

Survey is defined as a method of data collection that utilises questionnaires (Ghauri & Gronhaug, 2005). It is an effective tool to get opinions and attitudes. The steps in conducting a survey include: a) sampling frame, b) mode of administration, c) develop questions, d) review questions and face validity, e) pilot and revise questions, f) finalise questionnaire, g) sample from population, h) administer questionnaire to sample, i) data entry of completed questionnaires, and j) analyse and interpret findings (Bryman, 2012). The next sections will discuss each of these steps in Section 4.8.3.

4.8.1. Sampling frame

My sample of 1,051 permanent full-time employees worked in 33 large organisations in India, was selected using the convenience sampling approach. Due to access restrictions, the sample was based solely on private sector organisations. Owing to liberalisation of economic policies in the 1990s, an influx of foreign organisations entered India in a short span of time. This resulted in increased competition amongst large Indian organisations to recruit and retain skilled workers, as evidenced in improved recruitment and retention processes (Budhwar, 2009; Jain et al., 2012). In response, it appears that large organisations are more likely than smaller organisations to adopt formalised rather than adhoc approaches to HRM practice (Budhwar, 2009; Budhwar and Varma, 2011). As my research is based on formalised approaches to HRM, I only included organisations having a minimum of 500 employees and a senior HR executive in my sample.

Data were collected from nine metro cities, namely, Delhi, Noida, Faridabad, Gurgaon, Pune, Mumbai, Bangalore, Chennai and Ahmedabad. Due to the complexity of data collection procedures and to increase participation rate, the senior members in each organisation, such as CEO, Managing Directors and HR Directors, were approached through various ways. A popular formal networking

tool, LinkedIn was used to identify a senior member in each organisation. This was done in view of the increasing corporate use of social networks in India. Further, I shared the aims and objectives of the study with them. The senior members then agreed on the number of employees that could be administered the survey. The minimum number of employees administered the survey in any organisation was 15. Once access was granted, the HR contact from the organisation selected a random sample from the frontline employees employed in that organisation.

The organisations were representative of a wide variety of industry sectors, including financial services, outsourcing, computer software, telecommunications, printing, automotive etc. The respondents were employed in key organisational functions such as finance, marketing and sales. Examples of their job titles included Customer service associate, Software engineer and Executive-Finance. Since, the data were primarily based on HRM practices, employees working in the HR department were excluded from this study in an attempt to reduce bias. The diverse task contexts and organisational settings of this sample enhance the generalisability of the findings.

Data were collected from front line employees. The related constructs in this study like HRM practices, co-worker support, psychological contract, and job satisfaction comprise self-referential respondent perceptions and thus best studied by asking the intended recipients, the employees (Lance & Conway, 2010). Since this study was explicitly focused on employee perceptions and interpretations, data were collected only from frontline employees rather than other organisational groups like frontline managers.

4.8.2 Mode of administration

The mode of administration is a self-administered questionnaire survey. The researcher introduced the objectives of the study to the respondents in each organisation and then administered the

questionnaire to the respondents. This was done to provide a background for research to the respondents and clarify any related queries. The questionnaires were distributed by hand and then collected later. The researcher left the room while the respondents were filling out the questionnaires in order to avoid influencing them to answer in a socially desirable way. Also, the researcher refrained from giving any personal opinions about the items included in the questionnaire. This was done to reduce any bias related to the researcher and managing objectivity of the study. These issues have also been addressed in Section 4.11.

There are a number of sampling and data-quality advantages to this method. Response rates are usually higher than those of telephone or mail based surveys (Saunders et al., 2012). Rapport is also better in this type of survey as the respondents get to see the researcher and are able to ask any queries if required.

While there are many advantages of this method, there are four key disadvantages. First, it is expensive to travel to all locations to administer the questionnaire. Second, the questionnaire usually takes more time to fill as compared to a similar telephone survey. Third, the respondents may hesitate to report personal types of behaviour. Finally, the respondents are more likely to provide socially desirable responses.

4.8.3 Generation of questionnaire

The process of development and validation of questionnaire is based on the approach recommended by Churchill and Iacobucci (2002). Figure 4.3 illustrates the procedure which is used as a guideline for constructing an effective questionnaire.

4.8.3.1 Step One: Specifying information sought

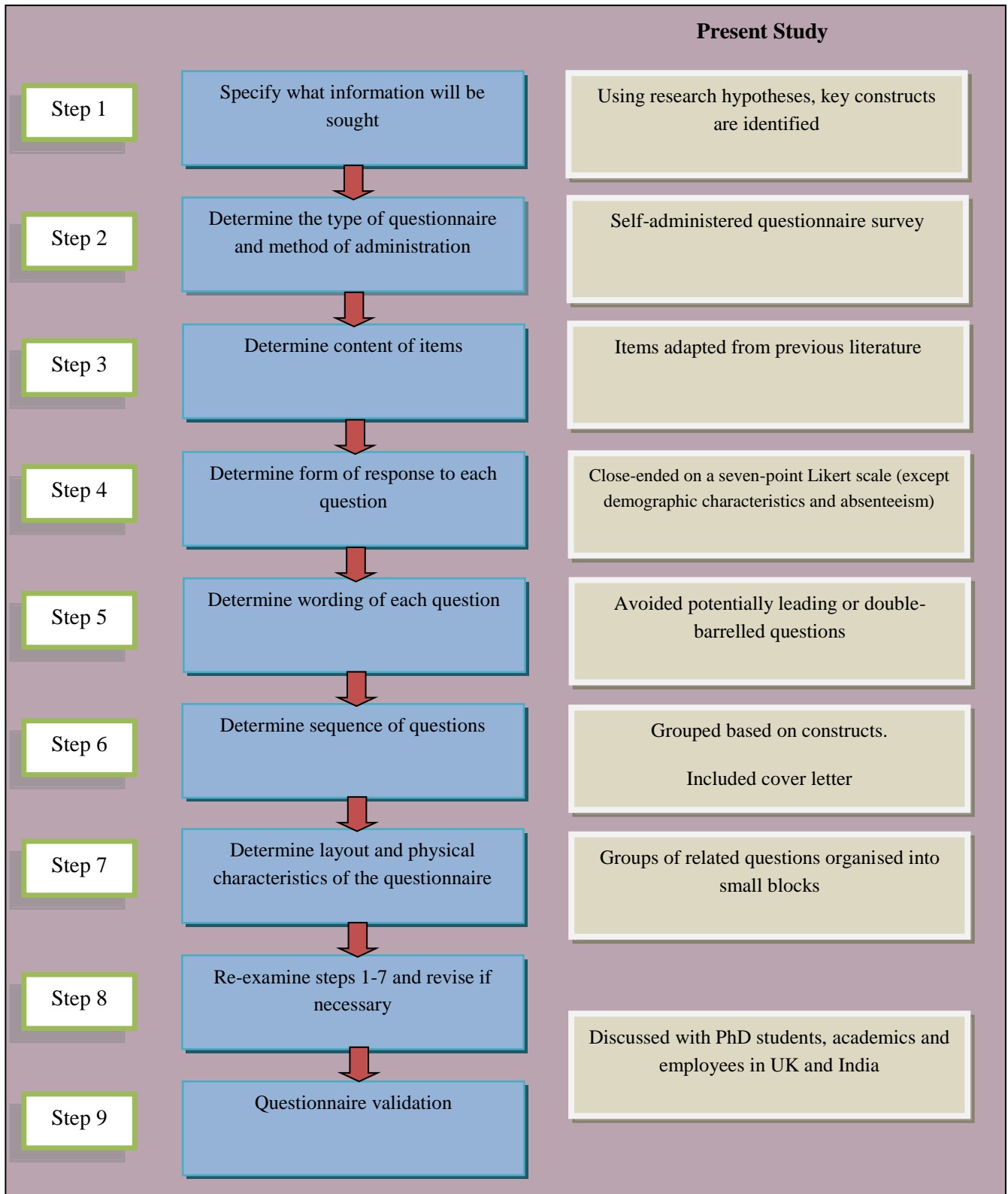
The first step was to determine the questions which would most clearly elucidate the situation. Questions were derived from the constructs of interest explicated in the conceptual framework for this study, presented in Chapter 3. Specifically, the conceptualisation of key constructs, namely, HRM practices, FLM leadership behaviour, co-worker support, psychological contract fulfillment (global and facet), affective commitment, intention to quit, job satisfaction, and absenteeism formed the basis of their operationalisation. Furthermore, so as to encapsulate and gain a greater understanding of the respondent's profile, demographic questions were also included with the understanding that they might have a role as control variables.

4.8.3.2 Step Two: Determining the type of questionnaire and method of administration

Regarding the current study, a structured questionnaire with majority of closed ended questions was thought to be most appropriate. Key benefits of the structured questionnaire include, first, the length of each questionnaire could be better controlled in comparison to the unstructured questionnaire approach. Second, the structured approach ensured that all informants were subjected to the same stimulus and questions in the same order, thus ensuring a degree of uniformity (Saunders et al., 2012).

Regarding questionnaire administration, there are two types, namely, self-administered and interviewer administered, according to Saunders et al. (2012). Self-administered questionnaire can be conducted through post, internet, or delivery and collection method, while the interviewer administered questionnaires are normally undertaken through telephone interview and/or face to face interview. Self-administered questionnaire was considered to be the most appropriate method for data collection due to its well documented benefits, discussed earlier in Section 4.8.2.

Figure 4.3: Questionnaire development process (Churchill & Iacobucci, 2002, p. 315)



4.8.3.3 Step Three: Content of individual items (Operationalisation of constructs)

Before variables can be measured, operationalising the variables is important so that it can be observed and measured. This step involves transferring theoretical concepts to measurable variables. Substantial effort was devoted to developing an efficacious set of questions due to the suggestion that strong measures can build rigour into many different parts of the study (Hair, et al., 2013). According to Churchill and Iacobucci (2002), single item measures suffer from a number of important drawbacks thus the vast majority of constructs (except absenteeism and demographic characteristics) under investigation in this study were operationalised as multi-item in nature. These indicators were mainly extracted from relevant extant literature. Unless otherwise noted, a 7-point Likert scale was used ranging from 1 (strongly disagree) and 7 (strongly agree). The details of the complete questionnaire are given in Appendix 2.

HRM Practices have been measured using a 16-item scale. These items have been compiled using prior literature studying HPWS (Huselid, 1995; Guest & Conway, 2004; Purcell, Kinnie, Swart, Rayton & Hutchinson, 2009; Kehoe & Wright, 2013). Sample items include "Applicants undergo structured interviews (job-related questions, same questions asked of all applicants and rating scales) before being hired." and "Employees have clear career paths within the organisation."

Frontline management leadership behaviour are aimed at HR duties carried out by FLMs including selecting, appraising, developing, communicating and involving, which are often related to influencing employee attitudes and behaviours and giving direction. There are five items for this construct, which have been adapted from previous literature, mainly, Guest and Conway (2004), Purcell and Hutchinson (2007) and Purcell et al. (2009). An example item is "The supervisor is good at...providing coaching and guidance to help improve my performance."

Co-worker support is defined as ‘an employee’s global beliefs concerning the extent to which the co-workers’ value their contributions, cares about their well-being and have positive attitudes towards them’ (see Chapter 3). The nine-item survey of perceived co-worker support was developed to be parallel to the Survey of Perceived Organisational Support (SPOS), with the target being co-workers rather than the organisation. The items for the present study are adapted from Ladd and Henry (2000), which include “My co-workers... are supportive of my goals and values.” and “Help is available when I have a problem.”

Psychological contract fulfillment (facet) was measured using a thirteen-item scale adopted from Guest and Conway (2002). The measure assessed the extent to which the respondent felt the organisation had kept its promises (7 items), treated them fairly (2 items) and how much they trust the organisation (4 items). Sample items include “Has the organisation fulfilled its promise or commitment to.... provide you with a reasonably secure job”, “Overall, do you feel you are fairly rewarded for the amount of effort you put into your job.” and “To what extent do you trust your immediate manager to look after your best interests.”

Psychological contract fulfillment (global) was measured using a four-item scale adopted from Conway and Briner (2002). The measure assessed the general perceptions of psychological contract fulfillment. A sample item includes “In general, this organisation has kept its promises to me about what I will get from them.”

Affective Commitment refers to “the employees’ identification and emotional attachment to their employing organisation” (Allen and Meyer, 1990, p. 1). This dimension is measured by seeking response to six items developed by Meyer, Allen and Smith (1993), and reverse coding was used for three items.

The scale has been widely tested in Indian context (Bhatnagar, 2007; Guchait & Cho, 2010) and also been used extensively in the context of psychological contract (Sturges et al., 2005; Parzefall, 2008; Blomme et al., 2010). The items used to measure affective commitment include, “I would be very happy to spend the rest of my career with this organisation.” and “I really feel as if this organisation's problems are my own.”

Intention to Quit has been defined as the extent to which an employee plans to quit the current organisation (Kim et al., 1996). The five-item scale is adopted from Kuvaas (2006) which in turn is based on prior measures e.g., Khatri, Fern and Budhwar (2001). Sample items include “I will probably look for a new job in the next year.” and “I may quit my present job next year.”

Job Satisfaction reflects an emotional state that results from the assessment of various aspects of one’s work situation. This variable was measured using a three-item Michigan Organisational Assessment Scale (MOAS) developed by Cammann, Fichman, Jenkins & Klesh (1979). The measure was chosen for its relative brevity compared to other multi-item job satisfaction instruments. This scale consists of only three items while other popular job satisfaction scales are generally much longer. Also, it is a face-valid measure of the affective component of job satisfaction and is a global measure. Example items are “All in all I am satisfied with my job.” and “In general, I don’t like my job.”

Absenteeism is treated as a form of withdrawal behaviour like turnover. This variable was measured using a single item measure adopted by Kehoe and Wright (2013). To assess absenteeism, the researcher asked the respondents to report the number of days they had missed work in the last calendar year. Consequently, the item read:

How many days did you miss from work in the last 12 months (excluding vacation)? _____

Demographic Variables Questions relating to the demographic variables of gender (0 = male, 1 = female), age (1 = under 30, 2 = 30 to 39, 3 = 40 to 49, 4 = 50+), organisational tenure in years/months, educational level (1 = high- school diploma, 2= university degree, 3 = post-graduate/professional qualification, 4= others) and sector (0= service, 1= manufacturing) were included in the questionnaire.

4.8.3.4 Step Four: Form of response to each question

The next stage in this process is to determine the form of the responses to be derived from the questionnaire. It was decided to use closed ended questions because they are easier for respondents to answer and not only save time but also reduce the costs involved in data processing (Oppenheim, 1992), since respondents are told to only select one answer and not multiple answers. Questions included dichotomous and multichotomous questions, and scale measurement. Dichotomous questions are mainly used to collect demographic data when only two alternatives exist (for example, female/male). A seven-point Likert scale was used to collect information on employees' response regarding all constructs except absenteeism and demographic characteristics.

4.8.3.5 Step Five: Question wording

Often, the quality of research is poor because respondents misunderstand the content of questions as a result of inappropriate or technical wording and phrasing, or reluctance to answer the question. Hence, the wording in the questionnaire was kept as simple as possible. Moreover, questions which were potentially leading or double-barrelled (questions that call for two responses) were avoided wherever possible. This also helps avoid the potential acquiescence bias, which is further discussed in Section 5.4.

Further, the wording for the items constituting the constructs was not altered. Two constructs, namely, high performance work systems and psychological contract fulfillment (facet) were treated as formative in this study, unlike other studies that used the traditional reflective model to assess them. The wording was not changed to allow for comparison between the results of this thesis and previous studies employing these constructs as reflective. More so, the distinction between reflective and formative constructs is on the basis of direction of causality. This is explained in more detail in Section 4.10.2. This is evident in the study by Sangmook (2011), where in, the author uses items from previous scales while estimating public service motivation both as a reflective and formative construct.

4.8.3.6 Step Six: Question sequence

Once the form of response and appropriate question wording has been determined, the next step involved considering the sequence in which the question are presented. Researchers such as Churchill and Iacobucci (2002) have suggested criteria to determine question sequence such as a) using simple interesting opening questions, b) asking for classification information at the end, c) difficult or sensitive questions should be obtained within the main body of the questionnaire, and d) using a logical arrangement. Therefore, in line with the recommended procedures, demographic information was elicited from respondent at the very end of the questionnaire in order to maximise the response rate. Furthermore, questions were grouped into different sections by issues in order to provide flow and to make it easier for the respondent to answer. Also, the items pertaining to the independent and dependent variables were placed in separate sections. It is argued that this reduces potential common method bias as the respondents are unable to view independent and dependent variables together, also highlighted in Section 7.7.1 and 8.5.

4.8.3.7 Step Seven: Questionnaire layout and physical characteristics

The layout and physical characteristics of the questionnaire play a crucial role in the success of data collection. Good physical design not only encourages the respondent to participate in the study at the outset, but also facilitates the completion of the questionnaire in an efficient manner. Therefore, based on those recommendations, considerable emphasis was placed on the layout and design characteristics of the questionnaire during the academic discussion phase. The original design was criticised for its cluttered appearance and unattractive layout by a number of scholars and employees during the pilot test, hence the questionnaire was revised several times accordingly in order to provide an organised appearance.

Furthermore, groups of related questions were organised into small blocks, thus giving the appearance that the questionnaire will not take a long time to complete and keeping the respondent motivated to complete the questionnaire in full (Churchill & Iacobucci, 2002). Each question was also numbered to promote the participants' cooperation and facilitate the process of editing as well as coding. In addition, each questionnaire was distributed including a cover letter outlining the purpose of the study, and reassurance of participants' confidentiality and anonymity.

4.8.3.8 Step Eight: Re-examination and revision of questionnaire

A period of re-examination and revision was considered essential and subsequently proved to be particularly important for the current study, especially when the sample population contained employees from diverse education backgrounds and expressed considerable different levels of understanding towards the question content and wording (Churchill & Iacobucci, 2002).

4.8.3.9 Step Nine: Questionnaire pre-testing

A prior discussion was held with relevant groups, such as academics in UK and India, PhD students and employees, to give feedback about the questionnaire. They were asked to raise queries about confusion or uncertainty related to the items in the questionnaire or just ask questions about the study. With this feedback, I made the necessary changes to the questionnaire, where feasible. For instance, it was recommended to incorporate key information about anonymity and providing honest opinions on the cover page, which was subsequently included. In certain cases, no changes were made. For instance, some academics commented on the length of questionnaire. The questionnaire was not changed basis this comment as the measurement of these construct was necessary to address the research questions. These participants were not included in the final study sample. If the same participants were used then this could decrease the reliability and validity, as they would have already seen and responded to the questionnaire once.

4.9 Data entry of completed questionnaires

The data from completed questionnaires were transferred to the Statistical Package for the Social Sciences (SPSS) for data analysis. The next section will discuss the quantitative data analysis techniques which were used in the current study.

4.10 Data analysis

This section will discuss the tools which will be used to analyse data collected from the questionnaire survey. It also discusses the relevant criteria which could be used for assessing the current study. The concept of psychological contract connects organisational level and individual level HRM research because it focuses on exchange relationship between organisation and individual (Sonnenberg, Koene & Paauwe, 2011). The present study intends to examine the inter-

relationships between independent (HRM practices, FLM leadership behaviour, co-worker support) and dependent variables (psychological contract fulfillment, employee outcomes). As this implies analysis of multiple variables, this thesis will use multivariate analysis techniques.

The typology of multivariate techniques can be classified into first-generational and second generational techniques based on the research objective (see Table 4.3). If the objective of study is primarily exploratory, the first-generation techniques include cluster analysis, exploratory factor analysis and multidimensional scaling. An example of a second-generational technique used for exploration is Partial Least Square-Structural Equation Modelling (PLS-SEM). Researchers using data for confirmation purposes could use a first-generational technique such as logistic regression or a second- generational technique like Covariance-based Structural Equation Modelling (CB-SEM).

Table 4.3: Organisation of multivariate methods (Hair et al., 2013, p. 2)

	Primarily exploratory	Primarily confirmatory
First-generation techniques	Cluster analysis Exploratory factor analysis Multidimensional scaling	Analysis of variance Logistic regression Multiple regression
Second-generation techniques	PLS-SEM	CB-SEM, including Confirmatory factor analysis

Structural Equation Modelling (SEM) is one of the most rapidly growing analytic techniques in use today. The technique is being increasingly used in empirical studies on psychological contract (Turnley et al., 2003; Guerrero & Herrbach, 2008; Zhang & Agarwal, 2009). SEM does not involve a single statistical technique but instead refers to a family of related procedures including covariance structure analysis, covariance structure modelling or analysis of covariance structures. Several aspects of SEM differentiate it from other older multivariate methods. SEM allows analysis of

inferential data and estimate the amount of measurement error within the model (Byrne, 2001). A unique feature of SEM is that it assesses moderator and mediator relationships simultaneously unlike multiple regression techniques. Thus, SEM is a preferred technique for researchers who wish to test multiple hypotheses simultaneously (Kline, 2011; Hair et al., 2013). SEM can be classified into Partial Least Squares- Structural Equation Modelling (PLS-SEM) and Covariance-based Structural Equation Modelling (CB-SEM).

This study uses both first generational (Cronbach's alpha; Exploratory factor analysis) and second-generational technique (PLS-SEM) as opposed to CB-SEM because of three primary reasons (Becker et al., 2012; Hair et al., 2013). First, PLS-SEM is better equipped to handle both reflective and formative constructs. The next chapter will discuss the appropriateness of two key constructs, HRM Practices and psychological contract fulfillment (facet) as formative constructs. Second, if the structural model is complex (many constructs and indicators), PLS-SEM is more well-suited to handle the data than CB-SEM (Hair et al. 2013). Third, PLS-SEM is known to perform better in case of non-normal data as CB-SEM has stringent assumptions about the normality of data.

Data were analysed using SPSS for descriptive and exploratory factor analysis. For PLS-SEM, SmartPLS 2.0 was used. The graphical interface with the drag and drop drawing features provides rapid model specification and displays parameter estimates in a path diagram.

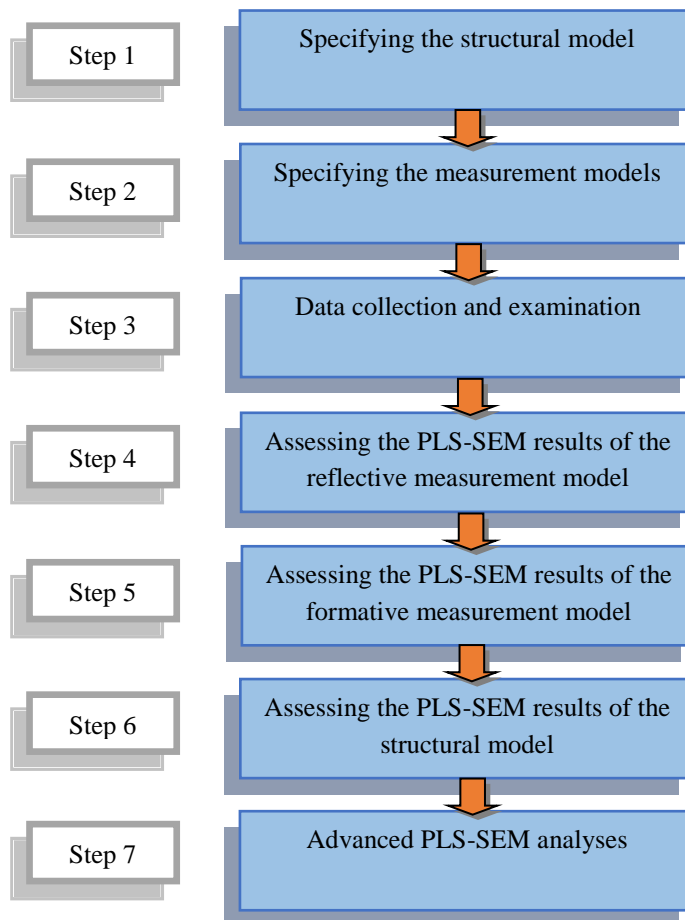
4.10.1 Steps of PLS-SEM technique

According to Hair et al. (2013), a typical PLS- SEM technique has six steps, which are presented in Figure 4.4.

In the first step, a model is specified by postulating hypotheses in the form of structural equations or by drawing a diagram. These equations define the relationships between the observed (manifest) and

unobserved (latent) variables. The second step specifies the constructs as reflective or formative based on the criteria illustrated in Section 4.10.2. This step is followed by the collection and examination of data. Subsequent to this specification, both reflective and formative measurement models are assessed in Steps 4 and 5. Once the data for the measures are considered reliable and valid, according to the criteria explained in Sections 4.10.2.1 and 4.10.2.2, the sixth step involves evaluating the structural model. Researchers can further conduct advanced PLS-SEM analyses, such as assessing higher-order models. Following these steps, researchers interpret their findings and conclusions.

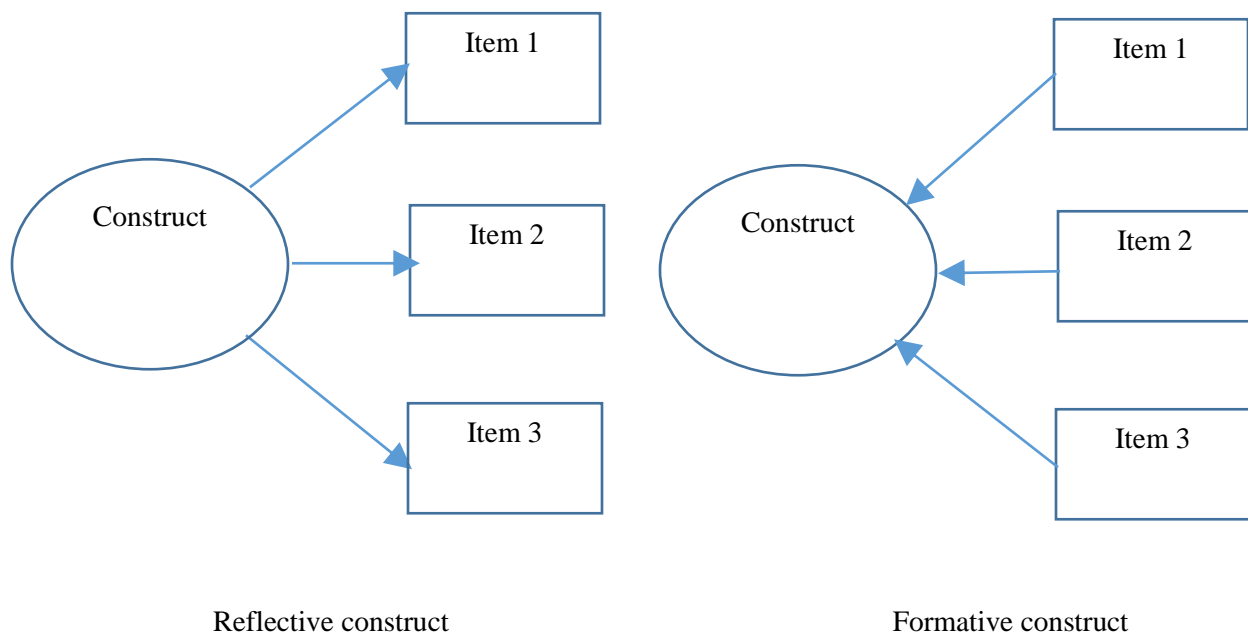
Figure 4.4: Steps involved in PLS-SEM (Hair et al., 2013, p. 25)



4.10.2 Measurement and structural model evaluation

To evaluate reflective and formative measurement models, it is necessary to distinguish between the reflective and formative constructs (Diamantopoulos & Sigauw, 2006; Hair et al., 2013). Reflective constructs suggest that the indicators are caused by the construct (see Figure 4.5). In other words, each item is a reflection of the overall construct, as well as being an indication of the other items in the measure. Also, the individual indicators should be interchangeable, and deleting one item would not alter the meaning of the overall construct, as long as the construct has sufficient reliability.

Figure 4.5: Difference between reflective and formative constructs (Hair et al., 2013, p. 44)



In contrast to reflective constructs, the items in formative constructs cause or ‘make up’ the construct itself. Each item constituting the formative construct is necessary for the development of the construct. Therefore, if an item is missing or not included in the measure, the construct will lose its meaning. The items are not interchangeable. In other words, each item captures a specific aspect of

the construct. Taken together, these items form the meaning of the formative construct. Table 4.4 sums up the criteria guiding the choice between reflective and formative model, based on their characteristics. Based on these criteria, the constructs examined in this study have been categorised as reflective or formative in Section 6.2.

Table 4.4: Criteria for choosing between formative and reflective model (adopted from Jarvis, MacKenzie & Podsakoff, 2003 and Hair et al., 2013)

Criterion	Reflective	Formative
Direction of causality	From the construct to the indicators	From the indicators to the construct
Explanatory power of items or construct	Construct explains the items	Construct is a combination of the items
Representation of the consequences or causes of the construct by the items	Consequences	Causes
Covariation among the indicators	Yes	No
Interchangeability of the items	Yes	No
Nomological net of the construct items	Nomological net for the indicators should not differ	Nomological net for the indicators may differ

Having discussed the criteria for distinguishing between the reflective and formative model, it is important to note that these differences have implications for the evaluation of the reflective and formative measurement model, further discussed in the next two sections.

4.10.2.1 Measurement model evaluation

Reflective measurement models need to be evaluated as a function of reliability and validity. As opposed to Cronbach's alpha, composite reliability does not make the assumption that indicators are equally reliable, thus increasing its utility for PLS-SEM. Thus, Cronbach's alpha is considered as a more conservative measure as compared to composite reliability. Composite reliability attributes priority to indicators as a function of their reliability during model estimating. Composite reliability values of 0.60 to 0.70 in exploratory research and values from 0.70 to 0.90 in more advanced stages

of research are considered acceptable (Nunnally & Bernstein 1994), whilst values below 0.60 signify unreliability.

Equally, indicator reliability merits consideration, whereby each indicator's absolute standardised loading should be greater than 0.70. Indicator with loading between 0.40 and 0.70 should only be considered for removal from the scale if deleting the indicator leads to an increase in composite reliability above the suggested threshold value.

The assessment of reflective measurement model focuses on convergent validity and discriminant validity. For convergent validity, it is necessary to examine the average variance extracted (AVE), where a value of 0.50 or more suggests reasonable convergent validity, indicating that the latent variable has the capacity to explain in excess of 50 per cent of its indicator's variance.

Two methods have been proposed to assess discriminant validity, the cross loadings and Fornell–Larcker criterion. The first criterion of discriminant validity is usually a bit more liberal: an indicator's loading with its associated latent construct should be higher than its loadings with all the remaining constructs (i.e., the cross loadings).

The second approach, the Fornell–Larcker criterion (Fornell & Larcker, 1981) suggests that a latent construct possesses greater variance with its denominated indicators than it does with a different latent variable found in the structural model. Statistically, the AVE of each latent construct should be greater than the latent construct's highest squared correlation with any other latent construct. The criteria for the reflective measurement model evaluation is illustrated in Table 4.5.

Table 4.5: Measurement model evaluation (Hair et al., 2013, p. 97)

Reflective measurement model evaluation	
Indicator reliability	Standardised indicator loadings ≥ 0.70 ; in exploratory studies, loadings of 0.40 are acceptable
Internal consistency reliability	Cronbach's alpha (conservative measure); composite reliability ≥ 0.70 (in exploratory research 0.60 is considered acceptable)
Convergent validity	AVE ≥ 0.50
Cross loadings	Each indicator should load highest on the construct it is intended to measure
Discriminant validity Fornell-Larcker criterion	Each construct's AVE should be higher than its squared correlation with any other construct
Formative measurement model evaluation	
Indicators' relative contribution to the construct	Report indicator weights
Significance of weights	Report t-values, p-values
Multicollinearity	VIF < 5 / tolerance > 0.20

Turning now to the evaluation of formative measurement model, it is not possible to transfer the statistical evaluation criteria for the reflective measurement model to the formative measurement model directly. The latent construct is represented in a formative measurement model by the indicators, which do not always possess a high degree of correlation. Additionally, formative indicators are considered to be error-free (Edwards & Bagozzi, 2000). As a result there is little relevance of the concepts of internal consistency, convergent validity and reliability. If the theory-driven conceptualisation of the measure strongly supports the indicator's inclusion (by means of face, expert, and content validity), it should be kept in the formative measurement model and the researcher should focus on explaining the empirical outcome. However, the researcher can also interpret the empirical finding as countering the conceptual foundations that support the indicator's inclusion and thus decide to exclude the nonsignificant indicator(s) from further analysis.

Furthermore, a high degree of multicollinearity in the formative measurement model can render an indicator's information redundant thus depriving it of significance, hence the degree of multicollinearity in the formative indicators merits examination, by calculating the tolerance or the variance inflation factor (VIF) values as recommended by Hair, Ringle and Sarstedt (2011).

The tolerance values represent the amount of variance of one formative indicator not explained by other indicators in the same construct. It is calculated by regressing the indicator on the remaining indicators of the same construct. The tolerance value is 1 minus the variance explained by the other indicators. In the context of PLS-SEM, a VIF value of 5, which suggests that 80 percent of an indicator's variance is accounted for by the remaining formative indicators related to the same construct indicates potential multicollinearity problems. The VIF value is defined as the reciprocal of the tolerance value, $VIF = 1/\text{Tolerance value}$. The criteria for the formative measurement evaluation is summed up in Table 4.5.

4.10.2.2 Structural model evaluation

It is important to note that the overall goodness of fit criteria applicable to CB-SEM like Goodness of Fit Index (GFI), Comparative Fit Index (CFI) and Chi-squared test is not relevant for PLS-SEM (Hair et al., 2013). This is because the fit statistics for CB-SEM are obtained from the discrepancy between the empirical and the theoretical covariance matrix. On the other hand, PLS-SEM focuses on the discrepancy between the observed (in case of manifest variables) or approximated (in case of latent variables) values of the dependent variables and the values predicted by the model. Thus, PLS-SEM is built on nonparametric evaluation criteria and uses procedures including bootstrapping and blindfolding to judge the model's quality.

There is only one PLS goodness of fit index that has been proposed by Tenenhaus, Amato and Esposito (2004), which has been questioned both conceptually and empirically by Henseler and Sarstedt (2013). This measure, unlike the fit measures in case of CB-SEM is not able to separate valid models from invalid ones. This measure is not applicable to the formative measurement model. Also, the measure does not penalise overparameterisation efforts. Based on the recommendations of Hair et al. (2013), it was decided not to use this measure, more so, as this thesis examines both formative and reflective constructs.

In evaluating the structural model, the fundamental criteria employed are the level and significance of the path coefficients and R^2 measures. The individual path coefficients of the PLS-SEM structural model may be regarded as standard beta coefficients of ordinary least squares regressions. In a similar manner to the indicators' weights and loadings, every path coefficient's significance may be measured by bootstrapping procedure method. The bootstrapping procedure is a robust non-parametric method to statistical inference based on the distribution free assumption. The method estimates the sampling distribution by drawing randomly with replacement from the original sample with the purpose of deriving robust estimate of confidence intervals of a population parameter.

Paths which are not significant or which appear to bear indications disagreeing with the assumed direction of the hypothesis offer no support for a prior hypothesis, whilst empirical support for the proposed causal relationship is offered by significant paths which exhibit the direction of the hypothesis.

The objective of the prediction-oriented PLS-SEM approach is the explanation of the endogenous latent variables' variance. Assessing whether the R^2 level is high or not is dependent upon each research discipline. For example, R^2 results of 0.20 would be regarded as high in consumer behaviour studies, whereas in market research studies R^2 values of 0.75, 0.50, or 0.25 for

endogenous latent variables in the structural model may generally be regarded as moderate, or weak. Falk and Miller (1992) suggested that the R^2 values above 0.10 are substantial.

Another assessment of the structural model involves the predictive ability of the model (Hair et al., 2011, 2013). The predominant measure of predictive relevance is the Stone–Geisser’s Q^2 (Geisser 1974; Stone 1974), often calculated using the blindfolding procedure. The blindfolding procedure is a sample reuse technique that omits every d th data point part and uses the resulting estimates to predict the omitted part, where d is the omission distance. Further, it postulates that the model must be able to adequately predict each endogenous latent construct’s indicators.

The blindfolding procedure is only used with endogenous latent constructs which possess a reflective measurement model specification. Q^2 possesses two forms which are the cross-validated redundancy and communality. The cross-validated redundancy, which unlike the cross validated communality employs the PLS-SEM estimates of both the structural model and the measurement models to predict data and hence provides a perfect fit for the PLS-SEM approach. Where an endogenous construct’s cross-validated redundancy measure value (i.e., Q^2) for a particular endogenous latent variable is greater than zero, its explanatory latent constructs show relevance for prediction. The criteria used in the structural model evaluation is summarised in Table 4.6.

Table 4.6: Structural model evaluation (Hair et al., 2013, p. 97)

Structural model evaluation	
R^2	Acceptable level depends on research context
Path coefficient estimates	Use bootstrapping to assess significance
Blindfolding	Use cross-validated redundancy

4.11. Ethical implications

In order that researchers may obtain access to potential respondents, they need to be assured of the ethicality of the situation and that they are protected. Therefore, research ethics have serious implications for the researcher, particularly in the preservation of the anonymity of the respondents (Saunders et al., 2012). Hence the researcher needs to be careful in his approach, as ethical concerns can emerge at any stage of the research.

This study was conducted strictly in accordance with the rules of Cardiff University regarding research ethics; including the guarantee of respondents' anonymity and the right to withdraw from the research at any point. An ethical approval form was submitted to the Cardiff Business School Ethics Committee and hence approval was granted (Appendix 1). The ethical considerations were stated explicitly on the first page of the questionnaire (Appendix 2).

Since the present study has gained its access through the organisation's senior management; the researcher had to be very careful when positioning herself in the research. For instance, the perception of the employees could be that the research involves some corporate motives which could result in socially desirable responses. Therefore, to avoid such misconceptions, firstly, it was made clear to the respondents that the data were being collected for purely academic purposes. And secondly, to enhance the quality and quantity of responses, the issues related to confidentiality and anonymity of the data collected were explicitly explained at the outset of this study.

4.12 Chapter summary

This chapter provides a comprehensive account of the research methodology adopted to pursue the present study. It outlines the position of the current study within positivist paradigm by providing justifications for the ontological, epistemological, methodological and axiological assumptions. In

addition, it gives a detailed overview of the methods, which will be adopted, tools and software for analysing data and their implications for this thesis. Finally, it also discusses the ethical implications of this study. The next chapter will present and discuss the empirical findings of the study.

CHAPTER 5

DESCRIPTIVE ANALYSIS

5.1 Introduction

This chapter reports the descriptive analysis of the data and summary related to the respondent's demographic profile and the constructs examined in the present study. The analysis aims to explore and obtain an initial understanding of the usable data collected in this research, not only in terms of scrutinising and summarising data, but also for model formulation using partial least squares structural equation modelling (PLS-SEM) at the next stage of the data analysis process.

5.2 Response rate and non-response bias

The data collection process was conducted over a 9-month period during 2011. 2000 questionnaires were administered. 1078 questionnaires were received. 27 questionnaires were discarded because of large amounts of missing data or obviously inappropriate responses. 1051 questionnaires were finally used, resulting in a response rate of 52.55 percent. Baruch and Holtom (2008) examined the response rates in studies published in 17 leading academic journals. The average response rate for studies that utilised data collected from individuals was 52.7 percent. The response rate of the present study compares favourably with the rate suggested by Baruch and Holtom (2008). It is important to examine response rates for two key reasons. First, higher response rates lead to larger data samples which are more representative of the population and thus higher statistical power as well as smaller confidence intervals around sample statistics. Second, while a low response rate could undermine the perceived credibility of the collected data in the eyes of key stakeholders,

higher response rates suggest greater reliability on the conclusions drawn from the data (Rogelberg & Stanton, 2007).

Data from each organisation were collected at a single point of time. Thus, the respondents cannot be classified as early and late respondents. Thus, the popular method proposed by Armstrong and Overton (1977) for testing non-response bias was not appropriate for this study. Cascio (2012) recommended that if relevant data, such as size and industry representativeness of organisations, on the age, race/ethnic group, and gender composition of management and non-management employees is available, then the composition of respondents and non-respondents can be compared to identify any notable differences. The presence of differences may indicate non-response bias, and that caution is necessary in making inferences.

I compared the demographic profile of the respondents in this study with the overall industry profile in India. The average employee age of this study is 26.07 years. For instance, the average age of employees at India's top software services exporter, Tata Consultancy Services (TCS), one of the country's largest private sector employers, is 28 years (Harjani, 2012). The pre-budget Economic Survey also suggests that the proportion of working-age population in India is likely to increase from around 58 per cent in 2001 to more than 64 per cent by 2021, with a large number of young persons in the 20-35 age group (Economic Survey, 2014). The majority of employees in this survey are in the age group 20-29 years, which is representative of the overall Indian industry profile.

I also compared the gender composition of the respondents in this study with the Indian Talent Survey, conducted on a large scale in 2012 by Deloitte and All India Management Association (AIMA). The percentage of male respondents in the India Talent Survey report is 69 percent (Schwartz & Bajpai, 2012), which is comparable to the percentage of male respondents in this thesis (70.3 percent). Taking into account these sample characteristics, it can be inferred that there are no

significant differences between the respondents and the profile of the typical Indian employee, implying that the data do not contain any obvious biases.

5.3 Sample demographics

This section presents the demographic profile of the respondents included in the present study. The following demographic characteristics were included in the survey: gender, age, tenure with organisation, and type of organisation (manufacturing or service) and are reported in Table 5.1.

Table 5.1: Workforce characteristics

Demographic Characteristic	Valid N	Total (% of employees)
Gender	1033	
Male		70.3
Female		29.7
Tenure with organisation	1034	
Less than a year		9.7
1 to less than 3 years		29.1
3 to less than 5 years		45.5
5 to less than 10 years		11.5
10 to less than 15 years		3.2
15 to less than 20 years		0.6
20 years or more		0.4
Age	1043	
Less than 20 years		0.5
20-29		81.7
30-39		15.9
40-49		1.7
50 or more		0.2
Educational Qualification	1050	
High school degree or less		2.3
Some college education		6.5
Graduate degree		71.2
Post graduate degree		19.9
Others		0.1
Sector	1051	
Manufacturing	755	71.84
Service	296	28.16

The demographic data indicated that 70.3 percent of the employees were male. The average employee organisational tenure was 2.96 years. 45.5 percent of the respondents had been employed with the present organisation for atleast three to five years. The mean employee age was 26.07 years. Most respondents (81.7 percent) were aged between 20 to 29 years. As to educational level, the majority of respondents (71.2 percent) were graduates and approximately 20 percent were postgraduates. 71.84 percent of the employees were employed in the service sector.

Table 5.2 presents the organisational demographic profile. 23 work units out of the total sample of 35 work units represented the service sector. The service sector thus constituted 65.71 percent of the sample. The organisations in service sector included outsourcing/ offshoring, computer software and insurance. The manufacturing organisations included in the sample comprised subtypes like computer networking, automotive and renewables and environment. The majority of the work units (45.71 percent) employed more than 10,000 employees.

Table 5.2: Demographic characteristics of organisations

Organisation ID	Type of Organisation	Industry	Number of Employees
1	Outsourcing/ Offshoring	Service	10,001+
2	Outsourcing/ Offshoring	Service	10,001+
3	Computer Networking	Manufacturing	10,001+
4	IT and Services	Service	10,001+
5	Outsourcing/ Offshoring	Service	10,001+
6	Computer Software	Service	1001-5000
7	Telecommunications	Manufacturing	10,001+
8	IT and Services	Service	1001-5000
9	Outsourcing/ Offshoring	Service	1001-5000
10	IT and Services	Service	5001-10000
11	Telecommunications	Manufacturing	5001-10000
12	Computer Software	Service	501-1000
13	Automotive	Manufacturing	10,001+
14	IT and Services	Service	5001-10000
15	Automotive	Manufacturing	5001-10000
16	IT and Services	Service	10,001+
17	Renewables and Environment	Manufacturing	1001-5000
18	IT and Services	Service	5001-10000
19	IT and Services	Service	1001-5000
20	Electric/ Electronic Manufacturing	Manufacturing	10,001+
21	Oil and Energy	Manufacturing	501-1000
22	Publishing	Manufacturing	501-1000
23	IT and Services	Service	501-1000
24	Outsourcing/ Offshoring	Service	10,001+
25	Food and Beverages	Manufacturing	1001-5000
26	Outsourcing/ Offshoring	Service	5001-10000
27	Insurance	Service	10,001+
28	Insurance	Service	10,001+
29	Insurance	Service	10,001+
30	IT and Services	Service	501-1000
31	Automotive	Manufacturing	10,001+
32	IT and Services	Service	501-1000
33	Consumer Electronics	Manufacturing	1001-5000
34	Hospitality	Service	10,001+
35	Textiles	Manufacturing	10,001+

5.4 Descriptive analysis of focal constructs

This section focuses on how the respondents answered the survey questions related to the constructs of the research model (HRM practices, FLM leadership behaviour, co-worker support, psychological contract fulfillment and employee outcomes). Table 5.3 presents the descriptive analysis including mean, standard deviation (SD), skewness and kurtosis values of questionnaire items of the aforementioned constructs. The skewness and kurtosis values will be discussed in Section 5.5.3. All items were measured on seven-point Likert scales in which 1 denoted *strongly disagree* and 7 denoted *strongly agree*.

Table 5.3: Questionnaire items and descriptive statistics

Construct	Items	Description	Mean	SD	Skewness	Kurtosis
HRM Practices						
Ability	HRM1	Applicants undergo structured interviews (job-related questions, same questions asked of all applicants and rating scales) before being hired.	5.57	1.213	-1.862	3.497
	HRM2	Applicants for this job take formal tests (paper and pencil or work sample) before being hired.	5.23	1.430	-1.244	.847
	HRM3	Sufficient on-the-job training programs are provided for employees.	5.36	1.400	-1.142	.695
	HRM4	Sufficient off-the-job training programs are provided for employees.	4.76	1.511	-.672	-.469
Motivation	HRM5	Employees have clear career paths within the organisation.	5.15	1.426	-1.014	.319
	HRM6	When new positions come up in management, your organisation normally tries to fill them with people from inside the organisation rather than recruit them from outside.	5.23	1.437	-.989	.356
	HRM11	Employees in this job regularly (at least once a year) receive a formal evaluation of their performance.	5.79	1.090	-1.576	3.247
	HRM12	The pay is related to the personal performance in any way through some sort of performance or merit-related pay.	5.00	1.505	-1.022	.296
	HRM13	Employees get sufficient benefits– other than pay.	4.80	1.647	-.875	-.302
	HRM14	Job security is almost guaranteed to employees in the organisation.	5.38	1.456	-1.242	1.150
Opportunity	HRM7	Employees in this job regularly receive formal communication regarding organisation goals and objectives.	5.49	1.264	-1.333	1.539
	HRM8	Employees complete an employee attitude survey on a	5.21	1.497	-1.026	.387

Construct	Items	Description	Mean	SD	Skewness	Kurtosis
		regular basis (e.g. annually).				
	HRM9	Employees in this job are involved in formal participation processes, such as quality improvement groups, problem-solving groups, roundtable discussions, or suggestion systems.	5.16	1.475	-1.050	.375
	HRM10	Employees in this job get sufficient opportunities to express views on issues and concerns at work.	5.24	1.384	-1.101	.750
	HRM15	Employees are given influence in organisation decisions that affect their job or work.	4.78	1.371	-.894	.208
	HRM16	The organisation helps employees to achieve a balance between home life and work.	4.85	1.623	-.901	-.247
Frontline management leadership behaviour						
	FLMLB4	The supervisor is good at keeping everyone up to date about proposed changes.	5.66	0.980	-1.227	2.154
	FLMLB5	The supervisor is good at providing everyone with a chance to comment on proposed changes.	5.55	1.158	-1.539	3.031
	FLMLB6	The supervisor is good at responding to the suggestions from employees.	5.61	1.124	-1.568	2.993
	FLMLB7	The supervisor is good at dealing with the problems at the workplace.	5.69	1.072	-1.558	3.307
	FLMLB8	The supervisor is good at treating employees fairly.	5.64	1.189	-1.503	2.863
Co-worker support						
	CW3	My co-workers are supportive of my goals and values.	5.61	1.119	-1.596	3.461
	CW4	Help is available from my co-workers when I have a problem.	5.79	1.039	-1.495	3.204
	CW5	My co-workers really care about my well-being.	5.55	1.255	-1.490	2.425
	CW6	My co-workers are willing to offer assistance to help me to perform my job to the best of my ability.	5.61	1.220	-1.502	2.727
	CW7	Even if I did the best job possible, my co-workers would fail to notice. (R)	5.35	1.422	-1.308	.855
	CW8	My co-workers care about my general satisfaction at work.	5.43	1.157	-1.558	3.048
	CW9	My co-workers show very little concern for me. (R)	5.27	1.386	-1.131	.384
	CW10	My co-workers care about my opinions.	5.44	1.049	-1.621	3.687
	CW11	My co-workers are complimentary of my accomplishment at work.	5.58	1.043	-1.595	3.008
Psychological contract fulfillment (facet)						
Delivery of the deal	Promise1	Has the organisation fulfilled its promise or commitment to provide you with a reasonably secure job.	5.57	0.995	-1.830	4.377
	Promise2	Has the organisation fulfilled its promise or commitment to provide you with fair pay for the work you do.	5.36	1.117	-1.475	2.606
	Promise3	Has the organisation fulfilled its promise or commitment to provide you with a career.	5.53	1.036	-1.474	2.961
	Promise4	Has the organisation fulfilled its promise or commitment to	5.54	1.010	-1.322	2.671

Construct	Items	Description	Mean	SD	Skewness	Kurtosis
		provide you with interesting work.				
	Promise5	Has the organisation fulfilled its promise or commitment to ensure fair treatment by managers and supervisors.	5.57	0.972	-1.590	3.851
	Promise6	Has the organisation fulfilled its promise or commitment to ensure equality of treatment.	5.54	1.009	-1.526	3.200
	Promise7	Has the organisation fulfilled its promise or commitment to help you deal with problems you encounter outside work.	5.47	0.977	-1.143	2.480
Fairness	Fairness1	Overall, do you feel you are fairly rewarded for the amount of effort you put into your job.	5.41	0.969	-1.458	2.875
	Fairness2	Do you feel you are fairly paid for the work you do.	5.21	1.149	-1.269	1.491
Trust	Trust1	To what extent do you trust your immediate manager to look after your best interests.	5.45	1.067	-1.296	2.097
	Trust2	To what extent do you trust senior management to look after your best interests.	5.32	1.113	-1.300	1.935
	Trust3	To what extent, do you trust your co-workers to help you when you are in need.	5.55	0.929	-1.181	2.579
	Trust4	In general, how much do you trust the organisation to keep its promises or commitments to you and other employees.	5.32	1.093	-1.370	2.441
<i>Psychological contract fulfillment (global)</i>						
	SPC1	In general, this organisation has kept its promises to me about what I will get from them.	5.25	1.411	-1.502	1.504
	SPC2	Managers in this organisation have honoured the commitments they have made to me.	5.34	1.336	-1.461	1.755
	SPC3	This organisation says it will do things for you and then never gets around to doing them (R)	5.16	1.496	-1.341	.808
	SPC4	I am often told I will receive things from this organisation that in the end never materialise (R).	5.24	1.416	-1.331	1.063
<i>Affective commitment</i>						
	AC1	I would be very happy to spend the rest of my career with this organisation.	5.35	1.224	-1.380	2.139
	AC2	I really feel as if this organisation's problems are my own.	5.49	1.197	-1.346	2.034
	AC3	I do not feel like 'part of the family' at my organisation. (R)	4.16	1.862	.084	-1.485
	AC4	I do not feel 'emotionally attached' to this organisation. (R)	4.05	1.858	-.029	-1.452
	AC5	This organisation has a great deal of personal meaning for me.	5.37	1.191	-1.372	1.901
	AC6	I do not feel a strong sense of belonging to my organisation. (R)	4.08	1.845	.010	-1.442
<i>Job Satisfaction</i>						
	JS1	All in all I am satisfied with my job.	5.35	1.358	-1.743	2.498
	JS2	In general, I don't like my job. (R)	4.61	1.936	-.441	-1.374
	JS3	In general, I like working here.	5.50	1.286	-1.798	3.289
<i>Intentions to quit</i>						

Construct	Items	Description	Mean	SD	Skewness	Kurtosis
	ITQ1	I will probably look for a new job in the next year.	3.65	1.869	.416	-1.085
	ITQ2	I may quit my present job next year.	3.57	1.824	.444	-1.009
	ITQ3	I will likely actively look for a new job within the next three years.	3.86	1.851	.240	-1.185
	ITQ4	I often think about quitting my present job.	3.32	1.827	.642	-.835
	ITQ5	I do not see much prospects for the future in this organisation.	3.27	1.780	.692	-.691
Absenteeism						
	Absenteeism	How many days did you miss from work in the last 12 months (excluding vacation)?	5.01	3.649	.165	-1.015

The table shows that employees exhibited a high mean (above scale midpoint¹²) for all items that comprised the three HPWS bundles, namely, ability, motivation and opportunity. This implies that on average, the respondents have positive perceptions of these practices. Nevertheless, there are notable variations in the responses to all the items measuring HRM practices.

The descriptive analyses indicated that the employees perceived leadership behaviours displayed by frontline managers as high, informed by the mean score of each item. Almost all items have standard deviations over 1, which shows there are some variations in the employee responses to this construct. The average scores on all 7 items that comprise co-worker support are above 5. This suggests that employees generally perceive their co-workers as highly supportive. All items have standard deviations over 1.

The state of psychological contract was measured using the global and facet measures. The facet measure included employee responses on three facets: a) delivery of the deal, b) fairness, and c) trust. The means on each of the facet measure items were above 5. Like other constructs, most items had standard deviation values over 1. Similarly, the mean scores of the items of the global measure were all over 5 and the standard deviation values were above 1. Summarising the results for both the

¹² The midpoint for all scale items is 4.

global and facet measures of psychological contract fulfillment, employees expressed highly positive views of their experience of psychological contract.

This thesis uses four constructs to measure different aspects of employee outcomes: affective commitment, job satisfaction, intention to quit, and absenteeism. Examining affective commitment first, it is interesting to note that the mean scores for the three reverse scored items is about 4, while the means of three positively worded items are above 5. All items exhibit standard deviations above 1.2, which reflects considerable variations in employee responses to this construct.

Similarly, employees demonstrated an overall high level of job satisfaction. Consistent with the commitment constructs, the mean score of the negatively worded item (JS2) is significantly lower (4.61) than the mean scores of the other two positively oriented items (5.35 and 5.50). All three items have standard deviations above 1.3. The standard deviations show that there are notable variations in the responses to the items measuring this construct.

Descriptive analysis findings of the intentions to quit construct show almost all items an average below the mid-point of the rating scale. This suggests that on an average, respondents were less inclined to quit their current organisation. The mean for absenteeism is 5.01 while the standard deviation is 3.649. Finally, the means for the negatively worded items are less than the mean score for the positively worded item. The standard deviations are all above 1.3.

Summarising, three key observations could be inferred from the descriptive analysis of employee outcomes. Overall, the means and the standard deviations of the items suggest that the typical employee response was in the range of *slightly agree* to *strongly agree*. This suggests that employees are generally committed to the organisation, satisfied with their job, and are less inclined to absent themselves from work and leave the current organisation. Second, the means for the negatively

worded items are lower than the positively worded items measuring the same scale. Third, the standard deviations for all items measuring employee outcomes are above 1, which demonstrated that there are variations in the employee responses to these items, as all are measured on 7-point Likert scales. As most items exhibit high mean scores and standard deviations above 1, this could hint acquiescence bias, which relates to the respondents answering what they perceive researcher wants. This issue is further discussed in Section 5.5.3. Additionally, this could suggest a potential social desirability bias, referring to the tendency of respondents to answer questions in a manner that will be viewed positively by others, which is further elucidated in Chapter 7.

5.5 Preliminary data screening

Preliminary data screening entails preparing individual level data for PLS-SEM analysis. This includes evaluating a) the impact of missing data, b) identifying outliers, and c) testing for the normality assumptions are an essential part of any multivariate analysis (Hair et al., 2010). I shall investigate each issue in turn.

5.5.1 Missing data

The amount of missing data for each individual item is given in Table 5.4. It also reports the number of valid cases, frequency and percentage of missing data for all the included items. Hair et al. (2013) suggest that when the amount of missing data on a questionnaire exceeds 15 percent, the observation is typically removed from the dataset. Since the missing data is less than 5 percent (Table 5.4), it was decided to retain the observations.

I performed a missing data analysis procedure, Little's MCAR test, which showed that data were missing completely at random (MCAR). Because the significance value is less than 0.05, the data were missing completely at random (MCAR). When the data are missing completely at random, you

can use any method for estimating the means, standard deviations, covariance matrix, and correlation matrix.

Table 5.4: Summary statistics of missing data for continuous variables

Construct	Items	Number of cases	Missing data*	
			Number	Percent
HRM practices	HRM4	1046	5	0.5
	HRM6	1040	11	1.0
	HRM11	1029	22	2.1
	HRM13	1039	12	1.1
	HRM16	1044	7	0.6
Frontline management leadership behaviour	FLMLB1	1044	7	0.6
	FLMLB2	1038	13	1.2
	FLMLB3	1037	14	1.3
Co-worker Support	CW2	1037	14	1.3
	CW4	1039	12	1.1
	CW5	1029	22	2.1
	CW7	1037	14	1.3
State of Psychological Contract (Global)	SOPC3	1030	21	2.0
	SOPC4	1036	16	1.5
Affective Commitment	AC1	1039	12	1.1
	AC2	1046	5	0.5
	AC3	1034	17	1.6
	AC4	1041	10	1.0
	AC6	1561	16	1.5

**Please note that items with no missing values are not presented in the table.*

The software used for analysis in this study is SmartPLS. This software offers two ways of handling missing values, mean replacement and casewise deletion (Hair et al., 2013). The first method, mean value replacement suggests that the missing value of an item are replaced with the mean of valid

values of other items in that construct. The second method, casewise deletion recommends removing all cases from the analysis that include missing values in any of the items.

Mean value replacement is easy to implement but it decreases the variability in the data and reduces the possibility of finding meaningful relationships. Further, using casewise deletion might lead to dramatically diminishing the number of observations from the dataset. Hair et al. (2013) argue that the mean replacement technique is suitable when the missing values per item are less than 5 percent. Based on this recommendation, the mean replacement technique was used in this study.

5.5.2 Outliers

Cases with “extreme” values that are very different from rest of the data are defined as outliers (Tabachnick & Fidell, 2001). A widely accepted rule of thumb of “extreme” is that scores more than three standard deviations beyond the mean may be outliers (Kline, 2011). A number of cases in the data set are spotted as outliers i.e. fall outside the limits ($Q1 - 1.5 IQR$, $Q1 + 1.5 IQR$). However, they do not classify as extreme outliers.

It was decided to retain all the cases for the following reasons. First, there was insufficient proof that these outliers are not part of the population. Some respondent might genuinely have different responses about items from the majority of the sample population, but certainly they are part of the target population. This was the rationale of the survey administration approach employed by this study where only qualified respondents from the screening questions were accepted as part of the sample. Furthermore, Kline (2011) indicates that the presence of a few outliers within a large sample size should be of minor concern. Thirdly, Hair et al (2010) also suggest that the deletion of outliers runs the “risk of improving the multivariate analysis but limiting its generalisability” (p. 67).

5.5.3 Normality

Two statistical characteristics are used to describe non-normality i.e. skewness and kurtosis (Tabachnick & Fidell, 2001; Hair, Black, Babin & Anderson, 2010). Skewness assesses the extent to which a variable's distribution is symmetrical. Kurtosis is a measure of whether the distribution is too peaked. In other words, it measures the degree to which the area in a distribution is in the middle and the tails of a distribution. Byrne (2001) and Kline (2011) suggest if the skewness value falls outside the range between +1 and -1, it indicates the distribution is substantially skewed. As a rule of thumb, the range of ± 2 is often considered as a significant departure from normality. If the skewness value falls outside the range of +3 and -3, the distribution of the data is considered extremely skewed. Furthermore, kurtosis values in absolute terms of more than 10, suggests a potential problem and a value of more than 20 indicates a more serious matter (Hair et al., 2010).

An inspection of skewness and kurtosis values in Table 5.3 reveals that most items have skewness values between -1.862 (HRM1) to 0.010 (AC6). Most variables of skewness were outside -1 and 1, suggesting that they are negatively skewed. Further, the values are all between -2 and 2 , it can be argued that these variables are moderately non-normally distributed with a negative skew. The kurtosis values ranged from 0.208 (HRM 15) and 4.377 (Promise 1). However, majority of the values were in the range of -3 and 3, suggesting that data is moderately non-normal.

I considered social desirability bias as a potential reason of the moderate non-normality. However, I believe this is not highly likely as the items were formulated in a balanced way and the chances of higher end of the scale being perceived as more socially desirable is low. The more plausible explanation for this lack of normality is the presence of an acquiescence bias. This is a response bias caused by an inclination of participants to agree to items when asked whether they agree or disagree

with a statement (Cascio, 2012; Purcell, 2014). In other words, the respondents have the tendency to agree with what they think the researcher might want to hear. It usually occurs when respondents are asked to rate on a Likert scale how strongly they agree or disagree with a statement. Given the Likert-design and the theoretical interrelatedness of the items and because the survey did not include a balanced set of reversely-formulated items, I was unable to further test this assumption.

It has been contended that use of non-parametric methods is more appropriate in case of non-normal distribution. PLS-SEM is a non-parametric statistical method. Unlike the CB-SEM, this method does not require the data to be normally distributed. However, it is important to assess data normality. Extremely non-normal data can pose issues in parameter significances. It could inflate the standard errors obtained from bootstrapping and thus decrease the likelihood some relationships will be assessed as significant (Hair et al., 2013).

CB-SEM model estimation requires a set of assumptions to be fulfilled, including the multivariate normality of data. This assumption is flawed as majority of data collected in behavioural research do not follow multivariate normal distributions (Micceri, 1989; Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). In contrast to CB-SEM, PLS-SEM is less stringent when working with nonnormal data because the PLS algorithm transforms nonnormal data in accordance with the central limit theorem (Hair et al., 2014). Apart from the other reasons discussed in Section 4.10, PLS-SEM is thus deemed more appropriate for this study as it does not presume that the data are normally distributed, making it a more viable approach than CB-SEM.

5.5 Chapter summary

This chapter discussed the issues of response rate and non-response bias. It also presented an overview of demographic profile of the respondents and organisations that participated in this study.

Furthermore, the chapter also reported the descriptive analysis of the constructs examined in the present study.

Descriptive findings of the constructs show that almost all measurement items (except intentions to quit construct) have an average above the mid-point of the rating scale. Most items also exhibited standard deviations of more than 1, displaying notable variation in the employee responses. In addition, this chapter included data preparation and screening techniques. Chapter 6 presents the analysis of the reflective and formative measurement model using partial least squares structural equation modelling.

CHAPTER 6

MEASUREMENT MODEL EVALUATION

6.1 Introduction

The objective of the present chapter is to present the first part of the multivariate data analyses using partial least squares-structural equation modelling (PLS-SEM) technique. For this purpose, SmartPLS 2.0 software package was used. Following common practice in research that applies PLS-SEM, I will provide an evaluation of our measurement model before presenting the results of the structural model, using the two-stage approach proposed by Anderson and Gerbing (1988) and adopted by Hair et al. (2013). Measurement specification requires operationalising measurement models as either reflective or formative (Hair et al., 2013). This choice, in turn, guides the selection of appropriate methods for subsequent data analysis and reliability and validity assessments (Diamantopoulos & Siguaw, 2006).

6.2 Reflective and formative measures

In PLS-SEM, there is a need to first define constructs and measures prior to the discussion of the relationships between them. Measurement theory specifies how the latent variables are measured. There are basically two approaches to measure constructs: reflective or formative. As illustrated earlier in Chapter 4, indicators of reflective constructs represent the manifest effects of an underlying construct. Formative constructs are based on the assumption that the indicators *cause* the construct. In other words, a formative construct is formed by its indicators (Edwards & Bagozzi, 2000; Hair et al., 2013). The key focus of this section is on the treatment of HRM practices and psychological contract fulfillment (facet) as formative constructs. All the remaining constructs (FLM leadership

behaviour, co-worker support, psychological contract fulfillment (global), employee outcomes) have been viewed as reflective constructs. Drawing upon the distinction between the reflective and formative constructs from Section 4.10.2, it can be inferred that these constructs are formed of conceptually similar items that reflect the overall construct, thus the direction of causality is from the construct to the constituent items. Thus the items share a common theme. Additionally, the removal or addition of an indicator will not cause changes in the meaning of the construct, as the indicators are interchangeable. For instance, the five items in the intention to quit measure whether the employee plans to quit the organisation. Sample items are “I often think about quitting my job.” and “I may quit my job next year”. These items *reflect* the content of the overall construct, intention to quit. Further, deleting any of these items does not change the original meaning of the construct. Extending this argument to the other aforementioned constructs, it was considered appropriate to treat these constructs as reflective.

Despite continued debate about the measurement issues regarding HPWS, there is a lack of consensus on how to measure these systems (Delery, 1998; Shaw et al, 2009; Jiang et al, 2012a, Jiang et al., 2012b). Before discussing the treatment of HPWS, I will discuss how it has been conceptualised in prior studies and the related methodological issues. HPWS have been measured using the traditional scale score assumptions, in which the underlying conceptual variable is presumed to cause scores on the item(s). This assumption suggested that HPWS should be treated as a reflective construct that implies there are three HRM bundles, such as ability, motivation and opportunity, which actually “reflect” the content of a HPWS.

Jiang et al. (2012a, 2012b) have argued that this reasoning is flawed as HPWS is a multi-dimensional construct explained by the three HRM bundles: ability, motivation and opportunity. These bundles jointly explain the HPWS construct. Also, each of these bundles captures a unique

aspect of the concept of HPWS which is not captured by the others (e.g., improving abilities, enhancing motivation, or providing opportunities). Each component of the work system is not interchangeable, and thus, none of them can reflect the system in isolation. Furthermore, the perceived presence of one HRM practice (e.g. training) within the bundle (ability-enhancing) is not necessarily reflective of another practice (e.g. recruitment and selection) within the same bundle as would be the case in reflective constructs. For instance, the organisation may provide a high level of training but have a poor approach to recruitment and selection, as perceived by the employee. Therefore, the low level of one practice within the bundle need not necessarily reflect a low level of other practices within the bundle. Using these arguments, the HRM bundles are employed as the first-order formative measures.

Similarly, each HRM bundle (ability-enhancing, motivation-enhancing, opportunity-enhancing) may not reflect each other, but they all are needed as part of the HPWS itself. Considering these arguments, it can be concluded that treating HPWS as a formative composite in form of indexes is conceptually appropriate. This is following the recommendations of Diamantopoulos and Siguaw (2006) and Hair et al. (2013), who suggested that once items have been selected following relevant dimensionality and reliability tests and dimensions have been confirmed, it is practical to combine them to generate overall measures of the construct. Overall indexing psychological contract fulfillment by measuring all the dimensions and simply summing each dimension can make it easier to measure the construct in practice. Hence, HPWS is defined as an aggregate construct. It is very important to include all the first-order facets (ability, motivation, opportunity), as omitting one may alter the meaning of the construct.

Like HPWS, the psychological contract fulfillment (facet) construct is multi-dimensional, which comprises three facets: delivery of the deal, fairness and trust. The rationale for treating this

construct as formative is twofold. First, the three facets are conceptually distinct and not interchangeable (as in the case of the HPWS). Second, the facets combine to form the construct and capture the entire conceptual domain as a group.

In contrast, items in the psychological fulfillment (global) measure, reflect each other and the underlying construct. Therefore, if one or more items are deleted, the remaining items reflect the overall measure. Researchers suggest that the indicators (items) for a reflective construct are interchangeable (Bollen & Lennox, 1991; Edwards & Bagozzi, 2000; Diamantopoulos & Sigauw, 2006; Hair et al., 2013). This is because each of the items reflect the same conceptual domain. This implies that dropping one of two equally reliable indicators from the measurement model should not alter the meaning of the construct.

The discussion on measurement issues concerning the assessment of psychological contract fulfillment is sparse (for exception see Tetrick, 2004). Prior research has treated psychological contract fulfillment as reflective measures. This assumption does not take into account that all promises or obligations may not necessarily reflect one particular strategy but rather multiple strategies across multiple domains. Tetrick (2004) lamented that while “no published studies explicitly addressed this possible alternative measurement [formative] model, certainly theory suggests that the formative model is plausible” (p. 325).

Each facet: delivery of the deal, trust and fairness comprises items that create it. For instance, the delivery of the deal includes items such as job security, fair treatment by managers and supervisors. Each are conceptually distinct and thus capture a specific aspect of the overall psychological contract fulfillment construct. The facet, ‘delivery of the deal’ is formed by all its constituent items in sum. The items within the facet are not interchangeable and deleting an item can cause a change in the meaning of the facet. Using similar arguments, each facet represents a unique aspect of the overall

measure of the psychological contract fulfillment. Thus, the removal of one or more facets would lead to a change in the meaning of the overall construct measure.

Based on the aforementioned arguments, a second order formative model capturing the three facets is proposed to capture the multi-dimensional nature of the psychological contract fulfillment (facet) construct.

As outlined in Section 2.5, both global and facet measures of the psychological contract fulfillment were included in this study. No prior studies have used both measures simultaneously, therefore their conceptual distinctiveness or differential effects are unknown. In summary, Table 6.1 classifies the measures used in this study into formative and reflective measures.

Table 6.1: Reflective and formative measures used in this study

Measures used in the study	Type of measure	Rationale
High performance work systems	Formative	Following theoretical and methodological recommendation of Jiang et al. (2012a, 2012b) and Hair et al. (2013). Indicators are explanatory.
Ability-enhancing HRM bundle	Formative	
Motivation-enhancing HRM bundle	Formative	
Opportunity-enhancing HRM bundle	Formative	
Frontline management leadership behaviour	Reflective	Conceptually similar items measuring one construct.
Co-worker support	Reflective	Conceptually similar items measuring one construct.
Psychological contract fulfillment (Global)	Reflective	Conceptually similar items measuring one construct.
Psychological contract fulfillment (Facet)	Formative	Conceptually distinct characteristics that commonly occur together. Not interchangeable. Indicators are explanatory.
Affective commitment	Reflective	Conceptually similar items measuring one construct.
Intention to quit	Reflective	Conceptually similar items measuring one construct.
Job satisfaction	Reflective	Conceptually similar items measuring one construct.
Absenteeism	Reflective	Single item measuring one construct

6.3 Exploratory factor analysis: Reflective constructs

The suitability of data for factor analysis is assessed before conducting PLS-SEM analysis. The purpose of exploratory factor analysis (EFA) is to confirm whether the items load onto their respective constructs and whether there is any evidence of cross-loading. Thus, EFA also provides a measure of convergent validity of the scale items. EFA can also be used to provide evidence for unidimensionality of the constructs, which suggests that all items from a construct load on a single factor.

EFA is not considered appropriate for formative measures. Becker and Huselid (1998) recommend that factor analysis is appropriate for a reflective measurement model in which multiple items are “covering the same construct” but not for a formative measurement model, in this instance, the HPWS and psychological contract fulfillment (facet) constructs (p. 73). Thus, I conducted EFA for only the reflective constructs. To determine if these items loaded onto their respective scales or not, each reflective construct is factor analysed in SPSS using principal component analysis and varimax rotation. Table 6.2 shows the factor loadings and total variance explained for each of the constructs.

Four constructs did not need any modification. The results for FLM leadership behaviour suggest that all items loaded on a single factor accounting for 71.261 percent of the total variance. Similarly, the results demonstrate evidence for a single factor for co-worker support accounting for 60.540 percent of the total variance. The psychological contract fulfillment (global) measure loaded on a single factor explaining 85.119 percent of total variance. Finally, the five items loaded highly on intention to quit accounting for 78.017 percent of total variance. So, these reflective constructs appear to be uni-dimensional and exhibit good internal consistency (Hair et al. 2010).

Table 6.2: Exploratory factor analysis for reflective constructs

Construct	Indicator	Indicator Loading	Average Variance Extracted	Further analysis needed	
Frontline management leadership behaviour	FLMLB1	0.818	71.261	No	
	FLMLB2	0.848			
	FLMLB3	0.874			
	FLMLB4	0.864			
	FLMLB5	0.814			
Co-worker support	CW1	0.795	60.540	No	
	CW2	0.796			
	CW3	0.839			
	CW4	0.856			
	CW5	0.672			
	CW6	0.815			
	CW7	0.657			
	CW8	0.814			
	CW9	0.732			
Psychological contract fulfillment (global)	SOPC1	0.922	85.119	No	
	SOPC2	0.917			
	SOPC3	0.927			
	SOPC4	0.925			
Affective commitment	AC1	0.864	42.987	Yes. Not unidimensional	
	AC2				0.892
	AC5				0.841
	AC3	0.928	37.282		
	AC4	0.932			
	AC6	0.912			
Job satisfaction	JS1	0.935	58.394	Yes. Low loading for JS2	
	JS2	0.004			
	JS3	0.935			
Intention to quit	ITQ1	0.912	78.017	No	
	ITQ2	0.929			
	ITQ3	0.828			
	ITQ4	0.896			
	ITQ5	0.847			

Next, I turn to discuss the two constructs- affective commitment and job satisfaction which require modification. One recurrent problem often noted in prior research is that the factor dimensionality of

affective commitment does not appear to be stable (Shaver, Schwartz, Kirson & O'connor, 1987; Bergami & Bagozzi, 2000; Bozeman & Perrewe, 2001; Merritt, 2012). Bergami and Bagozzi (2000) examined two components of Affective commitment, namely AC-Joy and AC-Love. AC-Joy refers to happiness arising from being a member of the organisation as a social category. AC-Love refers to emotional attraction or affection towards the organisation as a social category. The three positively worded items form the AC-Joy factor, while the AC-Love factor consists of the three negatively worded items. Concurrently, interpretation of such a solution is baffling as it is unclear whether the second factor should be considered as a substantive dimension or simply as a methodological artefact stemming from the negatively worded nature of the items (Schmitt & Stults, 1985; Merritt, 2012).

The initial analysis indicated two factors, which accounted for 80.269% of the variance, which is consistent with the study by Bergami and Bagozzi (2000). The first factor (42.711%) consisted of the three negatively worded items, whereas the second factor (37.558%) contained the three positively worded items.

The negatively worded items indicated a potential response bias (Marsh, 1996; DiStefano & Motl, 2006; Lindwall et al., 2012). This issue has also been discussed in relation to other constructs measured using a combination of positively and negatively worded items. For instance, Marsh (1996) suggested that positively and negatively worded global self-esteem items designed to measure the same factor may appear to represent separate factors. This does not necessarily suggest that the two factors are conceptually distinct. Peccei and Guest (1993), recommended, based on their review of an alternate commitment scale, British Organisational Commitment Scale (BOCS), "...that there is nothing to be gained by retaining these [negatively worded] items in the scale" (p. 22). This study implied that the negatively worded items did not contribute significantly to the scale. This

suggestion was also confirmed by Mathews and Shepherd (2002). Therefore, based on the aforementioned arguments, I deleted the three negatively worded items and ran further analysis. This analysis identified a single factor, which explained 75.039 percent of the variance.

In the case of job satisfaction, the loading of the negatively worded item (JS2 is 0.004), is below the threshold value of 0.6, as recommended by Hair et al. (2010). Thus, I eliminated this item from the scale and re-ran the factor analysis. This analysis showed that the two items accounted for 87.511 percent of variance.

Having discussed the measurement properties of each construct in the research model, the next section focuses on the assessment of the reflective measurement model.

6.4 Reflective measurement model evaluation

Following the procedures recommended by Chin (2010), I conducted an assessment of the reliability and validity of the measurement model which included all reflective constructs and their associated manifest indicators. The calculation of Cronbach's alpha, composite reliability, and average variance extracted (AVE) indicated satisfactory reliability at the construct level, using the conventional threshold criteria of 0.7 for Cronbach's alpha, 0.7 for composite reliability, and 0.5 for AVE (Fornell and Larcker, 1981; Hair et al., 2013). These results show a strong and consistent relationship between each set of items and their latent variable (see Table 6.3).

PLS-SEM generates factor loadings for each scale indicator, which can be used to assess the measurement model. A matrix of factor loadings is provided in Table 6.3. The matrix shows that most factor loadings are greater than 0.708 as recommended by Hair et al. (2013). The factor loading must exceed 0.708 for the factor to account for 50 percent of the variance for a variable.

Table 6.3: Factor loading for reflective measures

Construct	Indicator	Factor Loading	Cronbach's Alpha	Average Variance Extracted	Composite Reliability
Frontline management leadership behaviour	FLMLB1	0.823	0.899	0.712	0.925
	FLMLB2	0.844			
	FLMLB3	0.866			
	FLMLB4	0.859			
	FLMLB5	0.827			
Co-worker support	CW1	0.797	0.917	0.605	0.932
	CW2	0.793			
	CW3	0.831			
	CW4	0.852			
	CW5	0.653			
	CW6	0.829			
	CW7	0.645			
	CW8	0.826			
	CW9	0.743			
Psychological contract fulfillment (Global)	SOPC1	0.924	0.942	0.851	0.851
	SOPC2	0.918			
	SOPC3	0.926			
	SOPC4	0.923			
Affective commitment	AC1	0.887	0.915	0.852	0.945
	AC2	0.881			
	AC5	0.827			
Job satisfaction	JS1	0.943	0.857	0.875	0.933
	JS3	0.928			
Intention to quit	ITQ1	0.909	0.929	0.780	0.946
	ITQ2	0.928			
	ITQ3	0.817			
	ITQ4	0.897			
	ITQ5	0.827			

Only two items (CW5 and CW7) in the co-worker scale have factor loadings below 0.708. Hair et al. (2013) suggest that when the loading is below 0.4, the item should be deleted. The items with factor loadings between 0.40 and 0.70 should be considered for removal from the scale only when deleting the indicator leads to an increase in composite reliability or AVE above the suggested threshold value. In case of the present sample, the values of the two items are marginally below 0.708 and the composite reliability and AVE were already above the recommended values, so it was decided to

retain these two items. It can be concluded that all constructs exhibited good internal consistency based on composite reliability, Cronbach's alpha and AVE.

Two approaches have been proposed to measure discriminant validity of the constructs. The first approach involves examining the cross loadings of the indicators proposed by Hair et al. (2013). Specifically, an indicator's outer loading on the associated construct should be higher than its loadings on all the other constructs. Results show that in all cases, the items' outer loadings on each of the relevant constructs are higher than all its cross loadings, indicating discriminant validity on the indicator level (Appendix 3).

The second method was proposed by Fornell and Larcker (1981) and is a more stringent approach to assess discriminant validity. They recommend that the square root of each construct's AVE should be greater than its highest correlation with any other construct. Table 6.4 reports the correlations for the reflective constructs and the AVE values on the diagonal. In line with the Fornell- Larcker criterion, Table 6.4 shows that all AVEs were higher than the squared inter-construct correlations, which suggested satisfactory discriminant validity for all the reflective constructs.

Table 6.4: Correlation matrix and associated AVE values

	AC	CWS	FLMLB	PCF (G)	ITQ	JS	Absenteeism
AC	0.866						
CWS	0.262	0.778					
FLMLB	0.373	0.472	0.844				
PCF (G)	0.346	0.533	0.465	0.923			
ITQ	-0.210	-0.278	-0.277	-0.438	0.883		
JS	0.320	0.547	0.479	0.643	-0.496	0.935	
Absenteeism	-0.188	-0.326	-0.320	-0.286	0.171	-0.238	Single-item construct

√AVE values are on the diagonal (in bold)

All values are significant at two-tailed test at 5 percent level of significance

This section reported the results of the reflective measurement model evaluation. The next section will assess and discuss the formative model measurement evaluation.

6.5 Formative model measurement evaluation

Researchers have maintained that traditional validity assessments and classical test theory do not apply to manifest variables that are used in formative measurement models and that the concepts of reliability (i.e., internal consistency) and construct validity (i.e., convergent and discriminant validity) are not meaningful when a formative model is employed (Bollen & Lennox 1991; Chin, 2010; Hair et al., 2013). Due to its conceptualisation as a formative construct, interpretation of the respective HRM bundles: ability, motivation, opportunity, and the psychological contract fulfillment (facet) construct should be based on weights instead of loadings (Schroer and Hertel, 2009).

The first step for formative measurement is to assess the level of collinearity of the constructs. Multicollinearity might pose a problem as the formative measurement model is based on multiple

regression (Diamantopoulos & Siguaw, 2006). Hair et al. (2013) suggested that if the tolerance value is below 0.20 and variance inflation factor (VIF) value is 5 or higher, the items of the formative construct indicate a high level of collinearity.

Table 6.5: Tolerance values and variance inflation factor results

Construct	Item	Tolerance Value	Variance Inflation Factor (VIF)
Ability	HRM1	0.701	1.426
	HRM2	0.745	1.343
	HRM3	0.535	1.870
	HRM4	0.568	1.761
Motivation	HRM5	0.676	1.478
	HRM6	0.722	1.385
	HRM11	0.771	1.298
	HRM12	0.548	1.826
	HRM13	0.567	1.762
	HRM14	0.772	1.295
Opportunity	HRM7	0.645	1.550
	HRM8	0.646	1.549
	HRM9	0.462	2.163
	HRM10	0.582	1.718
	HRM15	0.681	1.467
	HRM16	0.729	1.373
Delivery of the deal	Promise1	0.451	2.219
	Promise2	0.487	2.055
	Promise3	0.365	2.743
	Promise4	0.459	2.180
	Promise5	0.356	2.809
	Promise6	0.360	2.775
	Promise7	0.569	1.759
Fairness	Fairness1	0.621	1.610
	Fairness2	0.621	1.610
Trust	Trust1	0.512	1.952
	Trust2	0.437	2.287

Construct	Item	Tolerance Value	Variance Inflation Factor (VIF)
	Trust3	0.673	1.486
	Trust4	0.511	1.956

In this dataset, the lowest tolerance value is 0.356 for the item, Promise 5 on the psychological contract scale, which is higher than 0.20 threshold (see Table 6.5). Also, the highest VIF value is 2.809 for the item, Promise5, which is below the common cut-off value of 5 (Sarstedt, 2008). Therefore, multicollinearity does not represent a serious problem. This suggests that the outer weights in formative measurement models can be analysed for their statistical significance and relevance as collinearity is not a serious issue in this context.

Next, the statistical significance and relevance of the indicator weights should be assessed to examine whether each indicator contributes to forming the construct. It is important to note that the t-values are obtained using the bootstrapping procedure that provides bootstrap standard errors. These standard errors are then used to estimate the t-values. Table 6.6 indicated that most formative indicators have significant outer weights.

The six non-significant formative indicators (highlighted) were considered for removal from their respective formative constructs. In all cases, the indicator loading is above 0.5, which suggests that the indicator should be interpreted as absolutely important but not as relatively important. Hair et al. (2013) suggest that the indicator should generally be retained in this situation, especially since the constructs have been derived from theory.

Table 6.6: Outer weights significance testing results

Formative construct	Formative indicators	Outer weights	Outer loadings	t Statistics	Significance levels
Ability	HRM1	0.149	0.612	1.411	NS
	HRM2	0.152	0.561	1.611	NS
	HRM3	0.623	0.936	6.116	***
	HRM4	0.298	0.808	2.917	***
Motivation	HRM5	0.276	0.634	5.103	***
	HRM6	0.200	0.614	4.037	***
	HRM11	0.128	0.500	2.336	**
	HRM12	0.079	0.633	1.202	NS
	HRM13	0.375	0.780	6.391	***
	HRM14	0.409	0.723	7.753	***
Opportunity	HRM7	-0.050	0.519	0.742	NS
	HRM8	0.127	0.577	1.947	*
	HRM9	0.141	0.732	1.690	*
	HRM10	0.512	0.860	8.131	***
	HRM15	0.149	0.619	2.520	***
	HRM16	0.408	0.776	7.295	***
Delivery of the deal	Promise 1	0.160	0.778	2.603	***
	Promise 2	0.082	0.722	1.455	NS
	Promise 3	0.177	0.847	3.055	***
	Promise 4	0.348	0.866	6.708	***
	Promise 5	0.228	0.851	4.075	***
	Promise 6	0.149	0.815	2.748	***
	Promise 7	0.074	0.682	1.534	NS
Trust	Trust1	0.282	0.817	6.183	***

Formative construct	Formative indicators	Outer weights	Outer loadings	t Statistics	Significance levels
	Trust2	0.346	0.877	6.051	***
	Trust3	0.182	0.683	3.895	***
	Trust4	0.394	0.867	7.854	***
Fairness	Fairness1	0.739	0.959	15.101	***
	Fairness2	0.358	0.813	6.090	***

*p<0.10, **p<0.05, ***p<0.01, NS- not significant

Summarising the results of the formative measurement model, the examination of VIF and tolerance values indicated that collinearity did not appear to be an issue in any of the formative constructs. Also, all indicators of the formative constructs were statistically significant except six items. All items were retained for further analysis, as prior research and theory provides support for the relevance of these indicators for capturing the formative constructs. Considering the results from Sections 6.4 and 6.5, all reflective and formative constructs exhibited satisfactory levels of quality.

6.6 Chapter summary

This chapter first explicated the classification of the measures used in this study as reflective or formative measures. This was followed by the exploratory factor analysis of reflective measures and an assessment of the reflective and formative measurement model. The last step of the analysis, which is validating the structural model, is presented in Chapter 7.

CHAPTER 7

STRUCTURAL MODEL EVALUATION

7.1 Introduction

This chapter presents the second step of the partial least squares structural equation modelling analysis, the evaluation of the structural model. The results of the structural model indicate whether the proposed relationships are empirically confirmed. Additionally, it will present the results of the robustness tests carried out in this study.

7.2 Structural model evaluation

The first step in assessing the structural model results involves examining collinearity issues. To test for multicollinearity, the criteria used for evaluating formative measurement model (see Section 6.5) are applied again. That is, all tolerance values should be above 0.20 and all VIF values should be below threshold value of 5. Table 7.1 shows the collinearity assessment for exogenous constructs. Results show that the tolerance values and VIF values for all exogenous constructs, which were all satisfactory.

Table 7.1: Collinearity results for exogenous constructs

Exogenous construct	Tolerance value	Variance Inflation Factor (VIF)
Ability	.585	1.711
Motivation	.391	2.560
Opportunity	.391	2.558
Frontline management leadership behaviour	.663	1.509
Co-worker support	.645	1.550

The second step is to assess the significance of structural model relationships. As discussed earlier, unlike covariance-based approaches, PLS-SEM applies non-parametric bootstrapping, which involves repeated random sampling with replacement from the original sample to create a bootstrap sample, to obtain standard errors for hypothesis testing. This process assumes that the sample distribution is a reasonable representation of the intended population distribution, rather than assuming normality. The bootstrap sample enables the estimated coefficients in PLS-SEM to be tested for their significance. The bootstrapping procedure drew 1051 cases and 5,000 samples, and used the no sign change option to determine path significance.

As discussed in Section 4.10.2.2, PLS-SEM fits the model to the sample data to obtain the best parameter estimates by maximising the explained variance of endogenous latent variable(s). On the other hand, Covariance based-SEM (CB-SEM) estimates parameters so that the differences between the sample covariances and those predicted by theoretical model are minimised. This implies that the goodness of fit measures associated with CB-SEM (e.g. GFI, CFI, Chi-square test) cannot be applied to PLS-SEM. Also, the goodness of fit measure proposed by Tenenhaus et al., (2004) was not used, as this thesis included both reflective and formative constructs. Further, this measure has been criticised both conceptually and empirically (see Section 4.10.2.2).

Thus, the criteria used for the assessment of the structural model in this study were, estimation of path coefficient (β), coefficient of determination (R^2) and blindfolding (predictive validity) for endogenous variables (Chin, 2010; Henseler, Ringle & Sinkovics, 2009; Hair et al., 2013). The first two criteria will be further discussed in this section while blindfolding (predictive validity) will be explained in Section 7.7.4.

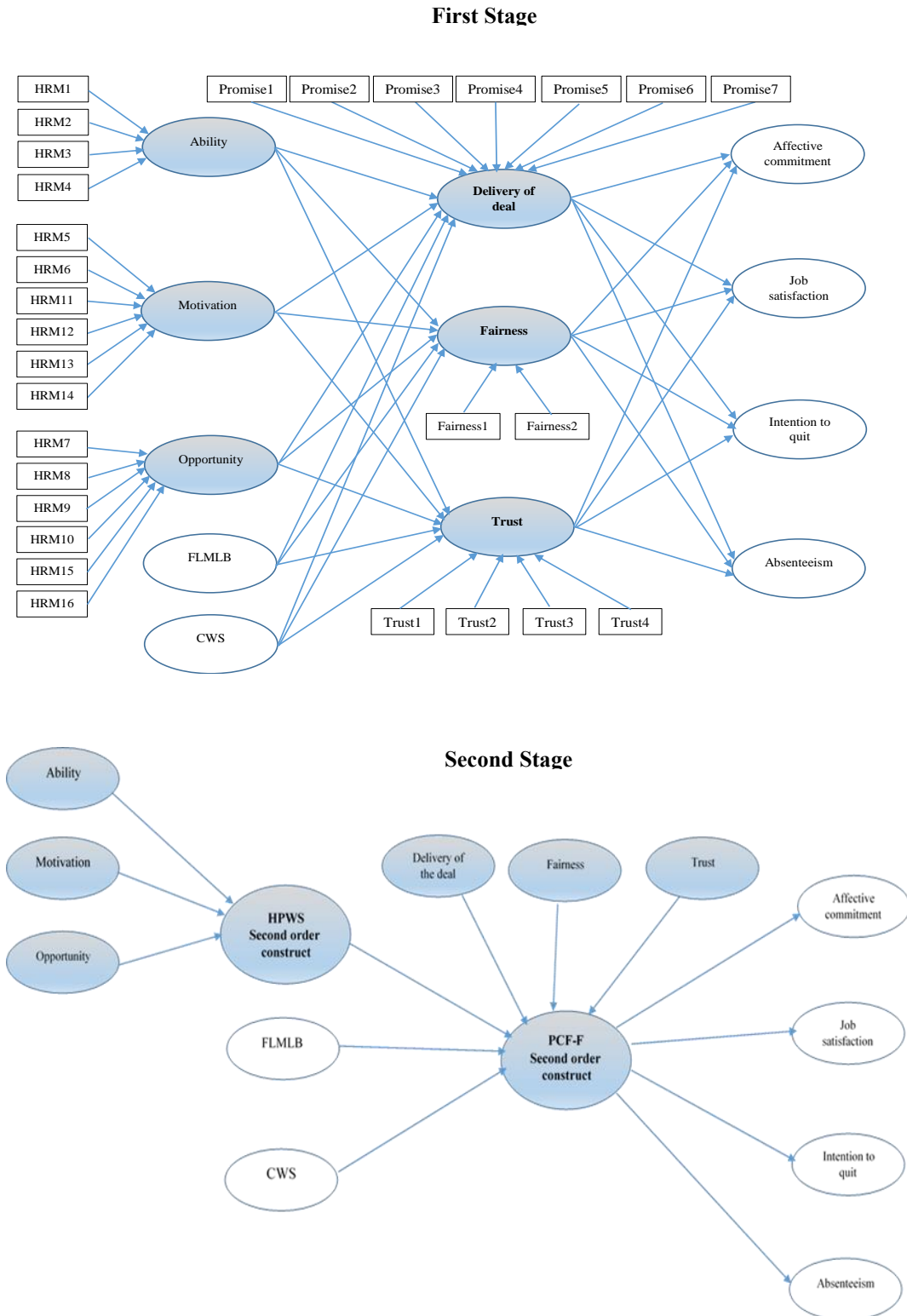
As an initial empirical investigation, this thesis first examined a single form of both the HPWS and psychological contract fulfillment (facet) (Model 1). In other words, Model 1 tested the validity of relationships between HPWS, FLM leadership behaviour, co-worker support, psychological contract fulfillment (facet) and employee outcomes. Both HPWS and the psychological contract fulfillment (facet) were treated as second-order formative constructs. All other constructs were treated as reflective. Model 2 considered the HPWS as a set of three separate formative measures for bundles: ability, motivation and opportunity; and the psychological contract fulfillment (facet) as a second-order formative construct.

7.2.1 Model 1 results

Model 1 was employed to validate the hypothesised relationships by regarding both HPWS and the psychological contract fulfillment (facet) measure as a second-order formative construct. The second-order formative construct (HPWS) is constituted of three formative first-order constructs (ability, motivation and opportunity). Similarly, the second-order formative construct (psychological contract fulfillment- facet) consists of three formative first-order constructs (delivery of the deal, trust and fairness).

I used the sequential latent variable score method, or two-stage approach (Ringle, Sarstedt & Straub, 2012; Hair et al., 2013), to estimate Model 1, which is presented in Figure 7.1. The two-stage approach estimated the construct scores of the first-order constructs (ability, motivation and opportunity) in a first-stage model without the second-order construct (HPWS) present, and subsequently used these first-stage construct scores as indicators for the higher order latent variable (HPWS) in a separate second-stage analysis. Similarly, construct scores of the first-order constructs (delivery of the deal, trust and fairness) were estimated in a first-stage model without the second-order construct (psychological contract fulfillment- facet) present, and these first-stage construct scores were used as indicators for the higher order latent variable (psychological contract fulfillment-facet). It is noted by previous researchers that the first stage is an intermediate model and is not reported in the final results (Becker, Klein & Wetzels, 2012).

Figure 7.1: Two-stage approach for assessing second-order constructs in PLS-SEM¹³



¹³ FLMLB= Frontline management leadership behaviour, CWS= Co-worker support, HPWS= High performance work systems. The items for the constructs, FLMLB, CWS, affective commitment, job satisfaction, intention to quit and absenteeism have not depicted for parsimony.

Results clearly show that all the hypothesised paths are significant ($p < 0.01$). Table 7.2 highlights the important role of HPWS, FLM leadership behaviour and co-worker support in driving the psychological contract fulfillment (facet) construct with standardised path coefficients of 0.477, 0.241 and 0.115 respectively. The positive coefficients for paths from HPWS, FLM leadership behaviour and co-worker support to psychological contract fulfillment respectively indicated that these three variables are significantly associated with the psychological contract fulfillment (facet) measure, thus providing support for Hypotheses 1, 3 and 4.

Table 7.2: Hypothesis test results for Model 1

	Hypothesised path	β	t- Statistics	Significance levels	Result
H1	High performance work systems -> Psychological contract fulfillment (facet)	0.477	14.381	***	Supported
H3	Frontline management leadership behaviour -> Psychological contract fulfillment (facet)	0.241	6.678	***	Supported
H4	Co-worker support-> Psychological contract fulfillment (facet)	0.115	2.618	***	Supported
H5a	Psychological contract fulfillment (facet) -> Affective commitment	0.508	14.629	***	Supported
H5b	Psychological contract fulfillment (facet) -> Intention to quit	-0.331	9.850	***	Supported
H5c	Psychological contract fulfillment (facet) -> Job satisfaction	0.533	16.092	***	Supported
H5d	Psychological contract fulfillment (facet) -> Absenteeism	-0.377	10.309	***	Supported

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In turn, the psychological contract fulfillment (facet) construct has a significant, positive relationship with affective commitment ($\beta = 0.508$, $p < 0.01$) and job satisfaction ($\beta = 0.533$, $p < 0.01$). These results provided support for Hypothesis 5a and 5c, which suggested a positive relation between psychological contract fulfillment and affective commitment and job satisfaction respectively. The relationship of the psychological contract fulfillment (facet) construct with intention to quit ($\beta = -0.331$, $p < 0.01$) and absenteeism ($\beta = -0.377$, $p < 0.01$) was negative and significant. These findings

are consistent with the predictions of Hypothesis 5b and 5d, which predicted that psychological contract fulfillment is negatively related to intention to quit and absenteeism.

7.2.2 Model 2 results

Model 2 predicted the relationships using the three HPWS bundles: ability, motivation and opportunity. Drawing on the prior discussion from Section 3.4, this model is set out to study the differential effects of the three HRM bundles on psychological contract fulfillment. Results (see Table 7.3) show that the motivation-enhancing and opportunity-enhancing HRM bundles are positively and significantly related to the psychological contract fulfillment (facet) measure, thus providing support to Hypothesis 2b and 2c. However, the ability-enhancing bundle was negatively related to the psychological contract fulfillment (facet) measure, which is contrary to Hypothesis 2a.

Table 7.3: Hypothesis test results for Model 2

	Hypothesised path	β	t-Statistics	Significance levels	Result
H2a	Ability-enhancing HRM bundle -> Psychological contract fulfillment (facet)	-0.107	2.939	***	Not Supported, in opposite direction
H2b	Motivation-enhancing HRM bundle -> Psychological contract fulfillment (facet)	0.398	8.306	***	Supported
H2c	Opportunity-enhancing HRM bundle -> Psychological contract fulfillment (facet)	0.150	2.988	***	Supported
H3	Frontline management leadership behaviour -> Psychological contract fulfillment (facet)	0.249	6.655	***	Supported
H4	Co-worker support-> Psychological contract fulfillment (facet)	0.132	3.055	***	Supported
H5a	Psychological contract fulfillment (facet) -> Affective commitment	0.508	14.593	***	Supported
H5b	Psychological contract fulfillment (facet) -> Intention to quit	-0.332	9.854	***	Supported
H5c	Psychological contract fulfillment (facet) -> Job satisfaction	0.533	15.963	***	Supported
H5d	Psychological contract fulfillment (facet) -> Absenteeism	-0.377	10.092	***	Supported

*p<0.10, **p<0.05, ***p<0.01

Consistent with Model 1, FLM leadership behaviour ($\beta=0.249$, $p<0.01$) and co-worker support ($\beta=0.132$, $p<0.01$) were positively and significantly associated with the psychological contract fulfillment (facet) measure. Again similar to Model 1's results, Table 7.3 indicated that the psychological contract fulfillment (facet) measure is positively related to affective commitment ($\beta=0.508$, $p<0.01$) and job satisfaction ($\beta=0.533$, $p<0.01$), and negatively associated with intention to quit ($\beta= -0.332$, $p<0.01$) and absenteeism ($\beta= -0.377$, $p<0.01$).

7.2.3 Coefficient of determination (R^2)

The coefficient of determination (R^2) provides the percentage of variation in dependent variable(s) explained by the independent variable(s) (Hair et al., 2013). The R^2 value was used to measure the percentage of the variance explained by the independent constructs in the structural model. Table 7.4 presents the R^2 values for Model 1.

Table 7.4: R^2 values for Model 1

	R^2
<i>Antecedents</i>	
High performance work systems, FLM leadership behaviour and co-worker support	0.498
<i>Employee outcomes</i>	
Affective commitment	0.258
Job satisfaction	0.284
Intention to quit	0.110
Absenteeism	0.142

The R^2 value for the psychological contract fulfillment (facet) measure is 0.498. This shows that the three independent variables (HPWS, FLM leadership behaviour, co-worker support) explained almost half of the variation in the psychological contract fulfillment (facet) scores, which indicates substantial influence of these variables on the psychological contract fulfillment (facet) measure.

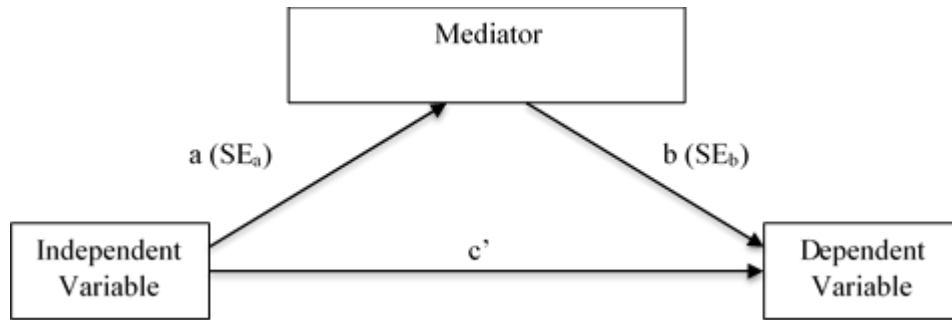
The psychological contract fulfillment (facet) measure explained 25.8 percent of the variance in affective commitment ($R^2 = 0.258$), 28.4 percent of the variance in job satisfaction ($R^2 = 0.284$), 11 percent of the variance in intention to quit ($R^2 = 0.110$), and 14.2 percent of the variance in intentions to quit ($R^2 = 0.142$). This suggests that psychological contract fulfillment has greater strength in influencing attitudes (affective commitment and job satisfaction) as compared to behavioural intention (intention to quit) and behaviour (absenteeism).

Falk and Miller (1992) suggested that the R^2 values above 0.10 are substantial. As seen in Table 7.4, the R^2 values for all dependent constructs are above the recommended levels.

7.3 Mediating mechanism between high performance work systems and employee outcomes

Hypotheses 6a, 6b, 6c and 6d predicted that psychological contract fulfillment (facet) measure would partially mediate the relationship between the HPWS and affective commitment, intentions to quit, job satisfaction and absenteeism respectively. Preacher and Hayes (2004) suggest two conditions need to be met in testing mediation. First, there should be an effect to be mediated. Second, the indirect effect should be statistically significant in the predicted direction. Full mediation occurs if the independent variable has no significant effect on the dependent variable when the mediator is controlled and partial mediation occurs if the magnitude of the effect of the independent variable is smaller but remains significant when the mediator is controlled. Figure 7.2 shows a simple mediation model.

Figure 7.2: A simple mediation model



a = regression coefficient for the association between independent variable and mediator; SE_a = standard error of a ; b = raw coefficient for the association between the mediator and the DV (when the IV is also a predictor of the DV); SE_b = standard error of b .

It can be seen from Table 7.5, there are direct effects between the HPWS and the four employee outcomes: affective commitment, job satisfaction, intention to quit and absenteeism.

Table 7.5: Mediating effects of psychological contract fulfillment on high performance work systems and employee outcomes

Mediating relationship	a (HPWS- PCF- facet)	b (PCF- facet- Employee Outcome)	HPWS- Employee Outcome (c')	Lower confidence interval (at 95%)	Upper confidence interval (at 95%)
HPWS-PCF (facet)-AC	0.477	0.508	0.242	0.198	0.290
HPWS- PCF (facet)-ITQ	0.477	-0.331	-0.158	-0.197	-0.121
HPWS- PCF (facet)-JS	0.477	0.533	0.254	0.209	0.301
HPWS- PCF (facet)-Absenteeism	0.477	-0.377	-0.177	-0.223	-0.139

To further assess the significance of the mediation, bootstrapping procedures were used. The advantage of using the bootstrapping approach is that it makes no assumption about the distribution of the standard error associated with the indirect effect and provides confidence intervals for the estimate. This method is deemed better than the Sobel test which assumes that the standard errors are

normally distributed. The significance of the indirect effect using bootstrapping is established by determining whether zero is contained within the 95% confidence interval (thus indicating the lack of significance).

The results presented in the last two columns of Table 7.5 were based on 5000 bootstrapped samples using bias-corrected and accelerated 95% confidence intervals (Preacher & Hayes, 2004). They showed that the indirect effects are indeed significantly different from zero at $p < .05$ (two tailed). It can be concluded that the psychological contract fulfillment (facet) measure partially mediated the relationship between HPWS and affective commitment, intentions to quit, job satisfaction and absenteeism respectively. Thus, it could be inferred that the HPWS has both direct and indirect effects on employee attitudes.

7.4 Mediating mechanism between frontline management leadership behaviour and employee outcomes

Hypotheses 7a, 7b, 7c and 7d predicted that the psychological contract fulfillment (facet) measure partially mediates the relationship of FLM leadership behaviour with affective commitment, intentions to quit, job satisfaction and absenteeism respectively.

It can be seen from Table 7.6, there are direct effects between FLM leadership behaviour and the four employee outcomes: affective commitment, job satisfaction, intention to quit and absenteeism.

Table 7.6: Mediating effects of psychological contract fulfillment on frontline management leadership behaviour and employee outcomes

Mediating relationship	a (FLMLB – PCF- facet)	b (PCF- facet- Employee Outcome)	FLMLB- Employee Outcome (c')	Lower confidence interval (at 95%)	Upper confidence interval (at 95%)
FLMLB -PCF (facet)-AC	0.241	0.508	0.122	0.086	0.161
FLMLB - PCF (facet)-ITQ	0.241	-0.331	-0.080	-0.104	-0.056
FLMLB - PCF (facet)-JS	0.241	0.533	0.128	0.089	0.170
FLMLB - PCF (facet)-Absenteeism	0.241	-0.377	-0.091	-0.119	-0.065

Again, to further assess the significance of the mediation, bootstrapping procedures were used. The results presented in the last two columns of Table 7.6 were based on 5000 bootstrapped samples using bias-corrected and accelerated 95% confidence intervals (Preacher & Hayes, 2004) and showed that the indirect effects are indeed significantly different from zero at $p < .05$ (two tailed). The necessary conditions for mediation by psychological contract fulfillment (facet) measure were met in the case of the relationship between FLM leadership behaviour and employee outcomes. Thus, it can be concluded that the psychological contract fulfillment (facet) measure partially mediated the relationship between FLM leadership behaviour and affective commitment, intentions to quit, job satisfaction and absenteeism respectively.

7.5 Mediating mechanism between co-worker support and employee outcomes

Hypotheses 8a, 8b, 8c and 8d predicted that the psychological contract fulfillment (facet) measure partially mediates the relationship of co-worker support with affective commitment, intention to quit, job satisfaction and absenteeism respectively.

It can be seen from Table 7.7, there are direct effects between co-worker support and the four employee outcomes: affective commitment, job satisfaction, intention to quit and absenteeism.

Table 7.7: Mediating effects of psychological contract fulfillment on co-worker support and employee outcomes

Mediating relationship	a (CWS - PCF (facet))	b (PCF-facet- Employee Outcome)	CWS- Employee Outcome (c')	Lower confidence interval (at 95%)	Upper confidence interval (at 95%)
CWS -PCF (facet)-AC	0.115	0.508	0.058	0.015	0.104
CWS - PCF (facet)-ITQ	0.115	-0.331	-0.038	-0.067	-0.010
CWS - PCF (facet)-JS	0.115	0.553	0.061	0.015	0.108
CWS - PCF (facet)-Absenteeism	0.115	-0.377	-0.043	-0.077	-0.010

To further assess the significance of the mediation, bootstrapping procedures were used. The results presented in the last two columns of Table 7.7 were based on 5000 bootstrapped samples using bias-corrected and accelerated 95% confidence intervals (Preacher & Hayes, 2004) and showed that the indirect effects are indeed significantly different from zero at $p < .05$ (two tailed). It can be concluded that the psychological contract fulfillment (facet) measure partially mediated the relationship between co-worker support and affective commitment, intention to quit, job satisfaction and absenteeism respectively.

7.6 Interaction effects

This section tests the pairwise interactions between the three independent variables used in the study: HPWS, FLM leadership behaviour and co-worker support in the prediction of psychological contract fulfillment. From the theoretical model, it can be posited that the two-way interactions (high performance work systems X frontline management leadership behaviour; high performance work systems X co-worker support; frontline management leadership behaviour X co-worker support) and the three-way interaction (high performance work systems X frontline management leadership behaviour X co-worker support) would be significant.

Regression analysis was used to test the specific interaction effect hypotheses using factor scores obtained from SmartPLS. The use of factor scores is more appropriate than using raw data as they a) allow for differential item weighting, b) strip out the measurement error and c) handle the formative nature of the constructs (HPWS and psychological contract fulfillment-facet). Adopting a stepwise regression approach, the dependent and three independent variables were entered in Step 1 followed by the interaction variables in Step 2. Evidence of interaction exists when the set of the two-way interaction terms account for significant residual variance in the dependent variable (F change= 180.119; R -squared change= 0.011).

The results of regression analysis of the main effects model (see Table 7.9) showed that the HPWS ($\beta=0.477$, $p<0.001$), FLM leadership behaviour ($\beta=0.241$, $p<0.001$), and co-worker support ($\beta=0.115$, $p<0.001$) are positively and significantly related to psychological contract fulfillment, consistent with earlier results reported in Section 7.2.1. As reported in Table 7.8, it can be seen that entering the three sets of two-way interactions causes a change in R^2 of the main effects model ($R^2=0.011$). In the next step, Step 3, the three way interaction was entered. Results suggested there was a negligible change in R^2 value on psychological contract fulfillment.

Table 7.8: Model with two-way and three-way interaction

Dependent variable: Output specification	R ²	R ² change	F change	Significance F change
Step 1: Psychological contract fulfillment	0.498	0.498	346.521	.000
Step 2: High performance work systems X Frontline management leadership behaviour; High performance work systems X Co-worker support; Frontline management leadership behaviour X Co-worker support	0.509	0.011	180.119	.000
Step 3: High performance work systems X Frontline management leadership behaviour X Co-worker support	0.510	0.001	154.972	.000

Table 7.9: Main and interaction effect regression results

Interaction term	β	t-value	Significance Levels
Step 1: Main effects			
High performance work systems	0.477	17.590	0.000
Frontline management leadership behaviour	0.241	8.984	0.000
Co-worker support	0.115	4.394	0.000
Step 2: Adding two-way interaction terms			
High performance work systems X Frontline management leadership behaviour	0.019	0.889	0.374
High performance work systems X Co-worker support	0.094	3.429	0.001
Frontline management leadership behaviour X Co-worker support	-0.075	-2.677	0.000
Step 2: Adding three-way interaction term			
High performance work systems X Frontline management leadership behaviour X Co-worker support	0.019	1.586	0.113

Hypothesis 9 predicted that there would be a two-way interaction between HPWS and FLM leadership behaviour in predicting psychological contract fulfillment. Contrary to this hypothesis, the results shown in Table 7.9 indicate the first interaction term (high performance work systems X frontline management leadership behaviour) is positive and insignificant. The second interaction

term (high performance work systems X co-worker support) is positive and statistically significant, providing some evidence that they are perhaps complements, providing support for Hypothesis 10. The third interaction term (frontline management leadership behaviour X co-worker support) is negative and significant, which suggests that the two variables act as substitutes. Thus, Hypothesis 11 is supported. The three-way interaction among HPWS, FLM leadership behaviour and co-worker support was insignificant for psychological contract fulfillment, thus providing no support for Hypothesis 12.

It is often considered appropriate to think of one predictor as a focal variable and the other predictor as the moderator variable hypothesised to affect the relationship between the focal predictor and the dependent variable. Further, the moderator variables partitions the focal independent variable into subgroups (high, medium and low) that establish its domains of maximal effectiveness in regard to a given dependent variable. Since all the three antecedents are important in this thesis, I inspect the slope coefficients for each interaction effect twice, considering each predictor as focal variable first and then as a moderator variable in predicting the dependent variable.

To explicate the significant interactions, I calculated conditional effects for employees for different values of the moderator variable, using the approach proposed by Aiken and West (1991). Please note that the mean and the standard deviation of the factor score was 0 and 1 respectively, as I have used the standardised factor scores. I classified the employee scores on the moderating variable which were one standard deviation below as low and one standard deviation above the mean of the factor score as high (Cohen & Cohen, 1983).

I first examined the interaction effect between the high performance work systems and co-worker support in predicting psychological contract fulfillment. An inspection of the simple slope coefficients demonstrated that the relationship between HPWS and psychological contract

fulfillment was high ($\beta = 0.571$) for employees scoring high on co-worker support and low ($\beta = 0.383$) for the employees scoring low on co-worker support. This is presented in Table 7.10.

Table 7.10: Interpreting regression slope coefficients of high performance work systems on psychological contract fulfillment at high, medium, and low levels of co-worker support

		Slope for high performance work systems on psychological contract fulfillment
Level of co-worker support	High	0.571
	Medium	0.477
	Low	0.383

Analogously, the relationship between co-worker support and psychological contract fulfillment was stronger (0.209) for employees perceiving high levels of HPWS, as compared to those forming weaker perceptions of HPWS (0.021). This is illustrated in Table 7.11.

Table 7.11: Interpreting regression slope coefficients of co-worker support on psychological contract fulfillment at high, medium, and low levels of high performance work systems

		Slope for co-worker support on psychological contract fulfillment
Level of high performance work systems	High	0.209
	Medium	0.115
	Low	0.021

Next, I discuss the interaction between FLM leadership behaviour and co-worker support in predicting psychological contract fulfillment. Table 7.12 examines the interaction effect treating co-worker support as the focal variable. When evaluating with FLM leadership behaviour at 1 standard deviation below the mean (low FLM leadership behaviour), the impact of the relationship between co-worker support and psychological contract fulfillment was stronger (0.190). However, when I evaluated the relationship with FLM leadership behaviour at 1 standard deviation above the mean

(high FLM leadership behaviour), the relationship between co-worker support and psychological contract fulfillment was low ($\beta = 0.040$).

Table 7.12: Interpreting regression slope coefficients of co-worker support on psychological contract fulfillment at high, medium, and low levels of frontline management leadership behaviour

		Slope for co-worker support on psychological contract fulfillment
Level of frontline management leadership behaviour	High	0.040
	Medium	0.115
	Low	0.190

Alternatively, employees scoring low on co-worker support, the impact of FLM leadership behaviour and psychological contract fulfillment was high ($\beta = 0.316$), as seen in Table 7.13. Also, the relationship between FLM leadership behaviour and psychological contract fulfillment was weaker ($\beta = 0.166$) for employees reporting higher levels of co-worker support.

Table 7.13: Interpreting regression slope coefficients of frontline management leadership behaviour on psychological contract fulfillment at high, medium, and low levels of co-worker support

		Slope for frontline management leadership behaviour on psychological contract fulfillment
Level of co-worker support	High	0.166
	Medium	0.241
	Low	0.316

In sum, this study explored three two-way interaction effects and one three-way interaction effect. The two-way interaction effect between HPWS and FLM leadership behaviour in predicting psychological contract fulfillment was insignificant. Also, no support was found for the three-way interaction effect between HPWS, FLM leadership behaviour and co-worker support in explaining the psychological contract fulfillment. Results indicated a synergistic effect between HPWS and co-worker support on psychological contract fulfillment. Also, the interaction results for FLM leadership behaviour and co-worker support indicate a potential substitute effect on psychological

contract fulfillment, in that a negative interaction was observed. To better explain the significant interactions, I examined the slopes in line with the recommendation of Aiken and West (1991).

7.7 Robustness tests

I undertook additional analyses to assess the robustness of the estimation results. These tests were performed to ensure the integrity of results. First, I performed the Harman's single-factor test to examine the possibility of common method bias. Next, I included the control variables (age, gender, education, tenure and industry) in the analysis to see whether the hypothesised relationships still remained significant. Third, I tested the hypothesised model using the global measure of psychological contract fulfillment (Model 3) and compared it with the baseline model (Model 1). This study is designed to juxtapose models using both global and facet measures of psychological contract fulfillment and attempt to identify whether one measure is better than the other. Finally, I included an approach specific to PLS-SEM, blindfolding, which evaluates the predictive relevance of the endogenous latent constructs. Each of these analyses are presented in detail in the following sections.

7.7.1 Common method variance

The effects of common method bias need to be examined as all the study variables were measured using the same source (Podsakoff, MacKenzie, Lee & Podsakoff, 2003; Chang, Van Witteloostuijn & Eden, 2010). Common method bias refers to the statistical variance that can be attributed to the method of measurement rather than the constructs the measures represent (Podsakoff et al., 2003; Chang et al., 2010; Podsakoff, MacKenzie & Podsakoff, 2012). Podsakoff et al. (2012) identified common method bias as one of the major sources of measurement error which jeopardises the validity of results related to the relationships between constructs.

Researchers have widely used the Harman's single-factor test for assessing the issue of common method bias (Favero & Bullock, 2014). It involves conducting an exploratory factor analysis on the variables included in the study and examining the unrotated solution to determine the number of factors that account for the variance in the variables. The main assumption of this test is that if common method bias exists, either one factor will emerge from the analysis or one factor will account for most of the covariance among variables. Recently, studies have started deploying the Harman's test using confirmatory factor analysis, which is believed to be a more stringent test for examining whether one factor can account for most of the variance in the data (Podsakoff et al., 2003, 2012). Accordingly, Confirmatory Factor Analysis (CFA) robust maximum likelihood procedure will be used in the current study to perform the Harman's single-factor test.

The measurement model using all reflective indicators had a very good fit ($\chi^2/df = 3.839$, CFI = 0.937, TLI = 0.928, SRMR = 0.041). Next, a measurement model was tested in which all the reflective indicators were loaded onto a single factor representing a common influence. Compared to the initial model, this model had an extremely poor fit ($\chi^2/df = 24.192$, CFI = 0.461, TLI = 0.410, SRMR = 0.146), suggesting that common method bias is unlikely to be a concern in the current study.

7.7.2 Control variables

One method of establishing the robustness of hypothesised relationships is to add control variables to the model (Khilji & Wang, 2006). Prior research suggests that control variables are potential sources of extraneous variance (Huselid, 1995; Restubog et al., 2011). I identified a number of control variables from the literature review to reduce the possibility of spurious results caused by correlations among these variables and the constructs of interest. I included five control variables: age, gender, education, tenure and industry in the subsequent analyses. These variables have been

included as control variables as they have been used frequently in prior psychological contract studies (Guest & Conway, 1997, 2000, 2001a, 2000b), suggesting that they may have an impact on psychological contract. Accordingly, these variables were controlled for in the current study so as to rule out potential alternative explanations for the findings (Dulac, Coyle-Shapiro, Henderson & Wayne, 2008; Agarwal & Bhargava, 2010).

Table 7.14 presents the results after the five control variables were entered in Model 1. Results revealed that none of the five control variables have a significant relationship with psychological contract fulfillment. More importantly, it can also be inferred that the hypothesised paths associated with Model 1 remained significant even after the inclusion of the control variables, thus enhancing the confidence in the findings.

Table 7.14: Examining control variables in Model 1

Hypothesised relationship	β	t-Statistics	Significance Levels	Result
Control variables				
Age -> Psychological contract fulfillment (facet)	-0.068	1.309	NS	Not Supported
Educational level -> Psychological contract fulfillment (facet)	0.024	1.151	NS	Not Supported
Gender -> Psychological contract fulfillment (facet)	-0.004	0.353	NS	Not Supported
Tenure -> Psychological contract fulfillment (facet)	0.056	1.240	NS	Not Supported
Industry -> Psychological contract fulfillment (Facet)	0.010	0.455	NS	Not Supported
Main effects				
High performance work systems-> Psychological contract fulfillment (facet)	0.477	14.652	***	Supported
Frontline management leadership behaviour -> Psychological contract fulfillment (facet)	0.238	6.531	***	Supported
Co-worker support-> Psychological contract fulfillment (facet)	0.118	2.745	***	Supported
Psychological contract fulfillment (facet) -> Affective commitment	0.508	14.905	***	Supported
Psychological contract fulfillment (facet) -> Intention to quit	-0.332	10.009	***	Supported
Psychological contract fulfillment (facet) -> Job satisfaction	0.533	16.102	***	Supported
Psychological contract fulfillment (facet) -> Absenteeism	-0.377	10.056	***	Supported

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, NS- not significant

The R^2 of the model with control variables is 50.0 percent, while before the R^2 was 49.8 percent. Thus, the incremental R^2 after the inclusion of control variables is 0.2 percent, thus the control variables had a very small effect on the variance of psychological contract fulfillment.

7.7.3 Testing with alternate psychological contract fulfillment measure

I tested for an alternative model, Model 3, which viewed psychological contract fulfillment as a global measure. This study attempts to identify whether the facet measure of psychological contract fulfillment is similar to the global measure on the basis of empirical evidence. The global measure of psychological contract fulfillment consisted of 4 reflective indicators, as opposed to 13 formative indicators of the facet psychological contract in Model 1. Table 7.15 presents the results of testing the hypothesised direct relationships for Model 3. The table includes the path coefficients, t-values and corresponding significance levels. Model 3 was compared to Model 1 on the basis of path coefficients and significance levels, as well as examining R^2 values.

Table 7.15: Hypothesis test results for Model 3

Hypothesised relationship	β	t-Statistics	Significance levels	Result
High performance work systems -> Psychological contract fulfillment (global)	0.406	12.065	***	Supported
Frontline management leadership behaviour -> Psychological contract fulfillment (global)	0.121	3.121	***	Supported
Co-worker support -> Psychological contract fulfillment (global)	0.274	6.815	***	Supported
Psychological contract fulfillment (Global) -> Affective commitment	0.346	9.238	***	Supported
Psychological contract fulfillment (Global) -> Intention to quit	-0.439	14.929	***	Supported
Psychological contract fulfillment (Global) -> Job satisfaction	0.643	23.833	***	Supported
Psychological contract fulfillment (Global) -> Absenteeism	-0.286	7.926	***	Supported

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Model 3 results clearly indicated that all the hypothesised paths are significant ($p < 0.01$). Table 7.15 highlights the important role of HPWS, FLM leadership behaviour and co-worker Support in

driving the psychological contract fulfillment (global) construct with path coefficients of 0.406 ($p < 0.01$), 0.121 ($p < 0.01$), and 0.274 ($p < 0.01$) respectively. These results are comparable to those obtained by testing Model 1. As shown in Table 7.15, the psychological contract fulfillment (global) construct has a significant, positive relationship with affective commitment ($\beta = 0.346$, $p < 0.01$) and job satisfaction ($\beta = 0.643$, $p < 0.01$). The relationship of the psychological contract fulfillment (global) construct with intention to quit ($\beta = -0.439$, $p < 0.01$) and absenteeism ($\beta = -0.286$, $p < 0.01$) was negative and significant. The direction and magnitude of the standardised path estimates were very similar to those found in Model 1, with the exception of co-worker support that has a higher magnitude than FLM leadership behaviour on the psychological contract fulfillment (global) measure.

Table 7.16: R^2 values for Model 1 and 3

	R² (Model 1) Psychological contract fulfillment (Facet)	R² (Model 3) Psychological contract fulfillment (Global)
<i>Antecedents</i>		
High performance work systems, FLM leadership behaviour and co-worker support	0.498	0.448
<i>Employee outcomes</i>		
Affective commitment	0.258	0.120
Job satisfaction	0.284	0.413
Intention to quit	0.110	0.192
Absenteeism	0.142	0.082

As is observed from Table 7.16, the R^2 values for both models are above the recommended levels (except R^2 for absenteeism in Model 3) using the criterion proposed by Falk and Miller (1992). The R^2 value for affective commitment is higher in Model 1 (0.258) than in Model 3 (0.120), whereas, R^2 value for job satisfaction is less in Model 1 (0.284) than in Model 3 (0.413). The R^2 value for

intention to quit is seen to be greater in Model 3 (0.192) than in Model 1 (0.110). For the construct of absenteeism, the R^2 value for Model 1 is 0.142 as compared to 0.082 in Model 3.

Clearly for both Model 1 and 3, the three predictors, HPWS, FLM leadership behaviour and co-worker support explain relatively similar amounts of variance in psychological contract fulfillment, though Model 1 explains slightly more variance than Model 3. In other words, both models provided good predictions of psychological contract fulfillment, although Model 1 slightly outperformed Model 3. Further, Model 1 explains affective commitment and absenteeism better while Model 3 explains job satisfaction and intention to quit better.

One reason explaining the differential relationships of the two measures on employee outcomes, is the nature of the measurement scales. For instance, the correlation between the global and facet measure of psychological contract fulfillment is 0.566. As the correlation coefficient is well below 0.8, this confirms that while the two measures are correlated, they are distinct (Anderson & Gerbing, 1988). Thus, the overall global and facet measure of the psychological contract are not identical, and appear to be measuring different aspects of the psychological contract fulfillment. This is further confirmed when considering the bi-variate correlations of each of the three psychological contract facets (delivery of the deal, fairness and trust) with the global measure of psychological contract fulfillment: 0.501, 0.435 and 0.530 respectively.

The global measure of psychological contract fulfillment, essentially only considers a general assessment of the fulfillment of promises and obligations made by the organisation. Whereas, the facet measure considers three distinct aspects of the psychological contract, namely the delivery of the deal, fairness and trust. It was anticipated that the global measure, which closely approximates the 'delivery of the deal' facet, would be highly correlated with this component of the facet measure. However, according to my results, it is not. This could be because the global measure is determined

by general fulfillment and not specific fulfillment of promises and obligations. On the other hand, the delivery of the deal facet comprises items that focus on the extent of fulfillment of specific promises and obligations such as job security, fair pay and provision of problem solving mechanisms within the organisation. Thus, the global measure may not be able to capture specific aspects of promises and obligations being fulfilled. This is because the global measure being a generalised approach, presumes that employees perceive the different facets in a uniform manner. However, in reality, it is unlikely that all facets of the psychological contract have the same effect on the employees and their attitudes and behaviours. Additionally, the global measure, being a general measure, does not explicitly capture the fairness and trust facets.

Therefore, it appears that the global measure may be limited in scope, as such, in its current form it does not capture the full range of actions attributed to the psychological contract fulfillment. Instead, the global measure appears to be a *general* rather than *specific* assessment of employees' perceptions of 'delivery of the deal'. The other two facets, fairness and trust could provide additional explanatory power for predicting and explaining the antecedents and outcomes of psychological contract fulfillment. However, the 4-item global measure is relatively parsimonious and it could be argued that in case of the facet measure, a small increase in the predictive power comes at a cost of using 13 items. This could be relevant for the purpose of practical application of the measures, wherein parsimony may be more heavily weighted.

The differential effects of the two measures on the employee outcomes suggest that it cannot be concluded solely on empirical grounds that one model is better than the other. This discussion provides some guidelines to choose between the global and facet based measures of psychological contract fulfillment. Given that both Model 1 and 3 are empirically strong, the choice depends on

other criteria. The information provided by using the global and facet based measure is quite different.

The global measure of psychological contract fulfillment provides a quicker way to gather information about the general perceptions of psychological contract fulfillment. The facet based measure of psychological contract fulfillment provides more specific information, giving more insight into which aspects are more fulfilled as compared to others. In sum, this test compared the global and facet measure of psychological contract fulfillment. Both models using the global and facet measure provided good predictions of psychological contract fulfillment. Also, the empirical evidence about the relationship between psychological contract fulfillment and employee outcomes is inconclusive, thus it requires more attention.

Going back to the question raised in Section 2.5, “Should one measure general or specific constructs?”, reviewing the empirical evidence on global and facet measures of psychological contract fulfillment, I infer that there is no best answer to this question. Like Judge and Kammeyer-Mueller (2012) proposed, a more appropriate question would be “*When* should one measure general constructs and *when* should one measure specific constructs?” (p. 170). As discussed before, there are substantive differences between the global and facet measures, and the appropriate level of abstraction is likely to vary on the basis of the question being asked. Researchers who attempt to investigate context-specific questions with specific criteria should employ a facet measure. Conversely, researchers who seek answers to context-general questions with general criteria should adopt a global measure.

7.7.4 Blindfolding

PLS-SEM includes an additional approach to evaluate structural model predictive ability called blindfolding, which is not available from CB-SEM analyses. Blindfolding was executed to evaluate the predictive relevance of the endogenous latent construct indicators (Hair et al., 2014). The blindfolding procedure produces the Q^2 , which applies a sample re-use technique that omits part of the data matrix and uses the model estimates to predict the omitted part. For PLS-SEM models, a Q^2 value larger than zero in the cross-validated redundancy report indicates predictive relevance. This technique is applied only to endogenous constructs that have a reflective measurement model specification as well as to endogenous single-item constructs. In this study, the endogenous constructs that are reflective measures are the four employee outcomes: affective commitment, job satisfaction, intention to quit and absenteeism.

The predictive relevance values, Q^2 for affective commitment, intention to quit, job satisfaction and absenteeism are 0.192, 0.085, 0.247 and 0.143 respectively. All Q^2 values are above zero, thus providing support for the model's predictive relevance regarding the endogenous latent variables.

7.8 Chapter summary

The chapter also examined, in detail, the structural model developed in this study. The results indicated that HPWS, motivation and opportunity HRM bundles, FLM leadership behaviour and co-worker support had significant positive relationships with psychological contract fulfillment, which subsequently was positively linked to affective commitment and job satisfaction, and negatively associated with quit intentions and absenteeism. Regarding mediation effects, the results revealed that psychological contract fulfillment partially mediated the relationship between HPWS and employee outcomes. Additionally, it was also found to partially mediate the relationships between

FLM leadership behaviour and employee outcomes; and co-worker support and employee outcomes respectively. Regarding interaction effects, the results suggested positive interaction between HPWS and co-worker support and a negative interaction between FLM leadership behaviour and co-worker support. The two way interaction between HPWS and FLM leadership behaviour and the three way interaction between HPWS, FLM leadership behaviour and co-worker support was found to be insignificant. Table 7.17 summarises the results of the hypotheses testing for this thesis. The last section of the chapter presented the results of the robustness tests which were carried out in this study.

Drawing on the empirical evidence reported in this chapter, the final chapter will present a discussion of the research questions in relation to the findings of this study. It will also present the contributions, managerial implications, research limitations of this thesis and the directions for future research.

Table 7.17: Summary of results for this thesis

Hypothesis	Hypothesised relationship	Result
Hypothesis 1	High performance work systems will be positively related to psychological contract fulfillment.	Supported
Hypothesis 2	a) Ability-enhancing HRM bundle, b) motivation-enhancing HRM bundle, and c) opportunity-enhancing HRM bundle will be positively related to psychological contract fulfillment.	Mixed. Supported for Hypotheses 2b and 2c; Not supported for Hypothesis 2a
Hypothesis 3	Frontline management leadership behaviour will be positively related to psychological contract fulfillment.	Supported
Hypothesis 4	Co-worker support will be positively related to psychological contract fulfillment.	Supported
Hypothesis 5	Psychological contract fulfillment will be related positively to a) affective commitment; b) job satisfaction; and negatively related to c) intentions to quit and d) absenteeism.	Supported
Hypothesis 6	Psychological contract fulfillment will partially mediate the relationship between high performance work systems and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.	Supported
Hypothesis 7	Psychological contract fulfillment will partially mediate the relationship between frontline management leadership behaviour and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.	Supported
Hypothesis 8	Psychological contract fulfillment will partially mediate the relationship between co-worker support and a) affective commitment, b) intention to quit, c) job satisfaction, and d) absenteeism.	Supported
Hypothesis 9	There is a two-way interaction between high performance work systems and frontline management leadership behaviour in predicting psychological contract fulfillment.	Not supported
Hypothesis 10	There is a two-way interaction between high performance work systems and co-worker support in predicting psychological contract fulfillment.	Supported, Positive interaction effect
Hypothesis 11	There is a two-way interaction between frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment.	Supported, Negative interaction effect
Hypothesis 12	There will be a three-way interaction among high performance work systems, frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment.	Not supported

CHAPTER 8

DISCUSSION AND CONCLUSION

8.1 Introduction

The chapter discusses the results of the current study and the implications for theory and practice. This chapter provides an integrative summary of this thesis. Specifically, it examines the findings relating to the research questions posed in Chapter 1. Next, this chapter presents the contributions and implications of the present research. Additionally, it discusses the limitations of the current study and outlines the future research directions.

8.2 Discussion

The main aim of this thesis was to explore the relationship between psychological contract fulfillment and its antecedents and consequences. This study examined three antecedents of psychological contract fulfillment: HRM practices, FLM leadership behaviour and co-worker support. Further, it considered four employee outcomes that are associated with the psychological contract fulfillment: affective commitment, job satisfaction, intention to quit and absenteeism. In particular, a brief summary of the salient findings is provided in accordance with each research question.

8.2.1 What is the relationship between employee perceptions of high performance work systems and psychological contract fulfillment?

The first research question addressed the relationship between employees' perceptions of the HPWS and psychological contract fulfillment. This question is particularly pertinent since a key function of

HRM practices is to foster an appropriate psychological contract, and employee interpretations of their employer's HRM practices may affect their psychological contract with their employer. Subsequently, their perceptions of contract fulfillment may affect their attitudes and behaviours (Guzzo & Noonan, 1994; Rousseau & Greller, 1994).

This view is based on social exchange, organisational support and signalling theories. I hypothesised a positive association between the HPWS and psychological contract fulfillment. The findings in Chapter 7 showed that the HPWS is related to a positive state of psychological contract ($\beta=0.477$, $p<0.01$) while adopting the psychological contract fulfillment (facet) measure. A similar finding was also reported for the global measure of the psychological contract ($\beta=0.406$, $p<0.01$).

Supporting the notion of social exchange theory, the results of this research strengthen the arguments developed in previous research suggesting that the employees would have positive perceptions of the psychological contract when they perceive the organisation is supporting them through investments in HRM practices (Katou & Budhwar, 2012). A complementary argument is made by the organisational support theory that posits that employees view the HPWS as indicative of investments in them by organisation, which in turn, determines their attitudes and behaviours (Eisenberger & Stinglhamber, 2011). An alternative view is that HPWS *signal* organisational support for employees, which strengthen the psychological contract between the employer and the employees (Ostroff & Bowen, 2000; Wright & Boswell, 2002; Boselie, Dietz & Boon, 2005; McDermott et al., 2013; Kuvaas, Dysvik & Buch, 2014).

The results reported here complement the previous studies that recognised and explained the influence of the HPWS on psychological contract fulfillment, conducted in the Western contexts. For instance, the findings are congruent with the series of surveys conducted by Guest and Conway's (1997, 2000, 2001a, 2001b), in which they report that HRM practices are a significant predictor of

the psychological contract. Sonnenberg et al. (2011) conducted a multilevel study which indicated that 29 per cent in the variation of psychological contract fulfilment can be explained by the variation in the use of high commitment HR practices. Similarly, Raeder et al. (2012) indicated the high-investment HRM systems predicted the fulfillment of the psychological contract. The reported β was 0.31 and high-investment HRM system index explained 12 percent of variance in psychological contract fulfillment.

As previously noted, the magnitude of the relationship between the HPWS and psychological contract reported in this study, is substantially higher than that reported in previous studies. This could be owing to how the variables of HPWS and psychological contract fulfillment have been theorised and conceptualised in previous studies. For instance, Guest and Conway (1997, 2000, 2001a, 2001b) used an overall additive HRM scale including the core areas of HRM, such as, equal opportunities, family-friendly policies, performance-related pay and training opportunities. The studies have reported the range of HRM practices that employees have experienced. Similarly, Sonnenberg et al. (2011) measured the total amount of HRM practices (HRM COUNT) by adding the number of HRM practices employed by the organisation and counting how many of the 24 HRM activities are employed regularly.

This specification used by Guest and Conway and Sonnenberg et al. (2011) is flawed as “...the presence of a HR practice does not say anything about the signals sent to employees, and thus the way it is experienced by employees...” (Delmotte, De Winne & Sels, 2012, p. 1483). Thus, this study collected data on employees’ *perceptions* rather than *presence* of HRM practices on a Likert scale from 1 to 7 (where 1= strongly disagree and 7= strongly agree). This study is concerned with capturing employee perceptions of the adoption of each HRM practice, rather than just the number of practices being used in the organisation (as reported by the employees). With respect to the

conceptualisation of psychological contract fulfillment, while this thesis adopted the measure used by Guest and Conway (1997, 2000, 2001a, 2001b), they specified it as a reflective construct. Unlike the original specification, this thesis treats it as a formative construct. I speculate that the methodological treatment could be a reason for the differences in magnitude of the results of this thesis, when compared with the studies by Guest and Conway.

Additionally, most previous research on HRM practices and psychological contract has been conducted in western countries (Hui et al. 2004; Restubog et al. 2009; Katou and Budhwar, 2012) where cultures are typically individualist and low in power distance. India differs with its western counterparts, as the collectivism and power distance is high in this context (Budhwar & Sparrow, 2002; Kwantes, 2003; Agarwal & Bhargava, 2010; Mellahi, Budhwar & Li, 2010; Agarwala, Arizkuren-Eleta, Del Castillo, Muniz-Ferrer & Gartzia, 2014). It would be worth exploring whether the differences in the magnitudes could be attributed to the cultural differences in the two contexts.

8.2.2 What is the relationship between HRM bundles and psychological contract fulfillment?

One of the contributions of the research model employed in this thesis is that the results show differential effects of the three HRM bundles, which is important for advancing strategic HRM theory and methodology. These results remind researchers that different HPWS bundles may have differential effects on organisational outcomes. I am not aware of any empirical study examining the differential effects of HRM bundles on the psychological contract fulfillment.

Prior research has highlighted the importance of studying the differential effects of HRM bundles with respect to other variables. For instance, the theoretical study by Wright and Kehoe (2008) proposed that the motivation and opportunity bundles would be positively related to organisational commitment, while the ability bundle may have no or a negative impact on commitment. Further, the

meta-analytic study by Subramony (2009) found that all three bundles of HR practices (ability, motivation, and opportunity) were positively related to most organisational performance measures. However, the results indicated that although the motivation and empowerment bundles were positively related to retention, the ability bundle was unrelated. Additionally, Prieto and Pérez-Santana (2014), using a sample of 198 Spanish organisations, found that ability-enhancing and opportunity-enhancing HRM bundles were positively related to innovative work behaviours. However, they did not find support for the relationship between motivation-enhancing HRM bundle and innovative work behaviour.

Based on the previous SHRM literature, I argue that it is important to ‘unpack’ HPWS into three bundles and study their differential effects. As such, the findings reported here reveal that the HRM bundles do in fact have a differential effect, with the ability-enhancing bundle having a significant inverse effect. Notably, the motivation-enhancing and opportunity-enhancing HRM bundles were found to be significantly associated with the psychological contract fulfillment. Further, the results highlighted that the bundle effects were stronger for motivation-enhancing HRM bundle in comparison with the opportunity-enhancing HRM bundle and ability-enhancing HRM bundle.

I discuss two possible reasons for the lack of empirical support for the association between ability-enhancing HRM bundle and psychological contract fulfillment. The first explanation for this result could be that the training and development opportunities could be viewed as a double-edged sword which could have a potential beneficial or detrimental effect on the employees (Suazo et al., 2009). They further elucidated that in case the employees viewed the training as a potential investment by the organisation in them, they will establish positive opinions about their exchange relationships with the organisation. On the contrary, if the employees think they have been nominated for training for not having the skills to perform a job correctly, they may associate negative feelings with it

rather than treat it as a developmental prospect. These negative perceptions regarding training may influence their perceptions of psychological contract in an adverse manner.

The lack of support for a positive relationship between the ability-enhancing HRM bundle and psychological contract fulfillment may reflect the instrumentality of the bundle. In my questionnaire, I did not explicitly distinguish between job-related skills as opposed to development and career related skills. On reflection, while the ability-enhancing bundle is consistent with delivery of the deal, in that employees assess whether a sufficient amount of training is provided to undertake their work, the bundle may be a little out of line with social exchange which is more focused on the organisation's investment in employees' developmental needs.

An alternate explanation for the absence of evidence is in line with suggestions made by researchers as Wright and Kehoe (2008), Subramony (2009) and Gardner et al. (2011). It is possible that the increase in training would lead to increase in employee skills, thus in employees' market value. If the employee feels that the organisation does not compensate employees in accordance with their increased value in the market, outside firms will lure (poach) them away with offers of a market based wage. In that case, employee training may not translate into positive employee outcomes as they may exhibit high intentions to quit.

Whilst there are no other empirical studies with which to compare these findings, this thesis sets the stage for further research and theory progress in understanding how HRM bundles could have a differential impact on the psychological contract fulfillment. This research draws on prior research by Subramony (2009); Gardner et al. (2011); Jiang et al. (2012b); Prieto and Pérez-Santana (2014). Finally, this study provides empirical support for the efficacy of examining the different bundles of HRM practices as opposed to an overall HRM index.

The results highlight the importance of distinguishing among the three bundles when trying to understand their relationships with psychological contract. Each HRM bundle seems to have a unique relationship with the psychological contract. More broadly, this study suggests that HRM bundles deserve more attention in psychological contract literature to develop a more complete understanding of the linkages between HRM and psychological contract fulfillment.

8.2.3 What is the relationship between frontline management leadership behaviour and psychological contract fulfillment?

The previous two research questions examined the role of the HPWS and HRM bundles on psychological contract fulfillment respectively. The results provided support to the existing research investigating HRM practices as an antecedent to psychological contract fulfillment (Guest & Conway, 1997, 2000, 2001a, 2001b; Katou & Budhwar, 2012). While prior research has devoted attention to the effects of HRM practices on psychological contract fulfillment, the relationships between frontline managers and employees' psychological contract have largely been neglected (see Guest and Conway, 2004).

This research question is very timely in the Indian context. India is characterised as a relationship-oriented society where supervisors' proximity to employees can make their influence quite strong (Anand, Vidyarthi, Liden & Rousseau, 2010). In a similar line of argument, Agarwal and Bhargava (2014) reasoned that "in collectivist, high-power societies such as India, people have great associative and nurturing needs, and superior-subordinate relationships parallel parent-child relationships" (p. 1488). Given the high relevance of immediate supervisor in the Indian context, the findings of this research question is vital for extending the psychological contract research. This

research question thus set out to examine the relationship between FLM leadership behaviour and frontline employee psychological contract.

As predicted, the results from Chapter 7 indicated that FLM leadership behaviour was a significant predictor of psychological contract fulfillment, thus substantiating the relationship between FLM leadership behaviour and psychological contract. In other words, where employees perceive their frontline managers are good at communicating, listen to their suggestions and treat them fairly, they will form positive perceptions of the psychological contract. This finding is consistent with social exchange and organisational support theory, which posits that employees perceive positive leadership behaviours from frontline managers as a form of organisation support and thus, in turn, form favourable perceptions of the psychological contract.

Prior research has suggested that the employee's immediate manager is likely to play an important role in shaping an individual's psychological contract. Consistent with this view, the empirical finding related to this research question is in line with the studies by Shore and Tetrick (1994), Guest and Conway (2000), Liden et al. (2004), Coyle-Shapiro and Shore (2007), Eitropaki (2013), reinforcing the critical role of the frontline manager as a key agent of the organisation. This finding confirms and elaborates the results of an earlier empirical study conducted by Guest and Conway (2004), which found that supervisory leadership was one of the significant predictors explaining positive psychological contracts. This also ties in with a more recent argument put forth by Lee and Taylor (2014), stating that frontline managers "increasingly possess considerable latitude in influencing employees' psychological contract with the organisation" (p. 96).

8.2.4 What is the relationship between co-worker support and psychological contract fulfillment?

This research question examined the link between co-worker support and psychological contract fulfillment. Drawing on the social exchange, organisational support and social information processing theory, I hypothesised a positive relationship between the levels of co-worker support and psychological contract fulfillment. Prior research has speculated and assumed co-workers may influence the psychological contract (Dabos & Rousseau, 2013). I noted that co-workers are not responsible for fulfilling the contract, as they are not directly involved in the development of the psychological contract between employees and the organisation. Instead, they *influence*, or *facilitate* their fellow employees' perceptions of psychological contract fulfillment through their supportiveness. This thesis proposed and tested this argument, and showed that high levels of co-worker support are associated with perceptions of psychological contract fulfillment.

In other words, the finding affirmed the positive effects of co-worker support on psychological contract fulfillment. This finding is in accordance with the arguments proposed by Dabos and Rousseau (2013) which stated that “social interactions on the job are likely to influence how employees interpret their employer’s commitments, for the basic reason that social cues from co-workers and colleagues tend to be more readily available than are HR or managerial communications. In particular, co-workers can help each other understand the employment relationship through the opinions, assurances, and interpretations they provide” (p. 487).

This finding is also relevant to the contextual setting of this thesis, India. Since India is primarily a collectivist society, employees are likely to be influenced by social networks, which include co-workers. Researchers (Saini & Budhwar, 2008; Mellahi et al., 2010) stated that Indian employees have a strong attachment with their peers and are willing to go the extra mile to help them. This

implies that employees tend to be relationally closer and more directly affected by the work practices of their co-workers, thus likely to be influenced by cues from co-workers. Thus, adding co-worker support as an antecedent of psychological contract fulfillment seems relevant in order to build a more integrative approach to studying psychological contract.

By examining co-worker support as an antecedent of psychological contract, this study facilitated considering co-workers as a part of work environment along with HPWS, HRM bundles and frontline managers. Together, the findings from the first four research questions indicated that HPWS, motivation and opportunity-enhancing HRM bundles, FLM leadership behaviour and co-worker support are significant predictors of the psychological contract fulfillment. To the best of my knowledge, these predictors have not been examined in a single study. Thus, this study substantiates and extends the findings of prior psychological contract research.

8.2.5 What is the relationship between psychological contract fulfillment and employee outcomes?

This research question investigated the link between psychological contract fulfillment and employee outcomes. This study focused on four key employee outcomes: affective commitment, job satisfaction, intention to quit and absenteeism, thus assessing both attitudes and behaviours. The results from Chapter 7 are congruent with prior research on psychological contract fulfillment and employee outcomes. It was found that psychological contract fulfillment is positively related to desirable employee attitudes and behaviours. Support was obtained for the favourable association between psychological contract fulfillment and affective commitment and job satisfaction. In addition, psychological contract fulfillment was found to be negatively related to intentions to quit and absenteeism.

These findings are consistent with social exchange, perceived organisational support and signalling theories. Where employees perceive that organisations fulfil their promises and invest in them, they, on the basis of norms of reciprocity, will reciprocate with desirable attitudes and behaviours (Eisenberger et al., 2002; Katou & Budhwar, 2012).

Like western counterparts, the results of this study confirmed the findings of previous research examining the link between psychological contract fulfillment and employee outcomes. Specifically, this study found support for the positive influence of psychological contract fulfillment on affective commitment, which is consistent with the findings from Coyle-Shapiro and Kessler (2000); Hornung and Glaser (2010); Antoni and Syrek (2012) and Chambel and Castanheira (2012). Similarly, psychological contract fulfillment was also positively related to job satisfaction in line with the results from Guest and Conway (2000), Conway et al. (2011) and Tomprou et al. (2012).

In accord with the studies by Chi and Chen (2007) and Willem et al. (2010), this study found psychological contract fulfillment was negatively related to intention to quit and absenteeism. Similar findings in both Indian and Western countries suggest the possibility of generalising the effects of psychological contract fulfillment to culturally diverse contexts.

8.2.6 Does psychological contract fulfillment partially mediate the relationship between high performance work systems and employee outcomes?

This research question examined the role of psychological contract fulfillment as a mediator between the HPWS and employee outcomes. This study found support for the mediation hypotheses. The results indicated that the hypothesised mediator, psychological contract fulfillment partially mediated the relationship between HPWS and the four employee outcomes: affective commitment, job satisfaction, intention to quit and absenteeism.

Psychological contract fulfillment serves as a mechanism through which employees' perceptions of HRM practices are associated with employee attitudes and behaviours. In other words, the psychological contract serves as one process between HRM practices and employee outcomes. This finding not only empirically supports Wright and Boswell (2002)'s contention that psychological contracts can be best viewed as the linking mechanism between the HPWS and employee outcomes, but also provides a possible explanation as to how the HPWS influences employee outcomes.

The current study has provided additional empirical evidence that HPWS lead to employee outcomes through psychological contract fulfillment. The finding supports the notion proposed by Conway and Briner (2005) which stated that "the structural features of organisations, such as human resource practices, impact on employee attitudes such as job satisfaction and organisational commitment is through the impact of such practices on the psychological contract" (p. 51).

Past empirical studies have yielded mixed results. The findings of this study are consistent with Uen et al. (2009) and Bal et al. (2013). However, the results are contrary to the studies by Raeder et al. (2012) and Scheel et al. (2013) who did not find support for the psychological contract as a mediator between HRM and employee outcomes. The reasons for mixed results in earlier studies could be the use of different measures for HRM and psychological contract. For instance, Raeder et al. (2012) operationalised HRM as a set of five practices: selection, career development, performance appraisal and performance-based pay planning. Scheel et al. (2013) treated HRM practices as a commitment-based HRM system, including 20 items adopted from Lepak and Snell (2002). Similarly, in the study by Raeder et al. (2012), psychological contract fulfillment was measured with a three-item scale adapted from Robinson et al. (1994). On the other hand, Scheel et al. (2013) operationalised psychological contract fulfillment by computing the mean level of fulfillment of all promises using items from Rigotti et al. (2010).

These mixed results suggest the need for some sort of consensus on the measures being used to examine HRM practices and psychological contract fulfillment to gain more confidence in the findings. Although the results of this study support the hypotheses that psychological contract fulfillment partially mediates the relationship between HRM practices and employee outcomes, additional mechanisms await discovery.

8.2.7 Does psychological contract fulfillment partially mediate the relationship between frontline management leadership behaviour and employee outcomes?

From a theoretical perspective, the finding of this study supports the premise that the quality of frontline management leadership's behaviour, as perceived by employees, leads to psychological contract fulfillment, which influences employee outcomes. The findings from Chapter 7 support the mediating role of the psychological contract fulfillment on the relationship between FLM leadership behaviour and employee outcomes. The findings are congruent with the social exchange and perceived organisational support theory. Clearly, the findings reinforce the importance of FLM leadership behaviour in predicting psychological contract fulfillment for employee outcomes. Additionally, it is consistent with the arguments proposed by Armstrong-Stassen and Schlosser (2010), which stated that the "...relationship an employee has with his or her supervisor is a lens through which the entire work experience is viewed" (p. 385). Thus, it can be implied that as psychological contract is a part of employee's work experience, frontline managers would play an active role in shaping employee perceptions of psychological contract fulfillment.

8.2.8 Does psychological contract fulfillment partially mediate the relationship between co-worker support and employee outcomes?

Whereas prior work has conjectured and demonstrated the direct impact of co-worker support on employee outcomes (Chiaburu & Harrison, 2008; Bacharach et al., 2010; Rousseau & Aubé, 2010; Tang et al., 2014), this study is one of the first to propose and empirically test a mechanism, psychological contract fulfillment, through which co-worker support impacts employee outcomes. Results indicated a partial mediating role of psychological contract fulfillment between co-worker support and employee outcomes.

The finding is consistent with the social exchange and organisational support theory, which supports the notion that employees' positive perceptions of co-worker support induces favourable perceptions of psychological contract fulfillment, which in turn increases the likelihood of employees engaging in positive outcomes, including affective commitment and job satisfaction. In contrast, where employees' perceive low levels of co-worker support, they are likely to be less committed and satisfied with their jobs, and more likely to quit and be absent from work.

Psychological contract fulfillment was found to mediate the relationship between co-worker support and employee outcomes, lending weight to the idea that an employee's positive appraisal of support received from co-workers induces positive perceptions of psychological contract and increases the likelihood of the employee exhibiting desirable employee outcomes. Few researchers studied the influence of HRM practices on employee outcomes through the mechanism of psychological contract fulfillment. However, there is no study that has considered the role of psychological contract fulfillment to mediate the relationship between a) frontline managers and b) co-workers in influencing employee outcomes respectively. As anticipated, the results of this thesis confirm the

important role of psychological contract fulfillment as a mediator between the aforementioned three relationships.

8.2.9 Is there a two-way interaction between high performance work systems and frontline management leadership behaviour in predicting psychological contract fulfillment?

Prior research on psychological contract has focused almost exclusively on HPWS, giving relatively little attention to FLMs' leadership behaviour, much less comparing the impact of the two factors. It is only recently that researchers have begun to propose the interactive relationships of HPWS and FLM leadership behaviour. However, no previous study has looked at the interaction effects between these two factors in predicting psychological contract fulfillment. It is important to note that, this constitutes a theoretical argument shared in the SHRM literature (Purcell & Hutchinson, 2007; Stanton et al., 2010; McDermott et al., 2013). In this study, both concepts were examined simultaneously in the framework of psychological contract.

It is important to note that the interaction term (high performance work systems X frontline management leadership behaviour) is positive but insignificant. This finding is interesting given the previous studies have suggested theoretical arguments that support symbiotic relationships between HPWS and FLM leadership behaviour (see Purcell & Hutchinson, 2007), as presented earlier in Section 3.9.

It may be possible to explain this lack of support by employing the arguments proposed by Lee and Taylor (2014) who suggest that there is a possibility that the frontline manager may put self-interest ahead of organisational concerns, which is further manifested in the relationship between employees and the psychological contract. There is the possibility of a psychological contract emerging between the line managers and the employees, which would not be contingent on the HRM practices, as it is

based on their personal interests, rather than organisational interests. In such situations, HPWS and FLM leadership behaviour could be viewed as two opposite forces that may offset each other, which may have caused the interaction term to be insignificant. Future research could replicate this study and validate the finding of this research question.

8.2.10 Is there a two-way interaction between high performance work systems and co-worker support in predicting psychological contract fulfillment?

This research question examines the interplay between HPWS and co-worker support in examining psychological contract fulfillment. Existing research has limited understanding of the important interaction between HPWS and co-worker support as a potential lever of psychological contract fulfillment. The interaction term (high performance work systems X co-worker support) is positive and statistically significant, providing some evidence that they are perhaps complements.

Concretely, the effects of HPWS on psychological contract fulfillment became more positive when the level of co-worker support is high and vice versa. This finding suggests that HPWS must not be considered in isolation but in conjunction with human agents, like co-workers. Evidence in support of interaction suggests that HPWS and co-worker support in combination, are likely to play an important role in predicting the psychological contract fulfillment.

Prior research has shown that co-workers play an active role by sharing their own experiences helping the employees to interpret the HRM practices and thus would influence employee perceptions about them (Mossholder et al., 2011). This suggests that the employees' perceptions of HRM practices and subsequently psychological contract fulfillment will be determined, in part, by how co-workers described them. In other words, it is likely that co-workers would accentuate the impact of progressive HRM practices, resulting in employees forming more positive perceptions of

psychological contract fulfillment. Alternatively, co-workers could also amplify the negative effects of HRM practices, causing a more severe negative evaluation of psychological contract fulfillment by the employees.

8.2.11 Is there a two-way interaction between frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment?

The investigation of this relationship helps provide a more nuanced understanding of the important connection between FLM leadership behaviours and co-worker support. The interaction term (frontline management leadership behaviour X co-worker Support) is negative and significant, which suggests that the two variables act as substitutes.

This finding supports the notion that positive leadership behaviours displayed by frontline managers are likely to have a weaker impact on psychological contract fulfillment to the extent that an employee views high levels of support from co-workers. An explanation for this could be that high levels of co-worker support could compensate for lower levels of FLM leadership. This could be explained using the lateral influence among peers, shared leadership, which contrasts with the concept of vertical leadership (Carson, Tesluk & Marrone, 2007). Often members within the team could assume the roles of leader without having formal authority, and thus help other employees, thus reducing the reliance on frontline managers. Likewise, the employees may not seek support from co-workers in case they perceive frontline manager leadership behaviours positively. The employees when satisfied with their frontline managers' leadership behaviours may not explore other avenues like peer interaction and support for interpreting the psychological contract.

This finding raises a potential question: *In what conditions, can both frontline managers and co-workers be leveraged to promote positive perceptions of psychological contract fulfillment amongst*

employees? Future research could attempt to seek answers on this issue, so that organisations could identify and successfully adopt a more integrative model of psychological contract fulfillment, combining the synergistic effects of frontline managers and co-workers.

8.2.12 Is there a three-way interaction between high performance work systems, frontline management leadership behaviour and co-worker support in predicting psychological contract fulfillment?

The three-way interaction among HPWS, FLM leadership behaviour and co-worker support was insignificant for psychological contract fulfillment. The lack of support for the three-way interactions in predicting psychological contract fulfillment suggests that each of the three two-way interactions in predicting psychological contract fulfillment does not depend on the strength of the third variable.

For instance, the strength of the two-way interaction between HPWS and FLM leadership behaviour in explaining psychological contract fulfillment does not depend on the strength of co-worker support. Similarly, the strength of the interaction between HPWS and co-worker support on psychological contract fulfillment does not depend on the frontline manager's leadership behaviours. Lastly, the relationship between FLM leadership behaviour and co-worker support in predicting psychological contract fulfillment is not contingent on the HPWS. Several reasons could cause this interaction term to be insignificant, including the dominance of the direct effects and the three two-way interaction effects. This finding should be investigated and validated further in subsequent studies.

8.3 Contributions of this study

This study contributes to both the human resource management and psychological contract literature in a number of ways. This study has examined HPWS, FLM leadership behaviour, co-worker

support and state of psychological contract as antecedents of employee attitudes and behaviours. Overall this study has provided support for several unique relationships and thus, has made important contributions to the literature.

The study makes six primary theoretical contributions to the psychological contract literature.

First, this thesis draws upon the social exchange, perceived organisation support, signalling and social information processing theories. While social exchange has been the dominant theory used to study psychological contract, other theories have not received much attention until recently. This thesis juxtaposed several current theories that are relevant to psychological contract and demonstrated that three theories: organisational support, signalling and social information processing, apart from the social exchange theory, could provide additional explanatory power to the hypothesised relationships proposed in this thesis. In other words, this implies that the explanations for the hypothesised relationships from these four perspectives are not mutually exclusive. Rather, they can possibly be best contemplated as synergistic, with one theoretical perspective being formed on basis of the assumptions and evidence advanced by another. Hence, there is an immense opportunity to theoretically integrate the antecedents and outcomes of the psychological contract fulfillment to develop and empirically test a comprehensive model of psychological contract.

Second, prior psychological contract literature has tended to focus either on the relationship of individual HRM practices (e.g. Fontinha, Chambel & De Cuyper, 2014) or as a system (e.g. Sonnenberg et al., 2011) on the psychological contract. This study presents a more integrative perspective by providing empirical evidence about how HRM practices are connected to psychological contract fulfillment, both as a system and as a set of HRM bundles. Although extant research has indicated the impact of HPWS on psychological contract fulfillment, the links between HRM bundles and psychological contract fulfillment have not yet been explored. Thus, this thesis,

by distinguishing the effects of each of the three HRM bundles, signifies an important addition to the existing psychological contract literature.

Third, prior work tended to concentrate primarily on HPWS, overlooking the role of human agents, such as frontline managers and co-workers (Conway & Briner, 2005, 2009). This is in line with arguments put forth by Anand et al. (2010), which suggested that “the individual’s employing organisation is a more distal entity in comparison to his/her supervisor and co-workers” (p. 982). Thus, by incorporating FLM leadership behaviour and co-worker support as antecedents of psychological contract fulfillment, this thesis has added two new predictors to the psychological contract model developed by Guest and Conway.

Fourth, this study further contributes by examining and confirming psychological contract as a mediating mechanism through which HPWS, FLM leadership behaviour and co-worker support ultimately drives employee outcomes respectively. While a few studies have proposed and tested the role of psychological contract fulfillment as a mediator between HPWS and employee outcomes (e.g Uen et al., 2009), this study conceptualises and tests for the other two relationships. In absence of prior empirical evidence, these findings also contribute to the broader psychological contract literature by providing preliminary evidence for psychological contract as an intermediate variable influencing the relationships of FLM leadership behaviour and co-worker support and employee outcomes respectively.

Fifth, a new insight of this study is in explicating the two-way and three two-way interaction effects between HPWS, FLM leadership behaviour, and co-worker support. Although this study does not provide evidence of the three-way interaction effect, it does find support for two-way interaction effects between a) HPWS and co-worker support and b) FLM leadership behaviour and co-worker support in predicting psychological contract fulfillment. These initial results provide a compelling

argument to further advance a comprehensive understanding of these variables and of the processes that can illuminate the conditions in which they *interact, combine* or *potentially conflict* with each other in explaining psychological contract.

The final theoretical contribution of this study is using a sample from India, a country that has a significantly different culture from its Western counterparts and has been under-researched (Katou & Budhwar, 2012). Prior psychological contract has been conducted predominantly in western contexts with a few exceptions (Agarwal & Bhargava, 2014). This thesis is the first study examining the antecedents and outcomes of psychological contract fulfillment in India. This thesis has demonstrated that the model proposed by Guest and Conway (1997, 1999, 2001a, 2001b) can be useful in investigating and understanding the role of psychological contract fulfillment even in a non-Western context, India. Having achieved success in testing the proposed model, developed in the Western theoretical context, in a different cultural context, India, generalises the application of these theoretical constructs.

Beyond the implications this thesis holds for theory, it also has two substantial methodological contributions. First, this study is unique in its specification of HPWS and psychological contract fulfillment (facet) as formative constructs. While there has been speculation theoretically about the treatment of these constructs as being reflective or formative (see Section 6.2), there was no prior study that used a formative specification.

Second, this study includes both global and facet-based measures of psychological contract fulfillment. The use of both facet and global measures of psychological contract fulfillment allows comparison and examining whether one measure is better than the other. This study is also unique as it treated global measure as a reflective construct and facet measure as a formative construct. While this study by itself is inadequate to show how much improvement can be made by using the global

and facet measures of psychological contract fulfillment, this is the first empirical attempt to explain the construct using both measures. A logical step for future studies would be to not only examine the suitability of treating this construct as reflective or formative, but also to test both measures with varying samples in different cultural contexts.

8.4 Practitioner implications

From a practitioner point of view, this thesis postulates some extensive guidelines for managers to maintain a successful employee-organisation relationship. Empirical evidence from this study reinforces the central role played by HRM practices in influencing the psychological contract, which in turn shapes employee attitudes and behaviours. In a similar vein, HRM practices are also designed and implemented to influence employee attitudes and behaviours in a positive way. Managers should appraise regularly whether the HRM practices are successfully realising these goals as planned, and if not, to identify the factors that might be responsible. It is important to note that employee perceptions of HRM practices are more crucial than the planned/ actual HRM practices as employee perceptions have been found to affect their work-related attitudes and behaviours. Thus managers could seek feedback about the perceptions of HRM practices *directly* from the employees, for instance, through an employee survey.

Further, the evidence of differential effects of HRM bundles on psychological contract fulfillment implies that managers should be aware that the HRM practices within their respective bundles could potentially have different effects. Thus, rather than implementing HRM practices without specifying a particular objective, managers should focus on practices which foster a positive state of psychological contract. Based on the empirical evidence, managers might want to augment specifically the use of motivation-enhancing practices (such as merit pay and promotion opportunities) and opportunity-enhancing practices (such as information sharing and participation

programs) as compared to ability-enhancing practices (such as training and recruitment and selection).

The findings of this thesis provide specific recommendations for managers keen to develop a supportive workplace climate. Specifically, the results suggest that leadership behaviours displayed by FLMS, such as disseminating relevant information, encouraging suggestions from employees and facilitating resolution of issues, have the capacity to positively influence the perceptions of the psychological contract fulfillment. There are two implications emanating from this finding. First, line managers should focus on clearly and effectively communicating the organisational objectives, policies and decisions. This would help promote a greater cohesion and understanding between the employees and organisation. Further, this unified approach would help employees develop a better understanding of the organisational signals such as HRM practices and therefore help foster positive perceptions of psychological contract among the employees. Second, HR managers need to work in tandem with FLMS, given that FLMS play a crucial role in communicating HRM practices to the employees.

Usually, managers seem to ignore the importance of co-workers in shaping employees' interpretations of the psychological contract. Having revealed the crucial role that the co-workers play in influencing the employee perceptions of psychological contract fulfillment, this thesis suggests that managers should endeavour to increase synergy among employees. They could do this by rewarding employees who exhibit supportive actions towards their co-workers. In other words, initiative could be taken to encourage interactions between co-workers by rewarding *assisting*, *helping* and *caring* behaviours among the employees.

For managers, evidence supporting the assertion that psychological contract affects employee outcomes may help bolster arguments intended to procure the resources needed to implement

strategic HRM systems. Managers should encourage open communication with employees so that they can align the employees with the organisational interests and resolve any potential issues of conflict or divergent interests. Additionally, managers should realise that the benefits of fostering a positive state of psychological contract among employees have extensive organisational benefits including lower absenteeism rates and intention to quit and higher levels of commitment and job satisfaction. The desirable employee outcomes translate ultimately into increased organisational performance.

8.5 Research limitations

The findings must be interpreted against a backdrop of the limitations of the study. First, the current research design is cross-sectional. The survey measures were collected concurrently and thus only levels of associations between variables could be tested. Cross-sectional research design limits the extent to which cause-effect relations can be inferred from the findings.

The second concern is that the data were obtained from a single source (i.e. front line employees) and was self-reported. It was deemed appropriate as employees should be best placed to report the perceptions of the variables included in the study. However, there is a possibility that the employees may not be completely accurate and could lead to a potential bias in the results. By using multiple employees, this problem is minimised, but not eliminated (Wright, Gardner & Moynihan, 2003). Although this approach has been common in the HRM literature, its appropriateness has been questioned as it increases the likelihood of common method variance (Podsakoff et al., 2003, 2012). Steps were taken both to limit and to assess potential effects of common method variance using the recommendations of Podsakoff et al. (2003, 2012) for survey design. In the cover letter, I assured employees that their responses would be treated anonymously and data were being collected for

purely academic purposes. I also asked for honest opinions to the questionnaire to reduce evaluation apprehension. For the perceptual variables, I included multi-item constructs, based on previously well-known, tested, and validated scales. This tends to minimise the chances that deficient wording of the questions could steer the employees to provide socially desirable responses. Researchers have found that response bias is more likely at the item level than at the construct level (Harrison et al., 1996). Thus, I used multi-item constructs for most variables except absenteeism and the demographic variables. Additionally, I also spatially separated the dependent variables from the independent variables by having respondents answer the dependent variables in a separate section they could not view simultaneously with any of the independent variables (Podsakoff et al., 2003, 2012).

A third limitation is the generalisability of the model. Data were obtained from a single geographic area, India, which could limit the generalisability of the findings to other geographic areas. It would be difficult to ascertain the degree to which the results of this study would be generalisable to other countries without additional examination. However, I anticipate that as much of the previous research is based on western cultures, the findings reported here confirm the generalisability of the earlier findings, suggesting that the results may also generalise elsewhere.

In addition, the focus of this study is antecedents and outcomes of psychological contract fulfillment. However, important variables remained unmeasured in this study. A potential limitation would be the exclusion of other variables including perceived organisational support, organisational climate, organisational citizenship behaviour and task performance, which have been previously examined with respect to psychological contract. Also, as this study was conducted in a non-western context, India, it would be desirable to include some context-specific variables including power distance and collectivism.

Although, examination of more variables would certainly provide a more comprehensive model, there are potential methodological and measurement issues associated with it. The survey questionnaire would have been much longer in length and thus employees would take longer to fill it, leading to fatigue and possibly errors in completion. Also, the model would become even more complicated to test.

8.6 Future directions for research

Future research may employ a longitudinal research design which would be better suited to addressing the causal issues of the variables examined in this study. Psychological contract is a dynamic concept of reciprocal exchange between two parties (Chao, Cheung & Wu, 2011). Since data in this study were collected at one point of time, the data collected from self-report questionnaires reflected only the static aspect of the contract and overlooked the change of the contract over time for the renegotiation. Thus, the longitudinal design would also benefit by studying the dynamic aspects of the psychological contract (Conway & Briner, 2002).

This thesis has examined the antecedents and outcomes of psychological contract fulfillment using four theoretical lenses, namely, social exchange, organisational support, signalling and social information processing theories. An additional perspective which could be of relevance to the Indian context is the internal labour market (Rubery, 1994; Yi & Sheldon, 2010). The literature on internal labour market proposes that HRM practices should be uniformly applied and formalised through policy. According to the internal labour market perspective, HRM practices will include formal selection procedures, job evaluation, performance-related pay and monitoring of training. Such practices are associated with highly structured HRM systems.

While formalised HRM systems are common in many Western organisations, they are rarely applied in private sector organisations in India (Budhwar, 2003). Instead, “private-sector organisations in India tend to recruit their relatives to top positions, and accordingly practices related to promotion, transfer and benefits are manipulated as a result of social contacts and personalised relationships” (Budhwar & Boyne, 2004, pg. 350). This implies that in India, the procedures encompassing HRM practices such as recruitment and selection, training, promotions and redundancy are often *ad hoc* in nature and are generally manipulated by employers in the interests of family members or friends. The internal labour market perspective could provide insights of the effects of social contacts and personal relationships on the psychological contract in the Indian context. This will involve collecting data on HRM policy from managers and perceptions of HRM practices from employees. While this thesis has looked at the employee *perceptions* of HPWS, it did not consider HRM policies. Adopting the internal labour market perspective, assessment of the impact of more formalised HRM systems on employees’ psychological contract could be undertaken. Data would need to be collected at both the HRM policy and practice levels to determine the extent to which the formalised policy has actually been implemented. Any gaps between HRM policy and its implementation could then be investigated.

Additionally, a key change in the Indian economy is the urbanisation of the labour force, which has had a significant impact on work and employment and subsequently employees’ values. Specifically, there has been a 2.4 percent increase in the rate of change in urbanisation in India, between 2005 and 2010, which has led to overpopulation and congestion in the cities (Budhwar & Varma, 2011). Urbanisation has resulted in dramatic increase in real estate values in the metropolitan cities (these are classified as Tier-I cities and include Mumbai, Delhi, Bangalore, Chennai, Kolkata and Ahmedabad). The social effect of urbanisation has resulted in an increase in ‘nuclear’ families as

opposed to 'joint' families. This change in lifestyle has reduced employees' propensity for collectivist values as they are more involved in looking after themselves and their immediate family rather than the group or community as a whole (Gupta & Singh, 2014). The increase in individualist employee orientation has been discussed earlier in Section 2.6, which suggests that the Indian society can no longer be regarded as collectivistic. The shift towards more individualist values, together with the urbanisation of the workforce, places greater demands on employees' psychological contract. While employees may exhibit collectivist traits towards their family and friends, there is an increase in the value of individual achievement within the organisation.

This view is consistent with the study by Ramamoorthy, Gupta, Sardesai and Flood (2005), in which data were collected from 180 MBA students from the USA, Ireland and India on their individualism/collectivism orientations and their preferences for HRM practices. They reported that, contrary to expectations, the Indian sample tended to be more individualistic than the American or Irish sample. It is likely that the individualism/collectivism orientations will impact employees' psychological contract as employees' with individualistic values will tend to be more concerned about their personal fulfillment of the psychological contract, rather than those of their work colleagues. This reflects the possible shift towards transactional-oriented contracts, which have a short-term, materialistic focus (Zhao & Chen, 2008).

Thus, my selection of sample organisations from Tier-I cities where I would anticipate a predominance of individualist values, would suggest that my results should be similar to those reported by scholars in Westernised countries (Guest and Conway, 2000, 2001a, 2001b, 2004; Sonnenberg et al., 2011; Raeder et al., 2012). However, as individual orientations were not measured

in this study, future work may wish to formally test the effects of employees' individualism/collectivism orientations on psychological contract fulfillment.

It may be useful to assess further variables within the model. While this study focuses on psychological contract fulfillment, future studies could examine psychological contract breach or violation. As noted above, this study did not include some variables known to be related to psychological contract, such as perceived organisational support and organisation climate. Therefore their inclusion in future research would add to our understanding of the antecedents of the psychological contract. Further, future studies could examine the impact of psychological contract fulfillment on employee outcomes such as organisational citizenship behaviour and task performance.

While employee perceptions of FLM leadership behaviour have been captured in this study, future studies could explore a range of leadership roles. For instance, a study by McDermott et al. (2013) developed a framework investigating leadership styles such as transformational and transactional styles and psychological contract in filling the gap between HRM strategy and performance. They used the AMO framework to examine the process linking HRM practices and leadership styles to individual performance. Further at some point, it might be desirable to obtain supervisors' perceptions of employees' psychological contracts on these dimensions as well, but clearly employee data will also be needed. The expanded view may also be applied to the employer's perspective, yielding a symmetric framework for investigating the relationship between employers and employees. With this framework, research can investigate inducements and contributions from the perspective of both the employer and employee to examine how each responds to fulfillment and breach of the psychological contract they hold for each other.

Further research of this nature is required in different contextual settings to expand our knowledge in this arena. This is the first study that has examined the impact of HRM bundles on psychological contract fulfillment. The generalisability of the findings reported in this study, therefore, will become more evident as other researchers, perhaps interested in these findings, replicate this study employing samples in different contexts. Also, future studies could include constructs like individualism-collectivism, relationship-interdependent self-construal and locus of control to examine the potential impact of culture on employees and their perceptions of psychological contract (Ravlin, Liao, Morrell, Au & Thomas, 2012; Epitropaki, 2013).

Future studies could also adopt a qualitative route to gain an in-depth understanding of the psychological contract. Qualitative studies could provide a more comprehensive picture of the social exchange relationships between the employees and their organisation. For instance, through a qualitative case study approach, the nature of the employees' perceptions and experiences of and reactions to psychological contract fulfilment, could be investigated. Further, studies could explore sense making in events of fulfilment, breach and violation across various organisational contexts.

Nevertheless, this thesis represents an important step toward uncovering the mechanisms linking HRM practices, frontline managers and co-workers to desirable employee outcomes using the psychological contract route.

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APPENDICES

Appendix 1: Ethical approval form

For Office Use:	Ref	Meeting
<p>CARDIFF BUSINESS SCHOOL ETHICAL APPROVAL FORM: PHD THESIS RESEARCH</p> <p>(For guidance on how to complete this form, please see http://www.cf.ac.uk/carbs/research/ethics.html)</p>		
<p>Does your research involve human participants? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>If you have answered 'No' to this question you do not need to complete the rest of this form, otherwise please proceed to the next question</p>		
<p>Does your research have any involvement with the NHS? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>If you have answered Yes to this question, then your project should firstly be submitted to the NHS National Research Ethics Service. Online applications are available on http://www.nres.npsa.nhs.uk/applicants/. It could be that you may have to deal directly with the NHS Ethics Service and bypass the Business School's Research Ethics Committee.</p>		
Name of Student:	Smirti Kutaula	
Student Number:	0924831	
Section:	Human Resource Management	
Email:	kutaulas@cardiff.ac.uk	
Names of Supervisors:	Dr. Julian Gould-Williams (Primary supervisor), Dr. Marco Hauptmeier (2 nd supervisor)	
Supervisors' Email Addresses:	gouldwilliams@cardiff.ac.uk , hauptmeierm@cardiff.ac.uk	
Title of Thesis:	Exploring the role of psychological contract in HRM and performance linkages	
Start and Estimated End Date of Research:	Oct 2009- Sep 2012	
Please indicate any sources of funding for this research:	Cardiff Business School Studentship	
<p>1. Describe the Methodology to be applied in the research</p> <p>This research will use self-administered questionnaire approach in an attempt to understand the impact of HRM practices on psychological contract, employee attitudes and behaviours. A framework has been established based on an intensive literature review. There are four sets of questionnaires that need to be circulated to the employees and line managers in person. The questionnaire for employees will take about 20 minutes and the one for line managers will take 10 minutes approximately to complete. Some data will be collected from HR and senior management personally through use of questionnaire. The questionnaires are specifically designed to accomplish the objectives of the study. The questionnaires are structured so that they mainly comprised of closed-end questions which are considered as being easier and relatively quicker to answer (Churchill 1987, Fowler 1993). Each question represents a measurement item grouped in accordance to the constructs which are derived from the literature. The questionnaires have been discussed and approved by the supervisor. The self-administered questionnaires will be personally administered to the respondents in the organisation. This method is regarded as one of the most effective ways to achieve high response rates. Each questionnaire is covered by a notification letter addressing the ethical issues regarding to the participants. The participation in the survey implies the consent of the respondent. All data will be collected and quantified in either 7 point Likert-scale or multiple-choice format (See Appendix 1 for questionnaires).</p>		
<p>phd_ethicsformSmirti[1]</p> <p>Version: 01/12/2010</p>		

2. Describe the participant sample who will be contacted for this Research Project. You need to consider the number of participants, their age, gender, recruitment methods and exclusion/inclusion criteria

Prospective organisations will be selected using three criteria- a) Employing more than 400 employees; b) More than 100 line managers; c) Standard HR practices in place

The sample excludes SMEs and organisations from public sector.

Due to time and budget constraints, the sample will be selected based on access. Within each organisation, the sample for self-completion questionnaire will be- a) Employees; b) Supervisors; c) HR manager; d) a representative of the senior management (Director/ CEO/ MD). The employees will be randomly selected from the company's personnel record - a sample of employees. Employees' perception of their HR practices may vary according to the kind of work that people do as well as people's individual characteristics. As a result, the sampling population will therefore be stratified according to the criterion of occupational level (management and non-management) as well as work place (office and frontline). This is done to ensure that all functional areas within the organisation are fully represented. Therefore the respondents in this research were chosen from management and non-management, as well as front-line and office employees.

S.No	Participant	Sample size
1	Organisations	50
2	Employees	50
3	Supervisors	40
4	HR Manager	1
5	Senior management representative	1

3. Describe the consent and participant information arrangements you will make, as well as the methods of debriefing. If you are conducting interviews, you must attach a copy of the consent form you will be using.

Selected employees will be informed by the cover letter (see Appendix 2) concerning main components to which the study relates, an assurance of confidentiality, an explanation of potential benefits of the study and an offer of assistance of any further enquire.

2. Describe the participant sample who will be contacted for this Research Project. You need to consider the number of participants, their age, gender, recruitment methods and exclusion/inclusion criteria

Prospective organisations will be selected using three criteria- a) Employing more than 400 employees; b) More than 100 line managers; c) Standard HR practices in place. The letter which will be used for access in the organisations is attached (see Appendix 3).

The sample excludes SMEs and organisations from public sector.

Due to time and budget constraints, the sample will be selected based on access. Within each organisation, the sample for self-completion questionnaire will be- a) Employees; b) Supervisors; c) HR manager; d) representative of the senior management (Director/ CEO/ MD). The employees will be randomly selected from the company's personnel record - a sample of full-time employees. Employees' perception of their HR practices may vary according to the kind of work that people do as well as people's individual characteristics. As a result, the sampling population will therefore be stratified according to the criterion of occupational level (management and non-management) as well as work place (office and frontline). This is done to ensure that all functional areas within the organisation are fully represented. Therefore the respondents in this research were chosen from management and non-management, as well as front-line and office employees.

S.No	Participant	Sample size
1	Organisations	50
2	Employees	50
3	Supervisors	40
4	HR Manager	1
5	Senior management representative	1

3. Describe the consent and participant information arrangements you will make, as well as the methods of debriefing. If you are conducting interviews, you must attach a copy of the consent form you will be using.

Selected employees will be informed by the cover letter (see Appendix 2) concerning main components to which the study relates, an assurance of confidentiality, an explanation of potential benefits of the study and an offer of assistance of any further enquire.

4. Please make a clear and concise statement of the ethical considerations raised by the research and how you intend to deal with them throughout the duration of the project

Respondent anonymity and confidentiality will be clearly addressed. Respondents will be informed that the details will be kept anonymous in the final version of the thesis. All information gathered will be treated with the strictest confidence. Information from the completed questionnaire will not be disclosed to anyone except the supervisory panel. The respondent has the right to not answer any of the questions as the completion of this survey is voluntary. Both the researcher and the research supervisor's contact details are given if the respondents need any help or want to know more about this research project.

PLEASE NOTE that you should include a copy of your questionnaire

NB: Copies of your signed and approved Research Ethics Application Form together with accompanying documentation must be bound into your Dissertation or Thesis.

5. Please complete the following in relation to your research:

		Yes	No	n/a
(a)	Will you describe the main details of the research process to participants in advance, so that they are informed about what to expect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b)	Will you tell participants that their participation is voluntary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c)	Will you obtain written consent for participation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d)	Will you tell participants that they may withdraw from the research at any time and for any reason?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e)	If you are using a questionnaire, will you give participants the option of omitting questions they do not want to answer?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f)	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g)	Will you offer to send participants findings from the research (e.g. copies of publications arising from the research)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PLEASE NOTE:

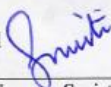
If you have ticked No to any of 5(a) to 5(g), please give an explanation on a separate sheet.

(Note: N/A = not applicable)

There is an obligation on the lead researcher to bring to the attention of Cardiff Business School Ethics Committee any issues with ethical implications not clearly covered by the above checklist.

Two copies of this form (and attachments) should be submitted to Ms Lainey Clayton, Room F09, Cardiff Business School.

Signed



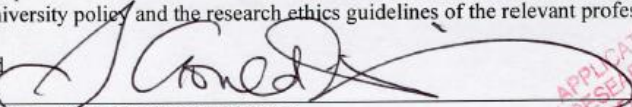
Print Name Smirti Kutaula

Date 01.12.2010

SUPERVISOR'S DECLARATION

As the supervisor for this research I confirm that I believe that all research ethical issues have been dealt with in accordance with University policy and the research ethics guidelines of the relevant professional organisation.

Signed



Print Name Dr. Julian Gould-Williams

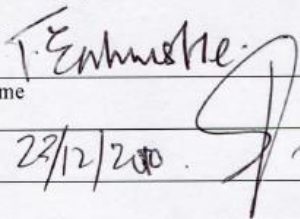
(Primary supervisor)

Date 01.12.2010

STATEMENT OF ETHICAL APPROVAL

This project has been considered using agreed School procedures and is now approved.

Signed



Print Name

(Chair, School Research Ethics Committee)

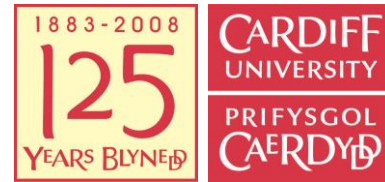
Date

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Version: 01/12/2010

Appendix 2: Questionnaire used in this study



Questionnaire

Impact of HR practices on employee attitudes and behaviours

Employees

While answering this questionnaire, please note that:

- Your answers are STRICTLY CONFIDENTIAL and intended for academic research only– study results will simply be exhibited in aggregate form.
- Your contribution toward the successful outcome of this study is INVALUABLE; please answer all questions as honestly as possible.
- There is no right or wrong answer, please just answer according to your opinion.

Ms. Smirti Kutaula

Doctoral student

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SECTION 1: PERCEPTIONS OF HRM PRACTICES

To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each)*

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
Applicants undergo structured interviews (<i>job-related questions, same questions asked of all applicants and rating scales</i>) before being hired.	1	2	3	4	5	6	7
Applicants for this job take formal tests (<i>paper and pencil or work sample</i>) before being hired.	1	2	3	4	5	6	7
Sufficient on-the-job training programs are provided for employees.	1	2	3	4	5	6	7
Sufficient off-the-job training programs are provided for employees.	1	2	3	4	5	6	7
Employees have clear career paths within the organisation.	1	2	3	4	5	6	7
When new positions come up in management, your organisation normally tries to fill them with people from inside the organisation rather than recruit them from outside.	1	2	3	4	5	6	7
Employees in this job regularly receive formal communication regarding organisation goals and objectives.	1	2	3	4	5	6	7
Employees complete an employee attitude survey on a regular basis (<i>e.g. annually</i>).	1	2	3	4	5	6	7
Employees in this job are involved in formal participation processes, such as quality improvement groups, problem-solving groups, roundtable discussions, or suggestion systems.	1	2	3	4	5	6	7
Employees in this job get sufficient opportunities to express views on issues and concerns at work	1	2	3	4	5	6	7
Employees in this job regularly (<i>at least once a year</i>) receive a formal evaluation of their performance.	1	2	3	4	5	6	7
The pay is related to the personal performance in any way through some sort of performance or merit-related pay.	1	2	3	4	5	6	7
Employees get sufficient benefits— other than pay.	1	2	3	4	5	6	7
Job security is almost guaranteed to employees in the organisation.	1	2	3	4	5	6	7
Employees are given influence in organisation decisions that affect their job or work.	1	2	3	4	5	6	7
The organisation helps employees to achieve a balance between home life and work.	1	2	3	4	5	6	7

SECTION 2: ABOUT MY SUPERVISOR

1) To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each)*

The supervisor is good at...	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
... keeping everyone up to date about proposed changes.	1	2	3	4	5	6	7
... providing everyone with a chance to comment on proposed changes.	1	2	3	4	5	6	7
... responding to the suggestions from employees.	1	2	3	4	5	6	7
... dealing with the problems at the workplace.	1	2	3	4	5	6	7
... treating employees fairly.	1	2	3	4	5	6	7

SECTION 3: ABOUT MY CO-WORKERS

To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each)*

My co-workers...	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
... are supportive of my goals and values.	1	2	3	4	5	6	7
... help is available when I have a problem.	1	2	3	4	5	6	7
... really care about my well-being.	1	2	3	4	5	6	7
... are willing to offer assistance to help me to perform my job to the best of my ability.	1	2	3	4	5	6	7
... would fail to notice, even if I did the best job possible.	1	2	3	4	5	6	7
... care about my general satisfaction at work.	1	2	3	4	5	6	7
... show very little concern for me.	1	2	3	4	5	6	7
... care about my opinions.	1	2	3	4	5	6	7
... are complimentary of my accomplishment at work.	1	2	3	4	5	6	7

SECTION 4: ABOUT MY ORGANISATION

1) To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each)*

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
In general, this organisation has kept its promises to me about what I will get from them.	1	2	3	4	5	6	7
Managers in this organisation have honoured the commitments they have made to me.	1	2	3	4	5	6	7

This organisation says it will do things for you and then never gets around to doing them.	1	2	3	4	5	6	7
I am often told I will receive things from this organisation that in the end never materialise.	1	2	3	4	5	6	7

2) To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each)*

Has the organisation fulfilled its promise or commitment to...	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
... provide you with a reasonably secure job	1	2	3	4	5	6	7
... provide you with fair pay for the work you do	1	2	3	4	5	6	7
... provide you with a career	1	2	3	4	5	6	7
... provide you with interesting work	1	2	3	4	5	6	7
... ensure fair treatment by managers and supervisors	1	2	3	4	5	6	7
... ensure equality of treatment	1	2	3	4	5	6	7
... help you deal with problems you encounter outside work	1	2	3	4	5	6	7

3) To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each)*

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
Overall, do you feel you are fairly rewarded for the amount of effort you put into your job.	1	2	3	4	5	6	7
Do you feel you are fairly paid for the work you do.	1	2	3	4	5	6	7
To what extent do you trust your immediate manager to look after your best interests.	1	2	3	4	5	6	7
To what extent do you trust senior management to look after your best interests.	1	2	3	4	5	6	7
To what extent, do you trust your co-workers to help you when you are in need.	1	2	3	4	5	6	7
In general, how much do you trust the organisation to keep its promises or commitments to you and other employees.	1	2	3	4	5	6	7

4) To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each).*

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
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I would be very happy to spend the rest of my career with this organisation.	1	2	3	4	5	6	7
I really feel as if this organisation's problems are my own.	1	2	3	4	5	6	7
I do not feel like 'part of the family' at my organisation.	1	2	3	4	5	6	7
I do not feel 'emotionally attached' to this organisation.	1	2	3	4	5	6	7
This organisation has a great deal of personal meaning for me.	1	2	3	4	5	6	7
I do not feel a strong sense of belonging to my organisation.	1	2	3	4	5	6	7

SECTION 5: BEHAVIOUR AT WORK

To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each)*

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
I will probably look for a new job in the next year.	1	2	3	4	5	6	7
I may quit my present job next year.	1	2	3	4	5	6	7
I will likely actively look for a new job within the next three years.	1	2	3	4	5	6	7
I often think about quitting my present job.	1	2	3	4	5	6	7
I do not see much prospects for the future in this organisation.	1	2	3	4	5	6	7

SECTION 6: ABOUT MY JOB

1) To what extent do you agree or disagree with each of the following statements? *(Please circle one number for each)*

	Strongly disagree	Disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Agree	Strongly agree
All in all I am satisfied with my job.	1	2	3	4	5	6	7
In general, I don't like my job.	1	2	3	4	5	6	7
In general, I like working here.	1	2	3	4	5	6	7

2) How many days did you miss from work in the last 12 months (excluding vacation)? _____

Appendix 3: Assessing item-level discriminant validity

	Affective commitment	Co-worker support	Frontline management leadership behaviour	Intention to quit	Job satisfaction	Psychological contract fulfillment (global)
AC1	0.887	0.262	0.300	-0.250	0.324	0.343
AC2	0.881	0.204	0.335	-0.129	0.253	0.278
AC5	0.827	0.208	0.342	-0.149	0.244	0.267
CW1	0.238	0.797	0.401	-0.215	0.469	0.426
CW2	0.202	0.793	0.427	-0.197	0.420	0.401
CW3	0.226	0.831	0.353	-0.194	0.419	0.391
CW4	0.173	0.852	0.369	-0.231	0.434	0.443
CW5	0.191	0.653	0.295	-0.201	0.280	0.282
CW6	0.272	0.829	0.420	-0.220	0.495	0.501
CW7	0.195	0.645	0.240	-0.220	0.309	0.321
CW8	0.179	0.826	0.400	-0.246	0.478	0.484
CW9	0.162	0.743	0.358	-0.227	0.455	0.419
FLMLB1	0.336	0.367	0.823	-0.245	0.399	0.402
FLMLB2	0.310	0.358	0.844	-0.215	0.360	0.379
FLMLB3	0.341	0.414	0.866	-0.191	0.377	0.365
FLMLB4	0.337	0.409	0.859	-0.266	0.405	0.371
FLMLB5	0.254	0.438	0.827	-0.248	0.467	0.433
ITQ1	-0.190	-0.215	-0.223	0.909	-0.431	-0.385
ITQ2	-0.217	-0.275	-0.239	0.928	-0.453	-0.407
ITQ3	-0.177	-0.198	-0.171	0.817	-0.354	-0.320
ITQ4	-0.158	-0.232	-0.263	0.897	-0.456	-0.377
ITQ5	-0.181	-0.295	-0.309	0.860	-0.480	-0.430
JS1	0.291	0.495	0.443	-0.476	0.943	0.633
JS3	0.309	0.530	0.453	-0.451	0.928	0.566
SOPC1	0.325	0.468	0.405	-0.439	0.596	0.922
SOPC2	0.347	0.513	0.488	-0.385	0.592	0.919
SOPC3	0.294	0.472	0.371	-0.422	0.595	0.925
SOPC4	0.308	0.515	0.448	-0.370	0.589	0.925