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Abstract

**Purpose & background** – The purpose of this study was to examine if part-time and full-time employees differ in terms of psychological contract content according to level of developmental HRM practices. The study adds to an ongoing research project “Organizational antecedents of psychological contracts and work-related outcomes”, run by Sabine Raeder, University of Oslo in cooperation with José María Peiró, University of Valencia, Spain.

**Design & methodology** – A survey of 463 employees from 35 organizations included scales measuring provided developmental HRM practices, psychological contract content and percentage of employment. The data were analyzed with multilevel methods.

**Findings** – Small but significant differences between part-time and full-time employees’ psychological contract content based on level of developmental HRM practices: the effect of developmental HRM practices was higher for part-time employees.

**Limitations & future research** – Sample size and representativeness limit the generalizability of the results. Future research should make an effort to include part-time employees when assessing group differences between employees.

**Contribution** – The high prevalence of part-time employment in Norway indicates the relevancy of this study. Interesting results with statistical significance contribute to the development and expansion of research.
Part-time employees account for 24 percent of the employed workforce in Norway, numbering around six hundred and fifty thousand in the third quarter of 2014 (Statistisk Sentralbyrå, 2014a). While part-time employment has been highly valued by employers for providing much needed flexibility, empirical work on how this work arrangement affects these employees has however been sparse. Nonetheless, a concern for the marginalization of those not working full-time is prominent in the relevant literature (e.g., Dick, 2010; Guest, Oakley, Clinton & Budjanovcanin, 2006). Part-time employees are often regarded as “second-class” by the management and considered less expedient for investment beyond their recruitment. Human resource management (HRM) practices are often unfavorably distributed to these employees as the result (Dick, 2009), consequently affecting their expectations for the employment relationship, hence their psychological contract.

HRM practices have been linked to organizational performance with the issue of the empty “black box” as the intermediate (Bal, Kooij & De Jong, 2013; Jiang, Lepak, Hu & Baer, 2012). This type of unidentified explanation for causation is a common one in organizational psychology, but none the less unsatisfying when wanting to explain the course of events. It has been suggested that the psychological contract can fill this gap and be the explanatory between the HRM variable on the one side, and all the subsequent variables on the other side connecting the research field to applied organizational psychology (Raeder, Knorr & Hilb, 2012; Wright & Boswell, 2002).

The present study

This study considers developmental HRM practices as influential for the psychological contract of the employee. As an introduction to the theme of this study, the content of the psychological contract as either more transactional or relational is applied. A content approach is widely applied throughout the literature and is included here for the purpose of assessing differences between full-time and part-time employees. More knowledge about how these two groups of employees differ on the psychological contract may be of value for appropriate managing of all employees, by understanding how these employees react to differential treatment in terms of lesser opportunities for training and development within the organization.

The present study considers quantitative data from corresponding employers and employees. Specifically, employers’ perception of their developmental HRM policy and employees’ self-evaluation of their psychological contract with their employer and their percentage of employment are explored. The objectives of this study are to investigate the relationship between developmental HRM practices and the psychological contract (H1), and
whether this relationship is moderated by the percentage of employment (H2). A multilevel regression model is applied, including work hours and the psychological contract at the employee level, and developmental HRM practices at the organizational level. The hypothesized relationships are presented in Figure 1.

Figure 1. Hypothesized model: Developmental HRM-practices affect the psychological contract and the relationship is moderated by work hours.

This study contributes to research in three ways. First, the hypothesized model includes developmental HRM practices, the psychological contract and work hours. Thus far, only a few studies have investigated a combination of these elements, and will contribute by extending a limited field of research. Second, applying a multilevel approach facilitates the investigation of direct effects of moderation relationships. Where most studies apply a cross-sectional approach, the present study supplements and broadens existing research. Third, the present study contributes by using a Norwegian sample. The need to expand the research beyond the U.S. has been requested (Stavrou, 2005).

The psychological contract

The concept of psychological contracts is widely applied as a framework to better explain the processes that shape and give direction to the employment relationship. In general, psychological contracts are described as employee beliefs and expectations regarding the exchange relationship with the employer (Conway & Briner, 2005). With several variations of psychological contract definitions presented in the literature, most agree on subjectivity and reciprocity as relevant features (e.g., McLean Parks, Kidder & Gallagher, 1998; Rousseau,
Subjectivity is relevant as each employee will perceive a psychological contract that is unique to them based on their unique experiences with their employer. Reciprocity refers to the belief in an exchange system summarized as “you get what you give” in terms of employee input and employer obligations (Rousseau, 1990). Thus the psychological contract refers to the employee’s perceived agreement with the employer regarding expectations for exchanges. These agreements are said to differ from general expectations about outcomes (Conway & Briner, 2005; Rousseau, 1990). Rather, various definitions on psychological contracts contain wordings such as implicit and explicit promises. A “promise” has been made if the employee recognizes organizational actions as an incentive (e.g., HRM practices) and feels obligated to reciprocate by offering loyalty, effort and flexibility.

A content approach

The most common typology for categorizing the content of the psychological contract is to distinguish between relational and transactional content (e.g., Bal et al., 2013; Conway & Briner, 2005, Isaksson, De Cuyper, Oettel & De Witte, 2010). An employment relationship highly transactional in nature can be characterized by a short timeframe, the motivation for work is of a quid pro quo nature, tasks have a narrow scope and limited involvement in the organization is expected from the employee (Rousseau & McLean Parks, 1993). Employees that identify with these restrictions will consider the relationship between them and their employer as solely based on work effort for economic exchange. Relational psychological contracts can be described as an employment relationship based on a long-term timeframe and intrinsic motives (Rousseau, 1990). While there is no clear consensus on what constitutes “good” or “bad” content, employees that identify with relational obligations have been presented as an advantage for positive employee outcomes (Uen, Chien & Yen, 2009) as well as organizational ones (Yeh, 2012).

Applying a content approach to psychological contracts draws on exchange principles from the field of economy (e.g., MacNeil, 1973) where a seemingly straightforward transaction (e.g., work for pay) can be understood properly by connecting it to a broader context (e.g., the employment relationship). For instance one can consider an employee going to work to collect wage as a simple and uncomplicated transaction. However, for most employments in Norway today, it is more to having a job than to earn a living. Beyond the formal work contract the employment relationship between the employer and the employee includes concepts such as loyalty, expectations and mutual understanding. These components make up the psychological contract and set the stage for the dynamics of the employment relationship (Rousseau, 1989).
Two concepts, one construct? The subjective nature of psychological contracts causes a greater need to simplify “reality” in order to make generalized assumptions across employees. The transactional and relational elements are therefore widely applied throughout the literature. Although a typology including a complete list of content options is beyond reach, including only the two may be too simple to capture the expected variety in psychological contracts amid employees.

Although most studies apply the transactional and relational elements as separate concepts (e.g., Isaksson et al., 2010; Yeh, 2012), an option of the two as part of one construct is relevant to consider based on a latent need in the existing literature. Several statements approve to this. First, Rousseau (1990) argues that the distinction between transactional and relational contracts are not best viewed as two entirely different concepts, but more as different “end caps” to a single continuum. Second, she explains the concept of psychological contracts as “in the eye of the beholder” (Rousseau, 1989, p. 128). Such a statement allows for there to be as many variations in the employees’ psychological contract as they number; certainly more than two. In support of this, it has been suggested that there may be a number of possible combinations of relational and transactional elements in the employee’s psychological contract (Isaksson et al., 2010). Additionally, Raeder, Wittekind, Inauen and Grote (2009) suggested the need for a more differentiated measure assuming that a “broad spectrum of contracts exists between the entirely relational and the entirely transactional psychological contracts” (p.178).

The presented statements and assumptions can be applied to argue in favor of a psychological contract construct that exceeds the standard “all-or-nothing” approach. As an alternative, these two generic types of the psychological contract can be positioned on different sides of a continuum. Making such an assumption implies that no employee perceives a purely relational or a purely transactional psychological contract. The economist MacNeil (1973) clarifies this by describing two hypothetical examples. As an example for a highly transactional exchange relationship he tells the story about a gasoline purchase while driving through the desert. The event is transactional in the sense that the relationship between the two parties has no past, present or future except for that particular transaction. As the relational counterpart, the example is a traditional marriage relation. This marriage is made up by continuous discrete transactions. Different from the gasoline purchase the exchanges in this marriage build on past exchanges, the present and what is expected for the future. The notion of social exchange is according to MacNeil (1973) embedded in human nature to such a degree that even the marriage has an element of transactions. The employment relationship,
which MacNeil (1973) rates second to marriage relative to primary contractual relations in our society, is evidently more relational than a gasoline purchase. Also, it entails for a presumably shorter expected future and relational elements than a traditional marriage. The economic exchange in the employment relationship also demands for transactional elements to be embedded in the relationship, thus the need for a construct including both concepts.

MacNeil’s (1973) argumentation for why neither purely transactional nor relational contractual relationships exist allows for the psychological contract of the employment relationship to be more complex than existing research has suggested. The existing distinction between the transactional and relational content provides an orderly representation of the construct but the structure of the constructs has yet to be empirically proven (Raeder et al., 2009). For example, there are considerable indications of the two concepts as distinctive elements (e.g., Rousseau, 1990) and they are widely used throughout the literature. However, researchers have failed to provide significant results of the concepts as mutually exclusive (Millward & Brewerton, 2000). Were the transactional and relational elements proven empirically to be mutually exclusive, they could not occur at the same time. As argued by MacNeil (1973) all contractual relations have both elements embedded in them. Accordingly, all employees have a psychological contract that involves the transactional as well as the relational elements.

Where most studies apply separate instruments for assessing the two concepts embedded in the psychological contract (e.g., Isaksson et al., 2010), the present study introduces a construct including the transactional and relational elements representing anchors on a continuum. When an employment relationship is argued as neither purely transactional nor relational, it makes more sense to apply a notion of the two constructs combined into one instrument. The notion of the continuum is in accordance with the relational and transactional duality that is advocated in many psychological contract studies, thus the same expectations for the development of an employees’ psychological contract apply. For example, throughout the duration of the employment relationship the employee may perceive different psychological contract content within the continuum. A new hire is expected to address the transactional elements of the psychological contract before the relational elements. The transactional elements have common features with the written employment contract that in a highly tangible way represents the start of the employment relationship (Isaksson et al., 2010). When the transactional obligations are perceived as fulfilled, the employee may add relational obligations to their employment relationship wish list. In accordance to existing perspectives, a continuum perspective also includes transactional elements as the basis for further
development of the psychological contract towards the relational side of the spectrum. However, a continuum approach assumes that the psychological contract is a thing of degree instead of type, allowing the employee to re-perceive continuously. This assumption will be applied in the subsequent sections.

**Human resource management practices and the psychological contract**

HRM practices have been recognized as an antecedent to psychological contract content. While there is no definitive consensus of the “ideal” perceived psychological contract, having the foundation being grounded in the employees’ expectations it is evident that awareness and management of these is essential for a beneficial employment relationship (Aggarwal & Bhargava, 2009). Research considering HRM practices is presented in this section to describe the process of managing the psychological contract of the employees.

Various HRM practices have been shown to be a highly effective organizational inducement for influencing the psychological contract of the employees (Aggarwal & Bhargava, 2009; Suazo, Martínez & Sandoval, 2009; Uen et al., 2009). Broadly, HRM practices can be defined as the actions of the management that are designed to maximize the dividend of their employee investment as well as serve the organization’s strategic objectives (Johnson, 2009). The inducement of HRM practices can be viewed as a form of organizational communication, from the employer to the employee (Guzzo & Noonan, 1994). Done effectively, these types of ‘organizational communication’ contribute to the shaping of the employees’ perceptions (Guest & Conway, 2002; Wright & Boswell, 2002). By deploying HRM practices, the employer conveys a message to the employees, stating the anticipated, mutual obligations (Aggarwal & Bhargava, 2009). Hence, the psychological contract is guided to include more relational or transactional elements. Exemplified, employees who receive a prospect of work results and dedication in exchange for opportunities for training and development, will perceive this as an obligation and part of his or her psychological contract (Aggarwal & Bhargava, 2009). The promissory nature of the opportunity for development reads to the employee as the employer’s intentions to invest in them (Rousseau, 1995). If the employees perceive that the employer has a long-term intent for the employee relationship, there is a greater chance that they adopt more of a relational psychological contract (Bal et al., 2013; Isaksson et al., 2010).

While several studies have indicated that a combined measure of HRM practices has yielded significant results predicting fulfilment of the psychological contract (e.g., Raeder et al., 2012), others have argued that some HRM practices are better and more effective than others (e.g., Delery & Doty, 1996). Certainly, a number of publications have established that
not all of the internal human resource practices have universalistic value (e.g., Bal et al., 2013; Harel & Tzafrir, 1999; Jiang et al., 2012). It is of interest, both theoretically and practically, to assess if certain inducements can be categorized as best practices and if they produce the desired effect on the psychological contract of the employees. Formal training and development arrangements have been indicated to have universalistic value in this regard (Bal et al., 2013; Harel & Tzafrir, 1999; Scheel, Rigotti & Mohr, 2013).

**Developmental human resource practices**

Developmental HRM practices refer to the extent employees are given formal training. Training of the employees can be provided through scheduled programs or by employees obtaining needed skills through socialization (Delery & Doty, 1996). A number of studies that have examined the relationship between training and organizational performance support a positive relationship (e.g., Bartel, 1994; Harel & Tzafrir, 1999). The improved performance caused by the inducement of training can be explained by the employees’ improved skills and abilities in relevant work tasks enabling them to work smarter (Harel & Tzafrir, 1999), increased knowledge and experience with reducing performance barriers in teams (Wright & Boswell, 2002), more socialized in terms of the organization’s history, goals and values (Klein & Weaver, 2000) and higher motivation and satisfaction regarding work (Harel & Tzafrir, 1999). Additionally, other studies found developmental HRM practices to be positively associated with organizational performance (Birdi et al. 2008; Combs, Liu, Hall & Ketchen, 2006), and negatively related to work related stress (Allen, McManus & Russel, 1999).

Developmental HRM practices have been positively related to the fulfilment of the psychological contract (Scheel et al., 2013). In agreement with the present study’s continuum perspective on the relational and transactional elements of the psychological contract Bal et al. (2013) suggest that through the inducement of developmental HRM practices the psychological contract can be “rebalanced”. Accordingly, the relational contract is strengthened and the transactional contract is correspondingly reduced.

To the employees, receiving training provided by the management functions as a statement regarding expected length of the employment relationship and other items relevant for the psychological contract (Aggarwal & Bhargava, 2009; Bal et al., 2013; Jiang et al., 2012). The intentions implied by the management encourage reciprocal behavior (Guest and Conway, 2002) and reduce the intent to leave the organization (Jiang et al., 2012). As a result, developmental HRM practices both shape the psychological contract towards the relational side of the continuum (Raeder et al., 2012), and act as an acknowledgement and confirmation.
to the employees who have the intention of long tenure within the organization (Aggarwal & Bhargava, 2009). The training the employees receive enhances their opportunities to develop within the organization, reinforcing the “organizational intent” for a more relational psychological contract.

As argued above, there are several studies (e.g., Raeder et al., 2012) suggesting that specific HRM practices are positively related to the psychological contract of the employees, and more specifically to whether the perceived type of contract can be classified as more relational or transactional in nature. In the present study I argue that developmental HRM practices strengthen the relational contract of the employees. The inducement of such practices entails implied expectations for the longevity of the employment relationship, reinforcing the feeling of employment security. In accordance with a continuum approach, I correspondingly argue that developmental HRM practices reduce the employees’ perceived transactional contract. On this basis and the presented research, I expect the following:

**Hypothesis 1**: Developmental HRM practices are related to the continuum of the psychological contract in a way that high levels on developmental HRM practices are related to high levels of the relational end on the psychological contractual continuum and low levels on developmental HRM practices are related to low levels of the transactional end of the psychological contractual continuum.

**Work hours**

As mentioned initially, there are concerns regarding the unequal distribution of HRM practices between different groups of employees. Several studies on differences between full-time employment and non-standard work arrangements have indicated that full-time employees receive higher levels of such practices (e.g., Dick, 2009; Isaksson et al., 2010; Lepak, Taylor, Tekleab, Marrone & Cohen, 2007; Scheel et al., 2013). Thus, work hours as a group indicator will be considered for moderating purposes regarding the expected relationship between developmental HRM practices and the psychological contract content perceived by the employee.

**Part-time employment**

In the relevant literature on group differences between full-time employees and alternative work arrangements, there are several definitions and terms provided. It is common for the most widely used accounts that include part-time employment to refer to employment that differs from a standard full-time agreement. In addition to the self-evident “part-time employee”, terms as professional reduced working hours (Dick, 2009), contingent workers
(Tregaskis & Brewster, 2006), flexible work arrangements (Guest et al., 2006; Kelliher & Anderson, 2010; Stavrou, 2005) non-standard, atypical and secondary labor market (Casey & Alach, 2004) has been used in studies with part-time employment interest. Throughout the literature the common threshold concerning part-time employment is employees working less than 30 hours a week (e.g., Boselie & Wiele, 2002; Guest et al., 2006). This cutoff is also in line with the Organization for Economic Co-operation and Development’s (OECD) definition that states: “…a common definition of 30-usual weekly hours of work in the main job” (OECD, 2003). As a reference, Norwegian conditions imply standard full-time employment of 40 hours per week (Arbeidsmiljøloven § 10.4(1)), with many working full-time 37.5 hours due to collective agreements.

**Part-time employment and the psychological contract.** When any work arrangement is assumed to impact the employment relationship (McLean Parks et al., 1998; Rousseau, 1989), the prevalence of part-time employment indicates a demand for understanding how these employees perceive their psychological contract. Although most psychological contract studies do not include the subject of part-time employment, these employees may have considerably different perceptions and expectations for the employment relationship. Researchers have argued that work hours (i.e., part-time and full-time employment) affect the exchanges both in terms of quantity and quality (Dick, 2009; Jiang et al., 2012). Arguably, part-time employees are less likely to receive developmental HRM practices than full-time employees. When such practices are expected to affect how the employees perceive the employment relationship, the psychological contract of part-time employees may differ from the one of full-time employees.

Due to limited research on part-time employment and psychological contracts (e.g., Bal et al., 2013), publications including adjacent non-standard work arrangements can provide an indication of how work hours affect the psychological contract content. Relevant publications has to a large extent focused on temporary versus permanent workers (e.g., Isakson et al., 2010; Scheel et al., 2013) and presented assumptions, argumentation and results that may be applicable to examine the psychological contract of part-time employees. Although there is the concern of temporary workers not being directly comparable to part-time employees, McLean Parks et al. (1998) suggested a framework of underlying dimensions that was argued to explain how different groups of employees have different conditions for employment. The dimensions were argued to be compatible for all work arrangements. Additionally, the dimensions were suggested compatible with a continuum approach, and attempts to explain how the psychological contract evolves. For the purpose of facilitating the
assessment of the psychological contract of part-time employees compared to full-time employees three dimensions are applied; scope, tangibility and stability. These dimensions are included to explain the process of how the psychological contract content evolves according to employee perception of the characteristics of these dimensions (McLean Parks et al., 1998).

By applying the three dimensions the following assumptions are adopted. First, employee perceptions of the dimensions are expected to influence the employment relationship, thus different content of the psychological contract is proposed for part-time versus full-time employees. Second, full-time employees are intuitively expected to perceive their employment relationship as more in accordance with relational elements hence a more relational psychological contract is expected for these employees. An opposite argumentation is suggested for part-time employees. The dimensions are not intended as a complete framework reviewing all relevant conditions for employment, as are the characterizations of part-time employees only broad generalizations. Rather they are included to aid the argumentation by supplementing a sparse research field. Each of the dimensions will be considered in detail.

**Scope, tangibility and stability.** Scope is argued to be either narrower or more comprehensive in nature. Narrow and comprehensive refers to the degree to which one’s work and personal life are clearly separated or highly intertwined (McLean Parks et al., 1998). A narrower scope entails for more transactional elements. In regards to different work hours, full-time employees are assumed to regard their job as a main priority. Conversely, part-time employees might work reduced hours due to other life priorities (Dick, 2009), such as parenting, studies or another employment relationship. While part-time employees themselves have been argued to place more emphasis on their work/life balance thus initiating such arrangements (Conway & Briner, 2002; Dick, 2006), they are also aware of that it can affect their opportunity to receive developmental HRM practices (Dick, 2009). Whether intended and self-created or imposed by the organization the part-time employee is in a difficult position. Much like a catch 22, part-time employees may be facing a self-reinforcing pattern of action. Where part-time employees do not receive work related training they have correspondingly reduced opportunities for development within their current position of work. Thus part-time employees are more likely to perceive the employment relationship as more transactional. By working reduced hours part-time employees can be perceived by the management as not fully devoted to the organization hence regarded as “second-class employees” (Loughlin & Murray, 2013) and disengaged from the organization (Casper & Harris, 2008). In a study by Gakovic & Tetrick (2003) lower work status were assumed to
affect part-time employees’ perceived organizational support with more transactional obligations as the result. The transactional obligations accompanying deprivation of training will reinforce the management’s belief of full-time employees superior work status, thus being the better bet for training investments.

As a result of reduced access to developmental HRM practices, part-time employees’ work related skills and expertise can be expected to be inferior to full-time employees. Kalleberg (2000) argues that part-time employees are “often associated with marginal employment in low paid, low status jobs” (p. 345). Employees within these jobs are often categorized by low skills and low compensation (Dick, 2009). From the management perspective, these employees are a source of flexible workforce where the available employees are assumed to be utilized interchangeably. In regards to developmental HRM practices, part-time employees may be perceived as not worth the investment (Jiang et al., 2012), reinforcing a narrow employment relationship. Hence a more transactional psychological contract is expected for part-time employees.

Stability refers to whether the employment relationship is characterized as static and rigid or more dynamic and evolving (McLean Parks et al., 1998). While the characteristics of a transactional psychological contract require a static element, relational contracts are more dynamic (Kalleberg & Rognes, 2000). Non-standard work arrangements were suggested to be more static and less dynamic than standard full-time employment (Rousseau & McLean Parks, 1993). In a study by Isaksson et al. (2010), non-standard employees (i.e., temporary workers) were assumed to have inferior opportunities to “broaden” their psychological contract past initial agreements, with a broader contract including more relational elements. The effect was attributed specifically to less access to developmental HRM practices. The same can be expected to be true for part-time employees. When newly hired, employees are expected to primarily focus their attention towards transactional obligations (Isaksson et al., 2010), the assumption that follows is that it can be assumed that part-time employees having less presence in regards to both attendance and access to developmental HRM practices would result in a more static employment relationship. Accordingly, the expected static nature of the employment relationship for part-time employees underpins the notion of a more transactional psychological contract compared to full-time employees.

Employment relationships that are tangible entail for unambiguity regarding expectations and possibilities for rewards (McLean Parks et al., 1998). Highly tangible employment relationships are assumed to contain more relational elements. As stated earlier, the written employment contract represents the start of the employment relationship in a
highly tangible way (Isaksson et al., 2010). Norwegian conditions entail for most written employment contracts to have close to identical content regardless of percentage of employment, thus leaving much of its implied content up to interpretation. Embedded in full-time employment is the anticipation of full-time input in regards to hours worked and effort put in. Conversely, Dick (2009) argued that part-time employment “violates the full-time norm” (p. 187) in the sense that all employees are expected to generate the same input regardless of percentage of employment. Embedded in part-time employment is less attendance than full-time employees. In accordance with the full-time norm, part-time employees may feel obliged to generate close to full-time output. In a qualitative interview conducted by Kelliher & Anderson (2010) a part-time employee expresses the challenge to “escape the psychological commitment of having a five day-a-week job” (p. 10) indicative of the embedded ambiguity of their employment relationship. The term intensification of work (Kelliher & Anderson, 2010) has been used to explain that unexpectedly employees who spend less time in the workplace do not necessarily generate less output. Accordingly, where the organization views the part-time employed as being lesser of employees, them self believe that they have to produce close to full-time output. As mentioned above, part-time employees are expected to receive less developmental HRM practices. Hence, the discrepancy between part-time employees self-perception regarding their input at work versus output is expected to affect their psychological contract (Conway & Briner, 2002). On this basis, the employment relationships of part-time employees are expected to be more often subject of interpretation than the ones of full-time employees. The higher ambiguity entails for less tangible employment relationship, hence a more transactional psychological contract is expected for part-time employees.

Broadly speaking, part-time employees are regarded as lesser of employees in terms of status and organizational investment, but still expected to submit the same effort and results as those working full-time. As presented, the framework of underlying dimensions provide an assessment of how part-time employees psychological contract is expected to evolve on the basis of the differential organizational experience. Part-time employees’ employment relationships is argued as having a narrower scope, being less tangible and more static compared to full-time employees. Hence, I expect a lower reporting of relational elements for part-time employees as compared to full-time workers. Accordingly, part-time employees may have limited access to developmental HRM practices. The more relational content of the psychological contract of full-time as compared to part-time employees could be expected to be a contribution of differential treatment. Therefore, I hypothesize the following:
Hypothesis 2: Work hours moderate the relationship between receiving developmental HRM practices and psychological contract content.

The Norwegian context

Part-time employment in Norway

The labor market in Norway is characterized by low unemployment with both men and women being represented to an equivalent extent. In a European context there is a tendency for low unemployment entailing more frequent use of part-time employment. Consequently, in Norway a high proportion of the workforce does not work full-time (NOU 2008:17, 2008, p. 74). Norwegian labor law does not allow for discrimination based on percentage of employment (Arbeidsmiljøloven § 13.1(3)).

Part-time employment has been and still is predominantly concentrated within occupations were the majority is unskilled workers in smaller organizations; often temporary employed, women or seniors. The gender distribution has been heavily skewed with eight out of ten part-time employees being women. Part-time employment in Norway is often divided in to “long” and “short” term, with men working part-time for shorter periods while being students or as seniors. Women on the other hand work part-time for longer periods, often large amounts of their vocational life (NOU 2008:17, 2008, p. 74). Recent surveys have suggested that proportionally, more women are working full-time than previous surveys have suggested (Statistisk Sentralbyrå, 2014b).

Underemployment has been an issue of debate and of increasing concern (NOU 2008:17, 2008, p. 77). As a response, the Norwegian labor law was extended to ensure that part-time employees working more than their contracted hours are entitled to having an employment contract corresponding to their average worked amount of hours the last 12 months. The extension was effective from January 1\textsuperscript{st}, 2014 (Arbeidsmiljøloven § 14.4(1)).

Method

Sample and procedure

The data in this study were both collected and used in a team of three master students writing independent theses with a related theme. Combined, the theses contribute to an ongoing research project “Organizational antecedents of psychological contracts and work-related outcomes”, run by Sabine Raeder in cooperation with José María Peiró, University of Valencia, Spain.
Data were collected through questionnaires, both online and on paper. Organizations were contacted either by email or by telephone requesting participation. After initial contact with management/human resource representative (organizational representative) an information letter was issued explaining the background and purpose of the studies, including information regarding anonymity, confidentiality and their right to withdraw their participation at any time. In return for participation, the organizations were offered a summative report explaining the research findings. After agreeing to participate, the organizational representative received an email containing URL-links to questionnaires, including appropriate instructions for further distribution to employees. Upon request from the organizational representative, the employee questionnaires were distributed by the team in order to emphasize that the study was independent from the organization and voluntary as opposed to work tasks. To facilitate participation of a larger variety of companies, some were offered the questionnaires on paper. This proved to be positive for participation in the companies that due to the nature of their work tasks did not have computers in the workplace.

The participating organizations were asked to have one organizational representative answer the employer questionnaire, and between 10 to 50 employees completing the employee version. Reminders were issued two weeks after the first distribution of questionnaires. The questionnaire sets of organizational representative and employee were given a matching ID-number, allowing the data from the organizational representative to be paired with the corresponding employees.

In total, 183 companies were contacted requesting participation, 99 companies replied and 84 companies did not reply. Out of these, 35 sets on both organizational and employee level completed the questionnaires, giving a response rate of 19%. There were no cases with only one side of the organizational/employee questionnaires completed, resulting in the use of all data collected. A sample size of 35 companies was assessed as sufficient (Maas & Hox, 2005). The sample was a “convenience sample” based on the personal network of the team. Both public (31%) and private (69%) organizations were included. Knowledge intensive organizations (43%), retail (34%) the manufacturing industry (8.5%) and wholesale industry (8.5%) as well as other service related industries (6%) were represented in the sample. In total, 35 organizational representatives and 463 employees completed their questionnaires. Within each company, the employee response ranged between 1 and 227 yielding an average of 13.23 employees (SD=37.58). On this base, the employee response rate was estimated to be 31.1%. The employee demographics showed that 49.7% (n=230) of the participants were female and 50.3% (n =233) male. The employees’ age ranged from 19 to 65 with an average age of 39
Additionally, 75.6% of the sample (n=350) had a college or university degree. Participants reported company tenure, ranging from less than a year to 39 years, averaging 5 years and 3 months (SD=6.41). The majority of the employee sample reported full-time employment 90.7% (n=420), consistent with a cut-off score at 30 hours per week (SD=16.05). Consequently, 9.3% reported part-time employment. Furthermore, 90.9% of the employees reported that their current percentage of employment was as desired and satisfactory to a large/very large degree (SD=.75).

Measures

Two versions of the questionnaire were used in this study; one for the organizational level and one for the employee level. Based on initial self-evaluations, completion time was estimated to be approximately 15-20 minutes for both questionnaires. The questionnaire at the organizational level included scales measuring developmental HRM practices, and demographics. The questionnaire at the employee level contained a scale measuring the psychological contract in regards to transactional and relational elements as well as a single-item measure on the same construct. Along with demographics, employees were also asked about their level of education, tenure, position of employment and percentage of employment.

English scales required translation from English to Norwegian. Translations to Norwegian were conducted by an individual with good knowledge regarding both languages who was not affiliated with the project. Self-conducted back translations showed minor differences from the original scale, but were considered insignificant. The items were compared to the English version, finding no remarks. Unless otherwise is noted all scale items were measured on a 5-point Likert scale, including verbal statements for anchoring ranging from “strongly disagree” to “strongly agree”.

Developmental human resource management practices. Developmental HRM practices were assessed using a measure developed by Delery & Doty (1996). Using a 4-item scale, the organizational representative was asked to indicate the use of developmental inducements. An example of an item from this scale is: “Extensive training programs are provided for individuals in this organization”. Cronbach’s alpha was .74.

The psychological contract continuum. The psychological contract continuum was assessed with a single-item measure specifically developed for this study. A visual analog scale was chosen based on DeVellis (2012) asserting this as a common practice with single-item measures. Following his guidelines for developing a sound measure, five steps were considered. The first step in this procedure involved defining what to include in the measure. Based on the argumentation introduced earlier in this thesis, the requirement for the new
measure was to merge the two elements of the psychological contract into one question. As the second step the characteristics of the item were assessed. An item that would be easy to understand across groups of employees and work settings was considered essential. Third, the format of how to present the single-item measure was evaluated. A visual analog scale has the advantages of being very sensitive to differences and changes between respondents. Also, such a measure is more robust against the respondent bias to be consistent in a test-retest scenario. As the fourth step DeVellis (2012) argues the need for having the item(s) reviewed by others that have knowledge in the subject. The wording, visual presentation and relevance of the measure were assessed by the other members of the team. The feedback was taken into consideration to improve the item. The fifth step of this process involved assessing the need for including validation items. An established scale on the construct was included in the questionnaire for this purpose. The process of these steps and the result of this validation will be discussed below.

As the result of these steps the single-item measure was: “please make an overall assessment regarding your employment relationship by positioning the slider between the poles as you see fit”. Visually, the anchors were positioned on both sides of an extended, straight line connecting the transactional pole (far left) with the relational one (far right). The verbal statements used for anchoring were introduced by “I would describe my employment relationship as:”. The transactional pole stated: “short-term with focus on incentives like pay in exchange for my effort”, and the relational side: “long-term with focus on factors such as loyalty and development”. Practically, the participants had to place a slider somewhere in between the two ends. Due to the nature of the software used to produce the questionnaire, the item was scaled between 1 to 10. This scaling was visually hidden from the participants, reinforcing the experience of a true slider on a continuum.

Considerations for using a single-item measure. The advantages and disadvantages for using a single-item measure were assessed. As mentioned earlier, it would be valuable and of great use to demonstrate a larger variety of psychological contracts than the purely transactional and relational and combine them into one construct. As argued, there are several statements in the existing literature on psychological contracts that facilitate such a notion. In addition there are other fields in work and organizational psychology that have adopted this approach. A meta-analysis assessing the use of single-item measures in research on job satisfaction found them to be acceptable in terms of both methodological and practical use (Wanous, Reichers & Hudy, 1997). Others have stated that a more faceted measure is the
preferred choice due to skepticism about single-item measures being unreliable and not valid compared to traditional measures (Scarpello & Campbell, 1983).

The validity of the single-item measure was tested following a procedure used in research on job satisfaction (i.e., Nagy, 2002). Nagy (2002) compared a widely used multiple-item scale to a single-item measure. In the present study, the validity of the self-developed single-item measure was assessed including another, already established psychological contract scale in the questionnaire. This scale developed by Raja, Johns & Ntalianis (2004) included 18 items which were equally distributed between the transactional and relational elements. An example from the transactional scale is: “I only carry out what was necessary to get the job done”. An example from the relational scale is: “To me working for this organization is like being a member of a family”. Cronbach’s alpha was .74 for the transactional scale and .89 for the relational scale. This measure on transactional/relational elements of the psychological contract correlated respectively -.45 and .52 with the single-item continuum measure.

Although only low correlations were obtained, they were utilized in several ways. First, the directions of the correlations were assessed yielding expected results; transactional and relational scales corresponding respectively negatively and positively to the continuum measure, thus providing some support for convergent validity as well as construct validity. This validation of the scale can infer its reliability based on the fact that reliability is a requirement for validity (DeVellis, 2012). Second, the correlations were lower than the ones obtained for similar conditions in research on job satisfaction were correlations between .60 and .72 for single-item and other measures are demonstrated (Nagy, 2002). The low correlations might be explained by the nature of the transactional/relational scale where the participants were able to get high (or low) scores on both elements (e.g., high transactional and high relational). In addition to emphasizing the need for a different type of measure, other procedures for assessing correlations were considered. As suggested by Scarpello and Campbell (1983) partial correlations were computed between the transactional/relational scale and the single-item psychological contract continuum measure. This was conducted in an attempt to support the unique contribution of the continuum measure as acceptable for assessment of the psychological contract. The partial correlations when controlling for the relational scale (.33) and the transactional scale (.43) were significant and remained within the same strength category as the initial correlations. In the case of Scarpello & Campbell (1983), the change in correlation stayed below .1 which is slightly smaller than in this paper where the change in correlations were respectively .12 and .09. As opposed to the example of Scarpello...
& Campbell (1983), the change in correlations needs to be larger here, because the continuum covers transactional and relational aspects in one variable.

Additionally there are other features of a single-item measure that support such a measure as the preferred choice. First, there is the fact that a single item takes up less space in a questionnaire than other scales (Wanous et al., 1997). This can be beneficial both in terms of invitees accepting participation due to a shorter proposed completion time and possibility for a lower drop-out rate before completion. Second, more organizations may be willing to consider participation as a shorter questionnaire is more cost-effective due to employees spend less time on non-work related tasks (Wanous et al., 1997). Lower costs will also benefit researchers regarding construction and distribution of the questionnaire. Third, there is reason to argue that single-item measures hold higher face validity compared to other measures (Wanous et al., 1997). In this instance it is of interest to emphasize the items included in the scale on relational elements of the psychological contract used for validation in this study. Three examples from the scale are: “I expect to grow in this organization”, “I have a reasonable chance of promotion if I work hard” and “I am motivated to contribute 100% to this company in return for future employment benefits”. Based on the wording and nature of these items, I consider them not ideal for participants working part-time. Part-time employees may not have the same goals (e.g., growth in the organization/promotion) as those working full-time, possibly making the items less suitable for part-time employees. In addition, a wording such as: “…promotion if I work hard” may seem offensive for part-time employees in organizations where an upgrade of work tasks may not be an option or aspiration for them, regardless of how hard they work. Likewise, the last presented item refers to a quantified amount (i.e., 100%) of employee contribution that may be misinterpreted as percentage of worked hours. Freese & Schalk (2008) support these assumptions by stating that most researchers have made changes to existing measures in order to make them more appropriate to the subjects in question. Assumingly, a single-item measure as the one developed for this study has in this regard not only a better face value, but also improved construct and content validity.

**Work hours.** Employee contractual work hours were assessed with one item asking participants to indicate “your percentage of employment” (percentage).

**Control variables.** At the organizational level, organizational size (number of employees) was included as a control variable. Additionally, gender (male/female), and tenure (years) were included as control variables at the employee level.
Statistical analyses

The data consisted of two levels, respectively the organizational level and the employee level. All data were analyzed with SPSS 22. Completed questionnaires entailed for no missing values as all items included in this study were mandatory. However, voluntary completion resulted in missing values on items later in the questionnaire affecting the measures on the psychological contract. In total 109 questionnaires contained missing values on these measures. Due to the nature of the data, missing values were replaced using the Expectation-Maximization (EM) method as suggested by Schafer & Graham (2002). Both datasets were screened for invalid input. Invalid input was indicated in the employee level dataset for the control variable “tenure” in 11 cases. Possible differences between participants with missing values and with complete data were assessed. Participants with missing values did not differ significantly from those with complete data, thus no further measures were needed.

Prior to conducting the analyses, the predictor at the organizational level, developmental HRM practices, was centered to increase the interpretability of the intercept for the models (Hox, 2010). Grand mean centering was applied and executed by interpreting the individual scores relative to the group mean. When centering, the value 0 (zero) is included in in the scale, changing the magnitude of the intercept (Paccagnella, 2006). For the mediator at the employee level, work hours, 0 is a statistically meaningful value. However, participation in this study entails for employment comprising some percentage of employment. Consequently, the predictor at the employee level was kept uncentered, utilizing the raw scores.

The distributions of the data were assessed following Tabachnick & Fidel’s (2012) recommendations for screening before multilevel regression analysis. Where normal distribution is usually required, all scales except gender were skewed. The predictors and independent variable had mean values that were higher than the middle value of the distribution, hence negatively skewed. This has various implications. Work hours were highly skewed (skewness = -3.90, kurtosis = 15.50). This indicates an actual skewness as only 9.3% of the respondents work part-time. The psychological contract continuum was moderately skewed (skewness = -1.07, kurtosis= 1.28) indicative of that most respondents chose a position on the continuum closer to the relational side. Developmental HRM practices was moderately skewed (skewness = -1.70, kurtosis = 3.57) indicating that most organizational representatives reporting higher levels of such practices than what was expected for the population. The remaining scales, tenure and organizational size, were significantly positively

skewed, indicative of a supposedly short tenure and organizations with few employees. However, as these measures were scaled from 0 to 40 for tenure and 0 to 25000 for organizational size, the skewness is not surprising. According to Tabachnick & Fidel (2012) distributions that are not consistent in the direction that they skew may impair the power of the analysis. However, as all predictors and independent variables were skewed in the same direction this was considered acceptable for the analysis. After the analysis, standardized estimates were computed to facilitate comparison of the predictors.

In order to test the hypothesized relationship between developmental HRM practices and the psychological contract continuum a multilevel regression model was chosen as the appropriate method of analysis. This decision was based on the data being on more than one hierarchical level with the lower level data (individual e.g., employees) being nested in units at a higher level (group e.g., distinct organization) (Hox, 2010). The multilevel approach can be explained as a series of equations on the included levels of data (Hox, 2010). The data included in this study had two levels: employees (Level 1) belonging to the organizations (Level 2). The psychological contract continuum was measured at Level 1 while developmental HRM practices were measured at Level 2. Using data on more than one level reduces both the possibility for making a type 1 error (Hox, 2010) and common methods bias in the sample (Podsakoff, MacKenzie & Podsakoff, 2012).

Following the procedure recommended by Hox (2010) the multilevel analysis was conducted through five steps for the dependent variable. As the first step, a model leaving out the predictor was computed resulting in the intercept-only model, allowing for the unexplained variance between employees and organizations to be computed. In the second step, the objective was to examine the control variables’ effect on the dependent variable, including organizational size, employee gender and employee tenure. Thereafter the independent variables on both levels, first for Level 2 and then for Level 1 where added individually in step 3 and 4. In the fifth step, the interaction between the variables developmental HRM practices and work hours was included. The procedure of adding variables stepwise allows for estimating the proportion of explained variance (Hox, 2010).

In the present study a measure on the psychological contract continuum represented the dependent variable. Developmental HRM practices were included as the independent variable. Work hours were included as a moderator. Additionally, organizational size, gender and tenure were included as control variables.
Results

Descriptive statistics

Table 1 and 2 present descriptive statistics and correlations of the outcome variables and predictors at the employee level (Level 1) and the organizational level (Level 2). To avoid aggregation of Level 1 data and disaggregation of Level 2 data the descriptive statistics and correlations for employees and organizations are displayed in two separate tables. The tables present mean values, standards deviations (SD), correlations and reliability estimates (α).

The internal consistency (Cronbach’s alpha) for the developmental HRM practices scale was .74 (Table 2). As a rule of thumb reliabilities within the range of .70 and .80 are considered respectable and satisfactory (DeVellis, 2012). Accordingly, the reliability of the developmental HRM practices scale is considered respectable and satisfactory. The reliability of the single-item measure of the psychological contract continuum was assessed through comparison to another measure. The single-item measure on the psychological contract continuum had a high mean, indicating that participants overall chose a position closer to the relational end on the continuum (Table 1). The transactional and relational scale supported this tendency, although with more moderate means. The developmental HRM practices scale had a mean value of 3.91, indicating that the organizational representatives gave relatively high scores regarding the availability of such practices (Table 2).

Table 1
Means. Standard Deviation, Correlations and Reliabilities at Level 1 (Employees)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender (1 = female, 2 = male)</td>
<td>1.50</td>
<td>.50</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Tenure</td>
<td>5.26</td>
<td>6.41</td>
<td>-.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Work hours</td>
<td>95.44</td>
<td>16.05</td>
<td>.10*</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The psychological contract continuum (single-item measure)</td>
<td>7.49</td>
<td>1.99</td>
<td>-.02</td>
<td>.08</td>
<td>.10*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Transactional elements</td>
<td>2.23</td>
<td>.58</td>
<td>.07</td>
<td>-.02</td>
<td>-.07</td>
<td>-.45**</td>
<td>(.74)</td>
<td></td>
</tr>
<tr>
<td>6. Relational elements</td>
<td>3.34</td>
<td>.82</td>
<td>.00</td>
<td>-.15**</td>
<td>.10*</td>
<td>.52**</td>
<td>-.36</td>
<td>(.89)</td>
</tr>
</tbody>
</table>

Note: N = 463 for all variables. Scale reliabilities (α) are reported on the diagonal in parentheses.
*p < .05, **p < .01.

As discussed earlier, the intercorrelations between the psychological contract scales were significant, albeit low (Table 1). Specifically, the transactional (r = -.45, p < .01) and
Table 2

Means, Standard Deviations, Correlations and Reliabilities at Level 2 (Organizations)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organizational size</td>
<td>743.37</td>
<td>1048.19</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>2. Developmental HRM practices</td>
<td>3.91</td>
<td>.69</td>
<td>.06</td>
<td>(.74)</td>
</tr>
</tbody>
</table>

Note: N = 35 for all variables. Scale reliabilities (α) are reported on the bottom right in parentheses.

**p < .01.

Multilevel analyses

Test of hypothesis. Table 3 present the results of the multilevel analysis including the psychological contract continuum as the dependent variable. The analysis was conducted in five steps following the procedure presented above. The table presents estimated fixed effects (Est.) and standard error (SE). Standardized estimates (β) are presented for the final model to facilitate a comparison of the independent variables. Akaike’s Information Criterion (AIC) was used to compare the fit of the five models specified by the lower the AIC, the better the fit. Significant interactions are illustrated in Figure 2 to facilitate visual examination of the results.

Hypothesis 1 investigated whether developmental HRM practices are related to the continuum of the psychological contract in a way that high levels of developmental HRM practices are related to high levels of the relational end on the psychological contractual continuum and low levels of developmental HRM practices are related to low levels of the transactional end of the psychological contractual continuum. In line with the hypothesis, developmental HRM practices were positively related to the psychological contract continuum (Est. = .27, p > .10), thus indicating that a higher value on the developmental HRM practice measure correspond to a more relational psychological contract. However, the effect was not significant. Consequently, Hypothesis 1 was not supported by the data.

Hypothesis 2 predicted that work hours moderate the relationship between receiving developmental HRM practices and psychological contract content. Model 5 displays the effect caused by developmental HRM practices and work hours which enables the prediction of how the employees perceive their psychological contract based on their values of the independent variables. Developmental HRM practices were positively related to the psychological contract
Table 3
Results of Multilevel Analysis Predicting The Psychological Contract Continuum

<table>
<thead>
<tr>
<th>Fixed Effects</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Standardized estimates for predictors (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>7.47 (.23)***</td>
<td>7.37 (.37)***</td>
<td>7.41 (.37)***</td>
<td>6.23 (.66)***</td>
<td>6.46 (.67)***</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.03 (.19)</td>
<td>-.02 (.19)</td>
<td>-.06 (.19)</td>
<td>-.05 (19)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td>.02 (.01)†</td>
<td>.02 (.01)†</td>
<td>.02 (.01)†</td>
<td>.02 (.01)†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational size</td>
<td>.00 (.00)</td>
<td>.00 (.00)</td>
<td>.00 (.00)</td>
<td>.00 (.00)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developmental HRM practices</td>
<td>.27 (.26)</td>
<td>.27 (.25)</td>
<td>.27 (.25)</td>
<td>1.07 (.58)*</td>
<td>.37*</td>
<td></td>
</tr>
<tr>
<td>Work hours</td>
<td>.01 (.01)*</td>
<td>.01 (.01)*</td>
<td>.01 (.01)*</td>
<td>.01 (.01)*</td>
<td>.08*</td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>-.01 (.01)†</td>
<td>-.33†</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Random Effects

| Variation between employees   | 3.57 (.25)*** | 3.55 (.25)*** | 3.54 (.25)*** | 3.52 (.24)*** | 3.52 (.24)*** |
| Variation between organizations| 1.06 (.53)*   | 1.02 (.52)*   | 1.02 (.52)*   | .91 (.47)*    | .85 (.45)*    |
| AIC                           | 1946.39       | 1949.65       | 1950.57       | 1947.95       | 1947.65       |

Note: †p < .10. *p < .05. ***p < .001
continuum (Est. = 1.07, β = .37, p < .05). The result is indicative of the more training and
development opportunities provided by the organization, the more relational content is
perceived by the employees. Work hours accounted for the main effect, and were positively
related to the dependent variable (Est. = .01, β = .08, p < .05). The effect of work hours was
small, but significant. Percentage of employment appears to predict how the employees
perceive their psychological contract. Tenure was also an indicator of the employees’
psychological contract. Although small, the relationship between tenure and how the
employees perceive their psychological contract was positive (Est. = .02, p < .10). This
implies that longer tenure promotes more relational content of the psychological contract,
coinciding with previous assumptions. The interaction effect of the two predictors was small
and negative in direction and significant at the 10% level (Est. = -.01, β = -.33, p < .10). These
results indicate that the effect of developmental HRM practices is moderated by the
percentage of employment of the employees. If disregarding the AIC of the intercept-only
model, this model had the lowest AIC, indicative of how well the model represents the
statistics (Hox, 2010). Accordingly, hypothesis 2 was supported by the data.

A graphic representation was generated to examine the direction of the interaction.
The interpretation of the interaction was facilitated by the program ModGraph (Jose, 2013)
which allows for processing the information from the multilevel analysis into equations for
the purpose to visually examine the statistical interactions. Figure 2 illustrates how the
interaction effect of developmental HRM practices and work hours impact the employees’
assessment of the psychological contract content. The Y-axis represents the predictor variable
and the X-axis represents the developmental HRM practices according to low, medium or
high levels of inducements. Work hours as the moderator is represented by three lines
differentiated by thickness according to high, medium or low levels of percentage of
employment. High levels indicate full-time employment while medium and low levels
indicate part-time employment. For both the independent variables, the different levels of
high, medium and low are separated by one standard deviation above and below the mean
(95.44) which specifies the medium value (Jose, 2013). Slope value (m) for low, medium and
high levels of work hours(WH), and the corresponding value on the psychological contract
continuum for low level of developmental HRM practices (WH_x low) is presented.

In the figure, the lines diverge from each other as developmental HRM practices
increases from low to high, indicating different effects according to percentage of
employment. Irrespective of the level of developmental HRM practices, all levels of
percentage of employment appear to perceive more relational content than transactional
Medium and low levels of work hours (i.e., part-time employees) appear to be more sensitive to training and development than high levels (i.e., full-time employees). Additionally, full-time employees appear to have a negative effect (m\text{high} = -.04) of developmental HRM practices, while both levels of part-time employees have positive effects (m\text{medium} = .12, m\text{low} = .28). Figure 2 indicates that when organizations provide low levels of developmental HRM practices, part-time employees perceive their psychological contract (WH_{\text{low }x \text{ low}} = 7.79 and WH_{\text{medium }x \text{ low}} = 8.14) more relational than full-time employees (WH_{\text{high }x \text{ low}} = 7.43). However, for both full-time (p = .88) and part-time employees (p = .65, .27) the difference in psychological contract content is small and non-significant at this level.

![Figure 2. Interaction Effect of Developmental HRM practices and Work Hours](image)

For the dependent variable Model 1 presented significant unexplained variation both within (p < .001) and between organizations (p < .05). Calculations of the intraclass correlation (ICC) showed that 23% of the unexplained variance was on the organizational level. Also, this model showed the best fit based on the lowest AIC value of the 5 models. Model 2 and Model 3 showed a progressively increasing AIC, implying a reduced fit compared to Model 1. Model 4 and Model 5 presented a slight decrease in the AIC from the two previous models, indicative of a better fit.
With predictors at both Level 1 and Level 2, calculations regarding the proportions of variance explained for both levels are of interest. For Level 1 Model 2 through Model 5 all explained 1% of the variation. Accordingly, little if any of the variation in the psychological contract continuum can be explained by the variation in the developmental HRM practices. For the organizational level Model 2 and Model 3 explained 4% of the variation, while Model 4 explained 14% of the variation at Level 2. Model 5 explained 20% of the variation at Level 2. The increase in the proportion of the variance explained indicates an improved predictive value of the slopes. Accordingly, Model 5 explained 20% of the variation for all levels of work hours.

**Control variables.** Gender was negatively related to the psychological contract continuum (Est. = -0.03, p > .10) and not significant. Tenure was positively related to the psychological contract continuum (Est. = 0.02, p < .10), hence a higher tenure corresponds to a higher score on the psychological contract continuum (i.e., more relational). This effect was small but significant at the 10% level. No effect was found for organizational size (Est. = 0.00, p > .10).

**Discussion and implications for future research**

The objectives of the present study were twofold. First, the purpose of the present study was to investigate whether developmental HRM practices are related to the psychological contract of the employees. High (low) levels of the former were expected to result in a more relational (transactional) positioning on the latter. Jiang et al. (2012) argued the need for more empirical work concerning the effects of HRM practices at the organizational level on employee outcomes. Unfortunately, the relationship was not supported. This result differs from recent research findings (e.g., Bal et al., 2013), that have demonstrated a relationship similar of the one hypothesized. The second objective was to investigate whether work hours regarding part-time and full-time employment act as a moderator on the relationship between developmental HRM practices and the psychological contract continuum. Generally, the amount of empirical work on group differences regarding distribution of HRM practices is sparse (Scheel et al., 2013). More specifically, the amount of publications explicitly devoted to work hours in this regard is not equal to the prevalence of part-time employment in the current labor market. Coinciding with my expectations work hours as a moderator was supported.

As the basis of this investigation, two sources of information were included: employees and organizations. Although the first hypothesis was not supported, the main hypothesis was supported by the data and shows how work hours moderate the relationship
between developmental HRM practices (reported by organizational representative) and placement on the psychological contract continuum (perceived by the employees). However, embedded in the expectations was the anticipation of full-time employees having easier access to HRM practices and thus a higher incidence of more relational elements. Contrary to this assumption, part-time employees reported higher levels of relational content than full-time employees. These findings may be the result of using a psychological contract measure different to comparable publications (e.g., Bal et al., 2013), and/or an effect of characteristics of the sample. An assessment of the present study’s design and methodology are presented in the following. Additionally, possible explanations for the presented results are examined.

**Developmental HRM practices and the psychological contract continuum**

The first hypothesis assumed that developmental HRM practices would have an impact on the type of psychological contract perceived by the employees. Through the process of shaping the employee expectations for the employment relationship, the employee would perceive the “intentions” of the organization as long-term in regards to the expected relationship length, thus perceiving a more relational psychological contract. Developmental HRM practices were assumed to have universalistic value with recent publications establishing its influence on the psychological contract (e.g., Bal et al., 2013; Scheel et al., 2013). Similar to the present study, these publications utilized European samples of sufficient size, analyzed with multilevel analyses. For that reason the present study’s non-significant effect was unexpected. A review of the differences between the present study and the other publications is presented to expand the understanding of the diverging results. The publications differ on several features. The first is that their samples contain certain characteristics that may have affected the results. With both publications using a non-Norwegian sample and one (Bal et al., 2013) including only one organization located in the healthcare sector, the basis for their results are different from the present study. Previous studies have suggested that the psychological contract and the concepts of transactional/relational may be sensitive to national differences (Raeder et al., 2009) and different populations (Freese & Schalk, 2008). Although the present study used a different psychological contract measure that possibly contributed to the unexpected result, national characteristics regarding the employment system should be considered. On the basis of these arguments the hypothesized relationship is still considered valid and significant for theory, however more research is needed.
Work hours as moderator

The second hypothesis argued that work hours would moderate the relationship between developmental HRM practices and psychological contract content. The significant results confirm the assumption of part-time and full-time employment as relevant in this regard. As expected, full-time employees reported a more relational psychological contract compared to part-time employees. However, both groups identified with a psychological contract quite high on the continuum (i.e., more relational). While somewhat unexpected in regards to the hypothesis, the notion of psychological contracts as generally more relational has been explained in several publications (e.g., Bunderson, 2001; Dick; 2006; McNeil, 1973). The employment relationship is naturally more relational due several reasons. Socially, the implicit promises that make up the psychological contract are not created in a vacuum (Rousseau & McLean Parks, 1993). Rather, the exchange relationship entails for an interaction between the employer and the employee, thus the social context provides a setting for the psychological contract. As explained by McNeil (1973) the employment relationship is, despite the embedded transactional elements, one of the most relational contractual relationships in our society. In contrast to the day-to-day employment of earlier times, employment today entails for long-term assumptions for the exchange relationship. The significant relationship between tenure and the psychological contract supports this argumentation. Consistent with the majority of the sample reporting full-time employment and higher levels of developmental HRM practices, a more relational psychological contact is reasonable.

As hypothesized, the results supported work hours as a valid moderator of the relationship between developmental HRM practices and psychological contract content. Hence, the percentage of employment does influence the effect of training and development on the degree of transactional or relational elements. However, the interpretation of the results shows that the interactions have directions contrary to expectations. On the basis of the three psychological contract dimensions presented it was expected that full-time employees would perceive a more relational contract than part-time employees. As presented in Figure 2, the directions suggest that part-time employees are more sensitive to training and development than full-time employees. Thus, the less the percentage of work the higher the effect of developmental HRM practices is reported. Additionally, part-time employees perceive more relational elements than full-time employees, independent of level of developmental HRM practices provided. These results dispute with previous research that demonstrated that developmental HRM practices rebalanced the psychological contract towards more relational
elements for all employees (Bal et al., 2013). A reevaluation of this study’s theoretical assumptions is presented to explain the unexpected results. Three explanations are assessed.

First, part-time employees’ employment relationship was expected to have a narrower scope due to other life priorities besides work. However, part-time employees’ bigger need for work/life balance may also provide an explanation for their more relational psychological contract. Conway & Briner (2002) suggested that part-time employees have concerns for their work/life balance more so than full-time employees. The flexibility that comes with part-time employment may be perceived as a commodity and allow for the employee who needs such an arrangement to envision a long-term time frame, hence explaining the results. A qualitative study by Dick (2006) of part-time employment amongst police officers supports this assumption. She suggests that part-time employment strengthens the relational aspects of the employment relationship by “signaling the organization’s investment in the officer” (p. 45). From this I infer that the opportunity for part-time employment has the same implications for psychological contract content as argued for developmental HRM practices. Developmental HRM practices were argued to function as an “organizational statement” implying expectations for the employment relationship consistent with a more relational psychological contract (Aggarwal & Bhargava, 2009). As embedded in most definitions of psychological contracts, subjectivity affects what constitutes a commodity and imply transactional or relational obligations for the employment relationship. Hence, the notion of part-time employees perceiving their work arrangement as a commodity like full-time employees perceives developmental HRM practices is probable.

For a second explanation, an element from psychological contract definitions is again relevant. The element of reciprocity was argued to refer to employee expectations for the exchange relationship. When the results indicate that part-time employees perceive more relational content than full-time employees, difference in expectations for the exchange of employee input and employer obligations may be of importance. In terms of employee input, it was argued that part-time employees may feel obliged to intensify their work effort according to the norm of full-time employment. Regarding employer obligations, several publications suggest that part-time employees may have lower expectations for the exchange relationship compared to full-time employees (e.g., Conway & Briner, 2002; Dick, 2006, 2009; Kelliher & Anderson, 2010). While I argued that more transactional content was expected for part-time employees due to a less tangible employment relationship, the employees may perceive their work arrangement as a commodity equivalent or more valuable than opportunities for training and development. Hence, by providing part-time employees
with such practices the management exceeds already low expectations initiating more relational content.

By arguing that expectations for the exchange relationship are significant for explaining the direction of the effect of developmental HRM practices, the negative slope for full-time employees’ is more understandable. If full-time employees have high expectations for the exchanges within their employment relationship, both the lower positioning on the continuum and the decline in effect with higher levels of developmental HRM practices may be explained, however more research is needed. In addition, the type of training was not specified. Part-time employees may receive different training content from full-time employees that may prove more effective regarding relational content.

The present study applied a measure developed with part-time employees in mind, and may have contributed to results slightly different from argued expectations. A visual analog scale was argued as more sensitive to differences and changes between respondents than traditional measures (DeVellis, 2012), and might have captured tendencies beyond established measures. However more research is advised prior to further use of the single-item measure.

Study limitations and direction for future research

All study designs and methodology are subject to certain limitations. Possible limitations corresponding with the present study are discussed and suggestions for future research are presented. Primarily, the sample needs to be assessed. First, the sample size although sufficient for the purpose of a master thesis, is on general terms considered somewhat small (Maas & Hox, 2005). According to Hox (2010) ideal conditions entails for 30 individuals nested within 30 units. The present study included 35 units, which is sufficient for Level 2. Level 1 yield an average sample size of 13 (SD=37.58), falling below the recommended value. The large standard deviation is indicative of inconsistencies regarding the sample ratio between Level 1 and Level 2. Indeed, the sample ratio varied between 1:1 to 1:227, with the majority of units consisting of a ratio below 1:30. Thus, the sample was skewed primarily due to one unit with a rather large ratio. The limited sample may cause reduced statistical power of the results. Accordingly, my recommendation for future research is to attempt to gain a larger sample size, especially at the individual level.

Second, the sample represented the population in terms of the range of sectors as well as demographics. In terms reaching representative levels of part-time employees compared to the corresponding population this study was unsuccessful. It is challenging to assess why this was the case. Part-time employment entails for weekly work hours of below 30. Employees with a fairly low percentage of employment may have a higher susceptibility for missing out
on the opportunity to participate due to the fact that they work less hours. Intensification of work may be another explanation. When part-time employees are more likely to work more intensely, there may not be time for participation equal to full-time employees. Additionally, the difference in work status between part-time and full-time employees may be of importance. Part-time employees at the lower end of the range may not be considered as relevant employees in this context. Organizational representatives were informed on the purpose of the study including the wording “percentage of employment”. A stronger emphasis on part-time employment or more clear directions should be considered for future research.

Third, although there have been statements regarding the need to recognize the distinctiveness of an European HRM perspective (e.g., Stavrou, 2005) the present study’s all Norwegian sample may be of concern. As discussed above, the higher effect of developmental HRM practices for part-time employees was both unexpected and a distinctive result compared to existing research. Although interesting, there is a need for further research in a Norwegian context.

Assessments regarding the measures are also appropriate. Existing research utilizes several different measures of the psychological contract. As argued earlier, the scale that was specifically developed for this study has several advantages regarding its characteristics. A previous study also using an entirely new measure on the content of the psychological contract did yield significant results (Isaksson et al., 2010). In favor of their measure, extensive pilot-testing was executed. Pilot-testing was included as one of the recommendations for sound scale development by DeVellis (2012); unfortunately the nature of the present study did not permit such a procedure. Isaksson et al., (2010) also argues the need to go beyond the cross-sectional nature of the data. To this I agree. Based on the data of the present study, determining casual inferences is impossible. The present study presents argumentation in favor of full-time employees receiving more developmental HRM practices, thus influencing them to perceiving more of a relational psychological contract. Although the interaction effect of work hours was proved to be significant, the highly relational psychological contract for part-time employees was surprising.

**Implications for practice**

The significant relationships in this study may have practical implications for organizations. Primarily, the main hypothesis was supported indicating an effect of work hours. The effect seemed to be higher for part-time employees. Organizations could benefit from giving part-time employees the same opportunities for training and development as full-time employees. Through an equal distribution of developmental HRM practices the
organization will enhance the human capital of their employees, hence making the most of their recruiting investment (Jiang et al., 2012). Assuming the accompanying rebalancing and broadening of their psychological contract towards more relational elements, positive organizational outcomes are expected.

In addition, while the relationship between developmental HRM practices and psychological contracts only is demonstrated in other publications (e.g., Jiang et al., 2012), there is still a basis for organizational implications. Contrary to the common approach of inducing a combined measure of HRM practices, single practice measures should be considered with the anticipation of both practical and economic implications.

**Contribution**

This study’s contributions are of methodological and contextual importance. Methodologically this study contributes through both applying a multilevel approach and suggesting an alternative measure. Although, the cross-sectional nature of this study precludes the possibility of determining casual inferences, there are already several publications including methodology that tackle this issue. Publications on psychological contracts including a multilevel approach are harder to come by. The advantage of a multilevel approach is in this instance its objective to determine direct effects of explanatory variables and moderating relationships (Hox, 2010). By not replacing, but supplementing existing research the present study contributes to the development and expansion of both research fields. This is also true for using an alternative measure. As presented, the measure regarding the assessment of the psychological contract yielded interesting results of statistical significance.

Contextually this study contributes to the limited field of group differences in regards to HRM practices and psychological contracts. Only a handful of studies have investigated a combination of these elements (e.g., Bal et al., 2013). In addition there are only a few studies regarding psychological contracts utilizing a Norwegian sample and most studies on HRM practices have been conducted in the US. Norwegian conditions entail for an employment system and a labor market that differs both structurally and legally from the US. Accordingly, there have been statements regarding the need to recognize the distinctiveness of a European HRM perspective. The present study indicated work hours, hence part-time employment to moderate the relationship between developmental HRM practices and the type of psychological contract. In a European context the Norwegian prevalence of part-time employment is rather high. Thus this study is relevant through new insight into the consequences of such work arrangements and for the Norwegian context.
References


