

Communication and Psychological Contracts in Teams:  
A Multilevel Investigation

Elisabeth Riise Aas



Master of Philosophy in Psychology

Department of Psychology

University of Oslo

May 2010

## **Acknowledgements**

First of all, I want to thank my supervisor, Sabine Raeder, Associate Professor at the Department of Psychology at the University of Oslo. She has helped me in developing the research project for my thesis, and she has provided me with the measures used in the data collection. Raeder has been an outstanding supervisor in every aspect, providing excellent methodological guidance and invaluable advice through the entire process

I would also like to thank Hartmark Consulting for their interest in my project and especially Jørgen Kreyberg for his guidance and assistance in acquiring a sample for my project.

I would also like to extend my gratitude to Oslo Universitetssykehus, in particular Johnny Olsen and Trond Tangnes for their excellent assistance in the data collection process. And of course, to all the participants who kindly took time out of their workday to complete my questionnaires.

I thank Klaus Breivik for commenting on my thesis during the process of writing. I also thank Natalie Stjernen and Andreas Midtgaard Johansen for assisting in the translation of the English questionnaire items.

Elisabeth Riise Aas

May 2010

### **Abstract**

Research on psychological contracts is increasingly focusing on the mutual relationship between employee and employer. In an organization several agents act as employers towards their employees and the present study directs the attention to the supervisor's role in the psychological contract. This study examines the relation between supervisor communication, as reported by both supervisor and employees, and employees' rating of employer inducements. In addition the study tests the effect of employer inducements on team performance. Data were collected from 42 supervisors and 151 employees from a Norwegian hospital. The study found strong support for supervisor communication, as perceived by employees, predicting the employees' rating of employer inducements. There was however no support for supervisor communication as perceived by the supervisor. The effect of employer inducements on team performance was also partially supported. The findings indicate that supervisor communication is an antecedent to psychological contracts, although the results are unclear about how sensitive the supervisor is to individual exchange relationships with employees. Implications and suggestions for future research are discussed.

## Introduction

When an individual is part of an organization he or she forms a relationship with the employer that consists of a set of mutual promises and obligations (Rousseau, 1989). A substantial part of these obligations are implicit and only perceived as obligatory by one party, but hold no legal implications for the other to fulfill. These perceived obligations constitute an employee's psychological contract. The psychological contract has been viewed as a framework for understanding employee behaviors, and is emerging as an important aspect of the employment relationship (Lester, Turnley, Bloodgood, & Bolino, 2002; Robinson & Morrison, 1995; Turnley & Feldman, 2000). The *psychological contract* is commonly defined as the set of mutual expectations, promises and obligations that exist between the employee and the organization, and which are not part of the legal employment contract (Rousseau, 1989). The concept of implicit agreement between the employee and the employer on the work conditions has been around for fifty years (Argyris, 1960), and it has only increased in importance. The last couple of decades have seen a major transition in the work relationship. Organizational changes like mergers, reorganizations and layoffs have increased dramatically (De Meuse, Bergmann, & Vanderheiden, 1997), and there is an increased tendency for the organization's assets to be tied up in the employees, as the society turn to a more knowledge-based economy (Burton-Jones, 1999). Consequently, both employees and employers view of their contributions and expectations towards each other have changed. The psychological contract has been argued to reduce insecurities and anticipate future exchanges (Shore & Tetrick, 1994), and to thus be a valuable framework, and the mutual reciprocity to be necessary for the employment relationship to last (Robinson & Rousseau, 1994).

### The Present Study

The present study is a multilevel approach to analyzing quantitative data of employees' and their supervisor's corresponding views of the expectations and obligations related to their employment relationship. Specifically the role of the supervisor as a representative for the employer in the relationship between employee and the organization is examined. The study draws on findings from a previous master thesis (Leirkjær, 2009) that documented a relationship between communication and agreement on psychological contract content in dyads of employee-supervisor pairs from various organizations. It was found that employees and supervisors had similar views of all dimensions except employer inducements. It was also found that the supervisor's perception of communication with the employees predicted the supervisor's view of employer inducements, but not the employee's view of employer inducements and vice versa. The present study wishes to advance on the concept of

communication as an antecedent to psychological contracts by examining teams of employees and their supervisor, within one organization. The main goal of this study is to investigate, primarily, the effect of supervisor communication on various aspects of the psychological contract, and secondly the effect of psychological contract content on team performance.

The present study contributes to the field of research by examining more closely the role of the supervisor as the primary agent for the organization's part in the employment relationship. Secondly, it does this by taking a multilevel approach that allows for studying entire teams of employees and their supervisors, where other studies have utilized employee-employer dyads. And thirdly, while most of the research on psychological contracts has been conducted in the U.S. and Western European countries like the U.K, this study is one of few conducted in Norway, with a Norwegian sample.

### **Theory**

A brief introduction to the present study's main topic *psychological contracts* will be presented, with a short review of previous studies and theoretical frameworks that build the foundation for the hypotheses. The psychological contract has been subject to different conceptualizations through the years. First, a brief account of the historical development of the field of research will be presented to show how the concept has evolved. This provides an historical perspective on the current trends in psychological contract research, with particular emphasis on how today's researchers are again focusing on the agreement on the contract terms between the employee and the employer and on the role of the employer.

Argyris (1960) was the first to use the term "psychological work contract", speaking of the implicit understanding between a group of workers and their foreman in a US factory. He reasoned that the employees would "maintain high production and low grievances, given that the foreman guarantee and respect the norms of the employee informal culture (i.e. let the employees alone, make certain they make adequate wages, and have secure jobs)" (Argyris, 1960, p. 97). A few years later Levinson, Price, Munden, and Solley (1962) provided the first extensive analysis of the psychological contract and the use of the psychological contract to better understand the well-being of employees. They defined the psychological contract as:

A series of mutual expectations of which the parties to the relationship may not themselves be even dimly aware but which nonetheless govern their relationship to each other... the psychological or unwritten contract is a product of mutual expectations. These have two characteristics: (a) they are largely implicit and

unspoken, and (b) they frequently antedate the relationship of person and company (Levinson, et al., 1962, pp. 21-22).

Levinson et al. also noted the expectations to have a strong obligatory quality (Coyle-Shapiro & Parzefall, 2008). According to Coyle-Shapiro and Parzefall (2008) the work of Levinson et al. contributed to the conceptualization of the psychological contract by stating that the two parties of the psychological contract are the individual employee and the organization represented by individual managers. The psychological contract is subject to change as the parties negotiate changes in expectations that may arise from changing circumstances or a more complete understanding of the contributions of the other party.

Similarly, Schein (1965) viewed the psychological contract as a continuous renegotiation, being influenced by explicit communication channels, “unfolding through mutual influence and mutual bargaining to establish a workable psychological contract” (Schein, 1965, p. 65). Schein was the first to discuss the importance of a strong match between the expectations and contributions of each party, and the consequences of a poor match (Taylor & Tekleab, 2004).

Underlying all these earlier conceptions is the idea that an exchange relationship exist between the employee and the employer, and the early development of psychological contract theory ran mostly parallel to that of exchange theories, such as equity theory (Adams, 1966). Equity theory states that the relationship between employee and employer needs to be balanced in such a way that both contribute equally. If one party makes a contribution to the exchange relationship, the other is expected to reciprocate. The failure to do so will result in fewer contributions or the abandonment of the relationship.

### **“The Rousseau Period”**

The person with the single most significant influence in the development of the field of psychological contracts is Denise M. Rousseau. Conway & Briner (2005) presented their historic review of the field in two eras, divided by Rousseau’s article in 1989. Publications up to this point were limited and rather scattered, the works of the earlier writers were non-cumulative and uncoordinated with hardly any empirical research (Conway & Briner, 2005). With this article Rousseau brought a new perspective on the psychological contract, defining it as intrapersonal “beliefs regarding the terms and conditions of a reciprocal exchange between that focal person and another party” (1989, p. 123). What Rousseau contributed to the field was a definition and direction of psychological contract research and the 1989 article provided a foundation upon which she later built her research (e.g. Robinson, Kraatz, & Rousseau, 1994; Robinson & Rousseau, 1994; Rousseau, 1990, 1998, 2001; Schalk &

Rousseau, 2002). Note that this conceptualization is in opposition to what was theorized by the earlier writers in that it restricts the psychological contract to one party. Most of the research on psychological contracts in the wake of Rousseau's seminal paper in 1989 has consequently been focused on the employee perspective, as Rousseau's definition implied that the organization could not hold a psychological contract, as it could not hold a "belief" regarding the terms and condition of the relationship. With Rousseau being paramount to the research in the field in the 1990's, this conceptualization has guided significant proportions of the studies conducted from 1989 up until the new millennium (e.g. Robinson, 1996; Robinson, et al., 1994; Schalk, Freese, & Van den Bosch, 1995). Studies in this period would primarily focus on employees' reactions to perceived breach of the psychological contract, and also on the nature of what was being exchanged, called psychological contract content. The limitation of the psychological contract to intrapersonal beliefs has later been criticized for being too narrow (Guest, 1998a, 1998b).

### **The Work Relationship Between Two Parties**

In more recent years researchers (e.g. Dabos & Rousseau, 2004; Lester, et al., 2002; Tekleab & Taylor, 2003; Tsui, Pearce, Porter, & Tripoli, 1997) have once again turned to the assumption that Levinson and his colleagues (1962) and Schein (1965) presented in the earlier years: that the employee is not the sole party in the work relationship between the employee and the organization. It has been found that the organization's approach to the employment relationship is likely to impact employees' job attitudes and work behaviors (Tsui, et al., 1997). However Schalk and Rousseau (2002, p. 136) pointed out that "'The organization' cannot be considered as a single party to the psychological contract and it does not always speak with one voice". This is consistent with Herriot and Pemberton's argument that "a collective cannot negotiate or communicate; only its representatives can do so on its behalf" (1997, p. 46). When it comes to the employment relationship the communication from 'the organization' might not be in unison. Herriot and Pemberton gave the example that a line manager may indicate that he/she wants a particular subordinate to remain in the current job, while an HR manager might advise the same person to move to another position in the company to develop his/her skills.

Turnley and Feldman (1999a) indicated that there are three different sources that might influence the expectations of the individual: the specific promises made by organizational representatives, the individual's own perceptions of the organizations culture and the individual's personal expectations regarding how the organization functions. Shore and Tetrick (1994) suggested that the employees' supervisor (i.e. their immediate line

manager) is likely to be viewed by their subordinates as the primary agent for the organization in establishing and negotiating the psychological contract. Tekleab and Taylor (2003) also used this framework in their study of employee-manager dyads, finding that employee tenure with the supervisor predicted higher agreement between the parties on employee obligations. Lester et al. (2002) stated that “regardless of which definition is used, it generally becomes the responsibility of the employees’ supervisor (acting as an agent on behalf of the organization) to see that the psychological contract is fulfilled”. Dabos and Rousseau (2004) tested this assumption by examining employee-employer dyads in university-based research centers. The authors argue that the research centers are so autonomous in nature that it is possible to assume that the center manager is the sole influence on behalf of the employer. The study found support for both *mutuality*, defined as the agreement on the promises and commitments, and *reciprocity*, defined as agreeing on the obligation to reciprocate contributions made by the other party, being positively related to indicators of productivity and intention to remain with the organization. Also Leirkjær (2009) studied supervisor-employee agreement on several psychological contract dimensions. In line with these authors it is hypothesized that the different aspects of the psychological contract measured at the supervisor level will be related to the psychological contract as measured at the employee level.

*Hypothesis 1:* The psychological contract of supervisor is positively related to the psychological contract of the employees.

### **Consequences of Psychological Contract Breach**

Since 1989, psychological contract breach has been established as an antecedent to adverse reactions from employees. While agreement focuses on the congruence of the perceptions of both parties in the employment relationship, breach emphasizes incongruence. Research considering breach is presented here to emphasize the potential gain in managing the psychological contract in such a way that breach is minimized and to show antecedents and consequences of congruence or incongruence.

Psychological contract breach has been related to reduced job satisfaction (Tekleab & Taylor, 2003), trust in the organization (Robinson, 1996), organizational commitment (Lester, et al., 2002; Turnley & Feldman, 1999b), organizational citizenship behavior (Restubog, Hornsey, Bordia, & Esposito, 2008; Robinson & Morrison, 1995) and increased intention to quit (Robinson, 1996; Robinson & Rousseau, 1994; Tekleab & Taylor, 2003; Turnley &



Feldman, 1999a). It has also been found that psychological contract breach is quite common. Robinson and Rousseau (1994) found that, in a survey of recently employed MBA graduates, 55% of the respondents reported experiencing that the organization had at some point broken a promise during their first years of employment. Similarly Conway and Briner (2002) discovered that, when examining psychological contract breach using a daily diary technique, employees reported broken promises on a more or less weekly basis. As much as 69% of the respondents reported at least one broken promise during the 10 working day period the study took place.

Breach in this context means that the employer has not fulfilled the obligations and that the employee thus perceives breach to have occurred. However, this perspective does not take into consideration what influenced the employee to perceive certain promises on the organization's part or why the organization did not fulfill these obligations.

Robinson and Morrison (2000) described two pathways to psychological contract breach by the organization. The first is where the organizations poor performance or poor financial situation makes them unable or unwilling to fulfill promises made to the employees, referred to as *reneging*. This is considered a conscious breach on the organizations part. The authors found that poor organizational performance predicted employee perceptions of breach. The second path to breach is where insufficient organizational socialization and misleading pre-hire interactions cause misunderstandings between employees and the organization, leading to the employee perceiving the psychological contract to be breached. This is referred to as *incongruence* and is viewed as a non-deliberate breach on the organizations part. This distinction leads to the assumption that breach, to the extent that it is caused by incongruence, can be avoided by seeking congruence. The matter of congruence or incongruence also imply that there must be two parties to the relationship and that steps can be taken to reduce incongruence (Morrison & Robinson, 1997)

### **Communication**

Psychological contract breach is thought to be caused by either deliberate action (or lack of such) by the organization, or by a misunderstanding between the parties. This logically leads to the assumption that communication between the parties might help to avoid or correct such misunderstandings, and thus help to reduce occurrence of incongruence that lead to the employee experiencing psychological contract breach (Morrison & Robinson, 1997).

Guest and Conway (2002) interviewed senior HR managers about the management of the employees' psychological contract, and in particular the role of different types of communication within the organization. Three categories of communication were identified:

upon the employees' initial entry in the organization, day-to-day work and future-oriented top-down communication. They found a negative relation between recruitment-related and daily job-related communication and psychological contract breach. However top-down communication was not found effective. In a previous master thesis, communication satisfaction as rated by both immediate supervisor and employee, was shown to be related to psychological contract congruence (i.e. agreement) in a pair-wise comparison of supervisor-employee dyads (Leirkjær, 2009). This supports the assumption that supervisor communication as rated by both parties is a viable antecedent to the psychological contract held by both the respective and the other party. In the present study the goal is to examine the role of the supervisor in communicating the psychological contract in his or her team of employees. If the role of the supervisor as a representative of the organization is significant in forming the psychological contract of the employee, then communication of the supervisor, as perceived by both parties, should be related to the psychological contract of the employee. Therefore it is hypothesized that communication by supervisor as perceived by both parties will significantly predict the psychological contract of the employee. More specifically:

*Hypothesis 2: Supervisor communication perceived by the supervisor is positively related to the psychological contract of the employee.*

*Hypothesis 3: Supervisor communication perceived by the employee is positively related to psychological contract of the employee.*

Measuring both supervisor and employees perceptions of supervisor communication raises an interesting problem; what if the parties are perceiving things differently? If the supervisor believes that that the communication is satisfactory, but the employee does not, it is highly unlikely to influence the employee's psychological contract positively as hypothesized. It is therefore assumed that whether the parties agree or not on the perception of the communication will affect the psychological contract. If both parties agree that the supervisor communication is satisfactory, it is assumed that the relation between communication and the psychological contract will be stronger than if only one of the parties perceive so. This relationship has not yet been empirically tested. However a study from 1982 found that what they called 'perception of communication congruence' had a positive relation with job satisfaction (Hatfield & Huseman, 1982). This study therefore wishes to test this in relation to psychological contract content.

*Hypothesis 4:* There is an interaction effect between supervisor communication perceived by the supervisor and the employee, which is positively related to the psychological contract at the employee level.

### **Team Performance**

Taking into consideration the adverse reactions to breach presented, researchers have increasingly begun to investigate whether psychological contract fulfillment can be related to positive outcomes (Chen, 2007; Henderson, Wayne, Shore, Bommer, & Tetrick, 2008; Turnley, Bolino, Lester, & Bloodgood, 2003). Chen (2007) found a positive relationship between psychological contract fulfillment and organizational citizenship behaviors in a sample of Chinese employees. Psychological contract fulfillment has also been related to increased in-role performance (Henderson, et al., 2008; Turnley, et al., 2003). Conversely psychological contract breach has been connected to decreased levels of in-role performance, with performance rated both by supervisor (Lester, et al., 2002), and by employees (Robinson, 1996; Turnley & Feldman, 1999a)

Turnley and his colleagues (2003) studied supervisor-subordinate dyads and found a positive relationship between fulfillment and in-role performance, as well as organizational citizenship behavior. They also noted that psychological contract fulfillment appeared to be more strongly related to citizenship behavior towards the organization than towards colleagues, which indicates that the employee engages in reciprocal behavior towards the organization in particular.

Tsui et al. (1997) found that employees performed better if they were in a working relationship where the employer either overinvested or mutually invested in the relationship, compared to those who worked in an underinvestment relationship. This is also consistent with equity theory (Adams, 1966). In line with this reasoning, this study proposes that if the employees perceive they are receiving more employer inducements, they will also invest more effort in the job manifesting itself in higher performance (Henderson, et al., 2008). Henderson et al. studied teams in a multilevel approach, but used individual performance measures. However, it is not always possible to separate individual employees' contributions to a work group's performance. Therefore this study wishes to examine whether employer inducements will also successfully predict higher work team performance

*Hypothesis 5:* The psychological contract is related to team performance; specifically a higher level of employer inducements is associated with a higher level of team performance.

## **Method**

### **Sample**

The sample consisted of 42 groups, each consisting of a supervisor and his or her team of employees, from a local hospital in Oslo. The employees ranged in age from 25 years to 67 years (normal retirement age in Norway) and were evenly distributed over the age groups (n[25-34 years] = 42, n[35-44 years] = 48, n[45-55 years] = 36, n[over 55 years] = 25), the majority 68.9 % of the sample (n = 104) were female. Also, 86.1% of the employee sample (n = 123) had completed higher education (college or university) and 56.3% (n = 85) reported working regular hours, while the rest worked rotating shifts. Of the 42 supervisors the majority (n = 30) were female and were between 35 and 44 years of age (n = 23), with the majority of the remaining being older than 55 years of age. Almost every supervisor (n = 40) reported having completed higher education and 26 supervisors reported their unit working only regular hours, with the remaining units working rotating shifts. The units with regular work hours were mainly clinics and research centers, whereas the units where people worked rotating shifts were inpatient facilities such as emergency or long term care units.

### **Procedure**

Groups of employees and their immediate supervisors were recruited from the psychiatry departments of a local hospital. Employees and their supervisors were requested to fill out corresponding questionnaires. Each group was given a common ID-number by which they were identified. An e-mail with information about the project and the invitation to participate was distributed a few days before the questionnaires; the questionnaire was distributed electronically to the participants work e-mail and they were to respond during work hours. Due to privacy issues, an administrative employee at the hospital generated the ID-numbers and distributed the e-mail with the link to the questionnaire, while the submitted data was only accessible to the researchers. Reminders were sent out at 2 and 4 weeks after the distribution of the questionnaire. All together 154 employees and 48 supervisors responded, which was about 15% of the total sample. A couple of respondents had to be dropped due to problems with the ID-number, and a few of the supervisors who responded turned out to be on the third leadership level and had to be excluded. Merging the employee and supervisor data files produced a final data set consisting of 151 employees distributed into 42 groups with their supervisors.

Despite the low response rate, the demographic data revealed no detectable deviations between the respondents and the non-respondents. Gender and age of the sample were confirmed by the hospital as being representative for the staff, and there was also a representative mix of clinics and 24-hour care facilities. The low response rate was probably due to complications brought about by the many steps necessary to distribute the questionnaire in a way that satisfied the privacy demands that were raised both by the hospital and by the NSD (Norwegian Social Science Data Services). Another contributing factor might have been that there are usually only a few computers at each unit's shared disposal and the employees might not have had the capacity to take the time out of their workday to respond to the questionnaire in one session.

### **Measures**

Two different questionnaires were created, one for the supervisors and one for the employees. The completion time was estimated to about 10-15 minutes for the supervisors and 15-20 minutes for the employees. The supervisor questionnaire contained scales measuring communication with employees and the psychological contract, along with demographics. The employee questionnaire contained scales measuring degree of supervisor communication, the psychological contract, and team performance, as well as demographics. Along with their demographics, employees were also asked their length of tenure with their current supervisor. The communication satisfaction and the team performance scales originally contained English items and had to be translated into Norwegian. The translation was done by the researcher. To ensure that the wording of the translated items did not deviate in meaning from the original, two people: one U.S native with English as a first language, and one person with a British background, translated the items back to English. The back translation was then compared to the original version. The psychological contract measure was originally in German and a Norwegian translation had previously been made using a professional translator and tested in the thesis of Leirkjær (2009). The items were compared to the English and German versions and some minor issues with the translation were identified and corrected. All items were measured on a 5-point Likert scale, with numerical and verbal anchoring ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

**Communication.** Supervisor communication with employees was measured using two out of eight subscales from Downs and Hazen (Crino & White, 1981; Downs & Hazen, 1977; Mueller & Lee, 2002). Employees answered the scale *relation with supervisor* (called *supervisory communication* in Mueller & Lee), containing items like “My supervisor listens and pays attention to me” and “My supervisor offers guidance for solving job related

problems". The items were extracted from the Appendix in Mueller & Lee (2002), however it appeared that one item included in this subscale by Mueller and Lee probably had been swapped by accident with an item from another scale (see Crino & White, 1981). The item was dropped from the data set and the scale in this study only contained the four items that belonged to this scale. The internal consistency was nevertheless excellent, with a Cronbach's alpha ( $\alpha$ ) at .89. Throughout the paper this scale will be referred to as *supervisor communication – employee perception*. The scale *relation with subordinate* (called *supervisor communication* in Mueller & Lee) originally also contained five items and all were included in the questionnaire. However, the internal consistency was poor ( $\alpha = .60$ ) and a factor analysis indicated that the items in fact loaded on two separate factors. Leirkjær (2009) also experienced problems with one of the items, which is consistent with Crino and Whites (1981) findings. In this analysis the two items affecting the reliability negatively were deleted resulting in an acceptable Cronbach's alpha of .69, which was superior to both the five-, and the four-item option. An example item from this scale is "My subordinates are receptive to evaluation, suggestions and criticisms". Throughout the paper this scale will be referred to as *supervisor communication – self-perception*.

**Psychological contracts.** The psychological contracts measure is an extension of the measure developed by Raeder, Wittekind, Inauen and Grote (2009). It has been validated in the Dutch version (Schalk, 2007). This study is based on the 23 items measuring employer inducements. Supervisor and employees received similar questionnaires containing the same items but with different wording. The employees were asked what their employer provided them with. Conversely, the supervisor was asked what, in their opinion, the organization was actually providing the employees with. These items can be divided into five subscales. Two of the scales were not relevant to this study, they were *flexibility* and *information and participation*. The flexibility scale contained too many items that were irrelevant to the hospital setting; like the opportunity to work flexible hours or to work from home, and the information and participation scale would essentially be too similar to the communications scales. In this study three of the subscales on the employer inducements dimension were chosen: *security and retention*, containing items like "long term employment" and "a sustainable organizational culture", *support for career and skill development* containing items like "support for enhancing my skills" and *appreciation of performance* containing items like "recognition for good performance". The employee version of these scales were used as dependent variables and Cronbach's alphas of the scales were .76, .86 and .78 respectively. The employer version of these scales were then selected as independent variables of their

corresponding employee scale; these all had satisfactory reliabilities with alphas at .81, .86 and .76 respectively.

**Team performance.** Performance was measured using the team performance measure by Hirst, Mann, Bain, Pirola-Merlo and Richver (2004). Employees were asked to indicate how they viewed their team's performance. An example of an item from this scale is: "The team has chosen the best available strategies for meeting project goals". The reliability of the scale was excellent ( $\alpha = 0.91$ ).

**Control variables.** The employee's gender and their tenure with the particular supervisor were added as control variables.

### **Data Analysis**

Analyses were conducted with PASW Statistics 18.0. Frequencies, means and standard deviations were calculated for the key variables. Missing data were handled with maximum likelihood (MLE) procedure. Multilevel analysis was chosen as the appropriate method of data analysis as the sample contained 151 employees nested into 42 groups. Because the supervisor of each group is also included in the sample, there are predictors on both levels. Because of this data structure the analysis must be made using multilevel methods, as there are clusters in the sample and several of the predictors of interest are on the second level.

### **Centering of predictors**

Psychological constructs are frequently expressed on arbitrary metrics that lack a clearly interpretable or meaningful zero point, like the 5 point Likert scale (Enders & Tofighi, 2007). Centering of the predictors is therefore used to establish a useful zero point and increase the interpretability of the results. There are two main methods of centering level 1 predictors: grand mean centering and group mean centering. Grand mean centering entails using the overall mean of the sample to center the scores, whereas group mean centering entails using the groups' mean to subtract from the individual scores. The two procedures influence the results and the interpretation of the model differently (see Enders & Tofighi, 2007). For the level 2 predictors there only is one option as all group members share the same value on level 2, it can only be centered on the grand mean. Consistent with the suggestions of Enders and Tofighi grand mean centering was used for all predictors in this study, as the main research interest is in the level 2 predictors (the role of the supervisor).

## Results

### Descriptive statistics

Means, standard deviations and correlations for the employee level are presented in Table 1 and for the supervisor level in Table 2.

### Associations between key study variables

Bivariate correlations of the employee level predictors (Table 1) show that the three psychological contract scales are highly correlated with each other, which is not surprising as they all come from the same global dimension of employer inducements. All three psychological contract variables are also highly correlated with employee communication satisfaction. Team performance is significantly correlated to all three psychological contract measures and to the communication satisfaction. Also at the supervisor level all three psychological contract constructs were highly correlated and each of them correlated with supervisor communication. The fact that the three psychological contract variables are correlated is not an issue with the first step of the analysis as the three variables are used in separate models; however for the second step examining the psychological contract variables effect on team performance a multicollinearity test was performed.

### Multilevel Analysis

Four multilevel models were processed, one for each of the dependent variables. Following the procedures recommended by Hox (2002), a model without predictors was first computed to calculate the amount of unexplained variance between the employees and the teams. Then the control variables were added in a second step. The independent variables on Level 1 and Level 2 were then added in two additional steps and finally interaction effects were tested.

The reason why the empty model has to be computed first is to determine the total unexplained variance by the model after taking into consideration the clusters in the sample. This is achieved by adding up the amount of within and between group variance<sup>1</sup>. The next step is to assess how much unexplained variance there is on group level<sup>2</sup>. When adding the variables stepwise as described above it is possible to calculate how much variance is explained by adding variables on the different levels. This is calculated for both levels, as well as for the total.

---

<sup>1</sup> Variation between employees + variation between teams

<sup>2</sup> Variation between groups / (variation between employees + variation between teams)



Table 1.

*Means, Standard Deviations, and Correlations for Level 1 Predictors (Employees)*

	M	SD	1	2	3	4	5	6	7
1 Sex (1 = female, 2 = male)	1.31	.47							
2 Tenure with supervisor	2.60	3.52	-.06						
3 Supervisor communication	4.03	.92	-.16*	.18*	(.89)				
4 Security and retention	3.96	.68	-.10	.18*	.73***	(.76)			
5 Support for career and skill development	3.92	.70	-.14	.14	.70***	.75***	(.86)		
6 Appreciation of performance	3.34	.79	-.11	.17*	.65***	.71***	.80***	(.78)	
7 Team performance	3.52	.80	-.03	.25**	.50***	.59***	.47***	.42***	(.91)

*Note:* N = 151. Scale reliability (Cronbach's Alpha) in brackets on the diagonal. \* p < .05. \*\* p < .01. \*\*\* p < .001

Table 2.

*Means, Standard Deviations, and Correlations for Level 2 Predictors (Supervisors)*

	M	SD	1	2	3	4
1 Supervisor communication	4.01	.46	(.69)			
2 Security and retention	3.99	.63	.40*	(.81)		
3 Support for career and skill development	4.03	.62	.46**	.76***	(.86)	
4 Appreciation of performance	3.26	.76	.29	.66***	.63***	(.76)

Note: N = 42. Scale reliability in brackets on the diagonal. \* p < .05. \*\* p < .01. \*\*\* p < .001

**Security and retention.** Following the procedure presented above a model without predictors was first computed to calculate the unexplained variance between employees and the work teams (Model 1 in Table 3). Then the control variables on employee level: gender and tenure with supervisor were entered (Model 2 in Table 3). Next the predictor on employee level communication with supervisor was entered (Model 3 in Table 3) and the predictors on supervisor level perception of security and retention offered, and communication with employees (Model 4 in Table 3). Finally the interaction effect of employee and supervisors communication rating was tested (Model 5 Table 3). The relationship between supervisor communication as rated by employee and the employee's perception of security and retention provided by the employer was significant, as hypothesized (Hypothesis 3). However there was no significant effect of the supervisor's perception of security offered, nor of supervisors' rating of communication with employees, rendering no support for Hypothesis 1 or 2. There was also no interaction effect; consequently Hypothesis 4 is also rejected for this model.

Akaike's information criteria (AIC) is used to assess a model's fit, taking into account the number of predictors (lower AIC indicates a better fit). Model 3 had the lowest AIC (see Table 3), and is therefore selected as the final model. This model explains 53% of the total variance<sup>3</sup> in employees' perception of security and retention offered by the employer.

**Support for career and skill development.** As in the first model the baseline model without predictors was computed first (Model 1 in Table 4). Then the control variables and the predictor on the first level were added (Model 2 and Model 3 in Table 4). The predictors on Level 2, supervisor's perception of support for career and skill development offered and communication with employees, were added (Model 4 in Table 4), and finally the interaction

<sup>3</sup> (Total variation Model 1) – (Total variation Model 3) / (Total variation Model 1)

Table 3.

*Results of Multilevel Analysis Predicting Employees Perception of Job Security and Retention Offered by Employer*

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Fixed Effects</b>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)
<i>Intercept</i>	3.96 (.07)***	3.89 (.11)***	3.97 (.07)***	3.96 (.08)***	3.97 (.08)***
<i>Control variables level 1</i>					
Employee sex		.01 (.11)	-.02 (.08)	-.02 (.08)	-.02 (.08)
Employee tenure with supervisor		.03 (.02)*	.01 (.01)	.01 (.01)	.01 (.01)
<i>Predictors level 1</i>					
Supervisor communication - employee perception			.53 (.04)***	.53 (.04)***	.51 (.05)***
<i>Predictors level 2</i>					
Supervisor communication - self-perception				.01 (.11)	.00 (.11)
Supervisor perception of security offered				.01 (.09)	.02 (.09)
<i>Interaction effects</i>					
Employee and supervisor communication					.05 (.13)
<b>Random effects</b>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)
Variation between employees	.38 (.05)***	.38 (.05)***	.21 (.03)***	.20 (.03)***	.21 (.03)***
Variation between teams	.08 (.05)*	.06 (.04)	.01 (.02)	.01 (.02)	.01 (.02)
AIC	309	309	207	211	213

Note: \* p < .05. \*\* p < .01. \*\*\* p < .001

Table 4.

*Results of Multilevel Analysis Predicting Employees Perception of Support for Career and Skill Development Offered by Employer*

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Fixed Effects</b>	<b>Est. (SE)</b>	<b>Est. (SE)</b>	<b>Est. (SE)</b>	<b>Est. (SE)</b>	<b>Est. (SE)</b>
<i>Intercept</i>	3.94 (.08)***	3.85 (.11)***	3.90 (.08)***	3.88 (.09)***	3.87 (.09)***
<i>Control variables level 1</i>					
Employee sex		.13 (.12)	.03 (.09)	.03 (.09)	.04 (.09)
Employee tenure with supervisor		.02 (.02)	.00 (.01)	.00 (.01)	.00 (.01)
<i>Predictors level 1</i>					
Supervisor communication - employee perception			.52 (.05)***	.51 (.05)***	.59 (.06)***
<i>Predictors level 2</i>					
Supervisor communication - self-perception				.09 (.14)	.16 (.15)
Supervisor perception of support offered				.13 (.11)	.12 (.12)
<i>Interaction effects</i>					
Employee and supervisor communication					-0.32 (.14)*
<b>Random effects</b>	<b>Est. (SE)</b>	<b>Est. (SE)</b>	<b>Est. (SE)</b>	<b>Est. (SE)</b>	<b>Est. (SE)</b>
Variation between employees	.38 (.05)***	.38 (.05)***	.23 (.03)***	.23 (.03)***	.21 (.03)***
Variation between teams	.12 (.06)*	.10 (.05)*	.03 (.02)	.03 (.02)	.03 (.02)
AIC	317	319	232	233	230

Note: \* p < .05. \*\* p < .01. \*\*\* p < .001

effect of the two communication predictors (Model 5 in Table 4). As with the previous model the effect of *supervisor communication - employee perception* was significant, while there was still no significant effect of either of the level 2 predictors. For this model the interaction effect of supervisor and employees' rating of the communication was also significant, As model 5 had the lowest AIC, this was chosen as the final model. It explains 51% of the total variance in employees' perception of support for career and skill development offered by the employer.

This model showed a significant interaction effect of the two communication variables. To interpret the interaction a program called ModGraph was used, which is a set of macros for MS Excel, created by Jose (2002). As can be seen from the graph (Figure 1), the result was not entirely as predicted by the hypothesis. The dependent variable is on the Y-axis in the graph, and the *supervisor communication - employee perception* is on the X-axis, the *supervisor communication - self-perception* is the moderator (the three separate lines in the graph). As the lines are parallel and do not converge towards each other, there is a clear main effect of supervisor communication on employee level that is negative in direction. This



Figure 1. Interaction Effect of Supervisor communication Self-Perception and Employee Perception

indicates that the higher the employee's perception of supervisor communication, the lower the perception of support for career and skill development. The fact that the separate lines differ in placement in the graph (they have different intercepts) indicate that the higher the supervisors perception of their own communication with employees, the lower the employees' score on the dependent variable. Taken together this means that if the employee and supervisor agree that the supervisor communication is high, then the employee score lower on this particular psychological contract dimension than if only one of them perceives so. Conversely if both agree that the supervisor communication is low, the employee perceives a higher degree of support for career and skill development. The result is unexpected and not as predicted by Hypothesis 4.

**Appreciation of performance.** Following the same procedure as for the previous models, the variables were added stepwise (Model 1 through 5 in Table 5). As with the previous two models the effect of employee's rating of supervisory communication was significant. Supervisor communication self-perception and the interaction effect on communication were again insignificant. However there was a small but significant effect of supervisors' perception of appreciation of performance offered. As the AIC is the same for Model 3 and 4, Model 4 is selected as it explains more variance, in total 50%, and as much as 91% of the variance on group level.

**Effect of psychological contract on team performance.** To test the final hypothesis a fourth model was computed with the employee evaluation of the work team's performance as the dependent variable. The same procedure as for the models above was used. Firstly an empty model without predictors was calculated (Model 1 in Table 6), then the same control variables as for the three previous models were added (Model 2 in Table 6) The level 1 predictors were entered in a third step and for this model we used all three psychological contract scales from the three first models (Model 3 in Table 6). Finally the level 2 predictors were added, in this case all three psychological contract variables on the supervisor level (Model 4 in Table 6). The AIC is equal for Model 3 and 4, and Model 4 is selected as it explains more variance in total (41%) and on the second level (77%).

For this model the variable *security and retention* measured on employee level was the most significant predictor, whereas the two other predictors on Level 1 were insignificant. Conversely on the supervisor level only *support for career and skill development* was significant, and the other two variables were not. This result only partially supports hypothesis 5. To ensure that there was no problem with multicollinearity due to highly correlated

Table 5.

*Results of Multilevel Analysis Predicting Employees Perception of Appreciation for Performance Offered by Employer*

	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Fixed Effects</i>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)
<i>Intercept</i>	3.37 (.08)***	3.27 (.12)***	3.34 (.09)***	3.36 (.10)***	3.35 (.10)***
<i>Control variables level 1</i>					
Employee sex		.13 (.14)	.01 (.10)	.00 (.11)	.01 (.10)
Employee tenure with supervisor		.03 (.02)	.01 (.01)	.01 (.01)	.01 (.01)
<i>Predictors level 1</i>					
Supervisor communication - employee perception			.55 (.06)***	.55 (.05)***	.59 (.07)***
<i>Predictors level 2</i>					
Supervisor communication - self-perception				-.03 (.14)	-.01 (.14)
Supervisor perception of appreciation offered				.17 (.09)*	.16 (.09)
<i>Interaction effects</i>					
Employee and supervisor communication					-.17 (.16)
<i>Random effects</i>	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)
Variation between employees	.53 (.07)***	.53 (.08)***	.35 (.04)***	.34 (.03)***	.34 (.04)***
Variation between teams	.10 (.06)*	.07 (.06)	.01 (.02)	.01 (.02)	.01 (.02)
AIC	358	358	286	286	287

Note: \* p < .05. \*\* p < .01. \*\*\* p < .001

Table 6.

*Results of Multilevel Analysis Predicting Team Performance*

	Model 1	Model 2	Model 3	Model 4
Fixed Effects	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)
<i>Intercept</i>	3.53 (.09)***	3.54 (.13)***	3.59 (.10)***	3.59 (.10)***
<i>Control variables level 1</i>				
Employee sex		-.02 (.13)	-.10 (.11)	-.11 (.11)
Employee tenure with supervisor		.05 (.02)	.03 (.02)*	.04 (.02)*
<i>Predictors level 1</i>				
Support for career and skill development			.14 (.13)	.12 (.013)
Security and retention			.63 (.12)***	.62 (.12)***
Appreciation of performance			-.08 (.12)	-.05 (.11)
<i>Predictors level 2</i>				
Support for career and skill development				.39 (.17)*
Security and retention				-.14 (.18)
Appreciation of performance				-.21 (.12)
Random effects	Est. (SE)	Est. (SE)	Est. (SE)	Est. (SE)
Variation between employees	.53 (.07)***	.52 (.07)***	.36 (.05)***	.36 (.05)***
Variation between teams	.12 (.07)*	.09 (.06)	.05 (.04)	.03 (.03)
AIC	362	359	305	305

Note: \* p < .05. \*\* p < .01. \*\*\* p < .001



variables a test was performed in linear regression. The level two predictors were entered stepwise to test if the coefficients changed. As the coefficients did not change direction or significantly changed in size it is assumed that the results are not a result of multicollinearity.

**Summary of results.** Overall there was partial support for the first hypothesis. In the model for *appreciation of performance* there was a significant effect of supervisor psychological contract, but not in the other two models. Consistently over all three models, *supervisor communication - self-perception* was insignificant as a predictor of employee psychological contract. There is therefore no support for Hypothesis 2. On the other hand *supervisor communication - employee perception* was significant across all three models. This strongly supports Hypothesis 3. When it comes to the interaction effect between the supervisor's and the employee's perception of supervisor communication, this was only significant for the *support for career and skill development* model, however it's directionality was opposed to what was hypothesized and therefore Hypothesis 4 is rejected. As for Hypothesis 5, only one predictor on each level was significant, partially supporting the hypothesis.

## Discussion

First the hypothesis will be discussed in relation to the findings. The three models on communication and psychological contract will be addressed with regard to the first four hypotheses. Team performance will be discussed separately with regard to the last hypothesis, before the study's limitations and implications for further research and practice will be presented finally.

### The Study's Findings

**Supervisor perception of psychological contract.** The first hypothesis was only partially supported. The supervisor's perception of employer inducements offered was only significant for the model *appreciation for performance*, and not for the two other models. This means that for *security and retention* and *support for career and skill development* there was no relation between what the supervisor reported and what the employees reported. The reason why the supervisor score was significant only in the appreciation for performance model might be that this particular construct concerns a role that is usually handled by the supervisor. The appreciation for performance involves feedback on performance. A task which to a large extent is expected to be performed by the supervisor is and not as much by other possible agents for the organization (Ilgen, Peterson, Martin, & Boeschen, 1981; Larson, 1984). The findings of the other two models are however in accordance with previous studies.

Leirkjær (2009) found the most incongruence on employer inducements when comparing global the dimensions employee expectations, employer expectations, employee contributions, and employer inducements. This study's findings thus further support that there is a prevalence of incongruence on the employer inducements dimension.

**Supervisor communication.** Supervisor communication as rated by the employee was the only predictor significant across all three models. Supervisor communication as rated by the supervisor was, on the other hand, not significant in any of the models. In consequence Hypothesis 2 was supported and Hypothesis 3 was rejected.

The results provide some support for communication as an antecedent to psychological contract content, but failure to support the supervisor's perception of the communication might indicate that the psychological contract is indeed in the eye of the beholder (Rousseau, 1989); and that the other party (in this case the supervisor) have little information about the psychological contract relationships he or she in fact is a part of, consistent with the findings of Lester et al. (2002). On the other hand, given that the supervisors are asked to evaluate their employees as a group and not individually, the results might also signify that the psychological contract is a relationship restricted to two parties; and that each employee has his or her own psychological contract with their supervisor, and consequently that the supervisor is party to a number of separate psychological contract relationships. This is supported by findings that employees differ greatly in desired psychological contracts (Bellou, 2009).

**Interaction effect of communication as perceived by both parties.** The interaction effect was only significant for one of the models, *support for career and skill development*. Surprisingly the relationship was opposed to what was hypothesized. If both supervisor and employee rated the communication as low, this resulted in a higher predicted score on the support for career and skill development variable, and conversely if both supervisor and employee rated the communication as high this resulted in a lower predicted score on the support for career and skill development (see Figure 1). It had been hypothesized that the relationship would be the opposite. Even though the result makes it necessary to fully reject Hypothesis 4, it is none the less worth revisiting. Possibly shedding some light on this result, Porter, Pearce, Tripoli and Lewis (1998) found that, in their study of employees and organizational representatives, in a substantial number of cases the employees reported a greater amount of inducements than what the organizational representatives reported. This discrepancy might be reduced on the employees' part as a result of a higher degree of communication with the supervisor. The rationale behind these results might be that the more

proficient the communication between the parties, the more realistic the score on the support for career and skill development. On the other hand, research by Lambert, Edwards and Cable (2003) indicated that this particular construct might have a curvilinear effect on job satisfaction, another variable often researched in relation to psychological contract breach. They proposed that both too much and too little training and skill development cause lower job satisfaction. The researchers indicated that employees want training and skill development to a certain extent, but that too many new challenges might cause the employees to feel they are not able to develop the necessary skills to be proficient in their work tasks. If training and skill development has a curvilinear effect on job satisfaction, this might have implications on what is perceived as a desirable level of training and skill development by the employees. This again might have implications for the interpretation of our results. In this study the mean for the *support for career and skill development* scale was high for both parties in this study (see Table 1 and Table 2), and thus this unexpected interaction effect might indicate that a high degree of communication causes the supervisor to adjust the provision of career and skill development to a more desirable level for the employees.

**Team performance.** Despite the supervisor variables' apparent lack of ability to successfully predict employee's psychological contract, employer inducements assessed by both parties bore some significant connections to team performance as assessed by the employees. On the employee level the *security and retention* variable was the most successful predictor of team performance. Taken into account that the hospital was going through a merger at the point of data collection, the result might imply that if the units were in fear of being made redundant, moved or merged with other units, this would affect their performance negatively. It is however worth noting that it is not possible to assess the causal direction of the relationship, thus it might also be that poor performing units had a higher fear of negative consequences of the merger. On the supervisor level the only significant predictor of the employees' assessment of team performance was *support for career and skill development*. This implies that the employer's investment in the employees' career and skill development is positively related to the employees' performance. Employees in an overinvestment or balanced work relationship (with regards to employer contributions) tend to perform better (Tsui, et al., 1997). This might be explained by equity theory (Adams, 1966), which postulate that employees who experience inequity, in the sense that they receive more than expected from the employer, will try to rebalance the relationship by increasing their contributions.

### **Contributions to the Field of Research**

Methodologically this study contributes to the field of research by adopting a multilevel approach to the investigation of the supervisor's role in the psychological contract relationship between the employee and the organization. Previous studies have commonly utilized employee-employer dyads. The use of dyads is useful in the sense that it provides a one to one comparison on the different aspects of the psychological contract. However a supervisor will usually have more than one employee and the dyad might not be representative of the supervisors group of subordinates. Questions might be raised about how this particular employee is selected from the group. The multilevel structure eliminates this issue by allowing the entire team of employees to participate. This study is one of very few studies on psychological contracts that have applied a multilevel approach (e.g. Henderson, et al., 2008).

The study also contributes to the body of research by examining the role of the supervisor in the psychological contract work relationship between the employee and the organization. By having a sample from a single organization one is able to infer that organizational culture and organizational communication would be equal for all employees, and thus not influence the result. The study also contributes to the rather limited field of communication and psychological contracts. This study, together with the previous master thesis of Leirkjær (2009), indicated supervisor communication as an antecedent for psychological contract congruence (as well as breach). This is a field that should be pursued further, particularly emphasizing the effect of supervisor communication on various dimensions of the psychological contract. Also this study contributes to the research of positive outcomes of psychological contract content (Henderson, et al., 2008; Turnley, et al., 2003) by providing some support for the relation between psychological contracts and team performance.

Contextually this study is relevant by being one of only a handful of studies on psychological contracts conducted in Norway, using a Norwegian sample. Most studies have been conducted in the U.S or the U.K. The employment system and the legal rights of employees in Norway are quite different from those of employees in the aforementioned countries (e.g. with a clear restriction on making people redundant for other than major economical necessities). This study thus contributes to the field of research by ascertaining that findings are representative across cultural and legal contexts.

## **Limitations and Future Research**

One of the main limitations of this study is the sample size. In multilevel modelling, the sample size on the second level is essentially the number of groups in the sample. In our sample the  $n$  on the second level is 42, which is sufficient. Hox (2002) recommends, as a rule of thumb, to have at least 30 groups, with an average of 30 participants in each group. In our sample the average is 3.6 people in each group, which is below the recommendation. However, Hox states that the need for a high number of participants in each group only applies when one wishes to calculate additional random effects (i.e. random slopes and intercepts), which was not needed in this study. The sample size is thus satisfactory; however future research should make great effort to ensure a larger sample size on both levels.

The response rate was very low (about 15%), which contributed to the problems with the sample size in the study. The probable reasons for the unsatisfactory response rate have been discussed above, and although there seems to be no relevant demographic differences between those who did respond and those who did not, it is nonetheless a reason for concern that needs to be noted. For future research it is suggested to implement the data collection in such a way that it ensures a larger response rate, by for example the researchers being more visible to the employees, and a more direct route of distributing the questionnaires. The practical limitations of the research setting prohibited the application of these suggestions in the present study. A private corporation might be more flexible in this regard, and a questionnaire could be administered as a part of an ongoing employee survey in the organization to obtain larger quantities of data.

The data were collected in a hospital, which is a public sector work place, and the results might therefore not be representative for the private sector. For instance it might be assumed that the employees' view of security and retention offered by the work place would be consistently high through the organization, and not as subject to extensive group variation based upon the communication of the supervisor. The organization was also going through a large merger with another hospital in the same city at the time of the data collection. This gives further reason to assume that the organization's communication was more salient than the supervisor's communication at the point of data collection, and employees have similar views across groups. Future research should examine the hypotheses in the context of a private corporation to ascertain the validity of the findings across different types of organizations.

Furthermore, there are more aspects of the psychological contract than the ones examined in this study. The instrument created by Raeder et al. (2009) also provides scales for

employee contributions, employee expectations and supervisor/organization's expectations. As a consequence the study might not capture all relevant aspects of supervisor influence on the employee psychological contract. Future research might focus on other aspects of the psychological contract with regards to the effect of communication between supervisor and employee.

The multilevel approach makes it possible to assess the effect of the supervisor on the employees as a group and thus limit the problem with the supervisor favouring an employee with which he or she already have a good relationship, as discussed above. However it also brings about the issue that the supervisor might have differing psychological contract relationships with different employees, and that these differences are not reflected in the supervisor's responses. Therefore less congruence might be found than if using employee/supervisor dyads as in previous research (e.g. Dabos & Rousseau, 2004; Leirkjær, 2009; Turnley, et al., 2003).

### **Implications for Practice**

Although the link between communication and psychological contracts is only established in research there are some implications for management practice to be inferred from these results. This study lent support to earlier assumptions that communication by the supervisor assists in making the psychological contract more explicit and reducing the incongruence between the parties. The organization might benefit from establishing routines for communication in such a way that incongruence is minimized. Managers should also be aware the common occurrence of incongruence and actively seek to reduce it, both informally on a day-to-day basis, and more formally in the context of formal appraisal interviews. There are also indications that point to each employee's psychological contract as individual, and this might imply that what is viewed as desirable employer inducements might vary between employees. Therefore, the individual follow up of employees might be beneficial to ascertain that each employee's contract is fulfilled.

This study partially supports the relation between psychological contracts and performance. The studies that exist, in combination with the strong support for negative outcomes of breach, indicate that organizations might well benefit from making sure employees' psychological contracts are fulfilled to benefit from employees' performance.

### **Conclusion**

This study is one of only very few on psychological contracts conducted in Norway, it is also one of a limited number that has taken a multilevel approach to the subject. On the employee's perception of employer inducements, there was found a strong effect of

supervisor communication, as viewed by the employee. There was however no support for supervisor communication as rated by the supervisor, and only very limited support for supervisor's perception of employer inducements, indicating that the supervisor's information about the employee's psychological contract is limited. This is in accordance with Leirkjær's (2009) findings on the same dimension. Limited support was also found for the effect of employer inducements on team performance. Further research is needed to establish the effect of communication on the psychological contract, possibly also focusing on employee contributions, and employee and employer expectations.

### References

- Adams, J. S. (1966). Inequity In Social Exchange. In B. Leonard (Ed.), *Advances in Experimental Social Psychology* (Vol. 2, pp. 267-299): Academic Press.
- Argyris, C. (1960). *Understanding organizational behavior*. London: Tavistock.
- Bellou, V. (2009). Profiling the desirable psychological contract for different groups of employees: Evidence from Greece. *The International Journal of Human Resource Management*, 20, 810-830. doi: 10.1080/09585190902770711
- Burton-Jones, A. (1999). *Knowledge Capitalism: Business, Work, and Learning in the New Economy*: Oxford University Press, Inc.
- Chen, Y. (2007). The impact of psychological contract fulfillment on organizational citizenship behaviors. *Psychological Science*, 30, 458-461.
- Conway, N., & Briner, R. B. (2002). A daily diary study of affective responses to psychological contract breach and exceeded promises. *Journal of Organizational Behavior*, 23, 287-302. doi: 10.1002/job.139
- Conway, N., & Briner, R. B. (2005). *Understanding psychological contracts at work: a critical evaluation of theory and research*. Oxford: Oxford University Press.
- Coyle-Shapiro, J. A.-M., & Parzefall, M.-R. (2008). Psychological Contracts. In J. Barling & C. L. Cooper (Eds.), *The Sage Handbook of Organizational Behavior* (Vol. Vol. 1, pp. XXIII, 749 s.): Sage Publications.
- Crino, M. D., & White, M. C. (1981). Satisfaction in communication: An examination of the Downs-Hazen measure. *Psychological Reports*, 49, 831-838.
- Dabos, G. E., & Rousseau, D. M. (2004). Mutuality and Reciprocity in the Psychological Contracts of Employees and Employers. *Journal of Applied Psychology*, 89, 52-72. doi: 10.1037/0021-9010.89.1.52
- De Meuse, K., Bergmann, T., & Vanderheiden, P. (1997). Corporate downsizing: Separating myth from fact. *Journal of Management Inquiry*, 6, 168.
- Downs, C. W., & Hazen, M. D. (1977). A Factor Analytic study of Communication Satisfaction. *Journal of Business Communication*, 14, 63-74. doi: 10.1177/002194367701400306
- Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*, 12, 121-138. doi: 10.1037/1082-989x.12.2.121



- Guest, D. E. (1998a). Is the psychological contract worth taking seriously? *Journal of Organizational Behavior*, *19*, 649-664. doi: 10.1002/%28SICI%291099-1379%281998%2919:1+%3C649::AID-JOB970%3E3.0.CO;2-T
- Guest, D. E. (1998b). On meaning, metaphor and the psychological contract: A response to Rousseau (1998). [Comment/Reply]. *Journal of Organizational Behavior*, *19*, 673-677.
- Guest, D. E., & Conway, N. (2002). Communicating the psychological contract: an employer perspective. *Human Resource Management Journal*, *12*, 22-38.
- Hatfield, J. D., & Huseman, R. C. (1982). Perceptual congruence about communication as related to satisfaction: Moderating effects of individual characteristics. *Academy of Management Journal*, *25*, 349-358. doi: 10.2307/255996
- Henderson, D. J., Wayne, S. J., Shore, L. M., Bommer, W. H., & Tetrick, L. E. (2008). Leader--member exchange, differentiation, and psychological contract fulfillment: A multilevel examination. *Journal of Applied Psychology*, *93*, 1208-1219. doi: 10.1037/a0012678
- Herriot, P., & Pemberton, C. (1997). Facilitating new deals. *Human Resource Management Journal*, *7*, 45-56.
- Hirst, G., Mann, L., Bain, P., Pirola-Merlo, A., & Richver, A. (2004). Learning to lead: The development and testing of a model of leadership learning. *The Leadership Quarterly*, *15*, 311-327. doi: 10.1016/j.leaqua.2004.02.011
- Hox, J. J. (2002). *Multilevel analysis: techniques and applications*. Mahwah, N.J.: Lawrence Erlbaum Associates.
- Ilgel, D. R., Peterson, R. B., Martin, B. A., & Boeschen, D. A. (1981). Supervisor and subordinate reactions to performance appraisal sessions. *Organizational Behavior & Human Performance*, *28*, 311-330. doi: 10.1016/0030-5073%2881%2990002-7
- Jose, P. E. (2002). ModGraph. Retrieved from <http://www.vuw.ac.nz/psyc/staff/paul-jose/files/modgraph/modgraph.php>
- Lambert, L. S., Edwards, J. R., & Cable, D. M. (2003). Breach and fulfillment of the psychological contract: A comparison of traditional and expanded views. *Personnel Psychology*, *56*, 895-934. doi: 10.1111/j.1744-6570.2003.tb00244.x
- Larson, J. R. (1984). The performance feedback process: A preliminary model. *Organizational Behavior and Human Performance*, *33*, 42-76. doi: 10.1016/0030-5073(84)90011-4

- Leirkjær, K. (2009). *Agreement between employees and employers on the psychological contract: antecedents and consequences*. Unpublished Master Thesis, University of Oslo.
- Lester, S. W., Turnley, W. H., Bloodgood, J. M., & Bolino, M. C. (2002). Not seeing eye to eye: Differences in supervisor and subordinate perceptions of and attributions for psychological contract breach. *Journal of Organizational Behavior*, 23, 39-56. doi: 10.1002/job.126
- Levinson, H., Price, C. R., Munden, K. J., & Solley, C. M. (1962). *Men, management, and mental health*. Cambridge, Mass.: Harvard University Press.
- Morrison, E. W., & Robinson, S. L. (1997). When employees feel betrayed: A model of how psychological contract violation develops. *Academy of Management Review*, 22, 226-256. doi: 10.2307/259230
- Mueller, B. H., & Lee, J. (2002). Leader-Member Exchange and Organizational Communication Satisfaction in Multiple Contexts. *The Journal of Business Communication*, 39, 220-244.
- Porter, L. W., Pearce, J. L., Tripoli, A. M., & Lewis, K. M. (1998). Differential perceptions of employers' inducements: Implications for psychological contracts. *Journal of Organizational Behavior*, 19, 769-782. doi: 10.1002/%28SICI%291099-1379%281998%2919:1+%3C769::AID-JOB968%3E3.0.CO;2-1
- Raeder, S., Wittekind, A., Inauen, A., & Grote, G. (2009). Testing a Psychological Contract Measure in a Swiss Employment Context. [Article]. *Swiss Journal of Psychology*, 68, 177-188. doi: 10.1024/1421-0185.68.4.177
- Restubog, S. L. D., Hornsey, M. J., Bordia, P., & Esposito, S. R. (2008). Effects of psychological contract breach on organizational citizenship behaviour: Insights from the group value model. *Journal of Management Studies*, 45, 1377-1400. doi: 10.1111/j.1467-6486.2008.00792.x
- Robinson, S. L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41, 574-599.
- Robinson, S. L., Kraatz, M. S., & Rousseau, D. M. (1994). Changing obligations and the psychological contract: A longitudinal study. *Academy of Management Journal*, 37, 137-152. doi: 10.2307/256773
- Robinson, S. L., & Morrison, E. W. (1995). Psychological contracts and OCB: The effect of unfulfilled obligations on civic virtue behavior. *Journal of Organizational Behavior*, 16, 289-298. doi: 10.1002/job.4030160309

- Robinson, S. L., & Morrison, E. W. (2000). The development of psychological contract breach and violation: A longitudinal study. *Journal of Organizational Behavior, 21*, 525-546. doi: 10.1002/1099-1379%28200008%2921:5%3C525::AID-JOB40%3E3.0.CO;2-T
- Robinson, S. L., & Rousseau, D. M. (1994). Violating the psychological contract: Not the exception but the norm. *Journal of Organizational Behavior, 15*, 245-259. doi: 10.1002/job.4030150306
- Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal, 2*, 121-139. doi: 10.1007/BF01384942
- Rousseau, D. M. (1990). New hire perceptions of their own and their employer's obligations: A study of psychological contracts. *Journal of Organizational Behavior, 11*, 389-400. doi: 10.1002/job.4030110506
- Rousseau, D. M. (1998). The "problem" of the psychological contract considered. [Comment/Reply]. *Journal of Organizational Behavior, 19*, 665-671. doi: 10.1002/%28SICI%291099-1379%281998%2919:1+%3C665::AID-JOB972%3E3.0.CO;2-X
- Rousseau, D. M. (2001). Schema, promise and mutuality: The building blocks of the psychological contract. *Journal of Occupational and Organizational Psychology, 74*, 511-541. doi: 10.1348/096317901167505
- Schalk, R. (2007). *Do age and the psychological contract influence employability and organizational commitment*. Paper presented at the small group meeting on psychological contracts February 15, 2007. Zürich.
- Schalk, R., Freese, C., & Van den Bosch, J. (1995). The psychological contract of part-time and full-time employees: An investigation into the expectations of employees. *Gedragen Organisatie, 8*, 307-317.
- Schalk, R., & Rousseau, D. M. (2002). Psychological contracts in employment. In N. Anderson, D. S. Ones, H. K. Sinangil & C. Viswesvaran (Eds.), *Handbook of industrial, work and organizational psychology, Volume 2: Organizational psychology* (pp. 133-142). Thousand Oaks, CA: Sage Publications, Inc.
- Schein, E. H. (1965). *Organizational psychology*. Englewood Cliffs, N.J.: Prentice-Hall.
- Shore, L. M., & Tetrick, L. E. (1994). The psychological contract as an explanatory framework in the employment relationship. In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behavior, Vol 1* (pp. 91-109). Oxford, England: John Wiley & Sons.

- Taylor, S. M., & Tekleab, A. G. (2004). Taking Stock of Psychological Contract Research: Assessing Progress, Addressing Troublesome Issues, and Setting Research Priorities. In J. A. M. Coyle-Shapiro (Ed.), *The Employment relationship: examining psychological and contextual perspectives* (pp. XXII, 377 s.). Oxford: Oxford University Press.
- Tekleab, A. G., & Taylor, M. (2003). Aren't there two parties in an employment relationship? Antecedents and consequences of organization-employee agreement on contract obligations and violations. *Journal of Organizational Behavior*, *24*, 585-608. doi: 10.1002/job.204
- Tsui, A. S., Pearce, J. L., Porter, L. W., & Tripoli, A. M. (1997). Alternative approaches to the employee-organization relationship: Does investment in employees pay off? *Academy of Management Journal*, *40*, 1089-1121. doi: 10.2307/256928
- Turnley, W. H., Bolino, M. C., Lester, S. W., & Bloodgood, J. M. (2003). The impact of psychological contract fulfillment on the performance of in-role and organizational citizenship behaviors. *Journal of Management*, *29*, 187-206. doi: 10.1177/014920630302900204
- Turnley, W. H., & Feldman, D. C. (1999a). A Discrepancy Model of Psychological Contract Violations. *Human Resource Management Review*, *9*, 367-386. doi: 10.1016/S1053-4822(99)00025-X
- Turnley, W. H., & Feldman, D. C. (1999b). The impact of psychological contract violations on exit, voice, loyalty, and neglect. *Human Relations*, *52*, 895-922. doi: 10.1023/A:1016971222029
- Turnley, W. H., & Feldman, D. C. (2000). Re-examining the effects of psychological contract violations: Unmet expectations and job dissatisfaction as mediators. *Journal of Organizational Behavior*, *21*, 25-42. doi: 10.1002/(SICI)0199-1379(200002)21:1<25::AID-JOB23E3.0.CO;2-Z