

The Psychological Contract

Psychological contract fulfillment, affective commitment and turnover intentions: consequences of two contrasting operationalizations of the exchange relationship

A secondary data analysis of survey data

Master Thesis Human Resource Studies

Author:	Marjon van de Ven
Student number :	s887572
Supervisor:	Dr. C. Freese
Second reader:	M.J.P.M van Veldhoven
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Abstract: Within the conceptualization of the psychological contract, mutual obligations play a crucial role. Based on the level of both employer and employee obligations four types of the exchange relationship can be classified: the quasi-spot, employer over-obligation, employer under-obligation and mutual high exchange type. This study evaluates two different operationalizations of the exchange relationship between employer and employee. The first, based on the social exchange theory, proposes favorable outcomes (high psychological contract fulfillment, high affective commitment and a low intention to turnover) for the exchange relationships that can be perceived as balanced. The second operationalization of the exchange relationship looks beyond this view and takes both balance and the amount of obligations into account for predicting psychological contract fulfillment, affective commitment and turnover intention. Based on this theory, the mutual high exchange relationship will have the most positive outcomes. Besides the direct effects of the two views, psychological contract fulfillment was expected to be related to affective commitment and turnover intentions. Moreover, affective commitment was assumed to influence the intention to leave. Additionally, a mediating effect of affective commitment in the relationship between psychological contract fulfillment and turnover intention was proposed. Analyses were based on an existing data set of 2801 employees working in twenty organizations in different sectors. Significant effects were found for the relationship between psychological contract fulfillment and affective commitment and turnover intention. Additionally, it can be concluded that affective commitment mediates the relationship between psychological contract fulfillment and turnover intention. No evidence was found for distinction in balanced and unbalanced psychological contracts. For the approach that distinguishes the four exchange types significant differences on the outcome variables were found. Additionally, a (non-hypothesized) mediating effect of psychological contract fulfillment in the relationship between the exchange types and affective commitment was found. After presenting the results of the research, explanations and implications of these findings are discussed.

Keywords: exchange relationship, balance, social exchange, psychological contract (fulfillment), affective commitment, turnover intention

Introduction

"A promise made, is a debt unpaid" is one of the most legendary sentences used by Shakespeare (Montapert, 1964, p. 284). It makes clear that promises are linked to the obligation that is implied by it. When somebody makes a promise to another person, this person will have the expectation that the individual will provide some future return (Blau, 1964). Gouldner (1960) called this process "the norm of reciprocity."

Promises, obligations and unpaid debts are key concepts in the relationship between employer and employee in the appearance of the psychological contract. The psychological contract reflects the individuals' belief about mutual obligations in the context of the employment relationship between employer and employee (Rousseau, 1990). Since the introduction of the psychological contract in the literature, it has been viewed as a crucial element in explaining the relationship between employer and employee. Even more important, this type of contract can be used to explain workplace behavior (Conway & Briner, 2005; Guest, 2004; Levinson, Price, Munden, & Soley, 1962; Rousseau, 1995; Schein, 1965, 1980). A balanced psychological contract can lead to improved organizational effectiveness, which makes it worth paying attention to by organizations.

Nevertheless, it is expected that not every employee perceives the personal psychological contract as stable and good. The employee perceives a personal set of obligations and additionally a set of obligations of the employer. The level of employer and employee obligations may range from high to low, which leads to four possible types of exchange relationships: quasi spot (low obligations for both employer and employee), mutual high (high obligations for both employer and employee), employer over-obligation (high employer obligations, low employee obligations) and employer under-obligation (low employer obligations and high employee obligations) (De Jong, Schalk, De Cuyper, 2009). Until now, there has not been much empirical research on the distinction of these four types of exchange arrangements. More specific, based on the existing literature, two contrasting operationalizations of the exchange relationship between employer and employee can be distinguished. Research on this topic is needed since a different operationalization of the employment relationship probably leads to diversified effects on work-related variables such as psychological contract fulfillment,

organizational commitment and intention to leave. In the current study data of 2801 employees from twenty organizations in fifteen industries will be assigned to the four different exchange arrangements and analyzed.

Analyzing the data seems interesting since the literature is not consistent on what the consequences of unbalanced exchange relationships are. While social exchange theory (Blau, 1964) would predict positive outcomes for the balanced types of exchange relationship (the quasi-spot and mutual high psychological contracts), theory on relational (mutual high) and transactional (quasi-spot) psychological contracts predict that the outcomes for the two balanced contract will differ (Rousseau & McLean Parks, 1993). This "competing view", based on the distinction in relational and transactional psychological contracts, will yield the most positive results for the mutual high employment relationship.

Based on the social exchange theory of Blau (1964) and the competing view (Koh & Yer, 2000) mentioned before, competing hypotheses will be formed for all relationships. The consequences that will be further investigated in this research include psychological contract fulfillment, affective commitment and intention to leave. Therefore, the purpose of this study is to clarify the relationship between the four types of exchange agreements and psychological contact fulfillment, affective commitment and turnover intention. Besides, the effect of psychological contract fulfillment on affective commitment and the relationship between affective commitment and turnover intention will be investigated.

The following research questions will serve as a guide through this article:

- *To what extent do the two different conceptualizations of the exchange relationship between employer and employee lead to diversified perceptions of psychological contract fulfillment, affective commitment and turnover intention?*
- *Can psychological contract fulfillment serve as a mediator in the relationship between the type of exchange relationship and affective commitment?*
- *Are affective commitment and turnover intention related to each other? And does psychological contract fulfillment influences the turnover intention of an employee?*

Theoretical Framework

Psychological Contract

Psychological contract research has progressed considerably since the concept was introduced by Argyris (1960). Argyris noticed there could evolve a psychological contract between employer and employee, but did not actually describe what this type of contract was about: a concrete definition of the concept is not given (Freese, 2007). After Argyris, there have been many attempts to develop and actually define the concept. For instance, according to Rousseau (1995), a psychological contract initiates promises, beliefs, acceptance and a perception of mutuality. The psychological contract is the perception of an individual, which is subjective. It is not about the reality, but how the reality is perceived by the employee. This subjective aspect is represented in Rousseau's definition of the psychological contract: "the individual's beliefs about mutual obligations, in the context of the relationship between employer and employee" (Rousseau, 1990, p.391). Within the conceptualization of the psychological contract, obligations play a central role. Obligations are "beliefs, held by an employee or employer, that each in bound by promise or dept to an action or course of action in relations to the other party" (Robinson, Kraatz, & Rousseau, 1994). These beliefs are formed through the interaction between an employee and agents of the organization (for instance supervisors, recruiters or managers of the HR department) (Rousseau, 2001). The theory about psychological contracts involves the perception of employees of the reciprocal obligations existing with their employer (Rousseau, 1989; Shore & Tetrick, 1994). In essence, the employee will have beliefs concerning the organization's obligation to them as their own obligations to the organization (Koh & Yer, 2000). Therefore, the psychological contract can be seen as an exchange relationship between employer and employee.

The concept of reciprocity is a key factor within exchange relationships. When the employee does the employer a favour, this employee will hold the expectation that the employer will provide him or her some future return (Blau, 1964). The expectation of some future return is characterized by the employees' trust in the employer to "fairly discharge their obligations in the long run" (Holmes, as cited Konovsky & Pugh, 1994, p. 657).

As mentioned before, the exchange relationship between employer and employees is based on reciprocal obligations. Nevertheless, employees will differ in what they perceive as organizational obligations. Therefore, the amount of organizational obligations is likely to differ between employees: high or low levels of obligations are both possible (De Jong et al., 2009). In line with the foregoing, the perception of an employee about the contributions he or she promises to give to the organization, and as a result the amount of obligations, are likely to diverge between employees as well.

Based on these levels of employee and perceived organizational obligations, four different types of exchange relationship can be distinguished.

The Exchange Relationship: Four Types

Literature on psychological contracts distinguishes balanced from unbalanced contracts. When a psychological contract is balanced, both the employer and employee "are perceived to be similarly obligated in exchange" (Shore & Barksdale, 1998, p. 732), which means the level of obligations is high or low for both employer and employee.

When the level of obligations is high, this is called a mutual high obligation psychological contract: when both employer and employee perceive a low level of obligations, the contract can be named as a quasi-spot psychological contract (De Jong et al., 2009). The mutual high obligations psychological contract indicates a strong social exchange between employer and employee, in which the employee feels that he or she owes the organization a good offer and that the organization is highly obligated in return. In the quasi-spot obligation psychological contract the employees will have the perception that with a minimum amount of effort, they are able to maintain the employment agreement. Nevertheless, they foresee a minimum amount in return from the employer (Shore & Barksdale, 1998).

In contrast, when the psychological contract is unbalanced, one of the parties involved in the employment relationship will have more obligations compared to the other. In other words, "either the employee or the employer is substantially more obligated than the other actor in the exchange" (Shore & Barksdale, 1998, p. 732). When the employee is more obligated, there will be a situation of employer under-obligation. Employer over-obligation occurs when the employer perceives more obligations compared to the employee (De Jong et al., 2009).

From the foregoing it can be concluded that four types of exchanges exists: *mutual high obligations psychological contract* (many promises for both the employer and employee); *quasi-spot psychological contract* (few promises for both parties); *employer under-obligation* (high number of obligations on the part of the employee and limited employer obligations) and *employer over-obligation* (high number of obligations on the employer part, whereas low number of obligations on the part of the employee). For an overview of the four types of exchange relationships see Table 1 on page 7.

Table 1: Four types of the Employment Relationship (Shore & Barksale, 1998)

	Low Employee Obligations	**High Employee Obligations**
Low Employer Obligations	Quasi-spot psychological contract	Employer under-obligation
High Employer Obligations	Employer over-obligation	Mutual high obligations psychological contract

The psychological contact will be balanced when the contract can be characterized as either mutual high obligations or quasi-spot: in the case of employer over-obligation or employer under-obligation there will be unbalance of the contract.

Limited empirical evidence for the distinction in the four exchange relationships is available (for an exception see De Jong et al., 2009). In order to obtain the four types of the exchange relationship, De Jong et al., (2009) used a median-split procedure. Only the mutual high obligations psychological contract was found to be related positive to work-related outcomes.

Nevertheless, the data used by De Jong et al., (2009) is not representative, which possibly harms the external validity of the study. The external validity of the study of De Jong et al., (2009) will be affected because the data was collected in only four sectors in the Netherlands. Besides, less than 800 respondents were included in the research. Of these respondents, only thirteen of the exchange types could be classified as an employer-over obligation psychological contract. According to De Jong et al., (2009) this limits the possibilities to compare the employer-over obligation psychological contract with the other exchange types. This research makes use of existing datasets which encompasses around 2800 respondents and is therefore better able to deal with the problems faced by De Jong et al., (2009), which makes it both interesting and valuable to test the distinction in the exchange types and the consequences of this differentiation.

Type of Exchange and Consequences

In the next paragraph, the consequences of the four types of exchange relationships are connected to three outcome variables: psychological contract fulfillment, intention to turnover and affective commitment. Afterwards a brief introduction and the relationships between the variables, the expected relationships with the exchange types will be clarified.

Psychological Contract Fulfillment

As mentioned before, the psychological contract is based on mutual promises. These promises make that the psychological contact of an employee can be fulfilled or not (Morrisson & Robinson, 1997). The concept of psychological contract fulfillment therefore is associated with the extent one party has kept the promises made to the other party (Rousseau, 1989). Psychological contract fulfillment develops feelings of being valued, leads to more trust in the other party and has a positive effect on work outcomes for both the individual and the organization (Conway & Briner, 2002; Coyle-Shapiro & Kessler, 2000; Robinson & Morrison, 1995). Since the emphasis in this research is on the perception of the employee, psychological contract fulfillment is conceptualized as the employees' perception of the extent to which the employer fulfills the obligations.

Affective Commitment

For an organization to be successful, organizational commitment of the employees is essential. Organizational commitment can be characterized as the identification with and involvement in the organization the employee is working for and consists of three different components: normative, continuance and affective commitment (Meyer & Allen, 1991). Particularly the affective component of commitment is frequently acknowledged as a predictor of valued organizational outcomes (Meyer & Allen, 1997). As a result, the focus of this article will be on affective commitment, which refers to the "identification with, involvement in, and emotional attachment to the organization" (Meyer & Allen, 1997, p. 11). When the affective commitment of an employee is strong, the employer wants to stay with the organization because of the emotional link with the organization (Meyer & Allen, 1997). Nelson and Quick (2008) state that affective commitment consists of three factors, namely:

1. The belief in the objectives and values of the organization

2. The willingness to put effort on behalf of the organization the employee is working for
3. The wish to remain a member of the organization (Nelson & Quick, 2008).

According to Millward and Hopkins (1998) the psychological contract and commitment are related to each other. However, there is no alignment in the literature how the different exchange relationships influences the relationship of psychological contract on the commitment of employees.

Nevertheless, a relationship between an employee's perception of the fulfillment of the psychological contract and affective commitment is reasonable. According to Coyle-Shapiro and Kessler (2000) a general assumption in research on the relationship between psychological contract fulfillment and commitment is that when the employer fulfills his/her obligations towards the employee, this will be reciprocated by the employee by showing commitment to the organization. In other words, because of the fulfillment of the employer obligations employees feel valued by their employer, which in turn will have a positive effect on their affective commitment. In this way, the fulfillment of the psychological contract will affect the emotional attachment to an organization (Meyer & Allen, 1997).

In addition to this, the positive relationship between psychological contract fulfillment and affective commitment can be clarified by the use of Nelson and Quick's (2008) factors of affective commitment. It seems likely that a higher fulfillment of the psychological contract will positively influence the willingness to put effort on behalf of the organization. Besides, when the psychological contract of the employee is perceived as unfulfilled, the belief in the objectives and values of the organization and the wish to remain at the organization are likely to decrease (Nelson & Quick, 2008; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002).

In line with the theory mentioned above, Flood, Turner, Ramamoorthy and Pearson (2001) identified a positive relationship between psychological contract fulfillment and affective commitment. Based on the findings of Flood et al., (2001), this study assumes a positive effect of psychological contract fulfillment on affective commitment. The first hypothesis is stated as follows:

> **H1**: *A positive relationship exists between psychological contract fulfillment and affective commitment*

Turnover Intention

In the existing literature actual turnover is mentioned as an important factor for predicting organizational effectiveness (Park, Ofori-Dankwa & Bishop, 1994). Turnover intention reflects the "individuals' own estimated probability that he or she is permanently leaving the organization at some point in the near future" (Vandenberg & Nelson, 1999, p. 1315) and is seen as the strongest and most precise predictor of actual turnover behavior (Tett & Meyer, 1993; Van Breukelen, Van der Vlist & Steensma, 2004). In other words, the stronger the intention to turnover of an employee, the more likely the individual is to leave the organization: the intention to turnover can therefore be considered as the stage before actual turnover. According to Zhao, Wayne, Glibkowski and Bravo (2007) the intention to leave can serve as an indication of the employee's psychological attachment to the organization and/or employer.

Samad (2006) argues that several elements contribute to the actual decision of an employee before they leave the organization. These include attitudinal, behavioral and organization elements. Additionally, negative experiences with work related issues will play a role in the employees' decision to stay or leave the organization (Lum, Kervin, Clark, Reid & Sirola, 1998; Samad, 2006). For instance, when an employee perceives that the management of the organization has no problems with breaching their psychological contract, "they start resisting and on failure they quit from organization" (Hong & Kaur, 2008, p. 3). Furthermore, when employees perceive the way they are treated by the organization as unfair, this may lead to feelings of procedural and distributional discrimination (Cole, Bernerth, Walter & Holt, 2010). In turn, these feelings of procedural and distributional discrimination possibly affect the fairness perception of an employee, which makes him or her to leave the organization (Tett & Meyer, 1993). Therefore, when an employee perceives a breach or violation of the psychological contract as a consequence of negative events on the jobs this will increase their inclination to leave the organization (Zhao et al., 2007).

Employees who show affective commitment towards their employer have a high emotional attachment, involvement in and identification with the goals of the organization (Galletta, Portoghese & Battistelli, 2011). The turnover intention of such high-committed employees will be low, since they have the desire to remain part of the organization (Gaan, 2008; Meyer, Allen & Smith, 1993; Thompson & Prottas, 2005). Moreover, compared with individuals with low affective commitment, individuals with high affective commitment are more likely to evaluate

their work environment more positively and are therefore less likely to have intentions to leave the organization (Chiu & Francesco, 2003). As a result of these characteristics, it is expected that high committed employees have lower intentions to leave (Judge, Thoresen, Pucik & Welbourne, 1999).

The preceding is in line with empirical evidence suggesting a negative relationship between affective commitment and turnover intention (e.g. Ahmad & Omar, 2010; Allen & Meyer, 1996; Chiu & Francesco, 2003; Galletta et al., 2011; Somers, 1995; Tett & Meyer, 1993). Moreover, Baotham, Hongkhuntod and Rattanajun (2010) concluded that employees showing a lack of affective commitment had an increased intention to turnover. In other words, employees who are more committed towards their employer are less likely to show turnover intentions.

H2: *Affective commitment is negatively related to employees' turnover intention*

The two hypotheses that are clarified above assume that psychological contract fulfillment influences the affective commitment of an employee, which is supposed to have an effect on the turnover intention of employees.

Besides the indirect influence of psychological contact fulfillment on the turnover intention of employees via affective commitment, a direct relationship between perceived psychological contract fulfillment and the turnover intention of an employee is expected. Literature on this association indicates that perceived psychological contract fulfillment and the intention to turnover are negatively related to each other (Robinson, 1996; Turnley & Feldman, 2000; Raja, Johns & Ntalianis, 2004). This negative association is explained by Bunderson (2001): when an employee perceives the employer does not fulfill the role obligations, continuing work will be experienced as an unfair exchange. This unfair exchange makes it less feasible that an employee wants to continue the employment relationship and is therefore likely to develop intentions to leave the organization (Bunderson, 2001).

H3: *A negative relationship exists between psychological contract fulfillment and turnover intention*

Based on recent research of Hemdi and Rahim (2011) and an article of Sturges, Conway, Guest and Liefooghe (2005), it is expected that affective commitment will mediate the relationship

between perceived psychological contract fulfillment and the intention to turnover. Mediation proposes a reduced strength of the relationship between the independent and dependent variable, after the inclusion of the mediating variable (Baron & Kenny, 1986). In other words, it is expected that the relationship between psychological contract fulfillment and turnover intention will be less strong when affective commitment is added to the model.

The study of Hemdi and Rahim (2011) has shown that psychological contract variables significantly explained affective commitment and consequently the turnover intention of hotel managers. Affective commitment was a found to be a meaningful mediator in the relationship between psychological contact variables and intentions to turnover. The Social Exchange theory of Blau (1964) together with the norm of reciprocity (Gouldner, 1960) suggests that employees who perceive psychological contract fulfillment will signal care and concern towards their wellbeing and development, which possibly encourage workers to reciprocate by enhancing affective commitment and a willingness to continue work in the firm (Hemdi & Rahim, 2011).

Additionally, Sturges et al., (2005) state that when employees perceive non-fulfillment of the psychological contract, this will reduce their commitment towards the organization. Reduced commitment is in turn associated with a greater likelihood that an employee will have intentions to leave the organization (Sturges et al., 2005).

Based on these linkages, it is assumed affective commitment mediates the relationship between perceived psychological contact fulfillment and the intention to turnover. The assumption of the mediating role of affective commitment will be examined by the following hypotheses:

> **H4***: Affective commitment mediates the relationship between perceived psychological contract fulfillment and the turnover intention of employees*

The conceptual model, displayed in Figure 1, summarizes the first four hypotheses.

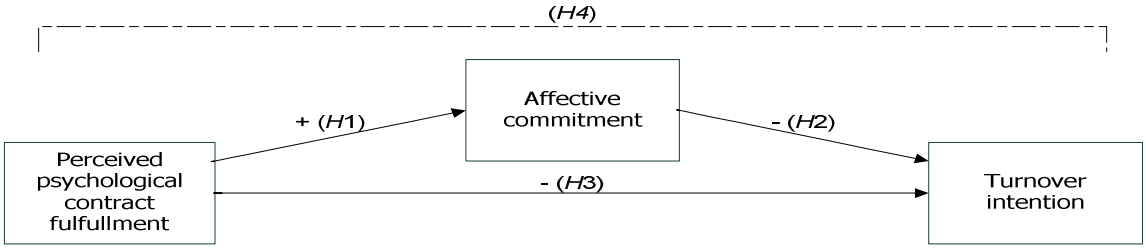


Figure 1: Conceptual model of the relationship between perceived psychological contract fulfillment, affective commitment and the intention to turnover.

Social Exchange Theory and Consequences of the Four Types of Exchange

When a balance in the level of obligations is perceived by the employee, there will be either a mutual high obligation psychological contract or a quasi-spot psychological contract. The employee thus acknowledges that the amount of contributions promised to provide to the employer are balanced with their individual beliefs about what the organization promised in return (Conway & Briner, 2005). Several theories about the exchange in employment relationship anticipate beneficial consequences of balanced psychological contracts (De Cuyper, Rigotti, De Witte, & Mohr, 2008).

One of the theories arguing that a balanced relationship between employer and employee has beneficial effects is the Social Exchange Theory. According to Blau (1964, p. 91) "social exchange […] refers to voluntary actions of individuals that are motivated by the return they are expected to bring and typically do in fact bring from others." In other words, when an individual does something that is beneficial for another party, he or she will have the expectation this action will be reciprocated. The individual will have the expectation that this process of reciprocation will include actions or behaviors that are beneficial for his or her own position (Blau, 1964; Shore & Barksdale, 1998). The foregoing can also be applied on the relationship between employer and employee. An employee will feel obligated to threat the organization in a good way when this employee has the perception that he or she is treated well by the organization (Gouldner, 1960). This suggests a positive relationship between balanced psychological contracts and perceived psychological contract fulfillment. When an employee perceives the employer obligations of the psychological contract as fulfilled (i.e. he or she is treated well by the organization), the individual will feel obligated to treat the organization well (i.e. adjust in-role behavior). The higher the amount of mutual obligations (high or low), the stronger the social relationship between the employer and employee will be and, as a consequence, the greater the probability that both parties in the exchange relationship will benefit, since both employer and employee are likely to maintain the mutually beneficial relationship (Shore & Shore, 1995). In line with this, Blau (1964) argued that a lack of balance in the employment relationship might lead to negative consequences. When an employee perceives that there is a discrepancy is what he or she provides the organization and what he or she gets in return, psychological contract breach occurs (Morrison & Robinson, 1997). The employees' perception of contract breach will create a feeling of inequality in the employment relationship. Therefore, when an employee has

the perception that he or she has adequately met the obligations to the organization whereas the organization failed to do this (i.e. employer-under obligation psychological contract), this will result in feelings of being cheated by the organization. Since employees strive towards a balanced psychological contract (Blau, 1964), employees who hold the perception that they are shortchanged by the organization will have the tendency to rebalance the employment relationship by reducing their obligations (Robinson, 1996; Rousseau, 1995; Turnley, Bolino, Lester & Bloodgood, 2003).

In cases of employer over-obligation, the organization offers the employee more than the employee provides in return. According to Turnley et al., (2003) employees who perceive this type of exchange will label this as a "positive imbalance" of the employment relationship.

Nevertheless, according to Robinson et al., (1994) the employer over-obligation psychological contract is the result of the perception that the employer has violated the psychological contract. When an employee held the perception the employer has failed to fulfill the psychological contract and perceives this as a violation, employee obligations are likely to decrease. However, most of the time organizational obligations will not change. Therefore, it can be argued that the employer over-obligation contract is a consequence of employees' perception that the organization violated the psychological contract (Shore & Barksdale, 1998).

Based on the foregoing, the social exchange theory states that unbalanced psychological contracts (employer over-obligation and employer under-obligation) are a consequence of either breach or violation perceptions (Shore & Barksdale, 1998). Therefore, employees with balanced contract (i.e. quasi-spot and mutual high psychological contracts) are likely to have the highest perception of fulfillment because the fit between employer and employee obligations.

The predictions of the social exchange theory mentioned above are in line with the predictions that can be made by the Equity Theory (Adams, 1965). The equity theory states that employees have the tendency to balance between what they contribute to the organization and what they get in return (Adams, 1965). When an employee perceives a high level of employer obligations, this will result in a high level of employee obligations. Nevertheless, when an employee has the perception that the amount of employer obligations is low, he or she will try to rebalance this low level of obligations and adjust their personal employee obligations (Adams, 1965). In other words, the equity theory of Adams (1965) will hold the most positive consequences for balanced psychological contracts.

In line with these theories, the Effort-Reward Imbalance theory (Siegrist, 1996) states that an insufficient amount of reciprocity between the costs (employee obligations) and gains (employer obligations) of the employment relationship possibly lead to so-called strain reactions (Fukada et al., 2010). Rigotti and Mohr (2005) postulate that these strain reaction the employee perceives as a consequence of the discrepancy between employer and employee obligations are highly similar to perceived psychological contract breach. Psychological contract breach is the cognition of an employee that the organization has failed to deliver its obligations (Morrison & Robinson, 1997). In other words, strain reactions (i.e. psychological contract breach) are likely to occur when the employee perceives a discrepancy between employer and employee obligations. Therefore it can be concluded that, according the effort-reward imbalance model, the perception of psychological contract fulfillment is less likely in unbalanced employment relationships. As a consequence, balance and fulfillment of the contract are positively related. In terms of the four exchange relationships, quasi-spot and mutual high contacts will have a high fulfillment, whereas the employer-over and employer-under obligation psychological contract will have a lower level of fulfillment.

Based on the social exchange theory (Blau, 1964), equity theory (Adams, 1965) and the effort-reward imbalance theory (Siegrist, 1996), the following hypothesis can be drawn:

> **H5:** *Employees who perceive the exchange relationship as balanced will be more likely to perceive psychological contract fulfillment compared to employees with an un-balanced exchange relationship.*

Meyer and Allen (1997) argue that affective commitment is shaped by the extent to which the expectations of the organization and the individual needs are in line with the reality, which reflects the psychological contract (McDonald & Makin, 2000). Therefore, the affective commitment of an employee can be seen as a part of the exchange agreement between employee and organization (e.g. Angle & Perry, 1983; Rousseau, 1995). For that reason, when an employee perceives that the psychological contract is breached or violated, he or she will probably have the conviction that the organization cannot be trusted to repay the depth (Robinson & Morrisson, 1995). The employee will perceive this as an imbalance in the exchange relationship and will strive to rebalance their employment relationship. Based on the social exchange theory, employees will decrease their affective commitment in order to restore the

balance. Empirical evidence indeed makes clear that perceived amount of breach and commitment are negatively related to each other (Lester, Turnley, Bloodgood & Bolino, 2002).
In the mutual high and quasi-spot psychological contract the employee obligations and perceived employer obligations are balanced. According the social exchange theory, psychological contract breach is least likely in these exchange relationships. Contrary, the employer over and employer under-obligation psychological contract lacks trust which makes breach more likely.
Furthermore, the social exchange theory suggest that when there is a balance between what the employee provides and what the organization gives in return, affective commitment will be high. Contrary, affective commitment will be low when the perceived balance is low. Therefore, there will be a positive relationship between perceived balance and affective commitment.

> **H6:** *Balance and affective commitment are positively related. Therefore, mutual high and quasi-spot psychological contract will report the highest level of affective commitment and employer over and employer under-obligation psychological contracts the lowest.*

Employees have the expectations that their contributions to the organization are balanced with what the employer provides in return (Cropanzano & Mitchell, 2005). If the employer perceives the exchange relationship with the employer as unfair the norm of reciprocity is harmed (Gouldner, 1960), which represents a breach (which have the possibility to result in a violation) of the psychological contract (Rousseau, 1995). Several researchers indicate that psychological contract breach (Zhao et al., 2007) and violation (Robinson & Rousseau, 1994) are positively related to turnover intentions. Breaches and violations of the psychological contract have the possibility to result in inequity perceptions and may decrease the confidence of the employees that a continuation in the exchange relationship with the employer is beneficial for both parties (Morrison & Robinson, 1997; Turnley & Feldman, 1999). Based on the foregoing, psychological contract non-fulfillment (breach or violation) is most likely to occur in employer over-obligation psychological contract. This type of exchange relationship reflects a long-lasting imbalance in the employment relationship, which is a consequence of a sustained process of violation of the psychological contract of the employee on the part of the employer (Shore & Barksdale, 1998). Therefore, employees who perceive their psychological contract as employer over-obligation will have the highest intention to leave the organization.

The foregoing is in line with the control theory (Carver & Scheier, 1982; Wiener, 1948). The control theory states that every single time an employee perceives a discrepancy between what the organization promised and what is actually received back, the employee will change attitude and behavior towards the organization. For the employee, a discrepancy between what is promised and what is received is seen as an imbalance of the exchange relationship with the organization. When an employee perceives that the employer fails in their role obligations, he or she will have the tendency to leave (or at least reduce) such imbalanced relationship with their employer and negatively change their attitude and behavior (Bunderson, 2001; Turnley & Feldman, 1999). As a consequence, a continuation of such imbalanced employment relationships with the employer will be seen as an unfair exchange which possibly leads to a retraction of the exchange agreement. Contrary, when an employee perceives that the exchange relationship with the employer is balanced the employee will reciprocate positively to the employer, which will result in a lower level of turnover intention (Bunderson, 2001).

Based on the foregoing, the following hypothesis can be drawn:

> **H7:** *Turnover intention will be lowest when employees perceive their contract as balanced (i.e. mutual high or quasi-spot). The intention to turnover will be highest when the contract can be classified as employer over-obligation psychological contract.*

The Consequences of the Four Types of Exchange: A Competing View

There is also another line of reasoning that can be used to clarify the relationship between the four exchange relationships and fulfillment, turnover intention and affective commitment.

As mentioned in the previous chapter about the social exchange theory, balance in exchange relationships is preferred and expected (Blau, 1964). Since there is a balance in what the employee provides to the organization and what is actually given back to the employee, the fulfillment of the psychological contract will be high (De Cuyper et al., 2008).

Nevertheless, besides the balance, the amount of employer obligations possibly plays an important role in the relationship between the four exchange types and the fulfillment of the psychological contract. It seems logical that the higher the level of perceived employer obligations, the higher the likelihood the employee will perceive their psychological contract as fulfilled. In particular, the preceding suggests that not only the (un)balance of the employment

relationship will influence contract fulfillment, since the amount of perceived employer obligations does play a role as well. Contrary to most of the articles about the psychological contract, it is expected that the level of perceived employer obligations plays a more important role compared to the balance of the obligations. Comparing the quasi-spot and the employer over-obligation psychological contract, the distinguishing factor between these two is the level of perceived employer obligations. Since the level of expectations both groups hold is the same, and employees with an employer-over psychological contract earn back more for their input, it is expected that employees with this type of contract will report a higher level of fulfillment of the psychological contract compared to their "quasi-spot colleagues."

Since the mutual high obligations psychological contract is balanced and has high levels of employer obligations, fulfillment will be most likely in this type of exchange relationship. Besides, it is proposed that the employer under-obligation psychological contract will report the lowest level of contract fulfillment, since this relationship is both unbalanced and has a low level of employer obligations. It is proposed that the employer over-obligation type and the quasi-spot psychological contract lie in between, since each has one of the criteria met (balance or high level of employer obligations). Nevertheless, since the core importance of the amount of employer obligations, a higher fulfillment is expected for the employer over-obligation compared to the quasi-spot psychological contract.

Based on the preceding, the eighth hypothesis can be formulated as follows:

> **H8**: *The mutual high obligations psychological contract will report the highest score on psychological contract fulfillment; the employer under-obligations contract the lowest. The fulfillment scores of the quasi-spot and employer over-obligations psychological contract will lie somewhere in between, with a more favorable outcome for the employer over-obligation contract.*

In existing literature the distinction between transactional and relational psychological contracts is frequently made. According to Rousseau and McLean Parks (1993) these two types of contracts distinguish on five elements: the focus of the contract, time frame, stability, scope and tangibility. While the focus of transactional contracts is generally on the economic exchange of promises, relational psychological contract focuses on both the economic and socio-emotional exchange of promises (De Jong et al., 2009). The time frame, which reflects the length of the

contract, is close-ended and specific in the transactional contract, whereas the relational contract is open-ended and ambiguous. Comparing the two types of contract on stability, the relational contract is more flexible and dynamic as the transactional contract. With respect to the scope of the psychological contract, the transactional contract is more limited and less related to the personal life of the employee compared to the relational contract. Additionally, relational contracts are subjective whereas the boundaries of a transactional contract are clear (Freese, 2007).

Linking this knowledge on the four types of exchange relationship mentioned before, the quasi-sport contract may correspond to the transactional contract. According to Koh and Yer (2000) this type of contract reflects a pure economic exchange model. The organization brings the employee short-term oriented, economic inducements in trade for restricted and specified offers given by the employee (Tsui, Pearce, Porter & Tripoli, 1997). In other words, the exchange between employer and employee is limited (De Cuyper et al., 2008). Since in this type of relationship the employee is not expected to be interested in organizational performance, the employer provides the employee monetary rewards and no options for a long-term relationship. As a consequence, the relationship between employer and employee is short-term oriented and close ended, but balanced (Koh & Yer, 2000).

Contrary, the mutual high obligations psychological contract may reflect the relational contract. Research of De Cuyper et al. (2008) found out that employees with both high employer and employee obligations exchanged both economic and socio-economic promises. The employer provides the employee inducements which go beyond the short-term monetary rewards, such as training and investments in the future career of the employer. In return, the employee contributes to the organization by, for instance, helping colleagues or accepting tasks that fall outside the formal job description (Koh & Yer, 2000).

Based on the foregoing, it can be concluded that the mutual high psychological contract can be seen as a relational psychological contract, whereas the quasi-spot contract will be perceived as a more transactional contract.

The relationship between the four types of exchange relationships and affective commitment can be clarified by the use of this distinction in transactional and relational psychological contracts. In short, in a relational exchange employees do not bother about an immediate compensation for the contributions to the organization, while employees who have a transactional exchange

relationship do expect an immediate repayment for their depth (Ekeh, 1974; O'Connell, 1984). Because affective commitment is performed voluntarily by the employees, it will be one of the first reactions on a breach or violation of the contract (McLean Parks & Kidder, 1994). Based on the foregoing, it can be argued that employees with a transactional contract will decrease their commitment to the organization immediate when the psychological contract is breached, since a direct repayment of the contributions is expected. Contrary, "relational" employees do not expect an immediate repayment for their depths and will therefore less likely to perceive breach. Additionally, when these employees perceive the psychological contract as breached, they will not immediately decrease their commitment to the organization because they value the relationship with the employer. Besides, employees will be more likely to perceive their contract as breached in a transactional exchange (Morrisson & Robinson, 1997).

The preceding is in line with the significant findings of Raja et al., (2004). It was found that the relational contract positively relates to affective commitment, whereas the transactional contract was negatively related to affective commitment (Raja et al., 2004). In other words, the affective commitment of an employee will be high (low) when the nature of the contract can be seen as relational (transactional).

Since the mutual high obligations psychological contract reflects a relational nature of the psychological contact, it is expected that this type of exchange relationship will report the highest affective commitment. Besides, research of Koh and Yer (2000) among temporary employees indicates there were significant differences in affective commitment of employer-over and employer under-obligation psychological contracts, with employer over contracts reporting a higher level of affective commitment. It is expected that this distinction is also true among regular workers, because it is likely that an employee is more willing to put effort on behalf of the organization (Nelson & Quick, 2008) when the employer provides more than expected compared to a situation in which the employer provides less than expected.

In particular, affective commitment will be lowest in the quasi-spot and highest in the mutual high obligations psychological contract. It is proposed that the employer under-obligation and employer over-obligation contract will lie in between. The employer over-obligation psychological contract will held the highest score of those two exchange types, since the amount of employer obligations is high. Therefore, employees are more likely to reciprocate on this high amount of employer obligations by showing their affective commitment to the organization.

Based on the preceding, the ninth hypothesis will be as follows:

> **H9:** *Affective commitment will be highest in the mutual high and lowest in the quasi-spot obligations psychological contract. The second highest score on affective commitment will be showed in the employer over-obligation contract, followed by the employer under-obligation psychological contract.*

In line with the reasoning on the relationship of the exchange types and affective commitment, the effect of the four exchange types on turnover intention can be made clear by the differentiation in transactional and relational psychological contracts. According to McLean Parks and Smith (1994) a relational exchange relationship reflects a collective or "other" interest instead of pure self-interest. Besides, employees who are engaged in a relational exchange relationship with their employer are focused on the relationship itself rather than on what is exchanged (Robinson & Rousseau, 1994). As a consequence of the foregoing, the employee will perceive the costs of reneging, which refers to possibly harm or break down the relationship, as higher when the exchange contract can be typified as relational. Therefore, reneging the employment relationship will be significant less likely in a relational exchange relationship compared to a transactional relationship (McLean Parks & Kidder, 1994; McLean Parks & Schmedemann, 1994; McLean Parks & Smith, 1994). As stated before, the mutual high obligations psychological contract will be perceived as a relationship with a relational nature. Since the costs of reneging are perceived to be high when the relationship is relational, the intention to turnover will be low.

When the nature of the employment relationship is transactional, the exchange itself is valued above the identity of the parties that are involved in the relationship. Therefore, the contracting parties are considered as substitutable, which is contrary to the relational psychological contract. Since the focus is on the exchange rather than the relationships between the parties, the costs of reneging the employment relationship are low. Additionally, contracting parties are seen as substitutable, which may increases the intention to leave (MacNeil, 1985; McLean Parks, 1990, 1992; Rousseau & McLean Parks, 1993).

In other words, the intention to leave will be low in the mutual-high obligations psychological contract and high in the quasi-spot obligations psychological contract. In the employer over and employer under-obligation psychological contract, the intention to turnover will be between the

other two. Nevertheless, it is expected that employees who perceive their psychological contract as employer under-obligation will report a higher level of turnover intention compared to employees who perceive their psychological contract as employer over-obligation. In the employer over-obligation psychological contract the employer provides more than the employee gives in return, which makes a "positive imbalance" for the employee (Turnley et al., 2003). Therefore, the employee will report a lower level of turnover intention compared to the employer under-obligation psychological contract, since in this relationship the employee provides more than he or she receives back from the organization.
Based on the foregoing, the following hypothesis can be formed.

> **H10:** *The intention to turnover will be lowest in the mutual high obligations relationship: intention to leave will be highest when the relationship is perceived as quasi-spot psychological contract. While comparing the employer-over and employer-under obligations psychological contract, employer-under contracts will report a higher level of turnover intention.*

The hypotheses five to ten, introduced in the foregoing section are summarized in the following research model, which will be used as a foundation for this research. Table 2 provides a more specified summary for the expected relationships.

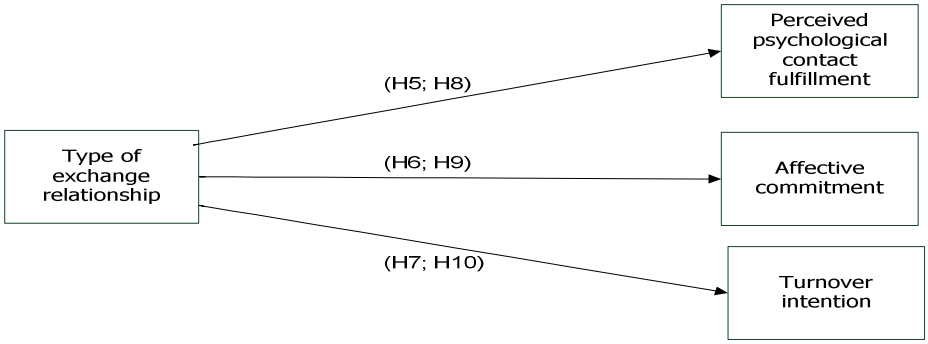


Figure 2: Conceptual model of the relation between the type of exchange relationship, perceived psychological contract fulfillment, affective commitment and turnover intention.

Table 2: Overview of the hypotheses five to ten

	Social Exchange Theory			**Competing View**		
Type of Exchange	Contract Fulfillment	Affective Commitment	Turnover Intention	Contract Fulfillment	Affective Commitment	Turnover Intention
Quasi-spot	High	High	Low	Low	Lowest	Highest
Employer under	Low	Low	High	Low	Low	High
Employer over	Low	Low	Highest	High	High	Low
Mutual high	High	High	Low	High	Highest	Lowest

Control Variables

In order to examine if there are variables that possibly affect the hypothesized relationships, several control variables will be included in this research. First of all, the work of Coyle-Shapiro and Kessler (2002) indicated that attitudes and behaviours of employees on the workplace can be affected by gender. Therefore, gender is the first control variable that will be included in this research. There will also be controlled for age, since Ng and Feldman (2009) argue that older employees demonstrate higher level of acceptance towards psychological contract breaches and therefore possibly react less strongly in adapting their affective commitment or turnover intention. Besides, Huiskamp and Schalk (2002) reported that the age of employee affects the amount of both employer and employee obligations an employee perceives, with older employees showing higher levels of obligations. The third control variable that will be included is educational level, since Guest (2004) argues this is one of the determinants that have an impact on the formation and evaluation of an employee's psychological contract. Contract hours will be used as a control variable, based on the research of Conway and Briner (2002) who indicated that the psychological contracts of full-time and part-time working employees diverge. Additionally, Logan, O'Reilly and Roberts (1973) argued that employees who are working full-time for an organization have higher expectations about what they should get in return for their own obligations and Schalk, Freese and Van den Bosch (1995) concluded that the psychological contract of employees working part-time were less fulfilled compared to full-time working employees. Based on the research of Rousseau (1990) of newcomers perceptions of their psychological contract, organizational tenure will be controlled for.

Since this research makes use of existing data within organizations, organization is included as control variables as well. A further elaboration on the use of nested data can be found in the method section of this study.

Method

Research Set-up

First of all it needs to be mentioned this study comprises a secondary data analysis, which implies that the data used in this study is not obtained by the researcher. Data of several researchers is combined to shed some light on the hypotheses mentioned in the theoretical framework. The researchers all used a cross-sectional survey to gain data: the questionnaire which is used can be found in Appendix A on page 62.

In total, twenty organizations are included. Important to mention is that the data is nested which indicates a multi-level structure. As a result, observations are not independent. ICC1 will be used to check if the organization does have an impact on the employees' scores on the different variables. In short, this secondary data analysis will help to develop insight regarding the four exchange relationships and the consequences on psychological contract fulfillment, affective commitment and turnover intention.

Before merging the data, the four distinct datafiles are analyzed. The first datafile, which was originally composed to get more insight into talent management practices, consists of 1.453 respondents working for fourteen organizations. Of these respondents 27.7% is men: the mean age of the employees in the datafile is 35.97. More information is only available for seven out of the fourteen organizations. The response rate for these seven organizations was 41%, representing 782 participants. Information about Datafile 2 is limited. The file consists of only one organization, of which 170 employees were included in the research. The third datafile is created by two students, who compared the psychological contract of part-time and full-time employees and shed some light on the effect of socialization tactics of newcomers' psychological contracts. In total, 716 respondents within three organizations were included in their research (response rate of 31.5%). A fourth organization was excluded in the analyses of the two students, but will be included in this research. Almost all of the employees working in this organization, operating in both residential and non-residential building, participated in the research project. By including this organization, the number of respondents within Datafile 3 increased to 746. In Datafile 4 one single organization was included. Within this healthcare organization, 432

respondents participated. The relatively small response rate in this research (26.5%) could be ascribed to the fact that the questionnaires were distributed during summer holidays. The majority of the respondents were women (99%): the mean age was approximately 46 years. The data was originally gathered to get an indication which (HR-)practices, aimed at work-life balance, can best be applied to increase work-life balance and decrease psychological contract violation and increase psychological contract fulfillment.

Before combining the data of the researchers, the separate files were checked on errors. After deleting the errors, it was analyzed to what extent all researchers used the same values for the variables. Some problems were found. First of all, there was no midpoint in the questions on both the employer and employee obligations in Datafile 4. In other words, respondents in this research had only four answer categories (not at all, slightly, moderately, to a great extent), while the respondents in the other three files had another option in between slightly and moderately: somewhat. Values of the items measuring employer and employee obligations within Datafile 4 were changed in a way that the score of four corresponds to "moderately" instead of "to a great extent". Another difficulty with the items measuring employer and employee obligations was found. Not all researchers used the same set of questions. For instance, the scale of employee obligations in Datafile 1 consists of eleven items, while in Datafile 4 only seven items were used to measure employee obligations. For this scale and all scales measuring employer obligations, it was checked which items were used by all researchers. Only the items that were present in all datafiles were selected to use in the final dataset.
Besides, the names of all items in the four datafiles were changed in such, that one item in all four files had the same name and value. For instance, the item measuring the rewards for exceptional performance in the four datafiles was named "PC_RewardsC."
Concerning the question measuring education, the four researchers used different answer categories. It is chosen to divide all answer options in three categories: low, mediate and high education. The distinction in these three categories is displayed in Table 3, which is showed on the next page.

Table 3: Three categories of education

Level	Type of education
Low	No degree; primary education; special education; lower general vocational education;
Mediate	Intermediate vocational education; higher general secondary education; pre-university education
High	Higher vocational education, University, PhD

Another control variable showed some problems. Instead of age, respondents in some of the organizations that made up Datafile 1 are asked for their year of birth. By checking in which year the research in these organizations was done, the age of the respondents could be discovered.
After the problems mentioned above were solved, it was checked whether the researchers of the different datafiles recoded variables. There are for instance some questions concerning affective commitment that need to be recoded. While the specific items that needed recoding were already recoded in Datafile 1, these items were not recoded in Datafile 2 and 3.

Description of Test Subjects

In this research the focus is on the employees' perception of the psychological contract. In total, 2801 employees participated in the research project. Statistics of the sample indicate most of the respondents were women (53.9%). The ages of the respondents ranged from 18 to 68 years, with a mean of 40.93 (*SD* = 10.76). Most of the employees participated in the research had a high degree of education (1742 respondents, 66.8%) or medium degree of education (697 respondents, which is 25.7%). The remaining part of the respondents in the sample had no or a low degree of education (170 respondents, 6.5%). The mean tenure of the respondents was approximately 15.84 (*SD* = 10.591) and ranged from zero to 51. On average, the amount of contract hours per week was 28.98 (*SD* = 10.694). Most of the respondents in the sample had no managerial job (55.9%).
Twenty organizations are included in the research. Most of the respondents worked in the healthcare sector (17.6%), followed by logistics, warehousing or communication (10.5%). Underrepresented in the sample were the business branch (2%) and mineral production (1%).

Instruments, Validity and Reliability

In this paragraph, the instruments that were used to operationalize the core concepts are clarified. Operationalization is the procedure to make concepts measureable, using empirical evidence. All of the questions in the research are part of the NTPCV (Nieuwe Tilburgse Psychologisch Contract Vragenlijst) of Freese, Schalk and Croon (2008).

Besides, factor analysis was used to determine the underlying structure of the concepts. All the items were subjected to principal component analysis (PCA) by the use of SPSS. Internal consistency is the degree to which the items of the scale are all measuring the same underlying attribute. Internal consistency was measured by Cronbach's coefficient alpha. The Cronbach's alpha coefficient provides an indication of the average correlation among all of the items of a scale. A minimal level of .7 is recommended.

Appendix A on page 62 shows the SPSS output of the reliability analyses.

Perceived Type of Exchange Relationship: For conducting the type of exchange relationship employees perceive, both employee and perceived employer obligations need to be clear. First of all, employee obligations were measured by the use of 21 items, subdivided in in-role obligations and extra-role obligations. One of the questions was stated as follows: "In the employment relationship you have opinions on what you should offer the organization. To what extent do you feel obliged to offer your organization the flexibility to change positions?" Answers were ranged from "not at all" to "to a great extent." For all respondents, the mean score on the 21 items measuring employee obligations will be calculated. Based on this mean score on the total scale, individuals are divided into the low- and high- employee obligations group. This division is based upon a median-split analysis on the mean score on the overall employee obligations scale.

In other words, the mean score on the total scale measuring employee obligations determines if someone is in the high- or low- employee obligations group.

Perceived employer obligations were measured by means of six categories: job content (6), career development (6), social atmosphere (5), organizational policies (8), work life balance (4) and rewards (6). The amount of items that measures each concept is showed between the brackets. One of the six questions measuring rewards was states as follows: "In the employment relationship employees have expectations about what the organization will offer. To what extent is your organization obliged to offer you rewards for exceptional performance?" In line with the

employee obligations, the answer scales were ranged on a five point Likert scale from 1 (“not at all) to five (“to a great extent”). For each respondent, a mean score will be calculated for all of the six categories measuring perceived employer obligations. The total score on perceived employer obligations is determined by the mean of the means on the six categories mentioned before. Median-split analysis differentiates respondents scoring low- or high on the total score on perceived employer obligations.

Based on these two median split analyses, each individual can be assigned to one of the four exchange relationship types. For instance, when the employee scores above the median high on both employer and employee obligations, he or she will hold a mutual high psychological contract. When the mean score on both variables is lower than the median, the psychological contract can be classified as quasi-spot. Moreover, the psychological contract of a respondent with a mean score on perceived employer obligations below the median and a mean above the median on the scale measuring perceived employee obligations can be seen as an employer under-obligation psychological contract. A psychological contact can be classified as employer over-obligation contract when the respondent has a high (above median) score on perceived employer obligations and a score below the median on employee obligations.

As mentioned before, median-split analysis is used to make a distinction in high and low scores on both employer and employee obligations. It is decided to use median-split analyses since it is in line with earlier research on exchange types by De Jong et al., (2009) and Shore and Barksdale (1998). To use this variable in regression analysis, dummy variables need to be composed for the different exchange types. Since the authentic variable consists of four categories, three dummy variables need to be created. In this case, the employment relationship that can be typified as quasi-spot is selected as the reference category.

Based on the differentiation in the four exchange types, it is possible to assign respondents either to the balanced or unbalanced exchange relationship. Whether the mutual high and quasi-spot psychological contract can be classified as balanced, the other two types of the exchange relationship (employer under-obligation and employer over-obligation) show an unbalanced exchange between employer and employee.

After clarifying how individuals are assigned to the four exchange types, it is possible to compare these groups on characteristics as age, tenure and contract hours. This comparison can be found in Appendix B on page 66.

Fulfillment of the psychological contact: The employees' perception towards the employers' fulfillment of their psychological contract is measured by the use of six items. As mentioned before, six categories of organizational obligations were included in the research. For each category, one question regarding the fulfillment was asked. Questions were assessed by a five point Likert scale, ranging from "not at all" to "to a great extent". A sample question measuring fulfillment is as follows: "To what extent did your employer fulfil the obligations with regard to career development?"

Before factor analysis of the scale is conducted, the correlation matrix of the items underlying the fulfillment scale is checked for correlations above .3. The correlation matrix indicates that all of the correlations between the items are above .3. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) is above .6 (.858) and Barlett's Test of Spherticity is significant, which verifies that the data is suitable for the use of factor analysis. Based on both the amount of components with eigenvalues above one and the Scree plot, it can be concluded that the fulfillment scale consists of one single factor. This single factor explains 55.11% of the variance.

After the internal consistency, the reliably of the scale is checked by the use of Cronbach's alpha. The Cronbach's alpha of the fulfillment scale showed a value of .84, indicating a good internal consistency. The values of the corrected-item total correlation of the items, which gives an indication of the degree each single item correlates with the total score, are all acceptable with a minimum of .56. Alpha will not increase by deleting one or more items of the scale.

Affective Commitment: In measuring the affective commitment of respondents, seven statements were formulated, for instance the item "*I really care about the fate of this organization*." The answer categories were ranged from one (totally disagree) to five (completely agree).

Before both validity and reliability tests were carried out, three items that make up the scale (Affective Commitment C, F and G) were recoded. In order to test if the scale is suitable for factor analysis, both the Barlett's Test of Sphericity and KMO were used. Since the KMO value is exceeding the recommended value of .6 (.84) and the value of Barlett's test is significant, factor analysis is appropriate. Both Kaiser's criterion and the Scree test (Catell, 1966) indicated a one component solution, accounting for 50.07% of the variance. All of the loadings are above .4 and can be considered as quite strong (Pallant, 2007).

Additionally, the Cronbach's alpha of .83 indicates a good internal consistency. The alpha in this study is exactly in line with the findings of Gilder, Van den Heuvel and Ellmers (1997)**.** All values on the corrected item-total correlation are above the minimum value of .3. Alpha would not increase by deleting one or more items. As a result, all of the items are included in the regression analysis.

Turnover Intention: Intention to leave was measured by eight items in the NTPCV questionnaire. Before the questions were asked, participants had to read the following introductory sentence: "*The following statements relate to your perception of the future with this employer. Please indicate to what extent you agree with the following statements.*" One of the statements that follow this introduction was: "*If I had a chance I would change to some other organization*." Answers were posed on a five point Likert scale ranging from totally disagree to completely agree.

Before both the validity and reliability of the scale are measured, questions one (Turnover Intention A) and six (Turnover Intention F) are recoded in a way that all the variables can be interpreted in the same way. Barlett's test and the KMO value indicates that factor analysis can be used in order to check for subscales (.90). Kaiser's criterion and the Scree test (Catell, 1966) revealed the presence of one component with an eigenvalue above one, which explained a total of 54.49% of the variance. Loadings on the component ranged from .54 ("I plan to continue to work here until I retire") to .84 ("If I had a change, I would change to some other organization.")

The reliability of the scale was measured by the use of Cronbach's alpha. Research of Freese (2007) reported a strong internal consistency of this variable, showing an alpha of .86. In the current study, Cronbach's alpha showed a value of .87 which also indicates a very strong internal consistency. All of the items showed a corrected-item total correlation higher than .3. Although, the Cronbach's alpha would be even higher by removing one item ("I plan to continue to work here until I retire"). Since the increase of the alpha can be neglected and the value of alpha already indicates a strong internal consistency, it is decided not to delete this specific item.

Control Variables*:* In order to examine if there were variables that could affect the conceptual model, several control variables were included. These were gender, age, educational level, contract hours, organizational tenure, sector, organization and organizational size. Age, organization, organizational tenure and organizational size were measured by the use of one single open-ended question. Gender was measured by use of the question "what is your gender?"

Also the educational level of the employee was measured by the use of one single question: "What is your highest completed certificate?" This categorical variable had eight answer options, which were translated into three groups: low, medium and high educational level. Two dummy variables were created to use the variable in regression analyses. High educational level served the role of reference category. The number of contract hours was measured by the question: "How many hours do you work a week, according to your contract?" The final control variable, which is sector, was measured by the question: "What is the primary sector in which the organization operates?" This categorical variable consists of twelve answer categories.

Statistical Analysis

In order to test the conceptual model and hypotheses, SPSS is used. The first four hypotheses in the research, which are summarized in the first conceptual model, are analyzed by use of regression analysis. Regression analysis will be used to check if these hypotheses are significant different compared to the H0 hypotheses. One of the general assumptions of regression analysis is that all of the observations that make up the data need to be independent of one another. In other words, every single observation must not be influenced by another observation (Pallant, 2007). Since this study makes use of nested data, the independency of observations is hard to ensure. Employees are nested within their organizations. In order to check if the respondents' answers are independent of their organization, ICC1 (intra-class correlation coefficient) will be used. ICC1 checks how much of the variance in a particular variable is shared within groups. More specific, it analyses the consistency of results across respondents on a particular item (Gerhart, Wright, McMahan & Snell, 2000).

Table 4: Intraclass Correlation Coefficients

Variable	ICC1
Psychological contract fulfillment	.111
Affective commitment	.050
Turnover intention	.040

Results from the one-way analysis of variance are converted into ICC1 values and displayed in Table 4. Based on the restrictions of Bliese (as cited in Klein & Kozlowski, 2000) all ICC1 values for the variables measuring psychological contact fulfillment, affective commitment and

turnover intention are sufficient. The preceding indicates that the organization in which an employee works does not determines the psychological contract fulfillment, affective commitment or turnover intention of an individual.

Since the independent variable which classifies the four exchange types consists of multiple groups, one-way between-groups analysis of variance (ANOVA) will be used. This technique indicates whether there are significant differences in mean scores on the dependent variable across groups. Afterwards, post-hoc tests will be used to exactly identify which groups are significantly different from each other (Pallant, 2007).

In the current study, the relationship between the type of exchange relationship and affective commitment is expected to be mediated by perceived psychological contract fulfillment, whereas the effect of perceived psychological contract fulfillment on turnover intention is expected to be mediated by affective commitment. Because the model consists of a combination of multiple concepts, Baron and Kenny (1986) recommend using series of regression analyses in order to test the conceptual model. Four conditions are needed to establish mediation. First of all, the independent variable needs to have a significant effect on the dependent variable. Second, a significant relationship between the independent variable and mediator is needed. Third, the mediator needs to significantly affect the dependent variable. The fourth condition proposes a reduced strength of the relationship between the independent and dependent variable after the inclusion of the mediating variable into the model. In the case the independent variable does not influence the dependent variable upon regressing the dependent variable on both the independent variable and the mediator, full mediation is demonstrated. If this is not the case, partial mediation is established.

The mediating role of affective commitment in the relationship between psychological contract fulfillment and turnover intention will be tested by the use of the same steps. First, the direct effect will be tested. Second, the effect of psychological contract fulfillment on affective commitment will be analyzed. Afterwards, the relationship between affective commitment and turnover intention will be tested. If the first three conditions of Baron and Kenny (1987) are met, a Sobel (1982) test will be conducted to check for the fourth condition.

With respect to the possible mediating role of psychological contact fulfillment on the relationship between the type of exchange relationship and affective commitment, these steps are

not sufficient. In this research the independent variable based on the competing perspective, which determines the types of employment relationships, is multicategorical. A Sobel (1982) test is only applicable when the independent variable is either dichotomous or continuous. A recently published research of Hayes and Preacher (2011) shed some light on the use of a multicategorical independent variable in mediation analysis. This approach makes use of two linear models: one for the mediator (psychological contract fulfillment) and one for the dependent variable (affective commitment). These models provide three coefficients quantifying the differences between the groups on psychological contract fulfillment and a single coefficient measuring the effect of psychological contact fulfillment while statistically equating the groups on average on the independent and mediating variable.

Results

In this section the results of the analyses will be presented. First of all, attention will be paid on the descriptive statistics of the sample. The correlation matrix, which shows the Pearson product-moment correlation coefficients, will be used. Means, standard deviations and correlations between the variables will be analyzed. Continuing, the hypotheses will be tested using analysis of variance (ANOVA) and multiple regression analysis.

Descriptive Statics

For all variables included in the research, means, standard deviations and bivariate correlations are presented in Table 5 on page 36. Based on the research of Cohen (1988) correlations can be interpreted as small (r =.10 to r = .29), medium (r =.30 to r = .49) or large (r = .50 to r = 1.0).

Since the relationships between perceived psychological contract fulfilment, affective commitment and turnover intention are part of the first conceptual model, the correlations between those variables will be analyzed first. As can be seen in Table 5, psychological contact fulfilment is significantly correlated with both affective commitment (r = .503) and turnover intention (r = -.400). Moreover, affective commitment and turnover intention are highly negatively correlated (r = -.625).

It needs to be mentioned that turnover is highly correlated with age (r = -.224), indicating that at a higher age individuals are less likely to have turnover intentions. Turnover intention is also correlated with tenure (r = -.193), contract hours (r = .070) and educational level (r = -.076; r = -.115). A Significant correlation coefficients for affective commitment and the number of contract hours a week was found (r = .097). Another interesting correlation is the association between contract hours and perceived psychological contract fulfilment, which indicates that employees who work more hours a week are more likely to perceive feelings of fulfilment (r = .097). For psychological contract fulfillment, more significant correlations are found for gender (r = .080), age (r = -.119) and the two educational level dummy variables (r = -.067; r = -.065).

Table 5: Means, standard deviations and intercorrelations (n = 2801)

	Variables	M	SD	1	2	3	4	5	6	7	8	9	10
1	Turnover intention	2.286	.743	-									
2	Affective commitment	3.898	.569	-.625**	-								
3	Psychological contract fulfillment	3.545	.592	-.400**	.503**	-							
4	Balance	.628	.483	-.002	-.001	0.13	-						
5	Gender	.460	.499	.022	-.032	.080**	-.005	-					
6	Age	40.931	10.765	-.224**	-.010	-.119**	-.016	-.019	-				
7	Tenure	15.84	10.591	-.193**	.051	-.091**	-.017	.077**	.823**	-			
8	Contract hours	28.98	10.694	.070**	.097**	.124**	-.022	.577**	-.306**	-.203**	-		
	Educational level												
9	Low educational level	.062	.247	-.076**	.025	-.067**	.022	-.051**	.203**	.181**	-.189**	-	
10	Mediate educational level	.267	.443	-.115**	-.054	-.065**	-.025	-.164**	.154**	.202**	-.323**	-.159**	-

Notes: ** : p < .01; *: p < .05; gender: 1 – man, 0 – woman; 1 – balance, 0 – unbalance. Reference groups: high educational level (education). Parameters with respect to the variables measuring education are quantifications relative to the reference group.

While Table 5 displays the correlation coefficients between the variables for the total sample, Appendix C on page 68 shows the coefficients per exchange type. For all exchange types, turnover intention, affective commitment and perceived fulfilment are significantly correlated. Moreover, the correlations coefficients are all in the expected direction. Interesting is the significant correlation between contract hours and turnover intention in the employer under-obligation psychological contact (r = .240). No significant correlation between those variables was found for one of the other exchange types. The preceding indicates that when the employee perceives the psychological contract as employer under-obligation, he or she will have a higher intention to leave the organization when working more hours a week.

The correlation between education and psychological contract fulfillment, affective commitment and turnover intention highly differs per exchange type. For instance, when low educational level (as compared to high educational level) in the mutual high exchange type is significant related to affective commitment (r = -.210), a small positive (but not significant) effect was found the quasi-spot psychological contract (r = .101).

As last, it needs to be mentioned that, age, tenure and contact hours do all significantly influence psychological contact fulfillment in the employer over-obligation psychological contract, while only contract hours shows a (small) significant effect for the employer under-obligation contract (r = .123).

The differentiation in balanced and unbalanced exchange relationship showed almost no correlation with psychological contract fulfilment (r = .013), affective commitment (r = -.001) and turnover intention (r = -.002). These correlation coefficients indicate that the distinction in balanced and unbalanced psychological contracts does not correlate to fulfilment, affective commitment and turnover intention. Moreover, the marginal correlation coefficients between balance and the affective commitment and turnover intention indicate no relationship at all (Pallant, 2007). None of the control variables is strongly or significantly correlated with balance.

When analyzing Tables 20 and 21, which are displayed in Appendix C, it is interesting that the correlation between psychological contact fulfilment and both affective commitment and turnover intention is somewhat stronger for the balanced exchange relationship (r = .523, r = -.406) as for the unbalanced exchange type (r = .468, r = -.382).

Besides, it needs to be mentioned that some of the control variables that are included in this research are strongly correlated to each other. The correlation coefficient for gender and contract hours indicates that men are more likely to work more hours compared to women (r = .577). Gender is also significant related to tenure (r = .077), which states that men are more likely to have a higher tenure. With respect to age, a medium (negative) correlation is found for the association with contract hours (r = -.306). Educational level, distinguished in three level (low, mediate and high education) and measured by the use of two dummy variables (respectively low and mediate), is showed to correlate significantly to all other control variables, which include age (r = .203; r = .154), gender (r = -.051; r = -.164), tenure (r = .181; r = .202) and contract hours (r = .189; r = .323).

Testing the Hypotheses

In order to test the hypotheses, both variance analysis and hierarchical multiple regression analysis were used. Detailed information for all analyses can be found in the tables presented in this section.

Psychological contract fulfillment, affective commitment and turnover intention (H1 to H4)

The first hypothesis which was retrieved from the conceptual model follows: *"A positive relationship exists between psychological contact fulfillment and affective commitment."* Since the number of contract hours is strongly significant related to both psychological contract fulfillment and affective commitment, contract hours will be included as a control variable. Regression analysis showed a significant positive effect ($F = 126.751$, $\beta = .499$, $p < .01$). The value of the R^2 is .254, indicating that psychological contract fulfillment explains 25.40% of the variance in affective commitment. According to the work of Cohen (1988), this relationship between contract fulfillment and affective commitment can be classified as a strong effect.

A significant effect is also found for the second hypothesis, which proposed a negative relationship between affective commitment and turnover intention ($F = 255.328$, $\beta = -.637$, $p < .01$). In line with the relationship between psychological contact fulfillment and affective commitment, the contract hours is used as a control variable. Based on Cohen's (1998) work on the strength of relationships, the effect of affective commitment on turnover intention can be classified as strong. The R^2 of .407 indicates that affective commitment explains 40.70% of the

Table 6: Results of multiple regression analyses: Hypotheses I & II

	Affective Commitment				*Turnover Intention*			
	Model 1		Model 2		Model 1		Model 2	
	β	*p*	β	*p*	β	*p*	β	*p*
Psychological contract fulfillment			.499	.000				
Affective commitment							-.637	.000
Contract hours	.097	.008	.035	.268	.070	.056	.132	.000
R^2	.009		.254		.005		.407	
R^2 change	.009		.245		.005		.402	
F	7.115		126.751		3.650		255.328	
F change	7.115	.008	244.062	.000	3.650	.056	504.537	.000

Table 7: Results of multiple regression analyses: The mediating role of affective commitment

	Turnover Intention					
	Model 1		Model 2		Model 3	
	β	*p*	β	*p*	β	*p*
Psychological contract fulfillment	-.400	.000	-.115	.001	-.139	.000
Affective commitment			-.567	.000	-.568	.000
Contract hours					.082	.007
Low educational level					-.078	.007
Medium educational level					-.141	
R^2	.160		.400		.438	
R^2 change	.160		.240		.038	
F	141.719		247.610		115.513	
F change	141.719	.000	297.100	.000	16.871	.000

variance in employee's turnover intention, which is a significant change compared to the model with the control variable as a predictor.

Since psychological contract fulfillment is significantly affecting affective commitment, and affective commitment has a significant effect on employees' turnover intention, it is tested if affective commitment can be seen as a mediator between psychological contract fulfillment and turnover intention. Therefore, it needs to be tested whether psychological contract fulfillment has a direct effect on the intention to turnover. After controlling for both educational level and contract hours, regression analysis argues that a significant relationship between these variables exists ($F = 141.719$, $\beta = -.400$, $p < .01$). When affective commitment is added to the model, the beta of fulfillment decreases ($\beta = -.115$). A Sobel test (1982) identifies that affective commitment indeed mediates the effect between psychological contract fulfillment and turnover intention, since the z-value does exceed -1.96 (z-value = -12.786, $p < .001$). Based on these findings, both hypotheses three and four are accepted.

In Figure 3 displayed below, the first conceptual model is displayed. This figure integrates the conceptual model as elaborated in the theoretical framework and the results of the regression analyses. The absence of dotted lines indicates that all relationships are significant and as hypothesized in the theoretical part of this research.

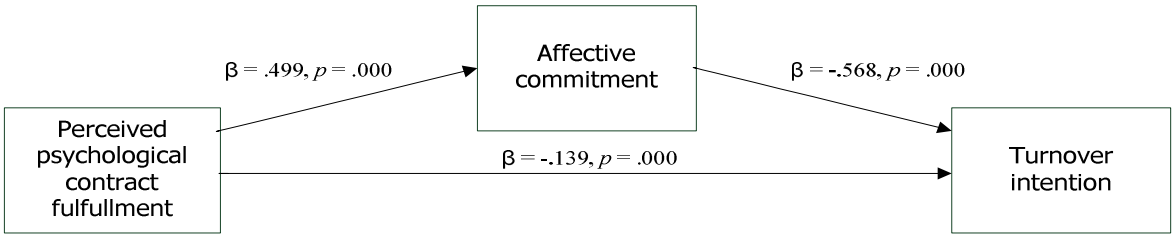


Figure 3: Perceived psychological contract fulfillment, affective commitment and turnover intention

Social Exchange theory: Balanced versus unbalanced exchange relationships (H5, H6, H7)

To test if the differentiation in balanced an unbalanced psychological contract significantly affects psychological contract fulfillment, affective commitment and turnover intention, regression analysis is used. The fifth hypothesis stated that when the employment relationship between employer and employee is perceived as balanced, psychological contract fulfillment is more likely. Nevertheless, no significant effect was found (F =.412, β = .013, $p > .05$). Only a marginally 1.30% of the variance in psychological contact fulfillment can be explained by balance ($R^2 = .013$). Therefore, the hypothesis is rejected. The hypotheses testing for the effect of balance on affective commitment (F = .001, β = -.001, $p > .05$) and turnover intention (F = .009, β = -.002, $p > .05$) needs to be rejected as well.

Table 8: Results of multiple regression analyses: Social Exchange Theory

	Psychological contract fulfillment				*Affective Commitment*				*Turnover Intention*			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	β	*p*	β	*p*	β	*p*	β	*p*	β	*p*	β	*p*
Balance			.011	.680			-.049	.181			-.012	.630
Contract hours	.203	.000	.203	.000	.097	.008	.100	.006	.037	.158	.037	.161
Age	-.076	.004	-.076	.004					-.230	.000	-.229	.000
R^2	.052		.052		.009		.012		.057		.057	
R^2 change	.052		.000		.009		.002		.057		.000	
F	38.008	.000	25.380	.000	7.115	.008	4.456	.012	42.112	.000	28.137	.000
F change	38.008	.000	.170	.680	7.115	.008	1.790	.181	42.112	.000	.232	.630

In this research, a balanced exchange relationship between employer and employee actually means that the employee perceives the psychological contract as either quasi-spot or mutual high. Nevertheless, the data provides another way of measuring balance, which can be called the net-balance. How this variable can be calculated can be found in Appendix D on page 70. When the net-balance variable is used instead of the dichotomous distinction in unbalanced and balanced exchange relationships, regression analyses showed a significant effect of balance on psychological contract fulfillment (F = 11.240, β = .051, $p < .05$). However the significance of the effect, the strength of the effect of balance on psychological contract fulfillment can be classified as trivial (Cohen, 1998). Nevertheless, after controlling for education, no significant

effect could be found for the relationship of net-balance on affective commitment (F = 1.514, β = .054, p > .05). In line with this, the hypothesized effect of net-balance on turnover intention needs to be rejected as well (F = 15.753, β = -.024, p > .05).

With respect to the mediating effect of psychological contract fulfillment in the balance-affective commitment relationship, it needs to be concluded that fulfillment of the psychological contract does not serve a mediating role. One of the conditions for mediation is a direct effect of the independent (balance) on the dependent variable (affective commitment), which is not found in the research.

The dotted lines in Figure 4 displayed below indicate no significant relationships of the distinction in balanced and unbalanced exchange types with perceived psychological contract fulfillment, affective commitment and turnover intentions.

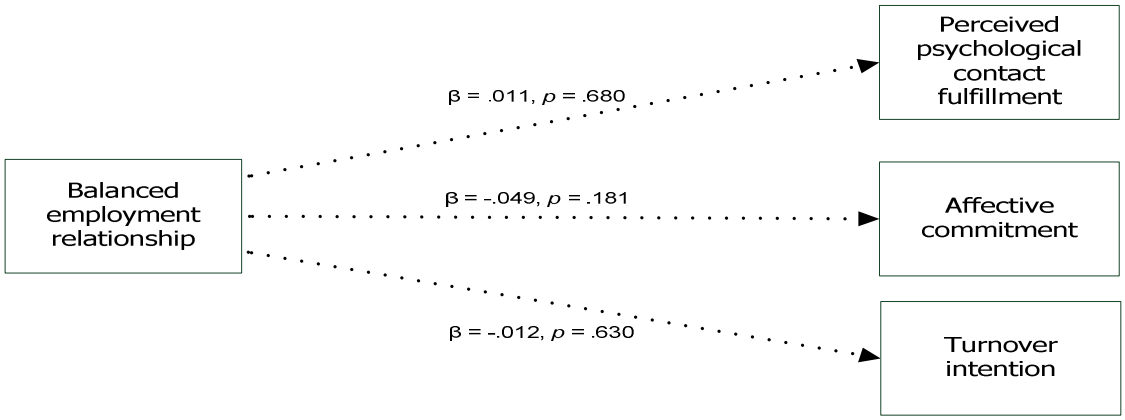


*Figure 4:*Model based on the Social Exchange Theory

Competing view: Four diversified exchange relationships (H8, H9, H10).

As mentioned before, the competing view proposes different outcomes for the four types of employment relationship between employer and employee. Based on regression and ANOVA analysis it will be concluded if the four exchange types have diversifying effects on psychological contract fulfillment, affective commitment and turnover intention.

Regression Analysis

First of all, the relationship between the four types and psychological contact fulfillment will be investigated. Gender, age, contract hours and education will be used as control variables. After

controlling for those variables, the beta's for the employer under-obligation (F = 15.136, β = .076, $p > .05$) and mutual high psychological contract (F = 15.136, β = .182, $p > .001$) are significant. The preceding indicates that employees, who perceive mutual high or employer under-obligation psychological contracts, will perceive a significant higher level of psychological contact fulfillment compared to the reference group (the quasi-spot psychological contact). Therefore, it can be concluded that the type of employment relationship between employer and employee significantly affects the level of perceived psychological contract fulfillment. The model of the exchange relationships together with the control variables explains for 7.5% of the variance in psychological contract fulfillment ($R^2 = .075$), which is a change of .024 compared to the model with only the control variables included.

Contract hours was the only control variable included in examining the relationship between the exchange types and affective commitment. Regression analysis indicates there were significant differences between the quasi-spot psychological contract, which is the reference category, and mutual-high (F = 9.987, β = .112, $p > .001$) and employer under-obligations psychological contracts (F = 9.987, β = .173, $p > .01$). In total, the model explained 5.1% of the variance in affective commitment ($R^2 = .051$).

After reflecting on the relationships of the type of exchange on psychological contract fulfillment and affective commitment, some light was shed over the effect of the exchange types on turnover intention. Age, tenure, contract hours and education are used as control variables and included in the first model. In the second model the exchange types are added. Outcomes of the regression analysis indicate none of the three exchange types significantly differs from the quasi-spot psychological contract on turnover intention. Together with the control variables, the type of exchange relationships predicts 6.9% of the variance in turnover intentions ($R^2 = .069$).

Table 9: Results of multiple regression analyses: The Competing View

	Psychological Contract Fulfillment				*Affective Commitment*				*Turnover Intention*			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	β	*p*	β	*p*	β	*p*	β	*p*	β	*p*	β	*p*
Employer over psychological contract			.054	.065			-.046	.224			.035	.335
Employer under psychological contract			.076	.010			.173	.000			-.035	.337
Mutual high psychological contract			.182	.000			.112	.003			-.041	.291
Age	-.076	.005	-.069	.011					-.218	.000	-.208	.000
Contract hours	.167	.000	.135	.000	.097	.008	.090	.011	-.045	.163	-.034	.302
Low educational level	-.046	.083	-.043	.099					-.106	.001	-.106	.001
Medium educational level	-.039	.147	-.033	.216					-.113	.000	-.113	.000
Gender	.052	.092	.040	.187								
Tenure									.072	.054	.077	.039
R^2	.053		.075		.009		.051		.064		.069	
R^2 change	.056		.024		.009		.042		.064		.004	
F	16.690	.000	15.136	.000	7.115	.008	9.987	.000	13.855	.000	9.273	.000
F change	16.690	.000	11.895	.000	7.115	.008	10.851	.000	13.855	.000	1.596	.189

ANOVA

ANOVA indicates whether there are significant differences in the mean scores on the dependent variable across groups. In this research, the respondents are subdivided into four groups based on the exchange relationship with their employer. Scores on the three outcome variables, which are psychological contract fulfillment, affective commitment and turnover intention, indicates a statistically significant result somewhere among the groups ($p < .001$). In other words, ANOVA analysis indicates that the four groups significantly differ on the mean score of all three outcome variables ($p < .001$). Table 10 on page 45 contains the results of the ANOVA.

First of all, a statistical difference at the $p < .001$ level was found in the mean score on psychological contract fulfillment for the four groups ($F = (3, 2308) = 34.125$, $p < .001$). Despite the statistical difference between groups, the actual difference is quite small. The mean scores ranged from 3.401 for the quasi-spot psychological contract to 3.584 for the employer

Table 10: One-way ANOVA: differences across exchange types on psychological contract fulfillment, affective commitment and turnover intention

		Psychological Contact Fulfilment		**Affective Commitment**		**Turnover Intention**	
		M	SD	M	SD	M	SD
1.	*Quasi-spot*	3.401	.487	3.855	.550	2.336	.693
2.	*Employer under*	3.584	.529	4.071	.548	2.140	.702
3.	*Employer over*	3.477	.565	3.739	.556	2.455	.779
4.	*Mutual high*	3.543	.639	3.990	.585	2.240	.767
	F-value	34.125***		11.898***		15.382***	
	Significant comparisons	2 > 1, 3, 4 4 > 1, 3		2 > 1, 3 4 > 1, 3		3 > 1, 2, 4 1 > 2	

Notes: Multiple comparisons were computed with Tukey's Studentized Range (HSD) Test.
***p <.001, **p < .01, *p < .05.

under-obligation psychological contract. In line with this, the effect size of .042 needs to be considered as a small effect (Cohen, 1988). Post-hoc comparisons using Tukey's HSD test indicates that the mean score on psychological contract fulfillment for the mutual high psychological contract was significantly different from the quasi-spot psychological contract, the employer over- and the employer under-obligation psychological contract. In line with this, the mean scores on psychological contract fulfillment for the employer under-obligation psychological contact group significantly differ from the mean score of all other groups.

Also while comparing the four groups on the mean score of affective commitment, a statistical difference was found (p < .001). Mean scores of the scale ranged from 3.739 for the employer over-obligation psychological contact to a mean score of 4.071 for the employer under-obligation psychological contract. The effects size, calculated by dividing the sum of squares for the between-groups (11.119) by the total sum of squares (291.154), resulting in a value of .038, can be classified as small (Cohen, 1988). Post-hoc comparisons indicate that the mean score on affective commitment differs between employees who perceive their psychological contact as quasi-spot and mutual high. Besides, the employer under-obligation psychological contract significantly differs from the employer over-obligation and quasi-spot psychological contact.

And last, mean scores for affective commitment significantly differ for the employer over-obligation and mutual high psychological contract.

Furthermore, the mean score for all groups on the intention to turnover was statistically significant (p <.001). The highest mean score for turnover intention was found for employees with employer over psychological contacts (M = 2.455), the lowest mean score for the intention to turnover was found for the employer under-obligation psychological contract (M = 2.140). The post-hoc comparisons make clear that mean scores for the turnover intention of employees with an employer over-obligation psychological contract significantly differs from all other exchange relationship types. Additionally, a significant difference was found between the mean of the quasi-spot psychological contact and the employer under-obligation psychological contact.

Mediation Model: Exchange types

As mentioned before, the procedure to test for the mediating effect of psychological contract fulfillment in the relationship between the type of exchange relationship and affective commitment is based on recent work of Hayes and Preacher (2011). From the ANOVA analysis it has already been verified that the four exchange types significantly differ on the mean scores of psychological contact fulfillment and affective commitment. In the words of Baron and Kenny (1986), two of the four conditions that are needed to establish mediation are present: the independent variable (exchange types) influences the mediator (psychological contact fulfillment) and the dependent variable (affective commitment). The third condition, which is the relationship between the mediator and affective commitment, has already been tested in the first hypothesis and was found to be significant. A reduced strength of the relationship between dependent and independent variable after the addition of the mediator into the model is the fourth condition needed. Table 11 on the next page clarifies the reduced strength of the exchange types while adding perceived psychological contract fulfillment to the model.

Therefore, two Sobel tests were conducted to test if psychological contract fulfillment actually mediates the relationship between the exchange types and affective commitment. For both the mutual high (z-value = 5.781, p < .001) and employer under-obligation psychological contract (z-value = 3.967, p < .001) the Sobel test is significant, indicating that psychological contract fulfillment is a mediator in the relationship of the exchange types on affective commitment.

Table 11: The mediating effect of affective commitment

	Affective Commitment					
	Model 1		Model 2		Model 3	
	B	*p*	β	*p*	β	*p*
Employer over psychological contract			-.039	.352	-.055	.134
Employer under psychological contract			.138	.001	.076	.043
Mutual high psychological contract			.098	.027	-.006	.889
Psychological Contract Fulfillment					.485	.000
Age	-.025	.536	-.045	.250	.000	.999
Contract hours	.052	.211	.017	.691	.005	.901
Low educational level	.033	.397	.029	.459	.052	.130
Medium educational level	.009	.827	-.004	.929	.018	.613
R^2	.004		.029		.249	
R^2 change	.004		.025		.221	
F	.708	.587	3.107	.003	30.610	.000
F change	.708	.587	6.286	.000	216.776	.000

In Figure 5 the model based on the competing view is displayed. This model integrates both the conceptual model as elaborated in the theoretical framework and the results of regression and ANOVA analyses. The next paragraph will make the results of this section more apparent.

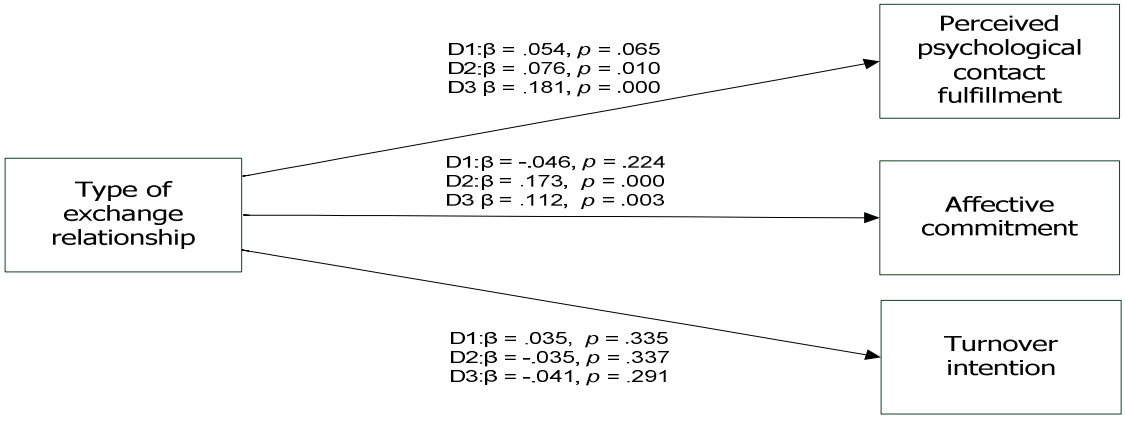


Figure 5: Model based on the Competing View

In the two tables below, the hypothesized and true effects of the type of exchange relationships on perceived psychological contact fulfillment, affective commitment and turnover intentions are displayed. While Table 12 represents the hypothesized relationships, Table 13 summarized the results of the analyses on hypotheses five to ten. It needs to be mentioned that the "high" or "low" scores are relative. Sometimes, as in the case with the Social Exchange Theory for affective commitment, the difference between "low" and "high" is negligible.

Table 12: Overview of the relationships as hypothesized

	Social Exchange Theory			**Competing View**		
Type of Exchange	Contract Fulfillment	Affective Commitment	Turnover Intention	Contract Fulfillment	Affective Commitment	Turnover Intention
Quasi-spot	High	High	Low	Low	Lowest	Highest
Employer under	Low	Low	High	Low	Low	High
Employer over	Low	Low	Highest	High	High	Low
Mutual high	High	High	Low	High	Highest	Lowest

Table 13: Outcomes of the analyses (H5 to H10)

	Social Exchange Theory			**Competing View**		
Type of Exchange	Contract Fulfillment	Affective Commitment	Turnover Intention	Contract Fulfillment	Affective Commitment	Turnover Intention
Quasi-spot	High	Low	Low	Lowest	Low	High
Employer under	Low	High	High	Highest	Highest	Lowest
Employer over	Low	High	High	Low	Lowest	Highest
Mutual high	High	Low	Low	High	High	Low

Conclusion and Discussion

The main aim of this research was to investigate to what extent two different conceptualizations of the exchange relationship between employer and employee leads to diversified effects on psychological contract fulfillment, affective commitment and turnover intention. While the Social Exchange perspective states that balanced employment relationships have more favorable outcomes compared to the unbalanced exchange relationship, the competing view argues that a further elaboration in four exchange relationship types is a more evident way of explaining these relationships. The competing perspective states that the distinction in balance and unbalance is not enough and adds the level of obligations. This leads to a distinction in four exchange types: quasi-spot, mutual high, employer under-obligation and employer over-obligation psychological contract. This research shed some light on the relationship between different employment relationships and psychological contact fulfillment, affective commitment and turnover intention.

The Social Exchange theory suggested that the exchange relationship between employer and employee could be classified in two groups: balanced or unbalanced. It was expected that employees whose employment relationship as balanced perceived more psychological contract fulfillment, show more affective commitment towards the organization and were less likely to turnover. Nevertheless, none of these relationships were found in the research. The preceding suggests that the level of psychological contract fulfillment is not influenced by whether the exchange relationship between employer and employee can be classified as balanced or unbalanced. Besides, the "identification with, involvement in and emotional attachment to the organization" (Meyer & Allen, 1997) does not depend on whether the exchange relationship is perceived as balanced or unbalanced. In line with this, no differences were found for the intention to turnover. An employee perceiving the employment relationship as unbalanced is therefore not more likely to have (high) turnover intentions compared to someone who perceives the relationship with the employer as balanced.

Nevertheless, when the net-balance of the respondents was calculated, a significant effect was found for the relationship with perceived psychological contract fulfillment. No significant effect was found for the relationships with affective commitment and turnover intention. Based on these findings, it can be concluded that the more an employee perceives that the organization and

himself are similarly obligated, the more psychological contact fulfillment the employee is likely to perceive. Additionally, the amount of balance between employer and employee obligations does not affect the likelihood to have turnover intentions or to show affective commitment towards the employer.
In short, what can be concluded from the social exchange theory is that a distinction in balanced and unbalanced psychological contracts does not help to explain psychological contract fulfillment, affective commitment and turnover intentions. Contrary to the dichotomous balance variable, the continuous net-balance variable is more useful. However, the net-balance variable is also not able to explain affective commitment and the turnover intention of employees.

The competing view argues that the differentiation in balanced and unbalanced psychological contracts is not sufficient and introduced the *level* of obligations. Compared to the social exchange approach, this view is more complex but more suitable to explain the relationships with psychological contract fulfillment, affective commitment and turnover intention. The employer over-obligation psychological contract showed the lowest mean values of perceived psychological contract fulfillment and affective commitment and the highest mean intention to turnover. At first glance this finding seems surprising, since this exchange type can be classified as a perception that the employer provides more than the employee gives in return. A low turnover intention seems likely in such situations: employees can easily make use of the high return for their input. Nevertheless, an explanation for the finding can be found in Robinson et al., (1994) and Shore and Barksdale (1998). It is argued the employer over-obligation psychological contract is a consequence of the experience of psychological contract violation. Personal role obligations are likely to decrease when an employee perceives violation. Contrary, organizational obligations will not change: the employer will still fulfill the same obligations. Employees with an employer over-obligation psychological contract are employees reciprocate less than is given by the employer because of feelings of violation. Therefore, these employees are not likely to show affective commitment towards the employer and are likely to have a high intention to turnover (Shore & Barksdale, 1998).
The highest mean for perceived psychological contract fulfillment (significantly higher than all other groups) and affective commitment is found for the employer under-obligation psychological contact. This indicates that employees who perceive that the employer is less

obligated to fulfill the promises compared to the individual had the most favorable outcomes on the dependent variables of this research. The mean turnover intention of such employees is the lowest of all exchange types. This outcome seems at first glace surprising, but could be explained. Employees with an employer under-obligation psychological contract do not expect to get much in return for what they provide to the organization. Therefore, the *perceived* psychological contract fulfillment of these employees is highest of all groups. Employees in this group do not expect to get something in return for their input, so if the employer provides anything in return, these employees will *perceive* feelings of fulfillment. Probably, employees with the expectation that the employer provides loads in return for their input, are possibly least enthusiastic with the same compensation. Additionally, the high mean value for affective commitment is possibly affected by these low expectations. It could be that employees have the feeling that the organization provides more in return, when affective commitment is shown. The mean for turnover intention, which is significantly lower as mean for the quasi-spot and employer over-obligation contract, indicates that employees who perceive that they are highly obligated towards the employer will have lower intentions to quit the organization. Since these employees feel themselves highly obligated, they are likely to have the perception that they invested quite a lot in the organization and the relationship with the employer. These feelings of large investments in the past possibly influence the intention to quit of an employee.

Employees with a mutual-high obligations psychological contract were found to have higher levels of contract fulfillment and affective commitment compared to the quasi-spot contract. This can be explained by the distinction in relational (mutual-high) and transactional (quasi-spot) psychological contracts. The transactional contract is focused on direct repayment of the depth, while the relational contract is based on a more long-term relationship with the employer and immediate repay is not expected. Therefore, employees with a transactional contract are more likely to perceive breach instead of psychological contract fulfillment (Morrisson & Robinson, 1997). The relational or transaction nature of the contract is also related to affective commitment, with more favorable outcomes for the relational (mutual-high) contract (Raja et al., 2004). With respect to turnover intention, no differences were found for the mutual high and quasi-spot psychological contract, indicating that employees who are highly obligated towards the organization and feels that the organization is highly obligated to provide something in return, do

not have higher (or lower) intentions to leave the organization as employees who provide the organization less and expect less in return for their input.

As stated before, a positive relationship is found for the association between psychological contract fulfillment and affective commitment, indicating that employees who perceive that their organizational fulfills the obligations are more likely to show affective commitment towards their employer. In other words, when an employee perceives the employer role obligations as fulfilled, he or she will have a stronger emotional link with and will be more involved in the organization (Meyer & Allen, 1997). This seems reasonable, since when the employer fulfills obligations towards the employee, the employee will have a feeling of being valued by the employer, which will be reciprocated by showing affective commitment towards the organization. Moreover, psychological contract fulfillment was found to affect the intention to turnover of employees. Employees who perceive that their employer fulfills the psychological contract are less likely to have turnover intentions. In other words, employees will be more likely to turnover when they perceive that the organization does not fulfill the obligations in the psychological contact.

Furthermore this research makes clear that employees are less likely to turnover when they show affective commitment towards the employer. As stated by Galletta et al., (2011), the reason why employees show affective commitment towards the employer is because they feel emotionally attached to the organization. As a result of this emotional attachment, employees are less likely to have turnover intentions. This finding is in line with earlier research on this relationship (e.g. Baotham et al., 2010; Galletta et al., 2011). Nevertheless, based on Cohen (1982), the beta found in this research can be classified as strong (β = -.64), while the beta found by Galletta et al., (2011) was slightly lower (β = -.46).

A mediating effect of affective commitment on the relationship between perceived psychological contact fulfillment and turnover intention was found. Besides, a relationship that was not hypothesized but followed out of the analysis needs to be mentioned. It was concluded that the relationship of the mutual high and employer under-obligation psychological contract on affective commitment is influenced by the fulfillment of psychological contract, indicating that a high level of affective commitment is partially explained because these employees perceive a high level of psychological contract fulfillment.

The current research shows strengths. Nevertheless, some of the limitations of this research have to be mentioned. First of all, the present research is a secondary data analysis based upon existing data sets, which limits the choice of the variables and measurements. Even more compelling it that data is collected by five researchers spread over a time period of two years. As a result, the results of this research could be influenced by organizational and personal characteristics that not could be controlled for. It is tried to minimize the chance that other factors influence the results of the study by checking intraclass correlation coefficients and including all control variables that significantly relate to the variables included in the research. Nevertheless, it could not be excluded that instead of the theoretical foundation, the absence of variables leads to the conclusions and their strengths presented above. For instance, affective commitment is the single variable mediating the effect of psychological contract fulfillment and turnover intention. Nevertheless, literature makes clear that there are more variables mediating this effect, such as trust (Robinson, 1996) and job satisfaction (Turnley & Feldman, 2000). Since these variables are not included in this research, it is reasonable that a direct effect of perceived psychological contract fulfillment on the intention to turnover is found.

Additionally, as a result of the cross-sectional character of the research, which indicates that the data is collected at one time, no causal relations can be confirmed. As a result, the internal validity is low and the direction of the relations that are found could not be guaranteed. For example, it was expected that the level of affective commitment has a negative effect on the turnover intention. However, it could be that the turnover intention influences the affective commitment of an employee. Therefore, the relation between affective commitment and turnover intention prefers a longitudinal approach. Besides, specifically affective commitment and turnover intention are variables that could be biased. The findings of this research are completely based on self-reports of the respondents. As a result of this, the findings show the self perceptions of the employees and may be subject to biases such as social desirable answers.

To divide the employees into the four exchange relationship types, median-split analysis is used. However, the use of this technique has been criticized since it increases Type I error and it leads to a loss of power (e.g. Irwin & McClelland, 2003). Nevertheless, it is chosen to use a median-split analysis to create the four exchange types since it follows the procedure used in the limited amount of research on this topic (e.g. De Jong et al., 2009; Tsui et al., 1997; Koh & Yer, 2002). By following the median-split procedure the findings of this study can be easily compared to the

conclusions of earlier researchers. Nevertheless, it could be that the use of median-split analysis is the reason that limited evidence was found for the effects of the exchange types. When median-split analysis is used in future research on this subject, an improved manner to use this analysis is to split the data in three groups instead of two, and delete the group that scores around the median. As a result, it is more likely that the employees in the two groups that remain part of the analysis more appropriate represent the "low" and "high" employer/employee obligation groups.

More research is needed to overcome the limitations mentioned above and to elaborate the limited knowledge about the four types of the exchange relationship. As mentioned previously, diversifying conclusions can be drawn from different researchers. Also this research is not completely in consensus with earlier findings on the effects of the exchange types. For instance, the findings of this research are slightly different compared to the results of research by Shore and Barksdale (1996), who found the highest mean on affective commitment for the mutual high obligations psychological contract, followed by the employer under, quasi-spot and employer over exchange types. Besides, the highest level of turnover was found for the employer over-obligation psychological contact, while the mutual high contract showed the lowest mean for the intention to quit. These differences could be explained by the different methods that are used. While Shore and Barksdale (1996) used cluster analysis, the current research used of median-split analysis to divide employees into the four exchange types.
More research is needed to search for the actual relationships between the four types of the employment relationships and the outcomes. More outcomes and more mediators, such as trust in the relationship between psychological contract fulfillment ant turnover intention, will help to gather a better understanding of the relationships.

Added value of this research for organizations and their managers lies in the field of talent management. The current globalization is leading to a world-wide war for talent. Because of this war for talent, employees have high demands of their employer and will easily leave to another, more attractive organization, when they are not content (Lawler, 2005). This research shows that employees with employer over-obligation psychological contracts have the highest intentions to turnover. In other words, employees who perceive that their employers provide them more as

they individually invest in the organization in return have the highest intentions to leave. When employers keep this finding in mind, they are probably better able to deal with keeping their talented employees within the organization.

Concluding, the results of the study were not completely as hypothesized and surprising, but definitely shed some (needed) light on the diversified exchange relationship between employer and employee and the consequences.

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Appendix A: Questionnaire & Quality of the scales

1) Organizational Obligations (N =35, α =.921)

A: Job Content (N = 6, α = .77)

- Variation in your work
- Challenging work.
- Balanced workload
- Interesting work
- Autonomy
- The opportunity to deliver quality goods/services

B: Career Development (N = 6, α = .83)

- Career opportunities
- Training and education
- Coaching on the job
- Professional development opportunities
- Learning on the job
- Opportunities to fully utilize knowledge and skills

C: Social Atmosphere (N = 5, α = .83)

- Good working atmosphere
- Good cooperation
- Support from colleagues
- Appreciation and recognition
- Support from supervisor

D: Organizational Policies (N = 8, α = .83)

- Participation in important decisions
- A fair supervisor
- Feedback on performance
- Clear and fair rules and regulations
- Keeping you informed
- Open communication
- Ethical policies concerning society and environment
- Confidence in the organization

E: Work Life Balance (N = 4, α = .77)

- Consideration of personal circumstances
- Opportunity to schedule your own holidays
- Working at home
- Adjustment of working hours to fit personal life

F: Rewards (N = 6, α = .75)

- Employment security
- Appropriate salary
- Rewards for exceptional performance
- Reimbursement of training costs
- Good benefits package
- Pay for performance

Answer categories of the scales measuring organizational obligations:
In the employment relationship employees have expectations about what the organization will offer. To what extent is your organization obliged to offer you the following?

Not at all
Slightly
Somewhat
Moderately
To a great extent

2) Employee Obligations

G: Inrole Obligations (N = 11, α = .82)

- Good cooperation
- Helping colleagues
- Provide good service to customers
- Performing well on tasks you do not like
- Integrity
- Dedication to your work
- Being cost-conscious when dealing with organizational properties
- Dealing with private matters at home
- Complying with organizational rules and regulations
- Protect the organization's image
- Contributing to a pleasant working atmosphere

H: Extra-role Obligations (N = 11, α = .78)

- Keeping knowledge and skills up to date to be able to deal with changing requirements
- Participating in training outside working hours that is important to do your job properly
- Making suggestions for improvement
- Volunteering to do additional tasks
- Working over time if that is necessary to get the job done
- Working weekends
- Participation in training to enhance employability
- Willingness to work in different positions
- The flexibility to change positions
- Willingness to work in another region
- Stay with the organization for several years

Answer categories of scales measuring employee obligations:
In the employment relationship you have opinions on what you should offer the organization. To What extent do you feel obliged to offer your organization the following?

Not at all
Slightly
Somewhat
Moderately
To a great extent

3) Psychological Contract Fulfillment: Employer-focused obligations (N = 6, α = .84)

To what extent did your employer fulfill the specific obligations?

Not at all
Slightly
Somewhat
Moderately
To a great extent

Item	Corrected-item Total correlation	Cronbach's Alpha if item deleted
- Job Content	.643	.801
- Career Development	.631	.803
- Social Atmosphere	.672	.795
- Organizational Policies	.648	.800
- Work Life Balance	.499	.829
- Rewards	.558	.818

4) Affective Commitment (N = 7, α .83)

The following statements refer to your feelings about your organization. Please indicate to what extent you agree with the following statements.

Totally disagree
Disagree
Neutral
Agree
Completely agree

Item	Corrected-item Total correlation	Cronbach's Alpha if item deleted
- I am very glad that I chose this organization to work for over others I was considering at the time I joined	.677	.789
- I really care about the fate of this organization	.447	.823
- Deciding to work for this organization was a definite mistake on my part	.599	.803
- My personal values and the organization's values are very similar	.537	.811
- For me this is the best of all possible organizations to work for	.615	.798
- I feel very little loyalty to this organization	.643	.793
- I don't feel part of this organization	.535	.816

5) Turnover Intention (N = 8, α = .87)

The following statements relate to your perception of the future with this employer. Please indicate to what extent you agree with the following statements.

Totally disagree
Disagree
Neutral
Agree
Completely agree

Item	Corrected-item Total correlation	Cronbach's Alpha if item deleted
- I plan to continue to work here until I retire	.439	.882
- I often think about quitting	.699	.851
- I am looking for an opportunity to find a job in another organization	.676	.853
- I would leave this organization if I were offered the same job in another organization	.519	.870
- I am actively searching for another job	.745	.846
- The next few years I intend to stay with this organization	.689	.854
- In the past three months I have applied for a job in another organization	.569	.865
- If I had a chance I would change to some other organization	.768	.843

Appendix B: Comparison of the exchange types

A comparison of the sample characteristics of each exchange relationship can be found in Table 14. The mean age of the quasi-spot (40.21) and employer under-obligation psychological contracts (41.97) is slightly higher compared to the mutual high and employer over-obligation psychological contract (respectively 37.51 and 38.51). The highest mean tenure, which is 12.11 years, was reported in the employer under-psychological contract. The lowest mean for tenure was found in the employer over-obligation psychological contract (7.231). The respondents with the mutual high psychological contract had the highest mean on contract hours (35.59 hours a week), respondents with a quasi-spot psychological contract worked on average five hours a week less (30.59). In all exchange relationship types, most of the employees are highly educated: ranging from 70.15% of employees with a psychological contract which can be characterized as employer over-obligations, to 78.71% in the mutual high exchange relationship. Employees who had no or a low level of education are underrepresented in all of the four exchange types. With respect to gender, women are overrepresented in the four exchange relationships. The difference is largest in the employer over-obligation psychological contract: 33.87% are men, 66.13% of the respondents are women. When looking the other way around, most low- and medium educated employees perceive their psychological contract as quasi-spot rather. Besides, most highly educated employees observe the psychological contact as mutual high. Both genders perceived their exchange type mostly as mutual high. For women, the second most common psychological contract type is the employer over-obligation psychological contact, whereas the quasi-spot exchange type is the second most common psychological contract for men.

As can be seen in Table 15 on page 67, there are almost no differences worth mentioning with respect to the employees' background characteristics comparing balanced and unbalanced psychological contracts. The only north worthy difference is the percentage of employees with a medium degree of education. More specific, the percentage of employees who completed a medium educational level was somewhat higher in the unbalanced exchange relationships (22.00%) compared to the balanced exchange relationships (19.90%).

Tabel 14: Means and Percentages: Comparison of the exchange types

	N	Age		Tenure		Contract Hours		Education			Gender	
		M	SD	M	SD	M	SD	Low	Mediate	High	Men	Woman
Quasi-spot	715	40.21	11.208	15.34	10.788	30.59	8.451	5.68%	22.85%	71.47%	48.60%	51.40%
Employer under	457	41.97	10.673	11.90	9.249	33.57	7.836	5.17%	16.80%	78.03%	36.63%	63.37%
Employer over	414	37.51	10.813	18.08	10.908	33.16	7.869	2.91%	26.94%	70.15%	33.87%	66.13%
Mutual high	757	38.51	9.526	14.43	10.250	35.59	6.839	7.29%	17.00%	78.71%	38.05%	61.95%
Total	2801	39.48	10.625	15.02	10.564	33.13	8.015	4.60%	20.70%	74.70%	39.29%	60.71%

Tabel 15: Means and Percentages: Comparison of the exchange types

	N	Age		Tenure		Contract Hours		Education			Gender	
		M	SD	M	SD	M	SD	Low	Mediate	High	Men	Woman
Balanced	1472	39.36	10.429	14.88	10.631	33.00	8.11	5.00%	19.90%	75.10%	54.10%	45.90%
Unbalanced	871	39.70	10.964	15.25	10.526	33.37	7.85	4.00%	22.00%	74.00%	54.60%	45.40%
Total	2801	39.48	10.62	15.02	10.564	33.13	8.02	4.60%	20.70%	74.70%	54.30%	45.70%

Appendix C: Correlations specified on exchange types

Table 16: Means, standard deviations and intercorrelations for quasi-spot psychological contract

	Variables	M	SD	1	2	3	4	5	6	7	8	9
1	Turnover intention	2.336	.693	-								
2	Affective commitment	3.855	.550	-.657**	-							
3	Psychological contract fulfillment	3.401	.487	-.380**	.502**	-						
4	Gender	.460	.499	.025	.053	.038	-					
5	Age	40.208	11.208	-.236**	.014	-.110*	.088*	-				
6	Tenure	15.340	10.788	-1.88**	.039	-.095*	.137**	.839**	-			
7	Contract hours	30.590	8.451	.015	.121*	.118*	.465**	-.104*	-.006	-		
	Educational level											
8	Low educational level	.057	.232	-.142**	.101	-.074	.087*	.144**	.209**	.058	-	
9	Mediate educational level	.229	.420	-.014	-.124*	-.083*	-.034	-.031	.083*	-.032	-.134**	-

Notes: ** : p < .01; *: p < .05; gender: 1 – man, 0 – woman; Reference groups: high educational level (education). Parameters with respect to the variables measuring education are quantifications relative to the reference group.

Table 17: Means, standard deviations and intercorrelations for mutual high psychological contract

	Variables	M	SD	1	2	3	4	5	6	7	8	9
1	Turnover intention	2.240	.767	-								
2	Affective commitment	3.990	.585	-.568**	-							
3	Psychological contract fulfillment	3.687	.639	-.422**	.569**	-						
4	Gender	.610	.487	.003	.016	.160**	-					
5	Age	28.511	9.526	-.199**	-.123	-.131**	.060	-				
6	Tenure	14.430	10.250	-.210**	-.152	-.091*	.132**	.889**	-			
7	Contract hours	35.590	6.839	.057	.093	.236**	.484**	-.163**	-.154**	-		
	Educational level											
8	Low educational level	.043	.203	-.038	-.210*	-.115**	-.029	.159**	.181**	-.135**	-	
9	Mediate educational level	.170	.376	-.204**	.129	-.028	-0.73	.162**	.258**	-.241**	-.096*	-

Notes: ** : p < .01; *: p < .05; gender: 1 – man, 0 – woman; Reference groups: high educational level (education). Parameters with respect to the variables measuring education are quantifications relative to the reference group.

Table 18: Means, standard deviations and intercorrelations for employer over-obligations psychological contract

	Variables	M	SD	1	2	3	4	5	6	7	8	9
1	Turnover intention	2.455	.779	-								
2	Affective commitment	3.739	.556	-.594**	-							
3	Psychological contract fulfillment	3.477	.565	-.338**	.438**	-						
4	Gender	.510	.500	.084	-.108	.005	-					
5	Age	37.513	10.813	-.209**	-.043	-.245**	.114	-				
6	Tenure	11.900	9.250	-.116*	.149	-.218**	.201**	.879**	-			
7	Contract hours	33.160	7.869	.031	.168	-.214**	.471**	-.223**	-.203**	-		
	Educational level											
8	Low educational level	.033	.178	-.012	.037	-.116*	.023	.106	.188**	-.115	-	
9	Mediate educational level	.178	.383	-.020	-.244**	-.156**	-.056	.093	.230**	-.329**	-.086	-

Notes: ** : p < .01; *: p < .05; gender: 1 – man, 0 – woman; Reference groups: high educational level (education). Parameters with respect to the variables measuring education are quantifications relative to the reference group.

Table 19: Means, standard deviations and intercorrelations for employer under-obligations psychological contract

	Variables	M	SD	1	2	3	4	5	6	7	8	9
1	Turnover intention	2.140	.702	-								
2	Affective commitment	4.071	.548	-.632**	-							
3	Psychological contract fulfillment	3.584	.529	-.406**	.480**	-						
4	Gender	.580	.495	.043	-.193*	.086	-					
5	Age	41.968	10.673	-.227**	.038	-.004	.156**	-				
6	Tenure	18.08	10.908	-.158**	.095	.006	.249**	.867**	-			
7	Contract hours	33.570	7.836	.240**	-.065	.123*	.509**	-.080	-.019	-		
	Educational level											
8	Low educational level	.0462	.210	-.080	.065	.065	.052	.098	.187**	-.045	-	
9	Mediate educational level	.256	.437	-.181**	.070	-.068	-.051	.094	.125**	-.261**	-.129**	-

Notes: ** : p < .01; *: p < .05; gender: 1 – man, 0 – woman; Reference groups: high educational level (education). Parameters with respect to the variables measuring education are quantifications relative to the reference group.

Table 20: Means, standard deviations and intercorrelations for the unbalanced exchange relationships

	Variables	M	SD	1	2	3	4	5	6	7	8	9
1	Turnover intention	2.290	.756	-								
2	Affective commitment	3.899	.576	-.630**	-							
3	Psychological contract fulfillment	3.533	.549	-.382**	.468**	-						
4	Gender	.550	.498	.049	-.153**	.051	-					
5	Age	39.702	10.964	-.244**	.023	-.118**	.140**	-				
6	Tenure	15.250	10.631	-.195**	.751**	-.064	.235**	.883**	-			
7	Contract hours	33.370	7.847	.126**	.061	.169**	.491**	-.132**	-.085	-		
	Educational level											
8	Low educational level	.040	.196	-.056	.046	-.011	.042	.102*	.189**	-.077	-	
9	Mediate educational level	.220	.415	-.126**	-.070	-.098**	-.047	.117**	.185**	-.287**	-.109**	-

Notes: ** : p < .01; *: p < .05; gender: 1 – man, 0 – woman; Reference groups: high educational level (education). Parameters with respect to the variables measuring education are quantifications relative to the reference group.

Table 21: Means, standard deviations and intercorrelations for the balanced exchange relationships

	Variables	M	SD	1	2	3	4	5	6	7	8	9
1	Turnover intention	2.287	.733	-								
2	Affective commitment	3.898	.564	-.621**	-							
3	Psychological contract fulfillment	3.549	.587	-406**	.523**	-						
4	Gender	.540	.99	.003	.040	.140**	-					
5	Age	39.358	10.429	-.216**	-.026	-.134**	.057	-				
6	Tenure	14.880	10.526	-.196**	-.009	-.101**	.125**	.860**	-			
7	Contract hours	33.000	8.108	.039	.117**	.237**	.501**	-.153**	-.089**	-		
	Educational level											
8	Low educational level	.050	.218	-.088**	.014	-.100**	.027	.153**	.197**	-.028	-	
9	Mediate educational level	.199	.399	-.104**	-.050	-.070**	-.064*	.057	.167**	-.140**	-.114**	-

Notes: ** : p < .01; *: p < .05; gender: 1 – man, 0 – woman; Reference groups: high educational level (education). Parameters with respect to the variables measuring education are quantifications relative to the reference group.

Appendix D: Calculating the "Net-Balance"

The net-balance of the exchange relationship refers to the difference between the employer and employee obligations. Therefore, for each employee, the net-balance can be calculated by subtracting the mean score on employee obligations of the employer obligations. Negative scores on this new variable will be translated to a positive score by removing the negative sign. In this way, all scores on the net-balance variable will be positive. Scores could range from zero (no difference between mean employer and mean employee obligations) to four (minimum score of one, maximum score of five for both employer and employee obligations). After removing the negative sign, all scores are recoded in such a way that a high score on the variable means a high level of balance. In sum, the new variable measuring balance does not make a dichotomous distinction in balanced and unbalanced exchange relationships, but calculates for all employees with both types of exchange relationships the differences in mean scores on employer and employee obligations.

In the sample, scores ranged from 1.76 to 4.00, with a mean of 3.665 (SD = .286). Since a significant correlation coefficient was found for net-balance and medium educational level (r = -.064), education will be used as a control variable in further analyses. Regression analyses showed that net-balance significantly affects psychological contact fulfillment ($\beta = .047$, $p < .05$) but not affective commitment ($\beta = .068$, $p > .05$) and turnover intention ($\beta = -.010$, $p > .05$).

Table 22: Regression analyses of the net-balance approach

	Psychological contract fulfillment				*Affective Commitment*				*Turnover Intention*			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	β	*p*	β	*p*	β	*p*	β	*p*	β	*p*	β	*p*
Net-Balance			.047	.029			.068	.063			-.010	.643
Lower Education	-.080	.000	-.079	.000	.017	.650	.018	.634	-.097	.000	-.097	.000
Medium Education	-.078	.000	-.075	.001	-.051	.207	-.047	.207	-.130	.000	-.131	.000
R^2	.011		.013		.003		.008		.022		.022	
R^2 change	.011		.002		.003		.005		.022		.000	
F	11.583	.000	9.330	.000	1.194	.303	1.951	.120	24.930	.000	16.686	.000
F change	11.583	.000	4.786	.029	1.194	.303	3.456	.063	24.930	.000	.215	.643