

The relation between direct participation, organizational commitment and turnover:

A test of the mediating role of organizational justice and Leader-member exchange

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The relation between direct participation, organizational commitment and turnover:

A test of the mediating role of organizational justice and Leader-member exchange

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Summary

This study examined the relation between satisfaction with direct participation, organizational commitment and turnover intention. The study was conducted among the employees of the University of Twente in The Netherlands. Because of the scarcity of properly educated personnel on the job market, reducing turnover intentions is important for the university. In the HRM-field a link has been suggested between direct participation and organizational commitment, organizational commitment is thought to reduce turnover intention. From the literature followed that reciprocity in the relation between employees and the supervisor, who is the face of the organization (an HR agent), plays an important role in the relation between satisfaction with direct participation and organizational commitment. Organizational justice, consisting of the dimensions distributive justice, procedural justice, informational justice and interpersonal justice, and Leader-Member Exchange (LMX) were introduced to provide a better understanding of the relationship between satisfaction with direct participation and employee commitment to the organization. These factors are hypothesized as mediating variables in the relation between satisfaction with direct participation and organizational commitment. The relation between the supervisor and the employee also gets specific attention in the written personnel policy of the university, as well as direct participation by means of formal and informal meetings.

A questionnaire consisting of 96 items was developed to measure the variables. Then the questionnaire was emailed to employees of four faculties of the university: 1) the faculty of Engineering technology (CTW), 2) the faculty of Electrical Engineering, Mathematics and Computer Science (EWI), 3) the faculty of Behavioral Sciences (GW), 4) the School of Management and Governance (MB). The questionnaire included two dimensions for distributive justice, one focused on the degree to which employees have influence in (changes in) their function (DJCF), and another focused on personnel policies and practices, where respondents were asked to compare their situation with their colleagues' (DJPP).

The analysis showed low scores (a three on a scale of five) for all variables; except for informational and interpersonal justice, LMX and low alternative calculative commitment. These variables scored a four. Higher scores for satisfaction with direct participation were given by employees younger than 35 years old, employees who worked for less than two years for the university and employees who worked for less than two years in the present function. Employees who worked for the university for less than five years gave lower ratings for affective commitment and normative commitment. Employees with fixed-term employment contracts gave higher ratings for satisfaction with voice and influence and distributive justice (CF) and lower rating for affective and normative commitment. Turnover intention was highest for employees who work for the university between ten and twenty years and for employees who work in their present function between ten and twenty years.

It was also found that only leader-member exchange and distributive justice (CF) mediated the relationship between satisfaction with direct participation and affective commitment. No

mediation effects were found for normative and calculative commitment. Also, only affective commitment was related to turnover intention, no relations were found for normative commitment and low alternative calculative commitment. Instead, satisfaction with direct participation was related to turnover intention directly, and also distributive justice (CF) was related to turnover intention. Several recommendations for reducing the turnover intention of the employees were made: 1) the HR function must make sure that the direct supervisors are properly trained and guided, 2) employees need to feel that their influence reflects their effort and/or results, 3) employees must be provided with proper information of procedures, especially when these outcomes are not in their favor.

Table of contents

| | |
|---|-----------|
| Foreword | 7 |
| 1 Introducing the subject of the study | 8 |
| 1.1 Introduction | 8 |
| 1.2 An exploration of the HRM field | 8 |
| 1.3 An exploration of direct participation, commitment and turnover intention | 9 |
| 1.4 Relevance of the study | 10 |
| 1.5 Conclusion | 11 |
| 2 Literature study | 12 |
| 2.1 Introduction | 12 |
| 2.2 Participation | 12 |
| 2.3 Commitment | 14 |
| 2.3.1 Targets of commitment | 15 |
| 2.3.2 Bases of Commitment | 15 |
| 2.3.3 Commitment and turnover intention | 17 |
| 2.4 Extending the field | 17 |
| 2.4.1 Towards a reciprocal relation | 18 |
| 2.4.2 Leader-Member Exchange (LMX): the relation between a subordinate and the supervisor | 19 |
| 2.4.3 Organizational Justice | 20 |
| 2.5 The research model | 23 |
| 2.6 Conclusion | 24 |
| 3 The organization: the University of Twente | 26 |
| 3.1 Introduction | 26 |
| 3.2 The University of Twente | 26 |
| 3.3 The personnel policy | 27 |
| 4 Research design | 29 |
| 4.1 Introduction | 29 |
| 4.2 Research Method | 29 |

| | | |
|----------|---|-----------|
| 4.3 | Measures _____ | 30 |
| 5 | Analysis & results _____ | 33 |
| 5.1 | Introduction _____ | 33 |
| 5.2 | Data Exploration _____ | 33 |
| 5.3 | Moderator analysis _____ | 39 |
| 5.3.1 | Gender _____ | 39 |
| 5.3.2 | Age _____ | 40 |
| 5.3.3 | Faculty _____ | 42 |
| 5.3.4 | How long do you work for the university? _____ | 43 |
| 5.3.5 | The time an employee works in his or her present function _____ | 45 |
| 5.3.6 | Function _____ | 48 |
| 5.3.7 | Salary scale _____ | 51 |
| 5.3.8 | Fixed-term contracts and indefinite contracts _____ | 51 |
| 5.3.9 | A division in part-time and full-time employees _____ | 54 |
| 5.4 | Analyzing the relations _____ | 54 |
| 5.4.1 | The supposed mediation effects of organizational justice and LMX _____ | 55 |
| 5.4.2 | The relation between organizational commitment and turnover intention _____ | 57 |
| 5.5 | Justice perception of four specific procedures _____ | 58 |
| 6 | Conclusions and recommendations _____ | 65 |
| 6.1 | Introduction _____ | 65 |
| 6.2 | Conclusions _____ | 65 |
| 6.2.1 | General conclusions _____ | 65 |
| 6.2.2 | The moderator analysis _____ | 65 |
| 6.2.3 | The hypotheses _____ | 66 |
| 6.2.4 | Conclusions and discussion _____ | 68 |
| 6.2.5 | Four procedures _____ | 70 |
| 6.3 | Recommendations for the University of Twente _____ | 70 |
| 6.4 | Suggestions for further research _____ | 71 |
| | References _____ | 73 |
| | Literature _____ | 73 |
| | Visited websites _____ | 80 |
| | Appendix: The questionnaire _____ | 81 |

Foreword

In November 2006 I started with this study in an attempt to finish my study industrial engineering and management. The assignment was supervised by Prof. Dr. J.K. Looise and Dr. N. Torka, both employees of the department Operations, Organization and Human Resources (OOHR) at the School of Management and Governance, a faculty at the University of Twente.

The field of participation and commitment was completely new to me when I started this assignment. I had no idea of the complexity of the matter. The initial idea was to study the relation between direct participation and commitment, but during the process it seemed necessary to extend the field to turnover intention as well. Also the initial idea of a qualitative approach did not make it through to the end. In May of 2006 the switch was made to a qualitative approach to speed up the work.

I would like to take this opportunity to thank everyone who helped me with this study, most of all my supervisors, who showed a great deal of patience.

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Paul van Beem

1 Introducing the subject of the study

1.1 Introduction

This chapter provides a short overview of the field of HRM and, more specific, the place that participation, commitment and turnover intention have in this field. This overview provides a preliminary global research question. The last paragraph describes the relevance of the study.

1.2 An exploration of the HRM field

Because of an increase in competition, companies all around the world have to make better use of all the resources they have (e.g. Delaney & Huselid, 1996; De Nijs, 1998). An important way to improve performance of a company is to “unleash” the performance of the workforce. Pfeffer (1994) came with a list of sixteen best practices to do this and to gain competitive advantage. Twelve of these practices are already common practice in the Netherlands since the 1970s, due to for example the role of legislation, and the possibilities for achieving competitive advantages are limited (Boselie, Paauwe & Jansen, 2001). In stead of looking at best practices alone, effects of HRM-practices may depend on their context, the business strategy, and there are interaction effects on for example high involvement management on performance (Wood, 1999). Strauss (1998) suggests that good management of workers not only satisfies the needs of the organization, it also meets the needs of the workers and it has influences on the society as a whole. Also, participation of workers in the process of decision making, leads to higher levels of commitment and therefore to a higher worker and organization performance (Beer, Spector, Lawrence, Quinn Mills & Walton, 1985; Guest, 1997). However, the link between the two is not yet fully understood, partly because most research focuses on participation or commitment in relation to performance, in stead of the direct link between participation and commitment. It is, for example, not yet known what forms of participation lead to different forms of commitment, also knowledge lacks about what the crucial factors are in the process.

In the literature the link is often described as a causal relation, which means that more participation should lead to higher levels of commitment, and commitment should lead to higher performance (e.g. Lewin & Mitchell, 1992) and turnover intention (Martin, 1989; Somers, 1995). Many HRM researchers make use of these assumptions (e.g. Fombrun, Tichy, Devanna, 1984; Beer, 1985; Delaney & Huselid, 1996; Guest 1997). Beer at al., for example, state in their ‘*map of the HRM territory*’ that HRM policies lead to certain HR outcomes; they thus suggest a direct link between employee influence and commitment. But, this link is a

black box, in that it remains unclear what the critical factors are in the process. Guest admits that this is the case: "... we need to use a greater range of outcome measures if only to understand how and why HRM has an impact on financial results" (Guest, 1997, p. 274).

1.3 An exploration of direct participation, commitment and turnover intention

Participation is an important subject in the HRM literature. In their model of the *Human Resource System*, Beer and colleagues (1985) place 'Employee Influence' in the center of the *HRM policies*, representing the central role that employee involvement should have. In The Netherlands and also in the rest of Europe indirect forms of participation (e.g. works councils, trade unions) are an established form of employee influence, but there is also an increase of direct participation practices (Gill & Krieger, 1999; Looise & Drucker, 2003). However, this increase in direct participation does not reduce representative participation practices as is sometimes suggested (for example by Marchington and Wilkinson, 2005). Instead, there is a neutral relation between direct and indirect participation; the amount of direct participation does not seem to influence the amount of indirect participation and vice versa (Gill & Krieger, 1999). The idea of upcoming direct participation fits into the development of the use of more flexible and individualized employer-employee relations (e.g. Looise & Van Riemsdijk, 2001). Goodijk & Sorge (2005, p. 8-9) predict that more direct participation will reduce employee's commitment to the company and increases commitment to e.g. work. However, research on the matter (by e.g. Looise & Drucker, 2003; Torika, 2003) does not fully support this statement. As stated in the pervious paragraph, higher levels of organizational commitment might be interesting for organizations, because there are some beneficial effects, like an increase of effort displayed by the employees (Randall, 1990), a better work environment (Dundon, Wilkinson, Marchington, Ackers, 2005, on task performance in quality circles and autonomous work groups (Latham, Winters, Locke, 1994) and turnover (e.g. Vandenberghe, Bentein & Stinglhamber, 2004; Benson 2006).

This study tries to reveal new information about the link between direct participation and employee commitment and whether this leads to lower turnover intentions. There is an insufficient amount of time to either conduct a longitudinal survey to measure changes in commitment or to measure the performance changes in organizations because of changes in participation of commitment. Therefore the global question focuses on the relation between different forms of direct participation and the levels of commitment:

What factors influence the relation between direct participation and commitment and which of these variables is most the most important predictor of turnover intentions?

1.4 Relevance of the study

As stated before, participation plays a central role in the HRM field. But commitment also benefits society, according to Matieu and Zajac (1990, p. 171), they state it like this:

“... a society as a whole tends to benefit from employees’ organizational commitment in terms of lower rates of job movement and perhaps higher national productivity or work quality or both.”

Many companies in the Netherlands experience a shortage of personnel at the moment (CWI, 2007). Especially personnel with the proper education are hard to find, so trying to keep good personnel within the organization is one of the key goals for HR-managers. To study how employees might be retained by organizations, it is necessary to closely investigate and understand the relation between direct participation and commitment (Ramsey, 1993). This study wants to contribute to the knowledge of this relation, especially on what some of the most important factors in the relation are and whether it really relates with turnover intentions.

Commitment is not something that is present in some people and not in others, and organizations can not take advantage of it through recruitment and selection – by hiring predisposed committed employees – alone; in contrast it might be more effective to manage the experiences the employees endure following entry (Steers, 1977; Irving & Meyer, 1994; Masterson, Lewis, Goldman & Taylor, 2000). People come to work in organizations with certain needs, desires, skills, etcetera, and they expect a work environment where they can utilize these abilities (Steers, 1977). By providing such a work environment, organizations can increase the likelihood of increasing their employees’ commitment. Of course, this management of employee commitment requires knowledge and understanding of the commitment process. Purcell & Hutchinson describe the purpose of HR-practices and how they are supposed to lead to improved performance in ‘The People Management Performance Chain’.

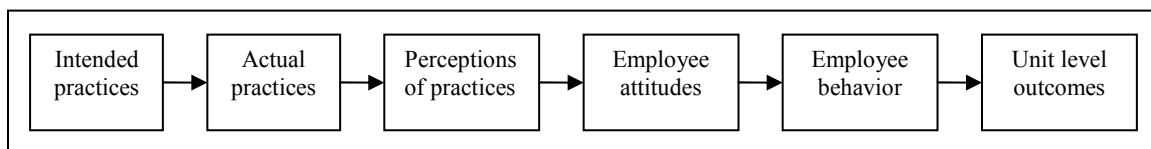


Figure 1.4-1: The People Management Performance Chain (Purcell & Hutchinson, 2007, p 7)

The chain shows how one factor is supposed to lead to another. It shows that direct participation practices (actual practices) lead to certain forms and levels of employee attitudes (e.g. employee commitment and turnover intentions). Employee attitudes then lead eventually to employee behavior that is, hopefully, more valuable for the organization and, finally, preferred behaviors will increase unit or organizational performance. Among other factors, more committed employees are said to be more extrinsically motivated, they are more

likely to use their creativity and innovativeness in a positive way for the organization and are less likely to display behaviors like for example withdrawal or lateness (Mathieu & Zajac, 1990). The figure also shows that measuring actual practices and performance alone, will not give us a better understanding of the entire chain; the steps in between also need to be studied. It would be too much to deal with the entire chain in this study; the focus will be primarily on the relation between the third and fourth aspect of the chain.

The study was conducted among employees of the University of Twente. Universities have very specific demands for their employees. For example every professor must be promoted (i.e. possess the title of “doctor” or have a PhD degree). Individuals with PhD degrees can only be trained by universities. Attracting employees with this high level of education on a labor market where these employees are difficult to find and educate possible future employees are two of the key concerns of the university (University of Twente, 2003). It is therefore of great importance for the university to have some insights of the turnover intentions of its employees and to find some motives for these intentions.

1.5 Conclusion

The University of Twente is faced with the problem that the right employees with the proper education are difficult to find. In the HRM-field the link between direct participation and organizational commitment is important to prevent high levels of turnover. Keeping these levels low might be especially important in a job market where the right personnel are scarce and finding the employees with the proper knowledge and competences are difficult to find. This study tries to contribute to a better understanding of the relation between direct participation, organizational commitment and turnover intentions.

2 Literature study

2.1 Introduction

This chapter deals with a literature study of the relevant topics. The first two paragraphs of this chapter deal with definitions of the terms direct participation and commitment. Then in the third paragraph, the two are brought together to show how they are related. To understand the relation between the two, the concepts of organizational justice and Leader-Member Exchange will be introduced. Finally the research model and the hypotheses will be proposed.

2.2 Participation

A wide variety of definitions can be found in the literature about participation. Baloff and Doherty (1989) speak of participation as “joint decision making”, suggesting that we should speak of participation when a decision is not taken by one individual. Strauss (2006) puts more emphasis on the employees and defines participation as “a process that allows employees to exercise some influence over their work and the conditions under which they work”. For Strauss, participation refers to giving employees *actual* influence, not just a *feeling* of influence. Cotton, Vollrath, Froggatt, Lengnick-Hall and Jennings (1988) conducted a meta-analysis of 91 empirical studies on the basis of which they classify five characteristic dimensions of participation.

- 1) *Formal - informal participation*. Formal participation is an “explicitly recorded, system of rules, and agreements imposed on or granted to the organization”. Three bases of legitimization of for formal participation treatments can be distinguished: 1) legal bases, like clauses in a country’s constitution, in national or regional laws; 2) contractual bases, like collective bargaining agreements on a national, sector, company or shop floor level; 3) management policies. Informal participation is a “nonstatutory, consensus emerging among interacting members”, these become legitimized through practice and evolving norms or customary procedures (Dachler & Wilpert, 1978).
- 2) *Direct – indirect participation*. Direct participation concerns the immediate personal involvement of members of an organization; indirect participation on the other hand means a mediated involvement of organization members (Dachler & Wilpert, 1978)
- 3) *Level of influence*. Marchington & Wilkinson (2005) call this the *degree* of participation. The degree of participation can be represented by a continuum called the “influence-power-continuum” (Heller, 1998b). On this continuum Rensis Likert identified four styles of management decision-making, this was later increased to five by Heller and Yukl

(1969) and, finally, to six by an European research group called IDE in 1981 (Heller, 1998b). The continuum ranges from “(1) not involved ... (2) informed beforehand, (3) informed beforehand and can give opinion, (4) opinion is taken into consideration, (5) take part in decision with equal weight ... (6) decide on my own” (Heller, 1998a, 1435).

- 4) *Content*. Marchington & Wilkinson (2005) call this the *range* of participation. Locke and Schweiger (1979) defined four categories for describing participation outcomes in term of the content of the decisions involved: 1) routine personnel functions (e.g. hiring, training), 2) work itself (e.g. task assignment, job design), 3) working conditions (e.g. hours of work, placement of equipment), 4) company policies (e.g. profit sharing, capital investments).
- 5) *Short-term versus long-term*. The commitment of the organization members can be affected by the duration of the participation process. Cotton at al. (1988) argue that individuals in short-term participation processes may be less committed than individuals involved in long-term participation processes, that may take several weeks or months.

Managers can have a variety of reasons to implement participative structures. For example because of societal change; employees *demand* to be involved (Goodijk & Sorge; 2005). There are also ‘negative’ motives for participation e.g. to increase management control (Baloff & Doherty; 1989) or to marginalize trade unionism in the workplace (Kochan, McKersie & Chalykoff, 1986). Strauss (1998) gives three broad reasons to support participation: humanistic, power-sharing and organizational efficiency. The humanistic argument enhances human dignity through e.g. personal growth and job satisfaction. Advocates of the power-sharing-argument support participation out of moral and ideological reasons. They favor a more equal distribution of power in the organization and support democratic decision making. The third is an economic argument. Participation leads to a more effective organization, because, for example, participation leads to better decision, higher more committed employees and better motivation. All these dimensions of participation can have many different shapes in companies. Some examples are given by Beer (1985): quality circles, self management groups, speak up or feedback programs, special councils, sensing groups, open-door policy, task forces of employee groups, employee relations personnel and ombudsmen, attitude surveys. Dundon, Wilkinson, Marchington & Ackers (2005) give other examples: electronic media, two-way communications suggestions schemes, attitude surveys, project teams.

Direct participation can be thought of as three dimensions. The first two deal with the opportunity for employees to give input for decision (voice), and there is also the actual influence employees have (e.g. Strauss, 2006; Dundon, Wilkinson, Marchington & Ackers, 2004). It is sometimes suggested that when employees are allowed to voice their opinions, at some point they also should have actual influence, otherwise they will get frustrated (Korsgaard, Schweiger & Sapienza, 1995). Thirdly, for successful participation, employees need to be provided with relevant information (Harrison, 1985). In this respect, line managers play an important role in the success of direct participation. Torka (2007) developed items for a questionnaire that measure satisfaction with direct participation, which also had this division in them. Satisfaction with employee influence is then measured in three dimensions:

1) satisfaction with communication, 2) satisfaction with voice, and 3) satisfaction with influence

There is a tendency only to consider worker perceptions of EIP practices themselves rather than analyze the relationship between the experience of EIP and worker views on broader aspects of work and organization (e.g. Marchington et al., 1992; Cotton, 1993; Bryson, 2004). However, seeking direct links between EIP and organizational outcomes is difficult: mediating factors exist between employee and organizational performance. Purcell and Georgiadis (2006) argue that to seek direct links between EIP and performance outcomes is a mistake and that we should instead focus on the links between employee experience of EIP and their attitudes to work. Marchington (1993) points out that when line managers are not enthusiastic and committed enough to implement participation in the organization, participation might not work at all. This is interesting since in forming experience on participation and attitudes, managers play an important role; Purcell & Hutchinson (2007) speak of a 'symbiotic relationship' between front line managers and HR practices. Line managers should in turn be supported by top management; they need to be properly trained and they need to have enough resources (e.g. financial, manpower or time) to implement participation practices (Torka, Van Woerkom & Looise, 2007). The manager should provide his or her subordinates with sufficient information, especially when this information involves unfavorable consequences (Folger & Bies, 1989). The role of the supervisors and/or managers will be discussed in greater detail in paragraph 2.4.2.

Paragraph 2.4 deals with how direct participation and commitment are related. As will be shown no simple relation exists. First however, in the next paragraph commitment will be discussed in greater detail.

2.3 Commitment

It is said that successful direct participation leads to an improved commitment (e.g. Leana, Ahlbrandt & Murrell, 1992), Richard Styskal (1980) calls commitment the concomitant of participation. The question first is *what is commitment?* Many definitions can be found in the literature, for example, commitment can be viewed as a function of both situational-organizational factors and personal dispositions (Wiener, 1982). Commitment can also be seen as a multidimensional construct; in the first place there are 'the individuals and groups to whom an employee is attached' and second there are 'the motives engendering attachment' (Becker, 1992). Herscovitch & Meyer (2001) conducted a literature study on the basis of which they defined commitment as a mind-set. The mind-set can be defined as follows: "a frame of mind or psychological state that compels an individual toward a course of action" (p. 303). So, for some reason a person can have a certain mind-set that provides him with motives to pursue a course of action. This mind-set is multi dimensional, in that it consists of three '*bases*' (Allen & Meyer, 1990; Meyer & Allen, 1991) and a *focus*, i.e. a target.

2.3.1 Targets of commitment

To start with the latter: the focus. Employee organizational commitment can be directed towards nearly anything, from entities to behaviors (Meyer & Herscovitch, 2001). The organizational focus receives the most attention in the organizational literature (e.g. Steers, 1977; Allen & Meyer, 1990; Meyer, Allen & Gellatly, 1990; Mayer & Schoorman 1992; Cohen & Kirchmeyer 1995; Somers, 1995). However, it was argued that the organization was “an abstraction that is represented in reality by co-workers, supervisors, subordinates, customers, and other groups and individuals that collectively comprise the organization” (Reichers, 1985, 472). For example, an employee can be also by committed to his task, or his colleagues. Becker (1992) was able to distinguish three foci of commitment that are important to employees: the global organization, the supervisor and the work group. In a more recent study focused on Dutch companies, Torcka (2003) interviewed members of a Dutch metal company and she found four main foci of commitment: the work, the colleagues, an organization and the department. These foci are not the only ones, others may also exist, for example the commitment towards implementation of decisions (Korsgaard, Schweiger & Sapienza, 1995). Becker and Billings (1993) stated that the foci of commitment should match the area of interest, for example: “a company having problems due to low cooperation within work groups should attempt to heighten commitment to the supervisor and co-workers, rather than to top management or the organizational overall”. Later studies (by e.g. Vandenberghe, Bentein, Stinglhamber, 2004) found these same relations, for example, when employees felt that they were supported by their organization, they rewarded that with commitment to the organization.

2.3.2 Bases of Commitment

Commitment can be accompanied by three different bases. These bases describe the nature of the commitment bond towards the focus. Though in the literature many bases were described, recent literature focuses on affective commitment, calculative commitment and normative commitment. Literature studies show that these basis can indeed be seen in practice as distinct basis of commitment (e.g. Gellatly, Meyer, Luchak, 2006; Dawley, Stephens, Stephens, 2005). These bases will be discussed below.

Affective commitment

The first to be mentioned here reflects an affective or emotional attachment and is called affective commitment. When a person has an affective commitment, he or she has the desire to follow a course of action. Antecedents of this form of commitment are for example personal characteristics, job characteristics, work experiences and structural characteristics (Mowday, Porter, Steers, 1982). Meyer & Allen (1991) summarized the literature on these antecedents and found among many other factors, that (a person’s need for) autonomy, decentralization of decision making and participation in decision making are all linked to affective commitment.

In the literature on commitment, the affective bond gets the most attention (e.g. the Organizational Commitment Questionnaire by Porter, Steers, Mowday & Boulain, 1974; De Gilder, 2003; Vandenberghe, Bentein, Stinglhamber, 2004; Benson, 2006). Meyer et al. (2002),

found that good predictors of affective commitment were the earlier work experiences, and the employer can facilitate optimal working conditions. Meyer, Stanley, Hercovitch & Topolnytsky (2002) found a strong positive correlation between affective commitment and overall job satisfaction and job involvement. Somers (1995) found that higher levels of affective commitment relate negatively with absenteeism, and affective combined with normative commitment relates positively with the intent to remain. Interesting in this respect is the concept of Perceived Organizational Support (POS) (Eisenberger, Steven, Rexwinkel, Lynch, Rhoades, 2001). They state that, in accordance to the principle of reciprocity, workers 'reward' POS with affective commitment towards the company.

Calculative commitment

The second form is called *continuance* commitment. A person wants to continue the relation with an organization, because the costs of leaving the organization are too high or he or she has no alternatives. Torka (2003) calls this form *calculative* commitment, because this gives a better description of the employee as a calculating individual. In this paper, this term is adopted. Calculative commitment might consist of two different sub-constructs, one based on the degree of personal sacrifice associated with leaving the organization, "High Sacrifices", and one based on a lack of alternatives, "Low Alternatives" (McGee & Ford, 1987). The costs and investments are not actual costs, the perceptions by employees of these costs are important. Meyer, Allen & Gellatly (1990) suggest that employees who experience high calculative commitment, have a long term employment relation with their employer might want to rationalize and justify (affective commitment) their relation; in that case calculative commitment can encourage affective commitment. However, the studies that link calculative commitment to tenure give mixed results (Meyer & Allen, 1991). Calculative committed employees may show more effort in doing their task, since they are aware that they do not have any alternative (Van Breukelen, 1996).

Normative Commitment

The third is normative commitment; this means people feel the obligation to follow a certain course of action. Wiener (1982) suggested that the internalization of normative pressures exerted on an individual prior to entry into the organization may invoke the feeling of obligation to remain with an organization. Also organizational investments in the employee, such as rewards that are provided in advance of costs incurred with providing employment (e.g. costs for training), may invoke this feeling of obligation (Meyer & Allen, 1991). Torka (2003) found in a study amongst Dutch metal workers that employee involvement leads to more affective and normative commitment to the department as well as to the organization. The research on normative commitment suggests that normative commitment is highly correlated to affective commitment (Meyer et al. 2002); Meyer et al. (2002) noticed that normative commitment has been given less attention in the recent studies, (partly) because the hypothesized antecedents, being socialization and organizational investments, are difficult to measure. This is also shown in the study conducted by Gellatly et al. (2006). They suggested that normative commitment changes as a function of the strength of the other two bases of commitment. When employees are highly affectively committed, obligations might be experienced as a *moral imperative*: "This is the right thing to do and I want to do it".

The literature study so far leads to the first hypothesis:

1. *Satisfaction with employee influence is positively related to organizational commitment. The strongest relations exist between satisfaction with employee influence and affective and normative commitment, a weaker relation with calculative commitment.*

2.3.3 Commitment and turnover intention

When employees have a high turnover intention, it does not automatically mean that they will actually leave the organization – intentions may or may not lead to behavior, it was found in a meta-analysis by Bluedorn (1982) that there were actually many significant positive relationships between leaving intentions and actual leaving behavior. To explain turnover intention, several authors related it to organizational commitment (e.g. Vandenberghe, Bentein & Stinglhamber, 2004; Benson 2006). Geurts, Schaufeli & Rutte (1999) found that organizational commitment fully mediated the relation between perceived inequity and turnover intention. Meyer and Allen (1991) suggest that high levels for each of the commitment bases might lead to lower turnover (intentions). Meyer et al. (2002) confirmed this, all dimensions on commitment bases correlated negatively with turnover intention. Hypothesis this leads to the following hypothesis:

2. *Affective, normative and calculative commitment are negatively related to turnover intention*

2.4 Extending the field

There is consensus in the literature that direct participation in decision making is related with organizational commitment (e.g. Wallace, 1995) and organizational commitment is positively related to more favorable outcomes such as effort, coming on time (Randall, 1990), turnover (Benson, 2004). To benefit from these outcomes, organizations might want to know how to influence employee commitment. The support by organizations to their employees to participate may be critical to building attachment to the organization (Cohen & Kirchmeyer, 1995). Cox, Zagelmeyer and Marchington (2006) found no support for the idea that the mere presence of employee involvement and participation is associated with positive employee perceptions of participation practices. For employees, being able to speak up in organizations is one thing, but the feeling that what has been said was seriously considered when the decision was made, can truly be valuable (Tyler, 1989). Cox et al. suggest that the number and mix of practices is the key issue in the participation – commitment relation. For two reasons this is not the case (Purcell & Hutchinson, 2007): 1) there is a gap between intended and actual HR-practices because of problems that front-line managers have in applying HR-practices, 2) the employees' experiences are linked with their relationship with the organization's HR-agent (e.g. supervisor). This means that for this study it is not sufficient to simply have a look at the number of direct participation practices or the frequency with

which participation takes place, instead the perceived quality of direct participation must be taken into account.

The influence of direct participation on commitment is the central issue in this study. To understand the relation better, it is necessary to see that the relation is a reciprocal one in nature. This will be shown in the next paragraph.

2.4.1 Towards a reciprocal relation

Torka, Van Woerkom and Looise (2007) studied the factors that determine the success of direct employee involvement and direct participation, following a qualitative approach. They conducted interviews among a group of 60 employees of three Dutch companies. They found that 'Direct Employee Involvement Quality' (DEIQ) depends on the factors top management support, direct supervisor's knowledge and skills, decent policies for direct employee involvement, and workforce characteristics. Like in the work of Purcell and Hutchinson (2007) the HR-function plays an important role in the relationship between these factors. In a reciprocal relation each partner shapes the other to some extent (Levinson, 1965). Also in this case there is a reciprocal relation where the employer has to give something to the employee to get their commitment: when employees feel they are supported by their organization, the felt obligation to care about the organization's welfare and to act in the organization's behalf is increased (Eisenberger, Armeli, Rexwinkel Lynch & Rhoades, 2001). The reciprocal nature of the relation will be explained below in greater detail.

Organizations often try to manage employee attitude and behavior using HR-policies and HR-practices, but it may not be these structures that have the greatest impact on employee behavior (Marks, 2001). An important part in employee commitment is the employees' perceptions of the commitment of the organization towards the employees by the employees. This is called employer's commitment (Torka, Van Riemsdijk & Looise, 2007). Employer's commitment is mediated through organization's *agents*, who act as an intermediary between the employer and employee. Agents can be for example supervisors, top managers, HR-managers. The idea that agents have an important role in mediating policies and practices with personnel goes back a long way. In 1965, Levinson mentioned the idea that an organizational agent, e.g. the supervisor, is the personification of the organization in the eyes of the employees, and also the reciprocity of their relationship. Later research confirmed this thesis (e.g. Skarlicki & Folger, 1997), if supervisors treat their employees with respect, the employees, in turn, will be more tolerant towards unfair behavior by the 'organization'. One of the interesting points of Torka et al. (2007) was that HR-policies do not have to be all-excellent, instead – in the Dutch context – fair and just HR-policies and HR-practices were the most important factors for employers being perceived as committed by their employees. Thus, employees' judgments of HR-practices, is determined for a great deal by the fairness perceived by the employees.

In understanding the relation between the organization, the supervisor and the employee the two concepts are of interest to this study. First Leader-Member Exchange (LMX) will be

discussed. This theory deals with interactions between supervisors and subordinates. Secondly the concept of organizational justice will be introduced. This deals with (perceived) the concept of organizational fairness.

2.4.2 Leader-Member Exchange (LMX): the relation between a subordinate and the supervisor

As described above, the relation between an employee and his or her supervisor is a reciprocal relation and the interaction between the two is an important factor in the way the employees are committed to the organization. A social exchange theory, derived from Vertical Dyad Linkage theory, which describes and enables researchers to measure this relation, is Leader-Member Exchange (LMX). The LMX exchange is (a) a system of components and their relationships, (b) involving both members of a dyad, (c) in interdependent patterns of behavior and (d) sharing mutual outcome instrumentalities and (e) producing conceptions of environments cause maps, and value (Scandura Graen & Novak, 1986). In LMX theory leaders can have different relations with each subordinate (e.g. Sparrowe & Liden, 1997; Schriesheim, Castro & Cogliser, 1999). The salience of an exchange will depend on the degree to which 'currencies' are offered that are valued by the parties. If the employee perceives the quality of the exchange relation with his or her supervisor as high, then he or she should reciprocate this relation with attitudes of behaviors that are more fruitful for the organization (Cole, Schaninger & Harris, 2002). Some authors saw LMX as a multi-dimensional construct (e.g. Dienesch & Liden, 1986; Schriesheim, Neider, Scandura, Tepper, 1992). According to Dienesch & Liden three dimensions exist: task-related behaviors (contribution), loyalty to each other (loyalty) and liking one another (affect). Members may develop a high LMX relationship for each (or more) of these three reasons. In each case, the outcome is different. For example, organizational commitment might be more related to contribution, because in contrast to loyalty and affect, organizational commitment is more related to the organization as a whole. Autonomy in carrying out their jobs might be experienced by employees who score higher on the loyal scale and supervisor ratings of subordinate performance have been shown to be affected by linking and should therefore be related to the affect dimension (Liden & Maslyn, 1998). Besides the three dimensions mentioned here also other dimensions are possible, such as professional respect, which is about the perception of the degree to which each member of the dyad has built a reputation, within and/or outside the organization, of excelling at his or her line of work. However, As Liden & Maslyn stated, when LMX is not a key variable, a single dimensional scale will be sufficient to measure a global LMX. With regard to decision influence, employees who experience high-quality LMX reported high levels of decision influence. Also higher LMX quality is characterized by leader communication and the participation opportunities for employees (Yrle, Hartman & Galle, 2002). Present literature on LMX indicates that LMX is related to several organizational outcomes, such as subordinate turnover, subordinate satisfaction, promotions and ratings of member performance (Bauer & Green, 1996). According to leader-member exchange, members of an organization can be divided into two basic categories (Dienesch & Liden, 1986). First there is the in-group; this category is characterized by high trust, interaction, support and rewards. The other category is the out-

group, characterized by low trust, interaction, support and rewards. Previous literature showed that in-group members had a greater agreement regarding mutually experienced events and out-group members, in comparison to in-group members, are less inclined to spend time on decision-making, are less likely to volunteer for special assignments and for extra work and receive lower performance ratings by superiors (Dienesch & Liden, 1986). Furthermore, once subordinates are in-group members, they seem somewhat more willing to tolerate unfair pay distributions and procedures (Skarlicki & Folger, 1997). Perceived Quality of Direct Participation is related for the most part by (positive perceptions of) leadership behavior, and that leads directly to affective commitment (Purcell & Hutchinson, 2007). Also other studies report the positive relation form LMX to affective commitment (e.g. Wayne, Shore & Liden, 1997; Gerstner & Day, 1997). Other research has shown that people, who are in-group members, are more committed to the group (Tyler, 1989). Also high LMX quality is negatively related to turnover (Gerstner & Day, 1997) and turnover intentions (Vecchio & Gobdel, 1984). This leads to the second hypothesis:

3. *Leader Member Exchange mediates the relation between employees' influence satisfaction, and is related to all forms of commitment, most strongly correlated to affective commitment and less strongly correlated to normative and calculative commitment.*

2.4.3 Organizational Justice

Organizational justice is an important factor in understanding the way in which people organizations function and it is intimately connected to the way decisions are being made and the way leaders interact with their subordinates (Tatum, Eberlin, Kottraba & Bradberry, 2003). Perceptions of justice can for example be formed when supervisors treat employees fairly when compared to others (Karregat & Steensma, 2005). When employees feel they are not being treated fairly, they will 'compensate' this by displaying unfavorable attitudes such as lower job satisfaction (Karregat & Steensma, 2005). The Research on organizational justice started with two forms of justice (e.g. Walker, Lind & Thibaut, 1979; Folger, 1987): distributive Justice and procedural Justice. Later, the model was expanded with two additional forms of justice (Colquitt J.A., Conlon D.E., Wesson M.J., Porter C.O.L.H. & Ng K.Y. 2001): Interpersonal justice and informational Justice. Colquitt (2001) showed that organizational justice is indeed best conceptualized as four distinct dimensions. The four forms of justice will be discussed in greater detail.

Distributive justice

Distributive justice (DJ) has its origin in the equity theory (Adams, 1965), a theory that claims that "people compare the ratios of their own perceived work outcomes (i.e. rewards) to their own perceived work inputs (i.e. contributions) to the corresponding ratios of a comparison other (e.g., a co-worker)" (Greenberg, 1990, p. 400). Today DJ deals with the fairness of outcome distributions of allocations (Colquitt et al., 2001); the (satisfaction with the) outcomes in question (Moorman, 1991). These outcomes are the direct received rewards, such as payment, promotions (Colquitt 2001) or turnover (Alexander & Ruderman, 1987). A

measurement of the construct is provided by Leventhal (1976), pointed towards changes in function, and this is later validated by Colquitt et al. (2001). Employees compare their efforts and outcomes, e.g. autonomy, salary (Geurts, 1994), to those of others in order to determine their distributive fairness perceptions, employees who felt involved in their job had higher fairness perceptions and were less likely to leave the organization (Van Yperen, Hagedoorn & Geurts, 1996). From the literature, it also becomes apparent that when fairness perceptions are high, employees are more tolerant in the case that certain outcomes of decision processes are not in their advantage (Colquitt & Chertkoff, 2002; Timmer, 2004). Also, when employees are allowed to have a voice in allocation decisions, they perceive the outcomes as fairer than when they are not allowed to be able to exercise influence (Folger, 1987). Finally DJ is related, though less strongly than procedural justice, to organizational commitment (Cohen-Charash & Spector, 2001).

Thus the following can be hypothesized:

4. *Distributive justice mediates the relation between employees' influence satisfaction especially influence, and commitment and it is more highly correlated with affective commitment than to normative commitment and calculative commitment.*

Procedural justice

Procedural Justice (PJ) came up when scientists recognized that distributive justice was too limited to describe justice in organizational justice in many diverse contexts (Greenberg, 1987). For instance, matters on how pay plans were administered in organizations prompted concerns about fairness that was more process oriented. Looking at *what* those decisions were (DJ) is important, but it was also important to look at *how* these decisions were made (Greenberg, 1990). Procedural justice reflects the fairness of the procedures used to determine outcome distributions of allocations (Colquitt et al., 2001). Participation is a significant aspect of perceptions about the fairness of procedures; the possibility to influence allocation decisions results in fairer perceptions of the outcomes (Alexander & Rudenman, 1987), also giving employees a voice is an important reward for the employee (Bies & Shapiro, 1988; Karregat & Steensma, 2005). Giving employees a voice in decision making is very important for PJ: "to deny someone voice when decisions are being made that affect the person is to imply that he or she has nothing of value to contribute to the decision" (Moorman, Niehoff & Organ, 1993). An important finding from the justice literature is that procedural fairness positively affects people's reactions. The perceived fairness of procedures within an organization and fair treatment have an important effect on individual employee's attitudes, such as commitment (e.g. Colquitt, 2001; Simons & Roberson, 2003); commitment is an outcome of procedural justice (Moorman, Niehoff & Organ, 1993; Kernan & Hanges, 2002) or rather PJ is a good predictor of organizational commitment (Moorman, 2001; McFarlin & Sweeney, 1992). PJ is strongly related to affective commitment (Cohen-Charash & Spector, 2001). PJ is also related to calculative commitment; however, the correlations found were less strong than with affective commitment (Moorman, Niehoff & Organ, 1993). As shown earlier, affective commitment and normative commitment are highly correlated, but research on the relation between justice and normative commitment is limited. A clue of how the

relation work can be found in the work of Cohen-Charash & Spector (2001), who suggested that fair procedures lead to people feel obliged to the organization. This might mean that procedural commitment leads to higher levels of normative commitment to the organization. The mere presence of procedures does not influence fairness perceptions, employees' impressions of the fairness of their interactions with their supervisors is responsible for that (Moorman, 1991). PJ leads to enhanced leader evaluation (Colquitt, 2001; Alexander & Ruderman, 1987; McFarlin & Sweeney, 1992).

The results are presented in the following hypothesis:

5. *Procedural justice mediates the relation between employees' influence satisfaction, especially voice, and is more strongly related to affective commitment and less strongly related to normative and calculative commitment.*

Interpersonal Justice and Informational Justice

The third and fourth forms of justice, Interpersonal justice (IPJ) and informational justice (IJ), are occasionally called interactional justice (IAJ). Research on IPJ and IJ is not yet very extensive, because these forms are relatively new. Interactional justice was previously a part of procedural justice, but Bies & Moag (1986) separated these when they focused on the interpersonal treatment when procedures are implemented. It was argued that interactions between people and the fairness of procedures should not be measured in the same variable (e.g. Greenberg 1990). IAJ is positively related to Organizational Citizenship Behavior (OCB). OCB is a work-related behavior, not related to the formal organizational reward system, and promote the effective functioning of the organization (Moorman, 1991). Also IAJ is related to organizational commitment, but not as strongly as PJ (Cohen-Charash & Spector, 2001). Supervisors should show adequate sensitivity and concern towards employees, this means treating them with dignity and respect. As a result, those employees seem more willing to tolerate the combination of an unfair pay distribution and unfair procedures that would otherwise maximally contribute to retaliatory tendencies (Skarlicki & Folger; 1997).

IAJ was later divided into interpersonal justice and informational justice (Colquitt et al., 2001). Interpersonal Justice reflects the degree to which people are treated with politeness, dignity, and respect by authorities or third parties involved in executing procedures or determining outcomes. Also, IPJ is influenced by voice and employee input (Kernan & Hanges, 2002). Voice was already known to be an antecedent of PJ, but when the two were separated, the hypothesis that IPJ is also related to voice, though less strong, was accepted. Besides this, also good quality of information received by management and supervisors leads to higher IPJ (Kernan & Hanges, 2002). Colquitt showed that higher IPJ-perceptions lead to enhanced leader evaluation, and to better relations to management in general (Kernan & Hanges, 2002). On the other hand, just like procedural justice, low levels of IPJ lead to the feeling of uncertainty and in that way might lead to stress (Judge & Colquitt, 2004). Torka et al. (2007) describe interpersonal justice as a 'social need'. In the Dutch context, interpersonal justice, together with the other forms of justice are 'corner stones' of employer's commitment – crucial here is giving fair and equal attention. Justice in this case is very much about 'common sense expectations', instead of 'obligations based on promises'. Justice is about

things that do not need to be promised over and over again, but it is about things that are self-evident, such as rules about interpersonal behavior.

As with IPJ, informational justice (IJ) was initially also a part of procedural justice (Greenberg, 1990). It was later argued that IJ is about the explanations provided to people that convey information about why procedures were used in a certain way or why outcomes were distributed in a certain fashion, and that it should also be a distinct form of justice (Colquitt et al., 2002). For this form of justice, the quality of the information given to employees and the way the information is presented are central issues. Good quality of information received by management and supervisors leads to higher IJ, and higher IJ leads to better relations to management (Kernan & Hanges, 2002). Colquitt and Chertkoff (2002) found that giving an explanation to employees for a decision taken in an organization, increases judgments of procedural and distributive fairness in case that the selected decisions by the employees were not upheld by the organization. Giving explanations for decisions that upheld the participants' decisions did not increase fairness judgments. This means that organizations' agents can increase perceived fairness when explaining outcomes that are both unfavorable and unexpected. It is not so that giving explanations as such, increases also task motivation; the expectations that employees have play an important role.

This leads to two hypotheses of interpersonal and informational justice:

6. *Interpersonal justice mediates the relation between employees' influence satisfaction especially voice and influence, and is more strongly related to affective commitment and less strongly related to normative and calculative commitment*
7. *Informational justice mediates the relation between employees' influence satisfaction especially communication, and is more strongly related to affective commitment and less strongly related to normative and calculative commitment*

When the forms of justice are compared, Colquitt et al. (2001) found that the first two dimensions, distributive and procedural justice, and the last two forms of justice are highly correlated. Furthermore, justice perceptions do not depend on gender, race, educational level and tenure (Cohen-Charash & Spector, 2001). From the above, it becomes apparent that Justice has a meditative effect on the linkage from direct participation to organizational commitment.

2.5 The research model

The goal of this study is to contribute to the knowledge of how direct participation relates to commitment. From the literature study follows that the relation between direct participation and commitment is mediated through Leader-Member Exchange plays and organizational justice. The way direct participation is perceived by the employees is an important factor for justice perceptions. The supervisor has an important role, for he communicates with the employees about the decisions that are made; he or she gets to deal with the subordinates in everyday working life. Finally, perceptions of employee influence satisfaction can also be in

part moderated by the workforce characteristics, such as tenure or functional level (Torka, Van Woerkom & Looise, 2007). The main question was how direct participation relates to commitment and to turnover intention. The analysis of this question leads to the insight that to understand this relation the concepts of justice and leader-subordinate interaction are vital. The relations found can be visualized in the following model:

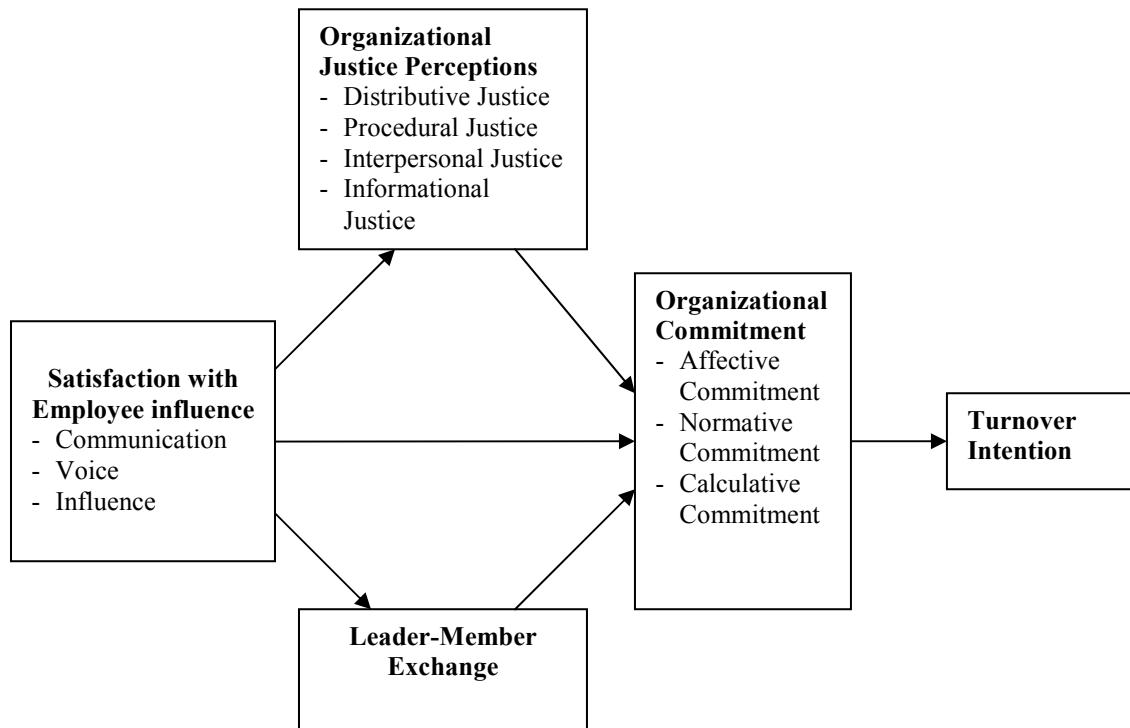


Figure 2.5-1: Research Model

In this model the organizational commitment mind-set, consisting of affective, normative and calculative commitment, is displayed on the right hand side, satisfaction with employee influence on the left hand side. The model visualizes the supposed mediating roles of organizational justice, LMX on the link between satisfaction with employee influence and organizational commitment, and the relation between organizational commitment and turnover intention.

2.6 Conclusion

From the literature discussed in this chapter can be concluded that reciprocity between employees and the supervisor, who is the face of the organization, plays an important role in the relation between direct participation and organizational commitment. Organizational justice and Leader-Member Exchange (LMX) were introduced to provide a better

understanding of the relation between satisfaction with employee influence and employee commitment to the organization. These factors are seen as mediating variables. Organizational commitment is hypothesized to be related to turnover intention. How all these items are measured will be discussed in the next chapter.

3 The organization: the University of Twente

3.1 Introduction

This chapter provides a description of the organization where the study takes place: the University of Twente in The Netherlands. The focus in the description will be on the personnel policy of the university (see paragraph 3.3), however first a more general description will be provided in paragraph 3.2.

3.2 The University of Twente

The University of Twente (UT) is situated in Enschede, The Netherlands and was founded in 1961. It is the only campus university in The Netherlands. The university had 7849 students registered in 2006, a fast growing number, considering in 2002 the number of registered students was 6583. In total 2326 employees were employed by the university in 2006, the average age was 40.1 years, the average number of years an employee works for the university is 9.4 years. The mission of University of Twente concentrates on education of excellent quality and research must be recognized on an international level and all derived activities that stimulate the economic and social environment of the region (Universiteit Twente, Jaarverslag 2006).

Figure 3.2.1. visualizes the management structure of the university. On top of the hierarchy is the board, which presently contains three members. Then there are three entities: institutes, faculties and services, which are led by a director, a dean and a director respectively. There are several institutes; among these are spearhead institutes such as the Institute for Biomedical Technology (BMTI), the Institute for Behavioral Research (IBR) and Institute for Governance Studies (IGS). Today the university has five faculties: Behavioral Sciences (GW), School of Management and Governance (MB), Electrical engineering, Mathematics and Computer Science (EWI), Engineering Technology (CTW) and Science and Technology (TNW). Services can for example be Facility Department, Financial and Economic Affairs and Personnel Department.

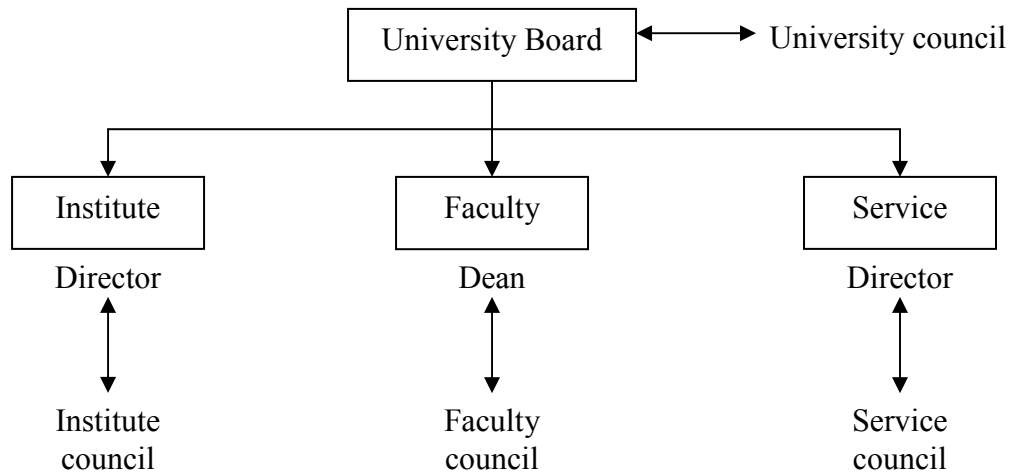


Figure 3.2-1: Visualization of the management structure (source: University of Twente; Jaarverslag 2005; p. 74)

The university is bound by the national collective labor agreement. This is a national legislation that regulates for example (minimum) payment, working conditions and sick leave. An automated system, *Academic Job Ranking* (Universitair Functie Ordenen) was designed to determine the functional levels and functional profiles of individual employees, in this way determining also the salary of that person.

3.3 The personnel policy

The personnel policy of the University of Twente is written down in “Nota Personeelsbeleid 2003-2007” and in the “Nota focus in HRM beleid”. The information in this chapter is based on these reports. Recently the university was confronted with a number of changes in its environment. One of these changes is the adaptation of a new system of education. Recently The Netherlands adopted an international structure of Bachelor and Master studies. The new system means an extension of target groups; new students must be recruited not only through the traditional channels, also international students need to be recruited. Also quality of education and the possibility for freedom of choice for students are central issues in this new structure. Also through a change of the cost structure, the Dutch government intends to encourage universities to increase quality. These changes can be characterized by five points:

- A new dynamics in research and education
- Competition will be based on quality
- Flexibility in relation to demands from the environment
- International orientation (mainly Europe)
- Attract more resources from the private sector (market orientation)

Governmental cutbacks have led to reorganizations in the university. One of the measures was a decrease in the number of faculties. The number of faculties was decreased to five. Also

the personnel policy was reevaluated. In several meetings employees were asked for their opinion. Several points that came up in the meeting were an increase of mobility, improve the quality of supervisors, more uniformity on working conditions and the possibility for flexible rewards.

Based on the data above the personnel policy is characterized by two terms: development and flexibility. In order to let people develop the university monitors employees' progression. In this manner employees can be provided with the proper development possibilities. Increasing flexibility means for example that employees can be given different contract forms for instance to combine a job at the university with a job somewhere else. Also the flexible reward systems need to be more transparent. Finally the supervisor needs to pay attention to the amount of work pressure that older employees experience.

The development of supervisors is central in the HRM-policy. There are formal meetings for supervisors and subordinate to discuss personal and work related matters, but also a supervisor must be open to informal meetings with subordinates. Supervisors need to set an example for their subordinates, for example in personal development issues.

Finally, the personnel policy of the university is directed to get more women in higher (scientific) functions. This can be done to attract more women from outside the university, an also by improving promotion possibilities for women who already work at the university.

4 Research design

4.1 Introduction

This chapter deals with the research design. Paragraph 4.2 gives a description of the method used for the study. Paragraph 4.3 deals with the measurement issues that are relevant for this study.

4.2 Research Method

A survey was conducted among employees of the University of Twente. The questionnaire was distributed among scientific personnel and non-scientific personnel. Four out of five faculties participated in the study:

- Faculty of Engineering technology (CTW); 324 employees,
- Faculty of Electrical Engineering, Mathematics and Computer Science (EWI); 706 employees,
- Faculty of Behavioral Sciences (GW); 265 employees,
- School of Management and Governance (MB); 402 employees.

The questionnaire was developed and distributed among the employees of the four faculties through email. As soon as the dean of a faculty expressed his willingness to cooperate, one contact person in each of the faculties sent the email to all the employees of that faculty. In the email employees were asked to fill in an online questionnaire by clicking on a hyperlink. The questionnaire was hosted by www.thesistools.com, an online service that provides a free opportunity for students to host questionnaires online. The mail was sent in Dutch only. The questionnaire consisted of 96 items. The 96 items are on the subjects of satisfaction with employee involvement, organizational commitment, organizational justice leader-member exchange and turnover intention. Also nine items about employee characteristics were included.

To test the mediation in the hypotheses, the three-step procedure developed by Baron and Kenny (1986) was followed. The first step contains that the independent variables, in this case the employees' satisfaction with influence, should be significantly related to the mediator variables, in this study the four forms of organizational justice perceptions and LMX. Then the independent variables should be related to the dependent variables, here the dimensions of organizational commitment. Finally the mediating variables should be related to the dependent variables with the independent variables included in the equation. When these three conditions hold, at least partial mediation is present, when the independent variables have non-significant beta weights in the last step, then the relation is completely mediated.

4.3 Measures

In this paragraph the measurements per subject will be discussed. The entire questionnaire is presented in the appendix; in the remainder of this report the question will sometimes be referred to using number, these number can be found in this list in the appendix as well. Except for the employee characteristics, all items were scored on a 5-point Likert scale, ranging from 1 (low) to 5 (high).

Employee characteristics; items 1-9

Nine items were included to determine the nature of the respondents. These items were the following:

- item 1: gender; male or female
- item 2: age; categories: < 25 years; 25 years - <35 years; 35 years - <45 years; 45 years - <55 years; >55 years
- item 3: the faculty where the respondent works; response options: CTW, EWI, GW and MB
- item 4: the time a respondent works for the University; categories: <2 years; 2 - <5 years; 5 - <10 years; 10 - <20 years; >20 years
- item 5: the respondent's present function; OBP (support personnel); PhD; lecturer; researcher; university lecturer (UL); senior university lecturer (SUL); professor
- item 6: when the respondent stated he or she is OBP (support personnel), they were asked for their salary scale; response options: 1,2,.....15
- Items 7: the time a respondent works in his or her present function; categories <2 years; 2 - <5 years; 5 - <10 years; 10 - <20 years; >20 years
- Item 8: tenure; indefinite contract or fixed-term contract
- Item 9: does the respondent work full-time or part-time

The functions were taken from the personnel department from the University of Twente. Seven functional levels are distinguished: OBP (non-scientific personnel), PhDs, lecturers, researchers, university lecturers (UL), senior university lectures (SUL) and professors.

Satisfaction with employee involvement (SEI); items 10-21

Satisfaction with direct participation was measured using a scale of twelve items, which was developed by Torck (2007). Four items measured each of the three dimensions of satisfaction with direct participation: satisfaction with communication (SEIc), satisfaction with voice (SEIv) and satisfaction with influence (SEIi). The items include for example 'how satisfied are you with the information you have concerning the UT as a whole?' (item 13), 'how satisfied are you with the degree to which you are asked for your opinion regarding your function?' (item 14) and 'How satisfied are you with the degree to which you have actual influence regarding your faculty?' (item 20).

Organizational Justice; items 22-57

Distributive justice was measured in two dimensions. The first dimension (items 22-25) consists of four items. The scale is a specification of distributive justice as developed by Leventhal (1976). The scale includes the items 'to what extent does your (outcome) reflect the effort you have put into your work?' and 'to what extent is your outcome appropriate for the work you have completed?', 'to what extent does your outcome reflect what you have contributed to the organization' and 'Is your (outcome) justified, given your performance?'. This scale specifically measures justice perceptions of matters that directly deal with (changes) in function or work. This dimension will be referred to as distributive justice, change in function (DJCF).

In the second distributive justice dimension respondents were asked to compare themselves with their colleagues on personnel policy and personnel practice issues, such as salary, work variation and support. Seven items (no. 42 – 48) were developed by Geurts (1994), for example, two items (no. 49 – 50) were developed by Van Yperen, Hagedoorn & Geurts (1994) and three items (no. 51-53) were developed by Karregat & Steensma (2005). Respondents were asked to compare themselves with colleagues and give their opinion on whether they were better off (score five) or not (score one). Respondents' judgments were asked on for example the following matters: 'the amount of variation in your work' (item 43), 'the height of your work pressure' (item 49) and 'the quality of the physical work environment such as ergonomics, monitors, furniture and the arrangement of the work space' (item 51).

Procedural justice was measured using seven items developed by Moorman (1991). These items include for example asking employees' judgments of procedures designed to 1) collect accurate information necessary for making decisions and 2) provide opportunities to appeal or challenge the decision. These items were translated into Dutch by Professor Van den Bos.

Informational justice was measured with two items from Bies & Moag (1986) (items 33 and 34), item 35 was added by the author, the last item is from Shapiro et al. (1994).

Interpersonal justice was a construction of five items. The first three (items 37, 38, 39) were developed by Bies & Moag (1986). In these items, respondents were asked whether their superiors treat them friendly, with dignity and with respect. The last two interpersonal justice items (no. 40, 41) were developed by Torka, Looise & Van Riemsdijk (2007). In these items, respondents were asked for their opinions to what extent they felt their supervisor was interested in personal and work related issues.

Also for items were included where the respondents were asked to judge four specific procedures (items 54-57). Three of these items (54, 55, and 56) were developed by Sweeney & McFarlin (1993). In these items respondents were asked to rate the judgment procedure (planning, progress and judgment cycle), the reward procedure and the promotion procedure (the procedure that is followed to obtain a function on a higher level). Item 57 is a new item, that was introduced to ask respondents to judge the selection procedure (the selection of new employees).

Leader Member Exchange (LMX); items 58-69

To measure LMX a 12 items scale developed by Liden & Maslyn (1998) was used. These items are for example 'I like my superior very much as a person', 'My supervisor would come to my

defense if I were “attacked” by others’, ‘I do work for my supervisor that goes beyond what is specified in my job description’ and ‘I admire my supervisor’s professional skills’.

Organizational Commitment; items 70-92

Organizational Commitment was measured using three dimensions, Affective Commitment (AC), Normative Commitment (NC) and Calculative Commitment (CC). Calculative commitment was again divided into Low Alternatives (CCLA) and High Sacrifices (CCHS). The dimensions were measured using items the items developed by Meyer and Allen (1991)

Turnover intention; items 93-96

Turnover intention was measured using four items which were developed by Sanders (2002). One item that is included in this scale is for example ‘if it is up to me, I will still work for the UT in two years’ (item 94).

Possibility for comments

Finally the respondents were given the opportunity to give any comments on the questionnaire. The respondents’ input might provide some useful information about certain difficulties the respondents had while filling in the questionnaire and information such as why respondents did not fill in certain questions.

5 Analysis & results

5.1 Introduction

In this chapter the results of the questionnaire will be presented and analyzed. Paragraph 5.2 provides an exploration of the data. Paragraph 5.3 analyses the moderator scores for each of the variables. Paragraph 5.4 analyzes the supposed relations. Finally, in paragraph 5.5, employees' perceptions on four specific procedures within the organization are analyzed.

5.2 Data Exploration

The data analysis will start with an exploration of the received data. The questionnaire was online from June 26th till July 25th. In this time-period 206 respondents completed the questionnaire, a response percentage of 12.1% (CTW: 16.7%; EWI: 7.9%; GW: 12.1%; MB: 12.9%). This percentage is rather low. Even though in the summer months the university is not closed completely, many employees go on holiday at this time of year. This was also a part of the feedback received by the contact persons at the faculties. So this might be the main reason for the low response rate. Also many employees at the university are non-Dutch speaking employees and therefore could not fill in the questionnaire, especially at the EWI faculty, where the response percentage is the lowest, many employees are non-Dutch. Many respondents started filling in the questionnaire did not complete it. A number of respondents (3) that did not complete the questionnaire stated that some questions were difficult to interpret and were too abstract. Finally some of the employees who received the questionnaire stated in the final 'remarks section' that they did not work at the university anymore, but still were interested in seeing the questionnaire. Finally, as one contact person from the faculty stated, employees receive request to cooperate in studies quite regularly, and therefore their willingness to cooperate might be low. To increase the response rate, a reminder email was sent one week after the first email was sent.

A summary of the population can be found in Table 5.2-1. What can be seen in this table is that most of the respondents (59%) are male. This comes as no surprise considering that at the engineering studies (at CTW and EWI) work more male employees. Only GW yielded more female than male respondents. Also interesting to notice is that most of the respondents (69.9%) were scientific personnel, 30.6% of whom are PhDs. The high number of PhDs in the results might also in part explain the high number of fixed-term employment contracts (43.4%).

| Variable | Category | % of respondents |
|--|------------------------|-------------------------|
| Gender in percentage | Male | 59 |
| | Female | 41 |
| Percentage of respondents per faculty | CTW | 28 |
| | EWI | 29 |
| | GW | 17 |
| | MB | 27 |
| Percentage of respondents per category for the respondent's age in years | < 25 | 6 |
| | 25 - <35 | 42 |
| | 35 - <45 | 23 |
| | 45 - <55 | 16 |
| | >= 55 | 13 |
| Percentage of respondents per category for the number of years the respondent works for the university | 0 - <2 | 24 |
| | 2 - <5 | 26 |
| | 5 - <10 | 18 |
| | 10 - <20 | 18 |
| | >= 20 | 13 |
| Percentage of respondents per category for the number of years the respondent works in his/her present function | 0 - <2 | 29 |
| | 2 - <5 | 31 |
| | 5 - <10 | 22 |
| | 10 - <20 | 13 |
| | >= 20 | 5 |
| percentage of respondents per category for the nature of the employment contract | Indefinite | 53 |
| | Fixed-term | 43 |
| | Other | 4 |
| Contract for full-time vs. part-time | Full-time | 69 |
| | Part-time | 31 |
| Percentage of respondents working in each of the function categories | OBP | 30 |
| | PhD | 31 |
| | lecturer | 4 |
| | researcher | 8 |
| | UL (UD) ¹ | 17 |
| | SUL (UHD) ² | 4 |
| | Professor | 6 |

¹ : UL = University Lecturer; English translation for universitair docent (UD)

² : SUL = Senior University Lecturer; English translation for universitair hoofddocent (UHD)

To study the internal consistency of the questionnaire the Cronbach's alpha (α) was calculated for each variable. Cronbach's alpha ranges from zero to one, with zero indicating complete unreliability and a value of one indicating perfect reliability (Cronbach, 1951). Alpha values lower than 0.70 are not desirable (Nunnally; 1978). Table 5.2-2 displays the variables, the number of items from which the variable was constructed, an example item and the value for alpha. It is apparent from the table that all items have a value higher than 0.7, as

proposed by Nunnally, except CCHS. The alpha value could be raised to 0.63 by removing items 91, 92 and 90 respectively. A higher alpha was not possible on the basis of these data. This means that, while 0.63 is lower than 0.7, that Calculative commitment for high sacrifices (CCHS) will not be included in the rest of the analysis. One of the items that measures turnover intention (item 94) had to be recoded. A score of five on the item actually meant a low intention to turnover. After recoding the variable that measures turnover intention is scored on a scale of 1... 5 with 1 meaning a low intention to turnover and 5 meaning a high intention to turnover. The value for alpha than is 0.75, which meets the criterion of 0.70 as proposed by Nunnally (1978).

Table 5.2-3 contains the means and the standard deviations per variable. When rounded to one digit, most variables score a three. This means that some employees are satisfied and others are not, whereas in the case of informational justice, interpersonal justice, Leader-Member Exchange and calculative commitment low alternatives score a four, which means that on average employees are satisfied with these items. Turnover intention scores the lowest, however, when rounded to one digit, it is still a three.

Finally in this paragraph, correlations are presented for the dimensions of satisfaction with influence for communication (SEIc), voice (SEIv) and influence (SEIi), organizational justice, organizational commitment and turnover intention. The data are presented in Table 5.2-4.

| Table 5.2-2: Results of reliability analysis | | | | |
|---|---------------------|---|------------------------|----------------------------|
| Variable | Abbreviation | Example item | Number of items | α |
| SEI - communication | SEIc | How satisfied are you with information concerning the University of Twente as a whole? (item 13) | 4 | 0.74 |
| SEI - voice | SEIv | How satisfied are you with the extent to which you are asked for your opinion about matters concerning the department? (item 14) | 4 | 0.82 |
| SEI - influence | SEIi | How satisfied are you with the extent to which you actual influence in matters concerning (changes in) your function? (item 18) | 4 | 0.77 |
| Distributive Justice – Change in Function | DJCF | Does your outcome reflect the effort you have to put into your work? (item 22) | 4 | 0.89 |
| Distributive Justice – HR policies/ practices | DJPP | How do you feel about your work situation compared to most other individuals from within your company? (item 48) | 12 | 0.80 |
| Procedural Justice | PJ | How do you perceive the fairness of procedures designed to collect accurate information necessary for making decisions? (item 26) | 7 | 0.94 |
| Informational Justice | IJ | In your opinion, to what extent does your superior communicate openly and fairly with you? (item 33) | 4 | 0.95 |
| Interpersonal Justice | IPJ | In your opinion, to what extent does your superior treat you friendly? (item 37) | 5 | 0.91 |
| Leader-Member Exchange | LMX | I like my direct supervisor as a person (item 58) | 12 | 0.91 |
| Affective Commitment to the Organization | AC | I am proud to work at the University of Twente (item 70) | 6 | 0.87 |
| Normative Commitment | NC | The goals of the University of Twente are my own (item 79) | 8 | 0.92 |
| Calculative Commitment – High sacrifices | CCHS | At the university I am respected (item 90) | 5 | 0.49 |
| Calculative Commitment – Low Alternatives | CCLA | I have enough possibilities on the job market (item 85) | 4 | 0.82 |
| Turnover intention | TI | If it is up to me, I will still work for the university in two years | 4 | 0.75 |

| Table 5.2-3: Means and standard deviations per variable | | |
|--|-------------|-----------------|
| Variable | Mean | St. Dev. |
| Employee satisfaction with communication | 3.27 | 0.73 |
| Employee satisfaction with voice | 2.99 | 0.82 |
| Employee satisfaction with influence | 2.95 | 0.80 |
| Distributive Justice – Change in Function | 3.17 | 0.76 |
| Distributive Justice – HR policies/ practices | 3.22 | 0.45 |
| Procedural Justice | 2.92 | 0.77 |
| Informational Justice | 3.56 | 1.03 |
| Interpersonal Justice | 3.99 | 0.78 |
| Leader-Member Exchange | 3.61 | 0.68 |
| Affective Commitment to the Organization | 3.21 | 0.72 |
| Normative Commitment | 3.01 | 0.77 |
| Calculative Commitment – Low Alternatives | 3.57 | 0.86 |
| Turnover Intention | 2.70 | 0.94 |

For the satisfaction levels and organizational justice the correlations are significant and positive between all groups for $p=0.05$. Especially the voice and influence dimension have high correlations. In the literature study it was stated that informational justice and interpersonal justice are highly correlated, this can also be seen in the table. Normative commitment and calculative commitment are not correlated to many variables. Normative commitment is only correlated to affective commitment; calculative commitment is correlated only with employee satisfaction with influence, informational justice and interpersonal justice. Finally, turnover intention is significantly, negatively related to all variable except for distributive justice (DJPP), procedural justice and calculative commitment (CCLA).

Table 5.2-4: Correlations

| | SEIc | SEIv | SEIi | DJCF | DJPP | PJ | IJ | IPJ | LMX | AC | NC | CCLA | TI |
|------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|-----------|
| SEIc | 1 | 0.68 ** | 0.64 ** | 0.50 ** | 0.40 ** | 0.45 ** | 0.36 ** | 0.40 ** | 0.37 ** | 0.29 ** | 0.12 | 0.09 | -0.37 ** |
| SEIv | | 1 | 0.84 ** | 0.60 ** | 0.24 ** | 0.46 ** | 0.26 ** | 0.34 ** | 0.25 ** | 0.23 ** | 0.01 | 0.16 | -0.269 ** |
| SEIi | | | 1 | 0.50 * | 0.22 * | 0.43 ** | 0.18 * | 0.25 ** | 0.18 * | 0.34 ** | 0.05 | 0.18 * | -0.185 * |
| DJCF | | | | 1 | 0.25 ** | 0.51 ** | 0.36 ** | 0.39 ** | 0.40 ** | 0.22 * | -0.10 | 0.17 | -0.314 ** |
| DJPP | | | | | 1 | 0.28 ** | 0.26 ** | 0.38 ** | 0.46 ** | 0.33 ** | 0.11 | 0.14 | -0.11 |
| PJ | | | | | | 1 | 0.33 ** | 0.27 ** | 0.22 * | 0.21 * | 0.09 | 0.07 | -0.17 |
| IJ | | | | | | | 1 | 0.79 ** | 0.65 ** | 0.15 | 0.02 | 0.21 * | -0.27 ** |
| IPJ | | | | | | | | 1 | 0.68 ** | 0.22 * | -0.04 | 0.20 * | -0.31 ** |
| LMX | | | | | | | | | 1 | 0.36 ** | 0.09 | 0.17 | -0.30 ** |
| AC | | | | | | | | | | 1 | 0.54 ** | -0.10 | -0.41 ** |
| NC | | | | | | | | | | | 1 | -0.04 | -0.24 ** |
| CCLA | | | | | | | | | | | | 1 | 0.09 |

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level.

High sacrifice calculative commitment was not included as a variable in this study; however, the scores on the items might prove useful for the university. Therefore the mean scores and standard deviations are presented in Table 5.2-5. In the table can be seen that the mean scores are quite low. The score on the first item is 1.95; employees feel that they can earn more money somewhere else. Also the respondents to not find their terms of employment better than those of most other employees; the score on the second item is 2.72.

Table 5.2-5: Scores on Calculative Commitment High Sacrifices items

| item | Mean | Std. Deviation |
|---|-------------|-----------------------|
| At this university, I can earn more money than with other employers | 1.95 | 0.94 |
| The terms of employment (e.g. salary), of the UT are better than those of most other employers | 2.72 | 1.08 |
| In this university I feel respected | 3.27 | 0.84 |
| Changing to another employer could be discomfoting for my family | 2.55 | 1.27 |
| I have built up a lot with this university | 3.18 | 1.13 |

5.3 Moderator analysis

In this paragraph the nine moderators are studied in relation to the variables. To compare moderators with two groups t-tests were conducted, for a comparison of more than two groups, an analysis of variance was conducted. The outcomes will be discussed for each moderator.

5.3.1 Gender

In Table 5.3-1 the moderator 'gender' is analyzed per variable. The categories are 'male' and 'female'. The third column presents the number of answers per category, the fourth column the mean and the fifth column presents the standard deviation.

Table 5.3-1: Means and standard deviations for gender

| | | N | Mean | Std. Deviation |
|-------------|--------|----------|-------------|-----------------------|
| SEIc | Male | 95 | 3.22 | 0.70 |
| | Female | 62 | 3.33 | 0.77 |
| SEIv | Male | 95 | 3.03 | 0.77 |
| | Female | 64 | 2.97 | 0.87 |
| SEIi | Male | 96 | 2.98 | 0.72 |
| | Female | 61 | 2.91 | 0.91 |
| DJCF | Male | 95 | 3.20 | 0.79 |
| | Female | 60 | 3.12 | 0.73 |
| DJPP | Male | 82 | 3.21 | 0.38 |
| | Female | 49 | 3.23 | 0.55 |
| PJ | Male | 81 | 2.96 | 0.76 |
| | Female | 48 | 2.85 | 0.79 |
| IJ | Male | 89 | 3.47 | 1.06 |
| | Female | 47 | 3.71 | 0.93 |
| IPJ | Male | 86 | 3.89 | 0.78 |
| | Female | 49 | 4.13 | 0.78 |
| LMX | Male | 78 | 3.55 | 0.66 |
| | Female | 48 | 3.68 | 0.74 |
| AC | Male | 82 | 3.17 | 0.70 |
| | Female | 48 | 3.25 | 0.74 |
| NC | Male | 81 | 3.09 | 0.81 |
| | Female | 45 | 2.87 | 0.69 |
| CCLA | Male | 82 | 3.63 | 0.88 |
| | Female | 45 | 3.43 | 0.81 |
| TI | Male | 84 | 2.78 | 0.94 |
| | Female | 47 | 2.53 | 0.94 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

What can be learned from this table is that there are no significant differences in scores for the different variables. For $p=0.05$ none of the variables the relations were significant. This means that the gender of the respondents did not influence the scores for the variables.

5.3.2 Age

The mean score for age is 2.89. When it is assumed that the ages are uniformly divided among the categories, this means that the average approximated age of the respondents was just fewer than 40. In Table 5.3-2 the scores for each variable are grouped by age. Age was measured using five categories, <25 years, 25 - <35 years, 35 - <45 years, 45 - <55 years and > 55 years. In the table the means per group are displayed, the variables for which the scores per category are significantly different are marked.

Table 5.3-2: Average score per variable grouped by age (years)

| | <25 years | 25 - <35 | 35 - <45 | 45 - <55 | >55 |
|---------------|-----------|----------|----------|----------|------|
| SEIc * | 4.05 | 3.31 | 3.12 | 3.14 | 3.24 |
| SEIv * | 3.90 | 3.09 | 2.80 | 2.74 | 3.00 |
| SEIi * | 3.68 | 3.09 | 2.75 | 2.67 | 2.99 |
| DJCF | 3.34 | 3.37 | 2.96 | 3.05 | 3.03 |
| DJPP | 3.42 | 3.21 | 3.10 | 3.20 | 3.40 |
| PJ | 3.31 | 3.07 | 2.65 | 2.80 | 2.89 |
| IJ | 4.08 | 3.64 | 3.43 | 3.33 | 3.57 |
| IPJ | 4.51 | 4.03 | 3.93 | 3.93 | 3.74 |
| LMX | 4.11 | 3.56 | 3.60 | 3.75 | 3.33 |
| AC | 3.64 | 3.08 | 3.09 | 3.48 | 3.46 |
| NC * | 3.08 | 2.75 | 3.06 | 3.26 | 3.46 |
| CCLA * | 3.67 | 3.69 | 3.71 | 2.99 | 3.35 |
| TI | 2.88 | 2.95 | 3.21 | 3.01 | 2.79 |

* relation significant at the 0.05 level

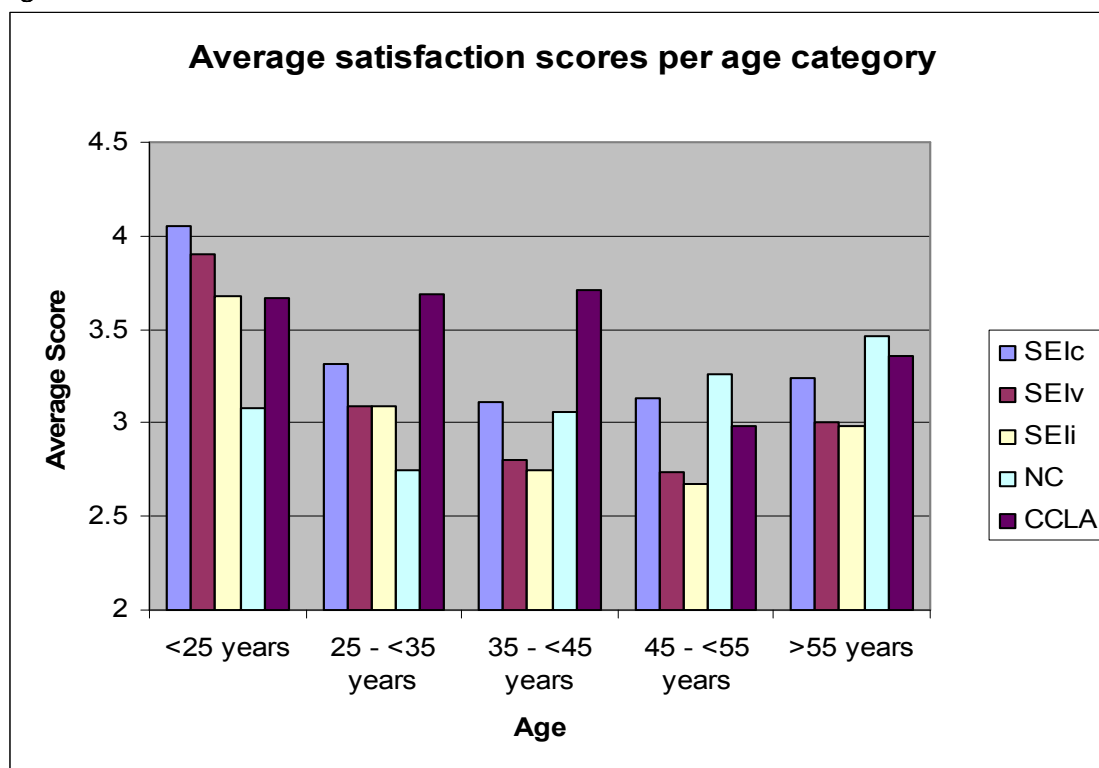
In the table can be seen that there are differences in scores for satisfaction with communication, voice and influence, and for normative commitment and calculative commitment (Low Alternatives). Table 5.3-3 displays which groups are different. From the table can be learned that young employees (< 25 years) are more satisfied with participation. The smallest mean difference with another group is 0.74, the largest difference in mean score is 0.93 (with the group between 35 - <45 years). The scores are visualized in Figure 5-1.

Also normative commitment shows differences in group means. The group of employees in the category 25 - <35 years, score lower (-0.72) than the oldest employees (>55 years). For the variable CCLA, the group of 45 - < 55 years score lower than the groups of 25 - <35 years and 35 - <45 years. These data can also be seen in Figure 5-1.

Table 5.3-3: Different score per age category per variable

| Age | Degrees of freedom between groups | F value | Relation | | Mean difference (I-J) |
|------|-----------------------------------|---------|----------------|----------------|-----------------------|
| | | | I | J | |
| SEIc | 4 | 3.93 | < 25 years | 25 – <35 years | 0.74 |
| | | | < 25 years | 35 – <45 years | 0.93 |
| | | | < 25 years | 45 – <55 years | 0.91 |
| | | | < 25 years | >55 years | 0.81 |
| SEIv | 4 | 4.95 | < 25 years | 25 – <35 years | 0.81 |
| | | | < 25 years | 35 – <45 years | 1.10 |
| | | | < 25 years | 45 – <55 years | 1.16 |
| | | | < 25 years | >55 years | 0.90 |
| SEIi | 4 | 4.19 | < 25 years | 35 – <45 years | 0.93 |
| | | | < 25 years | 45 – <55 years | 1.00 |
| NC | 4 | 3.97 | 25 – <35 years | >55 years | -0.72 |
| CCLA | 4 | 2.96 | 25 – <35 years | 45 – <55 years | 0.71 |
| | | | 35 – <45 years | 45 – <55 years | 0.73 |

Figure 5-1



5.3.3 Faculty

In Table 5.3-4 the means are presented per group of faculty members. The four faculties that participated in the study were CTW, EWI, GW and MB. As can be seen in Table 5.3-4 there are no significant differences in the means scores when the different faculties are taken into account.

Table 5.3-4: Mean scores grouped by faculty

| | CTW | EWI | GW | MB |
|------|------|------|------|------|
| SEIc | 3.20 | 3.19 | 3.58 | 3.17 |
| SEIv | 3.09 | 2.95 | 3.22 | 2.82 |
| SEIi | 3.07 | 2.88 | 3.14 | 2.86 |
| DJCF | 3.10 | 3.25 | 3.46 | 2.98 |
| DJPP | 3.16 | 3.22 | 3.37 | 3.18 |
| PJ | 2.85 | 2.82 | 3.17 | 2.92 |
| IJ | 3.45 | 3.46 | 3.73 | 3.60 |
| IPJ | 4.00 | 3.95 | 4.03 | 3.90 |
| LMX | 3.66 | 3.61 | 3.74 | 3.42 |
| AC | 3.14 | 3.30 | 3.14 | 3.31 |
| NC | 2.90 | 3.03 | 2.72 | 3.26 |
| CCLA | 3.62 | 3.53 | 3.62 | 3.49 |
| TI | 3.04 | 2.98 | 2.75 | 3.18 |

5.3.4 How long do you work for the university?

The means of the scores are presented in Table 5.3-5. Five categories were defined, 0 - <2 years, 2 - <5 years, 5 - <10 years, 10 - <20 years and 20 years or longer.

Table 5.3-5: How long do you work for the university?

| | 0 - <2 years | 2 - <5 years | 5 - <10 years | 10 - <20 years | >20 years |
|--------|--------------|--------------|---------------|----------------|-----------|
| SEIc * | 3.57 | 3.14 | 3.07 | 3.22 | 3.25 |
| SEIv * | 3.32 | 2.90 | 3.13 | 2.57 | 2.98 |
| SEIi * | 3.29 | 2.93 | 2.93 | 2.60 | 2.98 |
| DJCF | 3.35 | 3.35 | 3.13 | 2.97 | 2.88 |
| DJPP | 3.17 | 3.21 | 3.16 | 3.32 | 3.27 |
| PJ | 3.09 | 2.99 | 2.79 | 2.82 | 2.82 |
| IJ | 3.58 | 3.47 | 3.78 | 3.45 | 3.42 |
| IPJ | 4.06 | 3.93 | 4.18 | 3.84 | 3.78 |
| LMX | 3.52 | 3.57 | 3.69 | 3.68 | 3.55 |
| AC * | 3.13 | 2.94 | 3.33 | 3.31 | 3.66 |
| NC * | 2.82 | 2.65 | 3.13 | 3.23 | 3.62 |
| CCLA * | 3.63 | 3.61 | 3.70 | 3.67 | 2.94 |
| TI * | 2.83 | 2.98 | 2.96 | 3.23 | 3.11 |

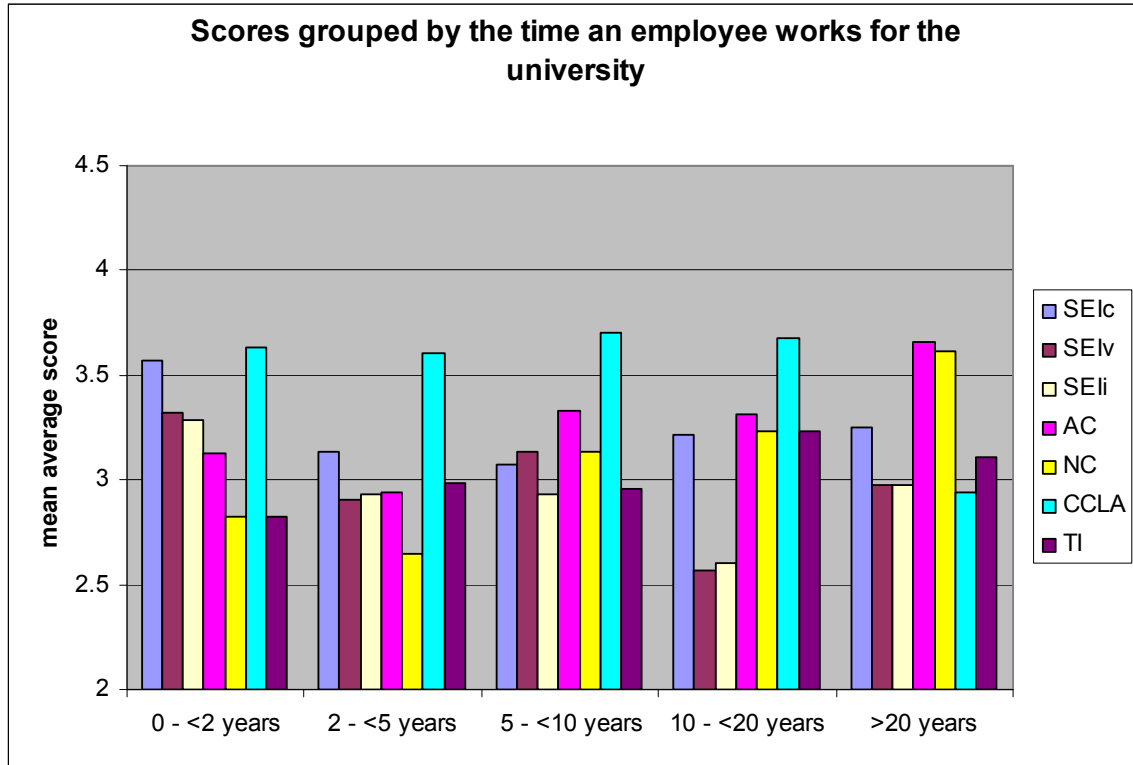
As can be seen in the table above, differences in group averages can be seen for the variables satisfaction with communication, voice and influence, affective, normative and calculative commitment and turnover intention. In Table 5.3-6 the mean differences are examined in greater detail, to see what groups differ from each other.

Table 5.3-6: Difference between groups for each variable

| | Degrees of freedom between groups | F value | Relation | | Mean difference (I-J) |
|-------------|--------------------------------------|---------|----------------|----------------|--------------------------|
| | | | I | J | |
| SEIc | 4 | 2.73 | 0 - <2 years | 2 - <5 years | 0.43 |
| | | | 0 - <2 years | 5 - <10 years | 0.50 |
| | | | 0 - <2 years | 10 - <20 years | 0.35 |
| SEIv | 4 | 4.33 | 0 - <2 years | 2 - <5 years | 0.42 |
| | | | 0 - <2 years | 10 - <20 years | 0.75 |
| | | | 5 - <10 years | 10 - <20 years | 0.57 |
| SEIi | 4 | 3.42 | 0 - <2 years | 2 - <5 years | 0.35 |
| | | | 0 - <2 years | 10 - <20 years | 0.68 |
| AC | 4 | 3.29 | 0 - <2 years | >20 years | -0.53 |
| | | | 2 - <5 years | 5 - <10 years | -0.39 |
| | | | 2 - <5 years | 10 - <20 years | -0.37 |
| | | | 2 - <5 years | >20 years | -0.72 |
| NC | 4 | 6.34 | 0 - <2 years | 10 - <20 years | -0.41 |
| | | | 0 - <2 years | >20 years | -0.79 |
| | | | 2 - <5 years | 5 - <10 years | -0.48 |
| | | | 2 - <5 years | 10 - <20 years | -0.58 |
| | | | 2 - <5 years | >20 years | -0.96 |
| CCLA | 4 | 2.58 | 5 - <10 years | >20 years | -0.49 |
| | | | 0 - <2 years | >20 years | 0.69 |
| | | | 2 - <5 years | >20 years | 0.67 |
| | | | 5 - <10 years | >20 years | 0.76 |
| TI | 4 | 3.76 | 10 - <20 years | >20 years | 0.74 |
| | | | 0 - <2 years | 2 - <5 years | -0.77 |
| | | | 0 - <2 years | 10 - <20 years | -0.61 |
| | | | 2 - <5 years | 10 - <20 years | -0.60 |

In the table can be seen that employees who work more years for the university have lower scores for satisfaction with communication, voice and influence. The differences are the least for satisfaction with influence. The commitment dimensions also show a pattern: when employees work longer for the university, affective and normative commitment is higher. Employees, who work for the university longer than 20 years, show a lower level of calculative commitment (low alternatives). When turnover intention is considered, employees who work for the university for less than two years have the lowest turnover intention. The group of employees who work for the university for more than ten years and less than 20 years show the highest turnover intention. These results are visualized in Figure 5-2.

Figure 5-2



5.3.5 The time an employee works in his or her present function

Employees were also asked how long they worked in their present function. When all respondents were to work in their first function, the results would be the same as the results in paragraph 5.3.4, because the time the respondent works in his or her present function would equal the time he or she works at the university. Thus, when the number of respondents that do not work in their first function is high, differences between the results in the previous paragraph and this paragraph will increase. The number of employees who work in their first function is displayed in Table 5.3-7.

Table 5.3-7: Respondents that work in the first function at the university or not in the first function

| | | N | Percentage |
|---|--------------------------------------|----------|-------------------|
| Employees who work in their first function at the university | | 141 | 73.1 |
| Employees who do not work in their first function at the university | | 52 | 26.9 |
| OBP | First function at the university | 36 | 63.2 |
| | Not first function at the university | 21 | 36.8 |
| PhD | First function at the university | 57 | 96.6 |
| | Not first function at the university | 2 | 3.4 |
| Lecturer | First function at the university | 6 | 75.0 |
| | Not first function at the university | 2 | 25.0 |
| Researcher | First function at the university | 14 | 87.5 |
| | Not first function at the university | 2 | 12.5 |
| UL | First function at the university | 18 | 56.3 |
| | Not first function at the university | 14 | 43.8 |
| SUL | First function at the university | 5 | 62.5 |
| | Not first function at the university | 3 | 37.5 |
| Professor | First function at the university | 5 | 41.7 |
| | Not first function at the university | 7 | 58.3 |

Table 5.3-7 indicates that 73 percent of the employees work in their first function. The highest percentage of employees in first function is for the PhDs (96.6 %). A high overlap in data might mean similar results. The means of this moderator is presented in Table 5.3-8.

Table 5.3-8: How long do you work in your present function?

| | 0 - <2 jaar | 2 - <5 jaar | 5 - <10 jaar | 10 - <20 jaar | 20 jaar of langer |
|---------------|-----------------------|-----------------------|------------------------|-------------------------|--------------------------|
| SEIc * | 3.54 | 3.13 | 3.19 | 3.10 | 3.13 |
| SEIv * | 3.35 | 2.81 | 2.97 | 2.71 | 2.91 |
| SEIi * | 3.29 | 2.85 | 2.90 | 2.63 | 2.84 |
| DJCF | 3.34 | 3.20 | 3.17 | 2.94 | 2.66 |
| DJPP | 3.18 | 3.20 | 3.24 | 3.31 | 3.27 |
| PJ | 3.12 | 2.88 | 2.86 | 2.83 | 2.43 |
| IJ | 3.60 | 3.48 | 3.73 | 3.43 | 2.96 |
| IPJ | 4.11 | 3.92 | 4.03 | 3.83 | 3.53 |
| LMX | 3.56 | 3.57 | 3.68 | 3.63 | 3.50 |
| AC * | 3.12 | 3.03 | 3.51 | 3.18 | 3.87 |
| NC * | 2.91 | 2.76 | 3.20 | 3.35 | 3.58 |
| CCLA * | 3.62 | 3.68 | 3.69 | 3.19 | 2.55 |
| TI * | 2.86 | 3.01 | 3.02 | 3.33 | 2.80 |

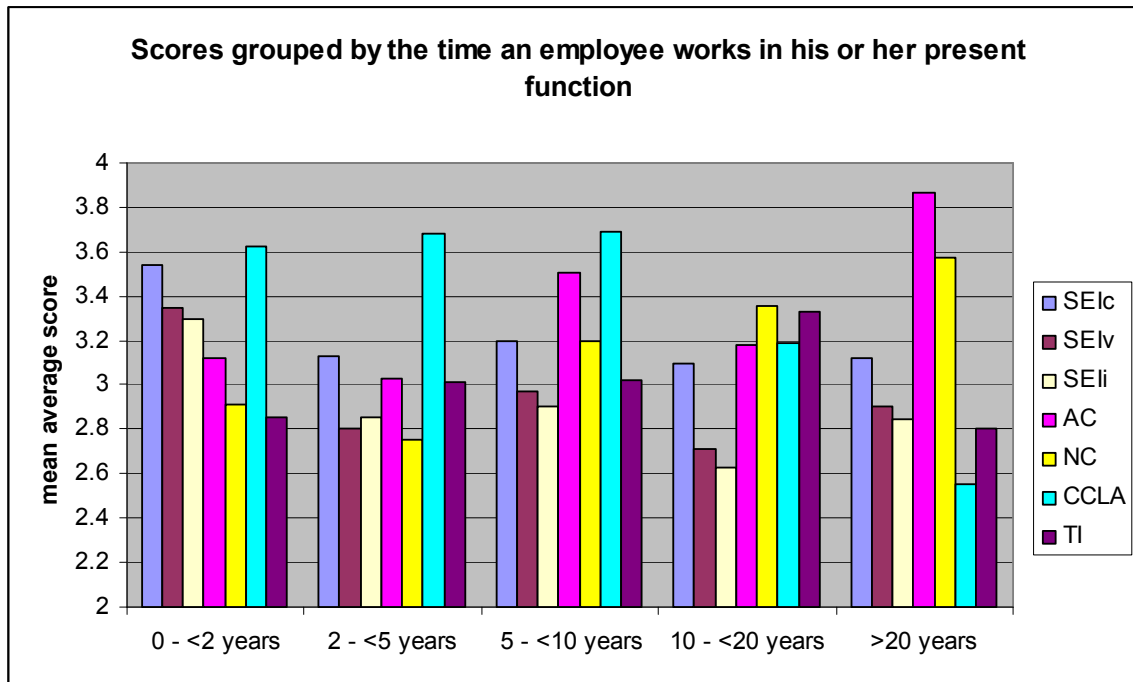
* relation significant at the 0.05 level

As can be seen in the table above, differences in group averages can be seen for the variables satisfaction with communication, voice and influence, affective, normative and calculative commitment and turnover intention. In Table 5.3-9 is shown which of the group differ.

| | Degrees of freedom between groups | F value | Relation | | Mean difference (I-J) |
|-------------|-----------------------------------|---------|---------------|----------------|-----------------------|
| | | | I | J | |
| SEIc | 4 | 2.61 | 0 - <2 years | 2 - <5 years | 0.41 |
| | | | 0 - <2 years | 5 - <10 years | 0.34 |
| | | | 0 - <2 years | 10 - <20 years | 0.44 |
| SEIv | 4 | 2.33 | 0 - <2 years | 2 - <5 years | 0.54 |
| | | | 0 - <2 years | 5 - <10 years | 0.38 |
| | | | 0 - <2 years | 10 - <20 years | 0.64 |
| SEIi | 4 | 3.42 | 0 - <2 years | 2 - <5 years | 0.44 |
| | | | 0 - <2 years | 5 - <10 years | 0.39 |
| | | | 0 - <2 years | 10 - <20 years | 0.67 |
| AC | 4 | 3.31 | 0 - <2 years | 5 - <10 years | -0.39 |
| | | | 0 - <2 years | >20 years | -0.75 |
| | | | 2 - <5 years | 5 - <10 years | -0.48 |
| | | | 2 - <5 years | >20 years | -0.84 |
| NC | 4 | 3.41 | 0 - <2 years | 10 - <20 years | -0.44 |
| | | | 2 - <5 years | 5 - <10 years | -0.44 |
| | | | 2 - <5 years | 10 - <20 years | -0.60 |
| | | | 2 - <5 years | >20 years | -0.82 |
| CCLA | 4 | 3.17 | 0 - <2 years | >20 years | 1.07 |
| | | | 2 - <5 years | 10 - <20 years | 0.49 |
| | | | 2 - <5 years | >20 years | 1.13 |
| | | | 5 - <10 years | 10 - <20 years | 0.50 |
| | | | 5 - <10 years | >20 years | 1.14 |
| TI | 4 | 2.65 | 0 - <2 years | 2 - <5 years | -0.59 |
| | | | 0 - <2 years | 10 - <20 years | -0.64 |

In the table some overlap can be seen with the data in the previous paragraph; the scores differ for the same variables and the direction of the relations are the same. It can be seen that employees who work longer in the present function, have lower scores for satisfaction with communication, voice and influence. Also, when employees work longer in the present function, affective and normative commitment is commitment is higher. Employees, who work for the university longer than 10 years, show a lower level of calculative commitment (low alternatives). Finally, employees who work in the present function for less than two years, have the lowest turnover intention. The data are visualized in Figure 5-3.

Figure 5-3



5.3.6 Function

The employees were also compared on the basis of their present function. The results are shown in Table 5.3-10. As can be seen in the table, there were no significant differences for group scores.

Table 5.3-10: Means per variable grouped by present function

| | OBP | PhD | lecturer | researcher | UL ¹ | SUL ² | professor |
|------|------|------|----------|------------|-----------------|------------------|-----------|
| SEIc | 3.38 | 3.38 | 2.96 | 2.77 | 3.26 | 3.00 | 3.27 |
| SEIv | 2.96 | 3.18 | 2.69 | 2.75 | 3.04 | 2.54 | 3.09 |
| SEIi | 2.90 | 3.21 | 2.72 | 2.63 | 2.93 | 2.63 | 3.14 |
| DJCF | 3.26 | 3.36 | 2.91 | 3.18 | 3.07 | 2.59 | 2.85 |
| DJPP | 3.36 | 3.20 | 2.98 | 3.11 | 3.17 | 3.12 | 3.56 |
| PJ | 3.13 | 3.06 | 2.86 | 2.68 | 2.66 | 2.55 | 2.97 |
| IJ | 3.64 | 3.57 | 3.68 | 3.40 | 3.52 | 3.53 | 3.25 |
| IPJ | 4.02 | 4.09 | 3.86 | 3.88 | 3.99 | 3.43 | 3.70 |
| LMX | 3.68 | 3.57 | 3.57 | 3.69 | 3.63 | 3.58 | 3.18 |
| AC | 3.48 | 3.08 | 2.90 | 3.32 | 3.15 | 3.19 | 3.40 |
| NC | 3.14 | 2.66 | 3.11 | 2.78 | 3.27 | 3.29 | 3.71 |
| CCLA | 3.40 | 3.56 | 3.75 | 3.66 | 3.56 | 3.58 | 3.82 |
| TI | 3.00 | 2.88 | 3.25 | 3.10 | 3.06 | 3.14 | 3.00 |

¹ : UL = University Lecturer; English translation for universitair docent (UD)

² : SUL = Senior University Lecturer; English translation for universitair hoofddocent (UHD)

But in the analysis for differences, a larger number of groups compared means that the differences need to be larger in order to show up in the analysis as significant (De Vocht, 2005). Also, some of the functions had only a limited number of respondents, e.g. lecturer (8), researcher (15), SUL (8), professor (10). When the scientific personnel is seen as a single group of employees, leaving three groups more equal in size: OBP (30 %), PhD (31 %) and scientific personnel (39 %), then the data (mean scores per functional level) are as shown below in Table 5.3-11.

Table 5.3-11: Average scores per variable per function reduced to three levels

| | OBP | PhD | Scientific personnel |
|--------|------|------|----------------------|
| SEIc | 3.38 | 3.38 | 3.10 |
| SEIv | 2.96 | 3.18 | 2.90 |
| SEIi * | 2.90 | 3.21 | 2.84 |
| DJCF | 3.26 | 3.36 | 2.99 |
| DJPP | 3.36 | 3.20 | 3.17 |
| PJ * | 3.13 | 3.06 | 2.72 |
| IJ | 3.64 | 3.57 | 3.48 |
| IPJ | 4.02 | 4.09 | 3.86 |
| LMX | 3.68 | 3.57 | 3.58 |
| AC | 3.48 | 3.08 | 3.19 |
| NC ** | 3.14 | 2.66 | 3.22 |
| CCLA | 3.40 | 3.56 | 3.64 |
| TI | 3.00 | 2.88 | 3.10 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

Three variables show differences in group means: satisfaction with influence, procedural justice and normative commitment. The data is visualized in Figure 5-4. In the figure can be seen that PhD students show lower levels of normative commitment than OBP personnel and scientific personnel. It was found in paragraph 5.3.2 that younger people showed lower levels of normative commitment. Considering that in general PhD-students are younger people, as presented in Figure 5-5, the findings in this chapter are consistent with the findings in paragraph 5.3.2. Furthermore, PhD-students show higher satisfaction scores for satisfaction with influence than both OBP and scientific personnel. Scientific personnel showed lower scores on procedural justice.

Figure 5-4

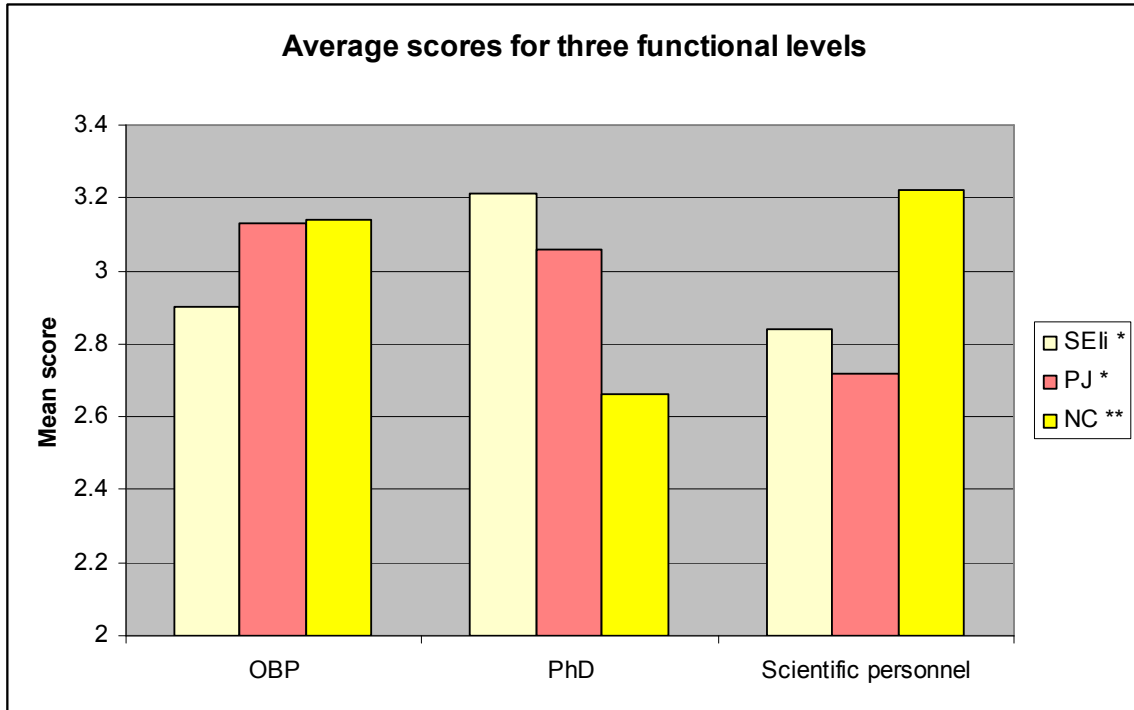
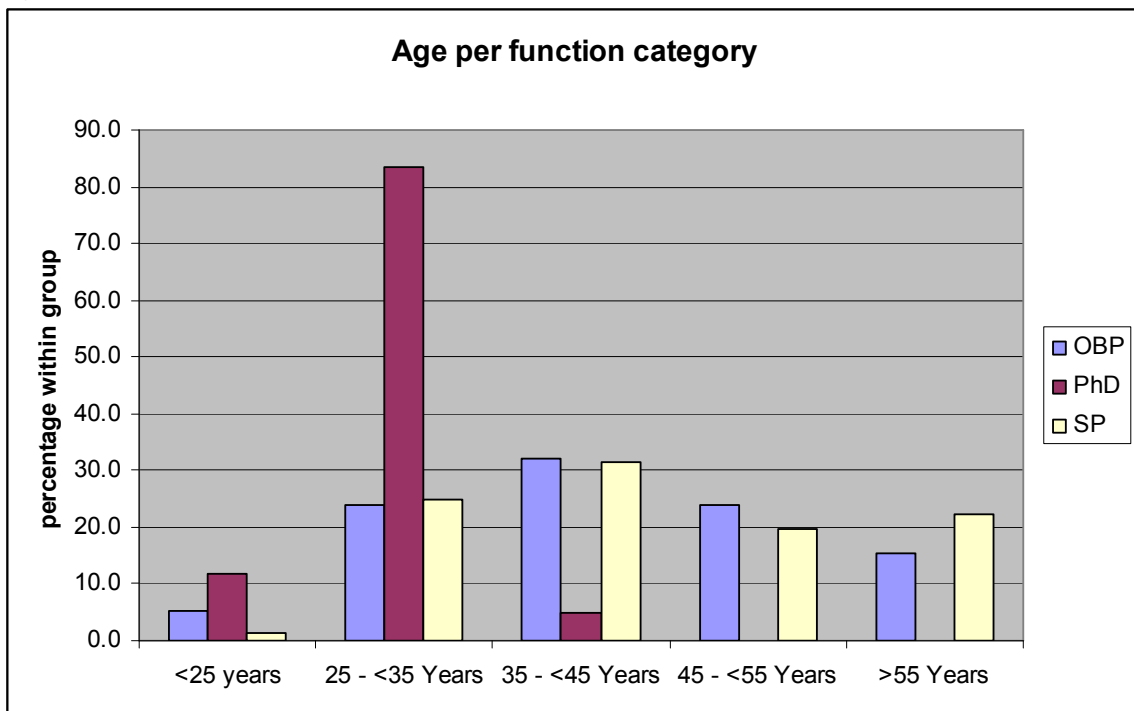


Figure 5-5



5.3.7 Salary scale

The support personnel (OBP) were also asked for their salary scale. For this group the means were compared to see if there are differences between the groups. The results are shown in Table 5.3-12. As can be seen in the table, there were no significant differences for group scores.

Table 5.3-12: Mean scores per variable grouped by salary scale

| | 1 | 4 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|
| SEIc | 3.75 | 3.25 | 3.40 | 3.13 | 3.31 | 3.21 | 3.19 | 3.07 | 2.00 | . | 3.67 |
| SEIv | 4.00 | 3.00 | 3.06 | 2.71 | 3.25 | 2.93 | 2.67 | 2.75 | 2.00 | 3.00 | 4.00 |
| SEIi | 3.50 | 3.00 | 3.04 | 2.25 | 3.17 | 2.79 | 2.83 | 2.50 | 2.00 | 2.50 | 3.83 |
| DJCF | 3.50 | 3.38 | 2.95 | 3.29 | 3.17 | 3.04 | 3.06 | 3.29 | 4.00 | 4.00 | 3.75 |
| DJPP | 3.58 | 4.08 | 3.40 | 3.12 | 3.08 | 3.52 | 3.16 | 2.96 | 3.08 | 3.25 | 3.19 |
| PJ | 3.57 | 3.29 | 3.29 | 2.57 | 3.86 | 3.03 | 3.18 | 2.57 | 3.00 | 2.29 | 3.10 |
| IJ | 4.75 | 2.50 | 3.75 | 4.25 | 4.00 | 3.95 | 3.21 | 3.50 | 3.50 | 3.50 | 3.33 |
| IPJ | 5.00 | 3.60 | 4.30 | 4.25 | 4.00 | 4.16 | 3.60 | 3.67 | 4.00 | 3.80 | 3.47 |
| LMX | 4.67 | 4.42 | 3.88 | 4.20 | 3.83 | 3.90 | 3.21 | 3.15 | 3.08 | 3.58 | 2.92 |
| AC | 4.67 | 4.17 | 3.69 | 3.70 | 3.83 | 3.47 | 2.82 | 3.40 | 4.33 | 3.33 | 3.28 |
| NC | 2.63 | 3.50 | 3.09 | 3.10 | 4.00 | 3.23 | 3.00 | 3.30 | 4.00 | 3.50 | 3.13 |
| CCLA | 3.75 | 4.00 | 3.04 | 3.50 | 3.00 | 3.88 | 4.18 | 3.10 | 4.00 | 4.00 | 2.83 |
| TI | 3.75 | 2.75 | 2.79 | 3.05 | 2.75 | 3.00 | 3.35 | 2.90 | 2.00 | 3.25 | 2.42 |

5.3.8 Fixed-term contracts and indefinite contracts

At the university employees can be divided into employees having an indefinite contract or a fixed-term contract. In Table 5.3-13 the means are presented grouped by these two contract forms.

The scores differ for five variables. Firstly, employees with fixed term contracts are more satisfied (3.17) with voice than employees with indefinite contracts (2.85). The same goes for satisfaction with influence (SEIi), employees with indefinite-term contracts have lower scores (2.77) than employees with fixed-term contracts (3.20). Also for distributive justice employees with fixed-term contracts show higher scores (3.33) than employees with indefinite-term contracts (3.07). When affective commitment and normative commitment are considered, the relations are opposite, here employees with indefinite-term contracts score higher (3.35 for AC; 3.25 for NC) than employees with fixed-term contracts (3.06 for AC; 2.70 for NC). These data are visualized in Figure 5-6.

To understand this it might be useful to see who the employees with the two contract forms are. Table 5.3-14 gives the number of employees and percentage for each of the functional levels for each of the contract forms.

Table 5.3-13: Group averages for the variables grouped by contract form

| | | N | Mean | Std. Deviation |
|-------------|---------------|----------|-------------|-----------------------|
| SEIc | Indefinite | 86 | 3.18 | 0.70 |
| | Fixed term | 67 | 3.40 | 0.75 |
| SEIv | Indefinite * | 87 | 2.85 | 0.85 |
| | Fixed term * | 69 | 3.17 | 0.77 |
| SEIi | Indefinite ** | 86 | 2.77 | 0.79 |
| | Fixed term ** | 67 | 3.20 | 0.76 |
| DJCF | Indefinite * | 87 | 3.07 | 0.82 |
| | Fixed term * | 64 | 3.33 | 0.68 |
| DJPP | Indefinite | 68 | 3.25 | 0.50 |
| | Fixed term | 61 | 3.18 | 0.38 |
| PJ | Indefinite | 70 | 2.81 | 0.84 |
| | Fixed term | 55 | 3.04 | 0.70 |
| IJ | Indefinite | 72 | 3.55 | 1.10 |
| | Fixed term | 61 | 3.54 | 1.01 |
| IPJ | Indefinite | 69 | 3.91 | 0.85 |
| | Fixed term | 62 | 4.00 | 0.77 |
| LMX | Indefinite | 66 | 3.63 | 0.77 |
| | Fixed term | 59 | 3.56 | 0.65 |
| AC | Indefinite * | 69 | 3.35 | 0.75 |
| | Fixed term * | 60 | 3.06 | 0.66 |
| NC | Indefinite ** | 65 | 3.25 | 0.65 |
| | Fixed term ** | 59 | 2.70 | 0.77 |
| CCLA | Indefinite | 66 | 3.48 | 0.99 |
| | Fixed term | 60 | 3.62 | 0.69 |
| TI | Indefinite | 69 | 2.72 | 0.96 |
| | Fixed term | 60 | 2.69 | 0.93 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

Figure 5-6

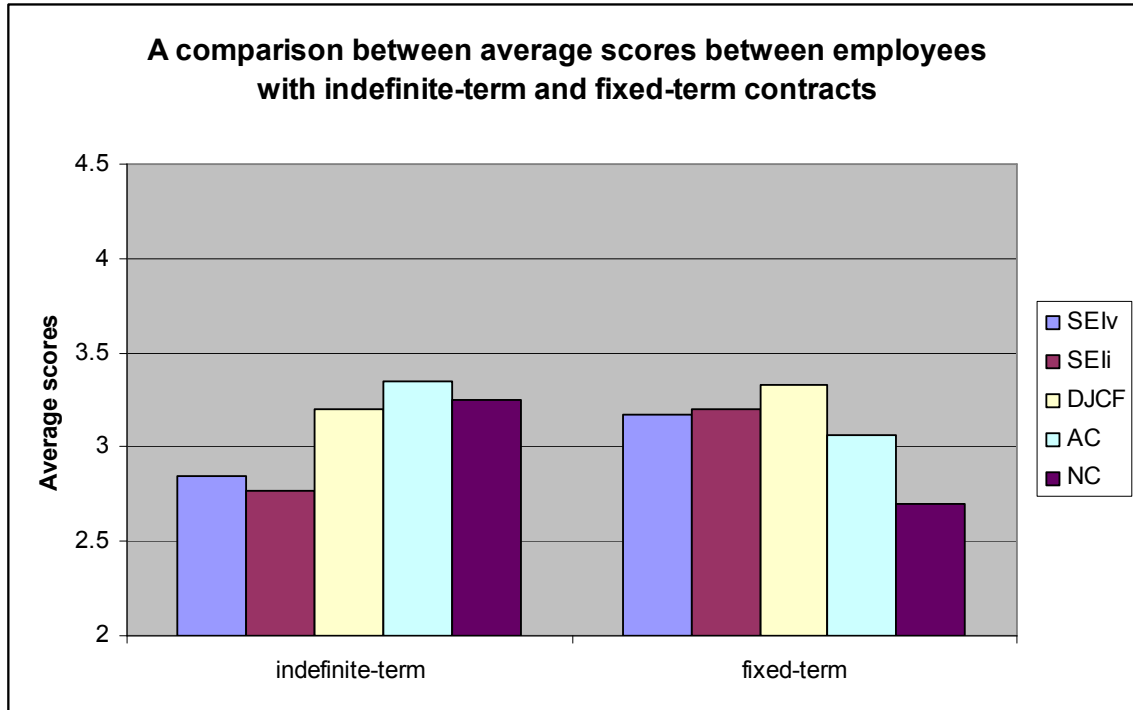


Table 5.3-14: Percentage and number of indefinite-term contracts and fixed-term contracts for each of the function groups

| | Indefinite term contract | | Fixed-term contract | |
|--------------|--------------------------|------------|---------------------|------------|
| | N | % of total | N | % of total |
| OBP | 49 | 48 | 9 | 11 |
| PhD | 0 | 0 | 56 | 66 |
| Lecturer | 6 | 6 | 2 | 2 |
| Researcher | 5 | 5 | 10 | 12 |
| UL | 27 | 26 | 5 | 6 |
| SUL | 8 | 8 | 0 | 0 |
| Professor | 7 | 7 | 3 | 4 |
| Total | 102 | 100 | 85 | 100 |

From the data in the table becomes clear that 66% of the respondents, who have a fixed-term contract, are PhD-students. In paragraph 5.3.6, it was shown that PhD-students have lower levels of normative commitment and higher levels of satisfaction with influence. Here too, there are significant differences for these variables. However, also differences were found for satisfaction with voice, distributive justice (CF) and affective commitment and no difference was found for procedural justice.

5.3.9 A division in part-time and full-time employees

In Table 5.3-15 the scores are compared for employees who work full-time and part-time. As can be seen in the table, no significant different score occur when these groups are compared.

Table 5.3-15: Group averages for the variables grouped by full-time and part-time working employees

| | | N | Mean | Std. Deviation |
|-------------|-----------|-----|------|----------------|
| SEIc | Full-time | 107 | 3.28 | 0.70 |
| | Part-time | 51 | 3.23 | 0.80 |
| SEIv | Full-time | 109 | 3.07 | 0.81 |
| | Part-time | 51 | 2.84 | 0.83 |
| SEIi | Full-time | 110 | 3.03 | 0.76 |
| | Part-time | 48 | 2.81 | 0.87 |
| DJCF | Full-time | 106 | 3.19 | 0.71 |
| | Part-time | 50 | 3.12 | 0.88 |
| DJPP | Full-time | 93 | 3.21 | 0.36 |
| | Part-time | 40 | 3.23 | 0.61 |
| PJ | Full-time | 90 | 2.94 | 0.79 |
| | Part-time | 40 | 2.84 | 0.74 |
| IJ | Full-time | 97 | 3.57 | 1.05 |
| | Part-time | 40 | 3.43 | 1.00 |
| IPJ | Full-time | 95 | 4.00 | 0.76 |
| | Part-time | 41 | 3.91 | 0.93 |
| LMX | Full-time | 89 | 3.60 | 0.71 |
| | Part-time | 38 | 3.60 | 0.72 |
| AC | Full-time | 91 | 3.15 | 0.68 |
| | Part-time | 40 | 3.38 | 0.81 |
| NC | Full-time | 91 | 3.02 | 0.81 |
| | Part-time | 37 | 3.00 | 0.67 |
| CCLA | Full-time | 89 | 3.54 | 0.85 |
| | Part-time | 39 | 3.60 | 0.89 |
| TI | Full-time | 93 | 2.72 | 0.88 |
| | Part-time | 39 | 2.63 | 1.07 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

5.4 Analyzing the relations

This paragraph deals with the mediation effects of organizational justice and LMX on the relation between satisfaction with direct participation and organizational commitment (paragraph 5.4.1) and the relation between organizational commitment and turnover intention (paragraph 5.4.2).

5.4.1 The supposed mediation effects of organizational justice and LMX

As discussed in paragraph 4.2 to show mediation three relations are of particular interest. In the first place the relations between the independent variable and the dependent variable, then the relations between the independent variable and the mediator (treating the mediator as if it were a dependent variable), and finally the relation between the mediator and the dependent variable with the independent variable in the equation. To calculate these relations, regression analyses were conducted. The results are shown in Table 5.4-1. In this table the significant relations are marked.

Table 5.4-1: Results of the regression analysis; the relation between the independent variables and the mediators and dependent variables

| | | AC | NC | CCLA | DJCF | DJPP | PJ | IJ | IPJ | LMX |
|------|---------|-----------------|--------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| SEIc | β | 0.294 ** | 0.120 | 0.088 | 0.496 ** | 0.404 ** | 0.453 ** | 0.358 ** | 0.402 ** | 0.368 ** |
| | r^2 | 0.079 | 0.006 | 0.000 | 0.241 | 0.157 | 0.199 | 0.121 | 0.155 | 0.128 |
| SEIv | β | 0.230 ** | 0.014 | 0.156 | 0.602 ** | 0.235 ** | 0.463 ** | 0.260 ** | 0.339 ** | 0.253 ** |
| | r^2 | 0.045 | -0.008 | 0.016 | 0.358 | 0.048 | 0.209 | 0.061 | 0.108 | 0.056 |
| SEIi | β | 0.336 ** | 0.054 | 0.177 * | 0.550 ** | 0.220 * | 0.431 ** | 0.184 * | 0.246 ** | 0.184 * |
| | r^2 | 0.106 | -0.005 | 0.024 | 0.298 | 0.041 | 0.180 | 0.026 | 0.053 | 0.040 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

The first thing to notice is that the satisfaction with communication, voice and influence has no explanatory value for normative commitment. For calculative commitment (low alternatives) only satisfaction with employee influence has a significant relation. For the rest all the relations found were significant, meaning that a part of the relation between the mediator and the independent variable could be explained by the independent variable. For example, 20% of the variance of the variable procedural justice could be explained by satisfaction with communication. The above means, that mediation can not occur for the dependent variable with normative commitment, and for calculative commitment (low alternatives) only satisfaction with influence has a relation that can be mediated. The relations are tested using regression analysis with the independent variable, mediator variable and the dependent variable in the equation. The results are shown in Table 5.4-2. In this table there is partial mediation if the supposed mediator has a significant beta value and the dependent variable also has a significant beta value. When only the mediator variable has a significant value for beta, and the beta of the independent variable has no significance anymore, than there is complete mediation. When only the independent variable has a significant beta value, then there is no mediation effect.

Table 5.4-2: Results of the regression analysis; the relation between a mediator with an independent variable with an independent variable in the equation

| | | AC | | | NC | | | CCLA | | |
|------|-------|--------------------|--------------------|----------------|--------------------|--------------------|----------------|--------------------|--------------------|----------------|
| | | β 1 MV-IV | β 2 DV-IV | R ² | β 1 MV-IV | β 2 DV-IV | r ² | β 1 MV-IV | β 2 DV-IV | r ² |
| DJCF | SEI-c | 0.116 | 0.235 * | 0.078 | -0.192 | 0.204 * | 0.028 | 0.154 | 0.019 | 0.011 |
| | SEI-v | 0.152 | 0.143 | 0.053 | -0.135 | 0.090 | -0.003 | 0.170 | 0.062 | 0.028 |
| | SEI-i | 0.071 | 0.302 ** | 0.103 | -0.156 | 0.131 | 0.007 | 0.110 | 0.126 | 0.024 |
| DJPP | SEI-c | 0.263 ** | 0.196 * | 0.130 | 0.081 | 0.092 | 0.004 | 0.146 | 0.022 | 0.008 |
| | SEI-v | 0.300 ** | 0.179 * | 0.126 | 0.102 | 0.001 | -0.006 | 0.122 | 0.131 | 0.022 |
| | SEI-i | 0.283 ** | 0.289 ** | 0.174 | 0.101 | 0.039 | -0.004 | 0.106 | 0.143 | 0.021 |
| PJ | SEI-c | 0.117 | 0.225 * | 0.017 | 0.049 | 0.091 | -0.003 | 0.046 | 0.059 | -0.009 |
| | SEI-v | 0.140 | 0.152 | 0.045 | 0.095 | -0.038 | -0.010 | 0.004 | 0.134 | 0.001 |
| | SEI-i | 0.086 | 0.332 ** | 0.124 | 0.069 | 0.048 | -0.007 | 0.018 | 0.159 | 0.010 |
| IJ | SEI-c | 0.072 | 0.256 ** | 0.066 | -0.034 | 0.130 | -0.001 | 0.187 | 0.027 | 0.022 |
| | SEI-v | 0.111 | 0.169 | 0.032 | 0.004 | -0.006 | -0.017 | 0.136 | 0.106 | 0.019 |
| | SEI-i | 0.103 | 0.325 ** | 0.108 | -0.034 | 0.130 | -0.001 | 0.190 | 0.132 | 0.043 |
| IPJ | SEI-c | 0.136 | 0.236 * | 0.081 | -0.074 | 0.113 | -0.004 | 0.206 | -0.019 | 0.024 |
| | SEI-v | 0.164 | 0.186 * | 0.062 | -0.042 | -0.001 | -0.015 | 0.145 | 0.100 | 0.022 |
| | SEI-i | 0.155 | 0.355 ** | 0.151 | -0.052 | 0.072 | -0.010 | 0.168 | 0.154 | 0.043 |
| LMX | SEI-c | 0.288 ** | 0.229 ** | 0.163 | 0.055 | 0.116 | 0.004 | 0.165 | 0.015 | 0.013 |
| | SEI-v | 0.311 ** | 0.191 * | 0.143 | 0.076 | -0.004 | -0.011 | 0.101 | 0.109 | 0.010 |
| | SEI-i | 0.314 ** | 0.229 ** | 0.197 | 0.084 | 0.045 | -0.007 | 0.147 | 0.133 | 0.028 |

IV= independent variable; MV = mediator variable; DP = dependent variable

** relation significant at the 0.01 level

* relation significant at the 0.05 level

From Table 5.4-2 can be learned that distributive justice (policies/practices) mediates all relations for the three satisfaction dimensions with affective commitment. The correlation was higher for distributive justice (PP) than for satisfaction with direct participation, except for satisfaction with employee influence, there the correlation with affective commitment is slightly higher for satisfaction with employee influence ($\beta = 0.289$ for SEI-I vs. $\beta = 0.283$ for DJPP) Also LMX partially mediates the relations for all satisfaction dimensions with affective commitment. LMX then shows higher correlations with affective commitment than all the dimensions of satisfaction with direct participation.

Finally, distributive justice (CF), procedural justice, informational justice and interpersonal justice did not show up as mediators for the relation between satisfaction with direct participation and organizational commitment. They might, however, still be related with the dimensions of organizational commitment. These relations are shown in Table 5.4-3. The data in the table shows that distributive justice (CF), procedural justice and interpersonal justice are related to affective commitment. With 0.04, their explaining capacity was not very large. Informational justice was related to calculative commitment (LA). The correlation found is 0.209 and r^2 is 0.036.

Table 5.4-3: The relations between DJCF, PJ, IJ and IPJ and organization commitment variables

| | AC | | NC | | CCLA | |
|------|----------------|-------|---------|-------|----------------|-------|
| | β | r^2 | β | r^2 | β | r^2 |
| DJCF | 0.218 * | 0.040 | -0.095 | 0.001 | 0.167 | 0.020 |
| PJ | 0.211 * | 0.037 | 0.089 | 0.000 | 0.073 | 0.000 |
| IJ | 0.147 | 0.014 | 0.016 | 0.000 | 0.209 * | 0.036 |
| IPJ | 0.216 * | 0.039 | -0.038 | 0.000 | 0.195 | 0.030 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

5.4.2 The relation between organizational commitment and turnover intention

In the literature study it was stated that organizational commitment was related to turnover intention. This paragraph tends to examine this relation in greater detail. Table 5.4-4 shows the relations between all variables and turnover intentions. The first thing to notice is that not all three dimensions of organizational commitment were related to turnover intention. Only affective commitment shows a significant relation. The value for beta was -0.172. the direction of the relation is as expected: when affective commitment is higher, turnover intention is lower. Only 2.2 percent of the variance in turnover intention could be explained by affective commitment. Other variables show stronger relations with turnover intention. Satisfaction with direct participation and distributive justice also show a negative correlation, meaning that when satisfaction with direct participation and the perceived distributive fairness is higher, turnover intention is lower and vice versa. Distributive justice explained most of the relation (0.099), the three dimension of satisfaction with direct participation - communication, voice and influence - show lower values for r^2 , 0.033, 0.042 and 0.023 respectively.

Table 5.4-4: Relations between variables all variables and turnover intention

| | Turnover Intention | |
|---|--------------------|-------|
| | β | r^2 |
| Satisfaction with communication (SEIc) | -2.02 * | 0.033 |
| Satisfaction with voice (SEIv) | -0.222 * | 0.042 |
| Satisfaction with influence (SEIi) | -0.147 * | 0.023 |
| Distributive Justice (Change in Function) | -0.326** | 0.099 |
| Distributive Justice (Policies & Practices) | -0.014 | 0.000 |
| Procedural Justice | -0.127 | 0.008 |
| Informational Justice | -0.114 | 0.005 |
| Interpersonal Justice | -0.147 | 0.014 |
| Leader-Member Exchange | -0.142 | 0.012 |
| Affective commitment | -0.172 * | 0.022 |
| Normative commitment | -0.047 | 0.000 |
| Calculative commitment (LA) | 0.111 | 0.005 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

5.5 Justice perception of four specific procedures

Items 50 – 53 asked respondents for their judgment perceptions on four specific procedures within the organization. The procedures were: judgment procedures, promotion procedures, reward procedures and selection procedures (see paragraph 4.3). The judgment perception scores will be analyzed for each of the moderators to see what differences in scores the several groups might have. In Table 5.5-1 the mean scores and the standard deviations for each of the procedures are presented. In this table can be seen that the score for judgment procedures is the highest (3.41) and the score for promotion procedure is the lowest (2.82). Rounded to one digit, all the items score a 3, which means that the respondents are neither satisfied nor unsatisfied with the procedures.

Table 5.5-1: N, mean scores and standard deviations for the four procedures

| | N | Mean | Std. Deviation |
|----------------------|-----|------|----------------|
| Judgment procedures | 137 | 3.41 | 0.85 |
| Reward procedures | 138 | 2.99 | 0.90 |
| Promotion procedures | 136 | 2.82 | 0.89 |
| Selection procedures | 138 | 3.17 | 0.79 |

Gender

A t-test was conducted to examine the scores given by men and women. The results are shown in Table 5.5-2. From the table can be learned that no significant differences in scores between the groups were found.

Table 5.5-2: Means and standard deviation for four procedures grouped by gender

| | | N | Mean | Std. Deviation |
|----------------------|--------|----|------|----------------|
| Judgment procedures | Male | 87 | 3.32 | 0.755 |
| | Female | 48 | 3.60 | 0.917 |
| Promotion procedures | Male | 86 | 2.79 | 0.828 |
| | Female | 48 | 2.90 | 0.951 |
| Reward procedures | Male | 88 | 2.98 | 0.844 |
| | Female | 48 | 3.02 | 0.956 |
| Selection procedures | Male | 87 | 3.15 | 0.815 |
| | Female | 49 | 3.20 | 0.763 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

Age

To study what differences might exist between the different age-groups, an analysis of variance was conducted. The results are presented in Table 5.5-3.

Table 5.5-3: significance in scores between age categories for four procedures

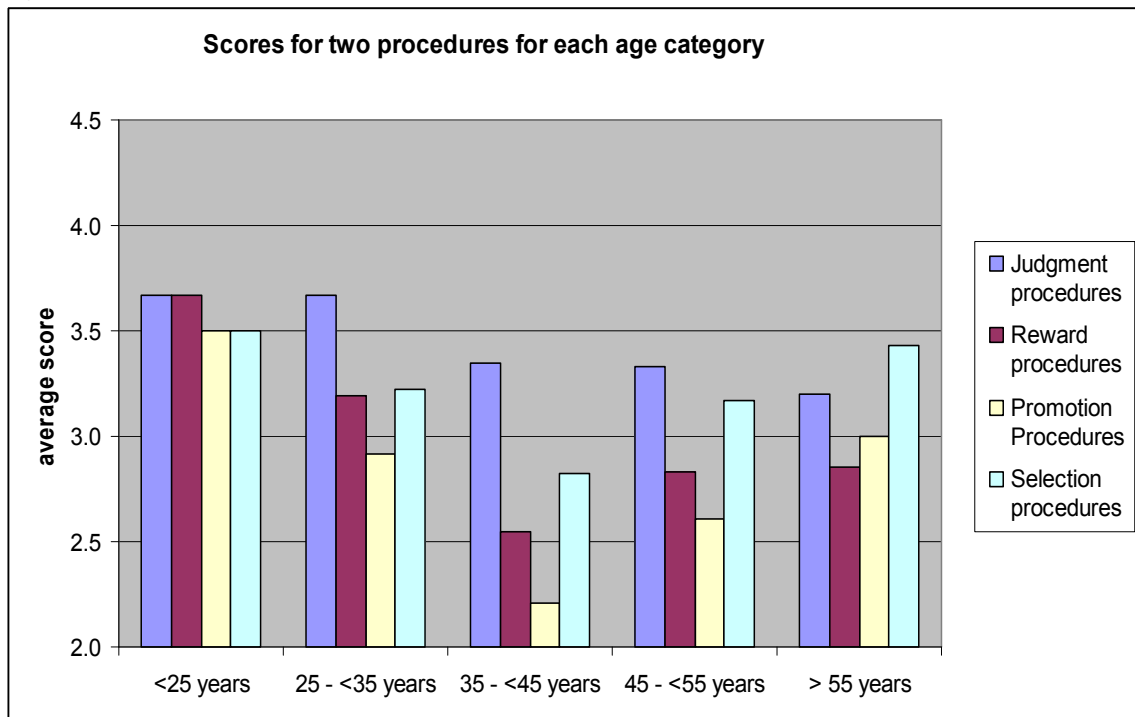
| | df | F | Sig. |
|-------------------------|----|-------|-------|
| Jugdment procedures | 4 | 3.007 | 0.306 |
| Reward procedures * | 4 | 1.219 | 0.021 |
| Promotion procedures ** | 4 | 3.619 | 0.008 |
| Selection procedures | 4 | 1.595 | 0.179 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

For reward systems appears that the group of respondents having an age in the category 35 - <45 years, score lower on reward systems than respondents in the categories younger than 25 years and 25 - <35 years. When judgment perception of the promotion procedures are considered, than the group of respondents with age category of 35 -<45 score lower than the groups <25 years, 35 - <35 years and >55 years. The data can be seen in Figure 5-7. In this figure the dip in average scores can be seen for the age category of 35 - <45 years for the reward systems and the promotion procedures.

Figure 5-7



Faculties

An analysis of variance was conducted to study whether employees who work in different faculties have different perceptions of the four procedures. The results of the analysis are presented in Table 5.5-4.

Table 5.5-4: Analysis of Variance, faculties and four procedures

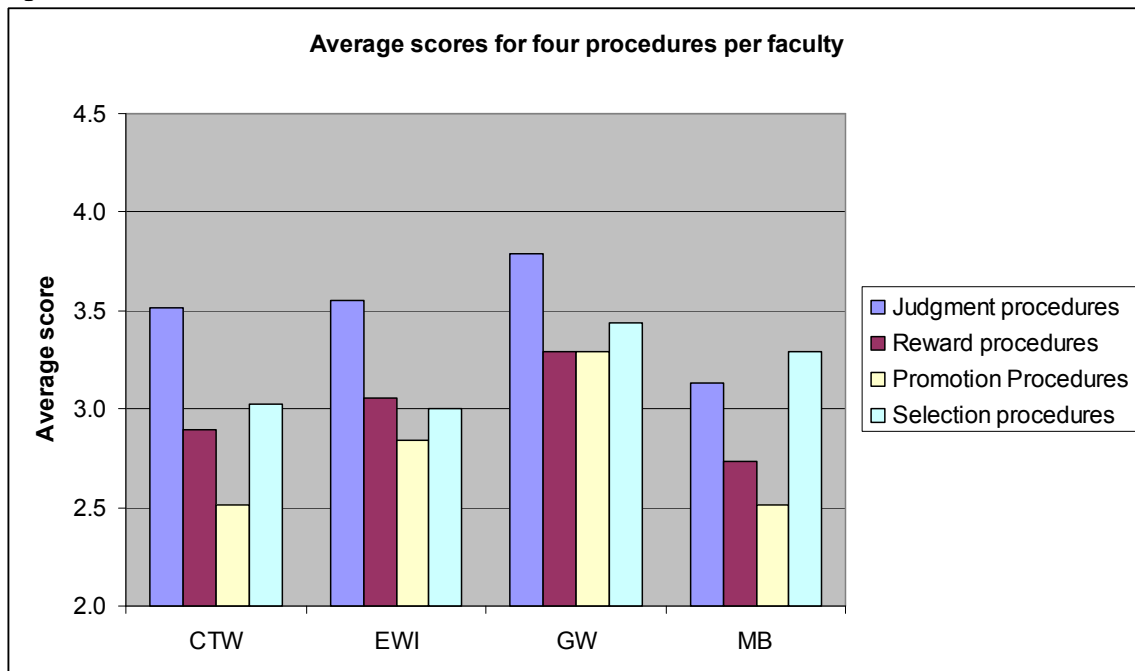
| | df | Mean Square |
|------------------------|----|-------------|
| Reward procedures | 3 | 1.164 |
| Judgment procedures | 3 | 2.094 |
| Promotion procedures * | 3 | 3.240 |
| Selection procedures | 3 | 1.444 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

The respondents who worked for the faculty GW had significantly higher judgment perceptions of promotion procedures than the respondents who worked for the faculties CTW and MB. The results are visualized in Figure 5-8.

Figure 5-8



How long do you work for the UT?

Table 5.5-5 presents the results of an analysis of variance of the number of years a respondent works for the university and their scores for the four procedures. As shown in the table, no significant differences exist.

Table 5.5-5: Analysis of the differences between groups for ‘How long do you work for the UT’ on each of the four procedures.

| | df | F | significance |
|-----------------------------|-----------|----------|---------------------|
| Reward procedures | 4 | 0.821 | 0.514 |
| Judgment procedures | 4 | 1.287 | 0.278 |
| Promotion procedures | 4 | 0.950 | 0.437 |
| Selection procedures | 4 | 0.263 | 0.901 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

Functional level

To study whether respondents from different functional level have different judgment perceptions of the four procedures an analysis of variance was conducted. The results are shown in Table 5.5-6.

Table 5.5-6: Results of an analysis of variance for functional level and the four procedures

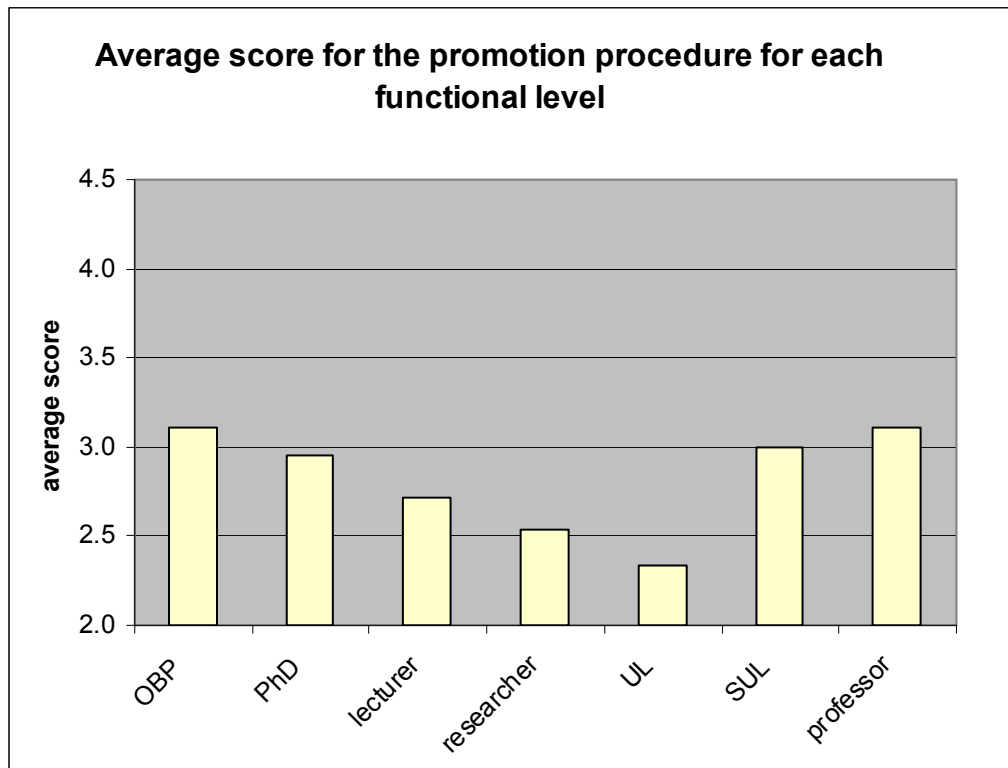
| | df | F | sig |
|-------------------------------|-----------|----------|------------|
| Reward procedures | 6 | 1.394 | 0.222 |
| Judgment procedures | 6 | 1.148 | 0.338 |
| Promotion procedures * | 6 | 2.656 | 0.018 |
| Selection procedures | 6 | 0.753 | 0.608 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

Except for the promotion procedures, no significant differences in group means were found. When the judgment perceptions of the promotion procedures are considered, then University lecturers (ULs) score significantly lower than OBPs, PhDs and professors. These data are shown in Figure 5-9. The figure indeed shows the lowest scores for university lecturers (UL) and higher scores for OBPs, PhDs and Professors. Also high scores for senior university lectures (SUL) can be seen, however, the difference in mean score was not significant.

Figure 5-9



How long do you work in your present function?

An analysis of variance was conducted to find whether the time a respondent works in his or her present function, gives different mean scores. The results are presented in Table 5.5-7. As can be seen in the table no significantly different scores were found for $p=0.05$.

Table 5.5-7: Analysis for differences in mean scores for four procedures grouped by the time respondents work in their present function

| | df | F | Sig. |
|----------------------|----|-------|-------|
| Reward procedures | 4 | 1.352 | 0.254 |
| Judgment procedures | 4 | 2.041 | 0.092 |
| Promotion procedures | 4 | 1.415 | 0.233 |
| Selection procedures | 4 | 0.694 | 0.598 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

OBP-Salary scale

Table 5.5-8 provides results on an analysis of variance where differences in group mean scores were studied for the four procedures, when grouped by the OBP salary scales. As the results in the table indicated no differences were found for each of the groups.

Table 5.5-8: Differences in scores on four procedures, when grouped by OBP salary scale

| | df | F | Sig. |
|-----------------------------|----|-------|-------|
| Reward procedures | 10 | 1.687 | 0.127 |
| Judgment procedures | 10 | 0.848 | 0.588 |
| Promotion procedures | 9 | 0.853 | 0.575 |
| Selection procedures | 9 | 0.776 | 0.640 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

Contract form

A t-test was conducted to study whether differences exist between scores from employees with indefinite term employment contracts and fixed-term employment contracts on the four procedures. The results are presented in Table 5.5-9. As can be seen no significant differences between the groups was found.

Table 5.5-9: Test of difference in group scores on the four procedures grouped by contract form

| | | N | Mean | Std. Deviation |
|-----------------------------|----------------------------|----|------|----------------|
| Judgment procedures | Indefinite contract | 72 | 3.35 | 0.906 |
| | Fixed-term contract | 60 | 3.50 | 0.792 |
| Promotion procedures | Indefinite contract | 71 | 2.79 | 0.955 |
| | Fixed-term contract | 60 | 2.85 | 0.820 |
| Reward procedures | Indefinite contract | 72 | 2.86 | 0.939 |
| | Fixed-term contract | 61 | 3.13 | 0.846 |
| Selection procedures | Indefinite contract | 71 | 3.18 | 0.798 |
| | Fixed-term contract | 62 | 3.16 | 0.793 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

Part-time versus full-time

A t-test was conducted to study whether differences can be found between scores from employees who work full-time and employees who work part-time on the four procedures. The results are presented in Table 5.5-10. As can be seen no significant differences between the groups was found.

Table 5.5-10: Test of difference in group scores on the four procedures grouped by respondents who work full-time and part-time

| | | N | Mean | Std. Deviation |
|-----------------------------|------------------|----------|-------------|-----------------------|
| Judgment procedures | full-time | 96 | 3.38 | 0.861 |
| | part-time | 40 | 3.48 | 0.816 |
| Promotion procedures | full-time | 95 | 2.82 | 0.863 |
| | part-time | 40 | 2.83 | 0.958 |
| Reward procedures | full-time | 97 | 2.99 | 0.872 |
| | part-time | 40 | 3.00 | 0.961 |
| Selection procedures | full-time | 96 | 3.19 | 0.772 |
| | part-time | 41 | 3.12 | 0.842 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

6 Conclusions and recommendations

6.1 Introduction

This chapter deals with the conclusions and recommendations of this study. In paragraph 6.2 the conclusions are drawn and discussed. In paragraph 6.3 recommendations that follow from this study are provided for the University of Twente. Finally some suggestions for further research will be provided in paragraph 6.4.

6.2 Conclusions

6.2.1 General conclusions

The study was conducted among employees of the University of Twente by means of a questionnaire that was distributed by email. The response rate was low, probably because of the holiday period and the fact that many of the potential respondents were non-Dutch speaking. In the analysis for internal consistency, it was found that calculative commitment (high sacrifices) did not show enough internal consistency to be taken into account in the analysis. The mean scores for the variables showed moderate scores. Most variables score a three (on a scale of five, with 1 = low and 5 = high), meaning employees are sometimes satisfied, and sometimes they are not. Informational justice, interpersonal justice, leader-member exchange and calculative commitment were the only variables that did not score a three; they scored a four. This means that on average, employees are satisfied with these variables.

6.2.2 The moderator analysis

Paragraph 5.3 studied whether the scores on the variables differed between groups. Nine moderators were taken into account. No differences in group averages were found for gender (item 1), the faculty where the employees work (item 3), OBP-salary scale (item 5), and full-time vs. part-time employment contracts (item 8). Several groups showed different scores.

The first moderator to be discussed here is *age*. It was found that in general younger employees showed higher levels of satisfaction with communication, voice and influence, normative commitment and calculative commitment (LA). Especially employees between 35 and 55 showed lower scores.

The second moderator that will be discussed is *the number of years an employee works for the university*. Differences in group means were found for satisfaction with communication, voice and influence, affective commitment, normative commitment, calculative commitment (LA) and turnover intention. The data showed that employees, who work for less than two years for the university, show higher levels of satisfaction with direct participation. For

affective commitment and normative commitment, this picture is reversed. Employees who work for the university for less than five years show lower levels of affective and normative commitment. Especially employees who work for the university for longer than 10 years show higher levels of affective and normative commitment. Calculative commitment was low for employees who work for the university for longer than 20 years. Finally, turnover intention was lowest for employees who worked for the university for less than two years, the highest turnover intention was found for employees who work for the university between ten and twenty years.

Roughly the same relations were found for *the time an employee works in his or her present function*. There were some nuances. For example, for satisfaction with influence, a larger difference was found between the group of employees who work in their present function for less than two years and the employees who work in their present function between ten and twenty years.

There were no differences found for mean scores for the functional level of the employees. However, when the number of function groups were reduced to three (OBP, PhD and scientific personnel), some significant differences came forward. It was then shown that PhDs scored higher on satisfaction with influence than OBP and scientific personnel. Scientific personnel scored lower on procedural justice than the two other groups. And PhDs score significantly lower on normative commitment on the other two groups.

Finally, differences between groups were found for indefinite-term and fixed-term contracts on five variables. Employees having indefinite-term contracts score higher on affective commitment and normative commitment and lower on satisfaction with voice and influence and distributive justice (CF) when compared to employees with fixed-term contracts.

6.2.3 The hypotheses

Hypothesis 1

Hypothesis 1 stated that satisfaction with employee influence is positively related to organizational commitment. The strongest relations were expected to exist between satisfaction with employee influence and affective and normative commitment; weaker relations were expected with calculative commitment. The data yielded only support for part of this hypothesis. The dimensions of satisfaction with direct participation were not related to all forms of organizational commitment. Satisfaction with communication was significantly related to affective commitment ($\beta = 0.294$) and not with normative and calculative commitment. Satisfaction with voice was only related to affective commitment ($\beta = 0.230$). Satisfaction with influence was related to affective commitment ($\beta = 0.336$) and to calculative commitment ($\beta = 0.177$) and was not related to normative commitment.

Hypothesis 2

Hypothesis 2 stated that affective, normative and calculative commitment are negatively related to turnover intention. The relation was examined in paragraph 5.4.2. It was found that affective commitment indeed was negatively related to turnover intention ($\beta = -0.172$), meaning that when employees show higher levels of affective commitment, they are less inclined to leave the organization. The expected relation was not found, however, for

normative commitment and calculative commitment. Instead, satisfaction with direct participation and distributive justice (CF) showed negative relations with turnover intention.

Hypothesis 3

The third hypothesis stated that Leader-Member Exchange mediates the relationship between satisfaction with direct participation, and is related to affective, normative and calculative (LA) commitment. The strongest relation was expected with affective commitment and weaker correlations were expected with normative and calculative commitment. The data showed that satisfaction with employee influence was related to LMX. LMX also mediated the relation between satisfaction with communication, voice and influence, with affective commitment. No mediation effect was found for normative commitment and calculative commitment.

Hypothesis 4

Hypothesis four stated that distributive justice mediates the relation between employee influence satisfaction, and commitment. It was expected that correlations were higher for affective commitment than to normative commitment and calculative commitment. Also the strongest mediation effect was expected for satisfaction with influence. The data showed that satisfaction with direct participation was positively related to both dimensions of distributive justice. For items that were selected from Leventhal (1976), here labeled (CF), the correlations for satisfaction with communication, voice and influence were 0.496, 0.602 and 0.550 respectively. The strongest relation was thus not found with satisfaction with influence, but with satisfaction with voice. For distributive justice (PP) the correlations were 0.404, 0.235 and 0.220 for the satisfaction dimensions of communication, voice and influence respectively. Distributive justice (PP) also partially mediated the relation between satisfaction with direct participation and affective commitment. No mediation was found for distributive justice (CF).

Hypothesis 5

Hypothesis five stated that procedural justice mediates the relation between employees' influence satisfaction, especially voice, and is more strongly related to affective commitment and less strongly related to normative and calculative commitment. Even though correlations were found between satisfaction with employee satisfaction with direct participation and procedural justice, no mediation effect was found for the relation between satisfaction with direct participation and organizational commitment.

Hypothesis 6

Hypothesis six stated that interpersonal justice mediates the relation between satisfaction with employee influence especially voice and influence, and a stronger relation was expected with affective commitment and it was expected to be less strongly related to normative and calculative commitment. Interpersonal justice was correlated with all three dimensions of satisfaction with direct participation. The relations were 0.402, 0.339 and 0.246 for communication, voice and influence respectively. No mediation effect was found for interpersonal justice.

Hypothesis 7

Hypothesis seven stated that informational justice mediates the relation between satisfaction with employee influence, especially communication, and a stronger relation was expected with affective commitment and it was expected to be less strongly related to normative and calculative commitment. Informational justice was correlated with all three dimensions of satisfaction with direct participation. The relations were 0.358, 0.260 and 0.184 for communication, voice and influence respectively. No mediation effect was found for informational justice.

6.2.4 Conclusions and discussion

There are several prominent findings in this study. Firstly, satisfaction with employee influence, which was used as a measure of satisfaction with direct participation practices, did not correlate to all forms of commitment. The relations were found for satisfaction with communication ($\beta = 0.294$), voice ($\beta = 0.230$) and influence ($\beta = 0.336$) with affective commitment. Also a significant relation was found for satisfaction with employee influence and calculative commitment low alternatives ($\beta = 0.177$). Even though the correlation between AC and NC was significant, it was not found that NC could be explained with any of the variables used in this study. It might be the case that the total number of response was too low for determining significance for this relation. Another explanation of this can be found in the work of Meyer & Allen (1991). They stated that higher levels of participative decision-making might lead to a felt obligation to e.g. remain in the organization or increase performance. When this is the case than it might be that the perceptions of SEI were too low to 'trigger' normative commitment and thus no relation between SEI and NC could be found. It might also be that the response group was too diverse for the number of responses to determine significance. Cultural differences were not taken into account in this study but they are antecedents for organizational commitment (Clugston, Howell & Dorfman, 2000). The beliefs people have (for example because they grew up with these beliefs) might then better explain the employees' NC. The lack of significant correlations between satisfaction with voice and satisfaction with communication leads to the suggestion that satisfaction perceptions with voice and communication, do not lead to changes in the number of alternatives the employees perceive. Unfortunately no conclusions could be drawn for the high sacrifices dimension, because this dimension lacked internal consistency ($\alpha = 0.49$). It is important to point out that in this study only the organizational commitment focus was studied. For other foci – for example the three additional foci which can be found in the study by Torcka (2003): work, the department or the colleagues – other relations might turn up. All dimensions of satisfaction with direct participation were significantly related to all supposed mediators: distributive justice (change in function), distributive justice (policies and practices), procedural justice, informational justice, interpersonal justice and leader member exchange. The exact details can be found in Table 5.4-1 on page 55; however, some of the interesting points will be discussed here.

Distributive justice (change in function) had the strongest relation with satisfaction with voice ($\beta = 0.602$ and $r^2 = 0.358$); almost 36 percent of the variance in distributive justice (CF) could be explained by satisfaction with voice. Distributive justice (policies and practices) was most strongly related to satisfaction with communication ($\beta = 0.404$ and $r^2 = 0.157$). It is interesting so see that satisfaction with influence did not yield the strongest relation with either dimensions of distributive justice. Procedural justice was most strongly related to satisfaction with voice ($\beta = 0.404$ and $r^2 = 0.157$). This was also as expected in the literature study. Informational justice, interpersonal justice and leader-member exchange were most strongly related to satisfaction with communication. This was also as expected in the literature study.

The only two supposed mediators that actually (partially) mediated the relations between satisfaction with direct participation and commitment were distributive justice (PP) and leader member exchange. The mediation affect was solely on the relation with affective commitment. When these relations are considered, stronger correlations with affective came forward for the mediators than for satisfaction with direct participation. This means that distributive justice (PP) and leader-member exchange are is more important in determining affective commitment than satisfaction with direct participation. Apparently employees compare their situation with other employees, and when they consider their situation as fair, they are more affectively committed. For LMX goes the same, the employees' attitude towards the supervisor is a more important factor in determining affective commitment than satisfaction with direct participation. For the supposed mediators for which no mediation effect could be found distributive justice (CF), procedural justice and interpersonal justice were only significantly correlated to affective commitment. The correlations were $\beta = 0.218$, $\beta = 0.211$ and $\beta = 0.216$ respectively. These correlations were lower than those found for satisfaction with direct participation on all three dimensions. The lowest correlation was found between satisfaction with voice ($\beta = 0.230$) and affective commitment. Also the values for r^2 were higher for satisfaction with direct participation. The informational justice perceptions were related to calculative commitment LA ($\beta = 0.209$; $r^2 = 0.036$). The only dimension of satisfaction with direct participation that was significantly related to calculative commitment LA, was satisfaction with influence ($\beta = 0.177$; $r^2 = 0.024$). The low values for r^2 mean the only a very small percentage of variance could be explained with these variables.

In chapter 2 it was stated that the organizational commitment was directly negatively related to turnover intention. In the analysis in paragraph 5.4.2 it was found that this was only the case for affective commitment. However, with $\beta = 0.172$ and $r^2 = 0.022$ the relation was rather weak. Stronger (negative) relations with turnover intention were found for satisfaction with communication ($\beta = -2.02$; $r^2 = 0.033$), satisfaction with voice ($\beta = -0.222$; $r^2 = 0.042$), satisfaction with influence ($\beta = -0.147$; $r^2 = 0.023$) and distributive justice (CF) ($\beta = -0.326$; $r^2 = 0.099$). Satisfaction with direct participation and distributive justice (CF) were actually more important in explaining turnover intentions. The fact that distributive justice (CF) and turnover intentions were correlated is not a complete surprise. For example Alexander & Ruderman (1987) already found this relation in their research, but their method of measuring

differed of the method that was used here. They did not ask their respondents to compare themselves with their colleagues, and some of the items they used, were more or less the same as some of the items that measure distributive justice (CF) in this study.

6.2.5 Four procedures

Fairness perceptions on four specific procedures were examined: judgment procedures (3.41), promotion procedures (2.99), reward procedures (2.82) and selection procedures (3.17). The procedures score a three. Differences in mean scores were examined for every moderator and for every procedure. No difference was found for gender, the time an employee works for the university, the time an employee works for his or her present function and contract forms. It was found that employees who are between 35 and 45 years score significantly lower on reward procedures and promotion procedures. Also employees from the faculty GW had significantly higher scores than employees from the faculties CTW and MB for the promotion procedures. Finally it was found that university lecturers gave significantly lower scores for the promotion procedures.

6.3 Recommendations for the University of Twente

For the University of Twente it is important to keep employees with the right educational level and skills within the organization. Especially highly educated and specialized personnel is difficult to find. In this study the turnover intention of employees was studied and some recommendations can be given which can contribute to lowering the turnover rate. The data in this study showed that at present the turnover intention is 2.70, the standard deviation is almost a full point. In this study some specific relations between turnover and other variables were studied. The variables that explained turnover intention were satisfaction with communication, satisfaction with voice, satisfaction with influence, distributive justice (change in function) and affective commitment. Table 6.3-1 is a selection of the significant relations for turnover intention from Table 5.4-4 on page 57. These variables might be improved to lower turnover intention. All the relations show negative correlations.

Table 6.3-1: Variables that have a significant relation with turnover intention

| | Turnover Intention | |
|---|--------------------|-------|
| | β | r^2 |
| Satisfaction with communication (SEIc) | -2.02 * | 0.033 |
| Satisfaction with voice (SEIv) | -0.222 * | 0.042 |
| Satisfaction with influence (SEIi) | -0.147 * | 0.023 |
| Distributive Justice (Change in Function) | -0.326** | 0.099 |
| Affective commitment | -0.172 * | 0.022 |

** relation significant at the 0.01 level

* relation significant at the 0.05 level

For the satisfaction with direct participation the direct supervisor and the HR function is very important. The HR function needs to guide direct supervisors in doing their task. Direct supervisors must be provided with knowledge and training on participative management

techniques, furthermore, HR managers should 'translate' employee involvement policies, which might be abstract to supervisors, into practices and they should act as consultants for supervisors (Torka et. al., 2007). It was already stated in paragraph 3.3 that the development of supervisors is central in the HRM-policy within the University, and supervisors need to set an example for their subordinates.

Distributive justice (change in function), is about the employee perceiving the fairness of his or her influence in the light of his or her efforts or results. The results in this study suggest that when employees perceive their influence as fair in relation to their effort, they are more inclined to remain in the organization.

Affective commitment describes a feeling of affection to the organization; employees that are highly affectively committed for example have a feeling of belonging to the UT family. It turned out that for all the forms of commitment affective commitment was the most important. Many antecedents of affective commitment were found in this study. Not yet discussed in this paragraph is for example leader-member exchange. It turned out that the extent to which an employee liked his or her leader increases affective commitment and through that reduces turnover intention. Also employees compare themselves with colleagues and judge whether others are better of. In this respect it is interesting to point out that when information about procedures is not available (for example a reward procedure), people use the outcome as a 'heuristic substitute' to assess how to respond to the procedure (Van den Bos, 1999). Employees thus need to be provided with proper information, especially when the outcomes of procedures are not in favor of the employee. The recommendations are listed below:

- The HR function must make sure that the direct supervisors are properly trained and guided.
- Employees need to feel that their influence reflects their effort and/or results.
- Employees must be provided with proper information of procedures, especially when these outcomes are not in their favor.

When implementing the recommendations the mediator analysis discussed in paragraph 6.2.2 should be taken into account. These recommendations can also be used to improve the judgment perceptions of the four procedures that were studied: judgment procedures (score 3.41), reward procedures (score 2.99), promotion procedures (score 2.82) and selection procedures (score 3.17). All the items scored medium. Differences in group means for the employee characteristics were discussed in paragraph 6.2.5.

6.4 Suggestions for further research

Several suggestions can be given to provide a better understanding of the subject at hand. In the first place a larger n might yield more significant results. The results from the analysis were not very conclusive on many of the relations; a larger n might give better results. Secondly, this was a quantitative study using a questionnaire; no conclusions can be drawn

about actual causalities. Some expected relations did not show up in this study. It could be that these relations might actually exist in reality, but that they just were not found in this study; they might show up when more respondents complete the questionnaire. But this could also mean that some supposed causalities do not exist at all. A qualitative study might investigate and explain unexpected outcomes. Especially the relation between satisfaction with direct participation and organizational commitment should be explained in greater detail. The existence of this relation was the main assumption of this study and it was unexpected that these relations could not be shown at all for especially normative commitment and to a lesser degree calculative commitment. One reason for not finding support for the relation between satisfaction with direct participation and organizational commitment is that this study focuses on the wrong commitment focus. It could be interesting to pay attention to other foci of commitment as suggested by Becker (1992) or Torka (2003). For future research it might be more appropriate to study more local foci of commitment such as the supervisor, work or the department.

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Appendix: The questionnaire

| Nr. | Item |
|---|--|
| Employee Characteristics | |
| | persoonlijke gegevens |
| 1 | Wat is uw geslacht? |
| 2 | Wat is uw leeftijd? (categorieën: <25, 25 - <35, 35 - <45, 45 - <55, >55) |
| 3 | Bij welke faculteit bent u werkzaam? (CTW, EWI, GW, MB) |
| 4 | Hoe lang werkt u al bij de UT? (0 - <2, 2 - <5, 5 - <10, 10 - <20, >20) |
| 5 | Wat is uw huidige functie? (OBP, AIO/OIO, Medewerker onderwijs (docent), medewerker onderzoek (onderzoeker), universitair docent (UD), universitair hoofddocent (UHD), hoogleraar) |
| 6 | Indien u OBP bent, wat is dan uw salarisschaal? (1,2, ... ,15) |
| 7 | Hoe lang werkt u al in uw huidige functie? (0 - <2, 2 - <5, 5 - <10, 10 - <20, >20) |
| 8 | Wat voor contract heeft u? (arbeidsovereenkomst voor onbepaalde tijd met de UT (vast contract), arbeidsovereenkomst voor bepaalde tijd (tijdelijk contract)) |
| 9 | Werkt u (part-time, full-time) |
| Satisfaction with Employee Influence | |
| | communicatie |
| | hoe tevreden bent u over ... |
| 10 | informatie omtrent (verandering van) uw taken? |
| 11 | informatie omtrent afdelingszaken? |
| 12 | informatie die betrekking heeft op de faculteit waar u werkzaam bent? |
| 13 | informatie die betrekking heeft op de UT als geheel? |
| | inspraak |
| | hoe tevreden bent u over ... |
| 14 | de mate waarin naar uw mening wordt gevraagd t.a.v. (veranderingen in) uw functie? |
| 15 | de mate waarin naar uw mening wordt gevraagd t.a.v. (veranderingen in) afdelingszaken? |
| 16 | de mate waarin naar uw mening wordt gevraagd t.a.v. zaken die de faculteit betreffen? |
| 17 | de mate waarin naar uw mening wordt gevraagd t.a.v. zaken die de UT als geheel betreffen? |
| | medezeggenschap |
| | hoe tevreden bent u over ... |
| 18 | de mate waarin u daadwerkelijk invloed heeft op (veranderingen in) uw functie? |
| 19 | de mate waarin u daadwerkelijk invloed heeft op (veranderingen in) uw afdeling? |
| 20 | de mate waarin u daadwerkelijk invloed heeft op (veranderingen in) zaken die de faculteit betreffen? |
| 21 | de mate waarin u daadwerkelijk invloed heeft op (veranderingen in) zaken die de UT als geheel betreffen? |

| Nr. | Item |
|-----|---|
| | Distributive Justice on change in function (five point scale; 1=in zeer geringe mate ... 5=in zeer grote mate) |
| 22 | In het licht van de inspanningen die u voor uw werk levert, vindt u uw invloed billijk? |
| 23 | Gegeven de resultaten die u in uw werk boekt, vindt u uw invloed billijk? |
| 24 | Weerspiegelt uw invloed uw bijdragen voor de faculteit? |
| 25 | Uw prestaties in aanmerking genomen, vindt u uw invloed rechtvaardig? |

| | |
|----|---|
| | Procedural Justice (five point scale; 1=in zeer geringe mate ... 5=in zeer grote mate) |
| | In hoeverre heeft u het gevoel dat |
| 26 | Informatie op een eerlijke manier wordt verzameld bij het komen tot beslissingen? |
| 27 | Op een eerlijke wijze wordt omgegaan met protesten en bezwaren tegen beslissingen? |
| 28 | De betreffende partijen op een eerlijke manier bij beslissingsprocedures betrokken worden? |
| 29 | Op een eerlijke manier de procedures worden vastgesteld waarmee beslissingen tot stand komen? |
| 30 | Op een eerlijke manier wordt omgegaan met bezwaren van betreffende partijen? |
| 31 | Bruikbare informatie wordt aangeleverd om goede beslissingen te kunnen nemen en in te voeren? |
| 32 | Op een eerlijke manier wordt omgegaan met vragen en onduidelijkheden naar aanleiding van besluiten? |

| | |
|----|--|
| | Informational Justice |
| | In hoeverre vindt u dat uw leidinggevende |
| 33 | Met u open en eerlijk communiceert? |
| 34 | U grondig informeert over zaken die u aangaan? |
| 35 | U voorziet van alle informatie die voor u van belang is? |
| 36 | U tijdig over relevante zaken informeert? |

| | |
|----|--|
| | Interpersonal Justice |
| | In hoeverre vindt u dat uw leidinggevende |
| 37 | U vriendelijk behandelt? |
| 38 | U waardig behandelt? |
| 39 | U met respect behandelt? |
| 40 | Oprecht interesse in uw werkgerelateerde zaken toont? |
| 41 | Oprecht interesse in uw privégerelateerde zaken toont? |

| Nr. | Item |
|-----|--|
| | Distributive Justice on HR policies and practices |
| | Indien ik me met mijn collega's t.a.v. de onderstaande zaken vergelijk, dan kom ik er 1=slechter van af ... 5=beter van af |
| 42 | De hoeveelheid autonomie en vrijheden in uw werk |
| 43 | De hoeveelheid variatie in uw werk |
| 44 | De hoogte van uw salaris |
| 45 | Uw loopbaanmogelijkheden |
| 46 | De ontwikkelings- en/of scholingsmogelijkheden |
| 47 | De sfeer op de afdeling |
| 48 | Wanneer u alle aspecten tezamen neemt, wat vindt u dan van uw werksituatie wanneer u deze vergelijkt met die van uw collega's |
| 49 | De hoogte van de werkdruk |
| 50 | De hoeveelheid (werk)overleg |
| 51 | De kwaliteit van fysieke arbeidsomstandigheden zoals ergonomie van de beeldschermplek, meubilair en werkruimte-indeling |
| 52 | De hoeveelheid waardering die u krijgt voor uw inzet |
| 53 | De hoeveelheid begeleiding en steun die u ontvangt |

| | |
|----|--|
| | <i>Hoe beoordeelt u de volgende procedures?</i> |
| 54 | De beoordelingsprocedure (plannings- voortgangs- en beoordelingscyclus) |
| 55 | De beloningsprocedure |
| 56 | De promotieprocedure (voor het krijgen van functies op een hoger niveau) |
| 57 | De selectieprocedure (selectie van nieuwe medewerkers) |

| | |
|----|--|
| | Leader-Member Exchange |
| 58 | Ik vind mijn directe leidinggevende als persoon leuk |
| 59 | Mijn directe leidinggevende is het soort mens dat met graag als vriend heeft |
| 60 | Het is erg leuk om met mijn directe leidinggevende te werken |
| 61 | Mijn directe leidinggevende verdedigt mijn werkgerelateerde acties tegenover een hogere leidinggevende, zelfs zonder complete kennis te hebben van de betreffende kwestie |
| 62 | Mijn directe leidinggevende zal me verdedigen als ik door anderen word aangevallen |
| 63 | Mijn directe leidinggevende zal me verdedigen tegenover anderen in de organisatie als ik een echte fout heb begaan |
| 64 | Ik doe werkzaamheden voor mijn directe leidinggevende die verder gaan dan in mijn functieomschrijving zijn opgenomen |
| 65 | In ben bereid extra moeite te doen om de belangen van mijn afdeling/capaciteitsgroep te behartigen |
| 66 | Ik vind het niet erg om zo hard mogelijk te werken voor mijn directe leidinggevende |
| 67 | In ben onder de indruk van de kennis die mijn directe leidinggevende heeft van zijn/haar taken |
| 68 | Ik heb respect voor de kennis en competenties van mijn directe leidinggevende met betrekking tot zijn/haar taken |
| 69 | Ik bewonder de professionele vaardigheden van mijn directe leidinggevende |

| Nr. | Item |
|-------------------------------|--|
| Affective commitment | |
| 70 | Ik ben er trots op dat ik bij de UT werk |
| 71 | Ik behoor echt bij de UT "familie" |
| 72 | De UT is een leuk bedrijf om voor te werken |
| 73 | De UT betekent veel voor mij |
| 74 | Ik voel me thuis bij de UT |
| 75 | Ik zou bijna iedere baan accepteren om bij de UT te kunnen blijven werken |
| Normative commitment | |
| 76 | Als er iets mis gaat bij de UT, dan trek ik mij dat aan |
| 77 | Ik voel me mede verantwoordelijk voor de gang van zaken bij de UT |
| 78 | Ik voel me mede verantwoordelijk voor de resultaten die door de UT worden geboekt |
| 79 | De doelen van de UT zijn ook mijn doelen |
| 80 | Ik voel me mede verantwoordelijk voor veranderingen bij de UT |
| 81 | Ik voel me mede verantwoordelijk voor verbeteringen bij de UT |
| 82 | Ik voel me mede verantwoordelijk voor het imago van de UT |
| 83 | Ik voel me verplicht ten opzichte van de UT |
| Calculative Commitment | |
| <i>Low Alternatives</i> | |
| 84 | Als ik morgen ontslagen zou worden, zou ik niet bang zijn voor de gevolgen |
| 85 | Ik heb voldoende mogelijkheden op de arbeidsmarkt |
| 86 | Met mijn opleiding kan ik ook bij andere bedrijven goed aan de bak komen |
| 87 | Met mijn werkervaring kan ik ook bij andere bedrijven goed aan de bak komen |
| <i>High sacrifices</i> | |
| 88 | Bij de UT kan ik meer verdienen dan bij een andere werkgever |
| 89 | Het arbeidsvoorwaarden-pakket (loon, winstuitkering, spaarloonregeling, enzovoorts) van de UT is beter dan dat van de meeste andere werkgevers |
| 90 | Bij de UT krijg ik respect |
| 91 | Van werkgever veranderen zou voor mijn familie ongemak kunnen veroorzaken |
| 92 | Ik heb veel opgebouwd bij de UT |
| Turnover Intention | |
| 93 | Ik heb sedert mijn indiensttreding bij de UT er weleens over gedacht om ander werk te gaan zoeken |
| 94 | Als het aan mij ligt, zal ik over twee jaar nog bij de UT werken |
| 95 | Zodra ik de gelegenheid krijg om ergens anders te gaan werken, grijp ik die kans |
| 96 | Over niet al te lange tijd ga ik weer actief op zoek naar een functie bij een andere werkgever |