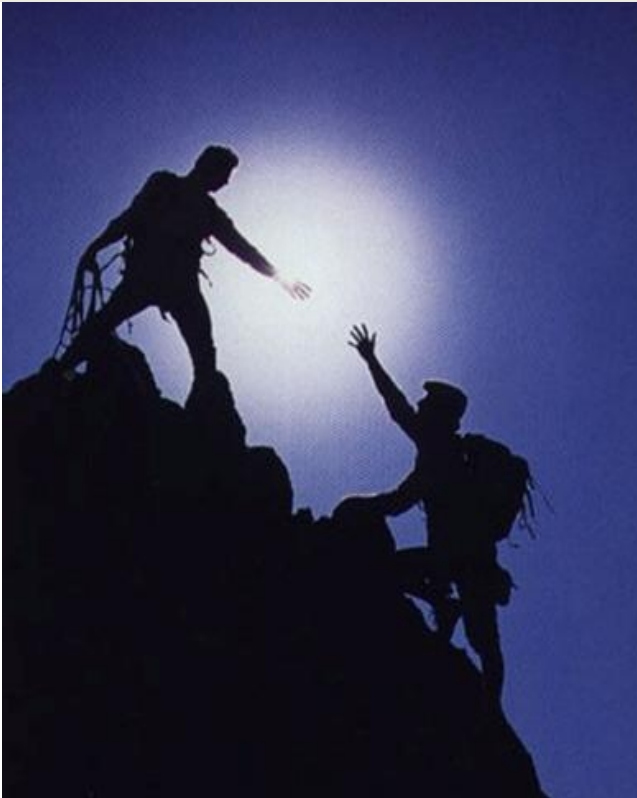


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# Exploring possible relationships between motivation and commitment



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## **Acknowledgement**

This research project is the closing of my master psychology at the University of Twente. To reach this end of my study it took a lot of motivation. It has not been easy to accomplish the stages of research and it was sometimes difficult to persist to the end. At the same time, motivation is a subject which appeals to me. A question I ask myself very often is ‘Why are people behaving like they do?’ Beside it, I find it interesting why some individuals are more committed than other individuals. To get an answer on these questions I investigated the relation between motivation and commitment among university teachers.

The accomplishment of this research project was not possible without the guidance of my supervisor, Mark van Vuuren. He has studied commitment for his PhD and gave me critical comments regarding the theoretical content of my paper. Also his practical tips were very useful to write my master thesis. I also would like to thank the university teachers who participated in this research, to describe their attitude with regard to motivation and commitment. Special thanks goes to Sietske Triemstra and Marjolein Veenstra for their critical comments and correcting my paper. Finally, I would like to thank my family who continually supported me during the writing of my master thesis.

## **Abstract**

**Background:** Employee commitment is a crucial element to increase job performance. An important predictor of this type commitment is motivation, which motivates employees to spend time and energy in the organization. Because of this fact, there is a growing interest in understanding the relationship between motivation and commitment.

Despite plenty of research on the subjects of motivation and commitment, linkages between different forms of motivation and different foci of commitment are hardly investigated

**Aim:** Present research aims to explore possible relationships between intrinsic motivation, extrinsic motivation and two forms of commitment: occupational commitment and organizational commitment. These two forms of commitment could be separated within three types of commitment: affective, normative and continuance.

**Method:** An online English questionnaire was used to collect data from 162 respondents. These respondents were university teachers of several departments of one participating university.

**Results:** This research shows that there is negative relation between intrinsic motivation and affective commitment to the organization which is partially mediated by work engagement. With regard to extrinsic motivation and normative commitment to both the organization and occupation, the results are positive, but not significant. The coefficients of the relations between extrinsic motivation and continuance commitment to both the organization and the occupation are consistent with the hypotheses, which predicted a positive result.

**Conclusion:** This research shows the first results on the relation between the several types of motivation and commitment. Although there are positive results with regard to extrinsic motivation and commitment, more research is recommended. This research could focus on the other existing types of motivation and foci of commitment.

## Samenvatting

**Achtergrond:** Toewijding van werknemers is een cruciaal onderdeel in het verhogen van baanprestatie. Een belangrijke voorspeller van dit type toewijding is motivatie, dat werknemers motiveert om tijd en energie te besteden in de organisatie. Hierdoor is er een groeiende interesse ontstaan in het begrijpen van de relatie tussen motivatie en toewijding. Ondanks veel onderzoek naar de onderwerpen motivatie en toewijding blijven relaties tussen verschillende vormen van motivatie en verschillende foci van toewijding nauwelijks onderzocht.

**Doel:** Dit onderzoek heeft tot doel de mogelijke relaties te ontdekken tussen intrinsieke motivatie, extrinsieke motivatie en twee vormen van toewijding: toewijding naar het beroep en toewijding naar de organisatie. Deze twee vormen van toewijding kunnen onderscheiden worden in drie types toewijding: affectief, normatief en continuïteit.

**Methode:** Een online Engelse vragenlijst is gebruikt om data te verzamelen van 162 respondenten. Deze respondenten zijn universiteitsleraren van verschillende afdelingen van een deelnemende universiteit.

**Resultaten:** Dit onderzoek laat zien dat er een negatieve relatie is tussen intrinsieke motivatie en affectieve toewijding naar de organisatie, welke gedeeltelijk wordt gemedieerd door bevlogenheid. Met betrekking tot extrinsieke motivatie en normatieve toewijding naar zowel de organisatie als het beroep zijn de resultaten positief, maar niet significant. De coëfficiënten van de relaties tussen extrinsieke motivatie en continuïteit toewijding naar zowel de organisatie als het beroep zijn overeenkomstig met de hypothesen, welke een positieve resultaat voorspelden.

**Conclusie:** Dit onderzoek laat de eerste resultaten zien van de relatie tussen de verschillende typen motivatie en toewijding. Hoewel er positieve resultaten zijn met betrekking tot extrinsieke motivatie en toewijding wordt meer onderzoek aanbevolen. Dit onderzoek zou zich kunnen richten op de andere bestaande types van motivatie en foci van toewijding.

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## **1 Introduction**

The present study is an effort to draw a meaningful relationship between intrinsic motivation, extrinsic motivation, and two forms of commitment: occupational commitment (OCC) and organizational commitment (ORC). Despite plenty of research on the subjects of motivation and commitment, linkages between different forms of motivation and different foci of commitment are hardly investigated. Consequently the two forms of literature remain under investigated in the organizational psychology literature. (Meyer, Becker & Vandenberghe, 2004). Present research aims to study the possible relations between intrinsic motivation and extrinsic motivation and the two forms of commitment.

In today's rapidly changing economy, the worldwide competition continues to increase. For that reason, companies are searching for more efficient ways to rise their productivity. In this increasingly competitive market, it is not sufficient to cut down costs by making use of new technologies or lower-wage employees. To rise productivity, it is important to make use of the skills of employees (George & Jones, 2008). Murphy & Saal (1990) investigated the relation between job performance and productivity, which resulted in a positive relation. Thus, it is of importance for companies to seek ways to rise job performance.

According to Matthieu & Zajac (1990), a crucial element to increase job performance is employee commitment. They conducted a meta-analysis in which others' ratings and output measures are used as performance criteria. Although the relation between commitment and job performance is weak, Mowday et al. (1982) stated that commitment levels influence performance. Besides job performance, a committed workforce gives benefits to an individual, in terms of job satisfaction and role effectiveness, which in turn gives benefits to the organization (Meyer, Becker & Vandenberghe, 2004). According to Matthieu & Zajac (1990), these benefits are organizational effectiveness, reduced absenteeism and extra role behavior

This study will focus on two foci of commitment: organizational commitment and occupational commitment. Where OCC received less attention, ORC is the most widely researched focus amongst the work commitment foci because of the important consequences for organizations. Allen and Meyer (1990) define organizational commitment as "a psychological state that binds the individual to the organization (i.e., makes turnover less

likely)”. Occupational commitment can be defined as “the attachment of an employee to his or her occupation or profession” (Morrow, 1983).

Motivation functions as an important predictor of commitment by motivating employees to spend time and energy in the organization (Mowday, Steers & Porter, 1979). Because of this fact, there is a growing interest in understanding this relationship between motivation and commitment. Spector (2006) defines motivation as ‘an internal state that induces a person to engage in particular behaviours’. It also reflects an intention to act according to the self-determination theory (Deci & Ryan, 1985). This theory makes a distinction between two forms of motivation: intrinsic motivation and extrinsic motivation. When someone is intrinsically motivated he or she performs an activity for its own sake. In contrast, extrinsic motivation is related to motives outside the activity it-self (e.g. a reward).

Commitment is different from motivation, as Scholl (1981) defined it as ‘a stabilizing force that acts to maintain behavioral direction when expectancy/equity conditions are not met or do not function’. This definition implies a complex relation between motivation and commitment, which needs further investigation.

This leads to the following research question:

*‘What is the underlying relation between motivation and commitment?’*

### **1.1 Scientific relevance**

Linkages between different forms of motivation and different foci of commitment appear to evolve independently in the organizational psychology literature (Meyer, Becker & Vandenberghe, 2004). Thus, where commitment researchers ignore the motivational aspect which has an influence on employee commitment, motivation researchers seldom address commitment in their research. The reason for this independency can be found in theories behind motivation and commitment (Steers, Porter & Bigley, 1996). Where work motivation theories arise from more general motivation theories, commitment theories in contrast evolve out of research regarding to sociology (Kanter, 1968) and social psychology (Kiesler, 1971). To motivate researchers in the research areas “employee commitment” and “motivation” to make use of each other’s work, Meyer, Becker & Vandenberghe (2004) developed a theoretical framework. This framework concerns a cross-fertilization of motivation and commitment. Although they attempt to integrate these concepts at a complex level by combining the theories regarding motivation and commitment, there still is lack of research

about the interrelations between the two forms of motivation (internal and external) and the two foci of commitment (OCC and ORC).

Integrating motivation and commitment theory has two important benefits. First, it broadens our understanding of commitment as an important element in the process of motivation, as it functions as an energizing force in this process (Meyer, Becker & Vandenberghe, 2004). Secondly, it gives further insight in how motivation indirectly influences behavior by commitment. Ultimately it can make a contribution to existing theories about job performance, which in turn can make production and efficiency better. Matthieu & Zajac (1990) developed an integrative model regarding the antecedents, correlates and consequences of organizational commitment. They state that motivation correlates with organizational commitment, where high levels of motivation are correlated with high levels of commitment.

Another concept, related to organizational commitment, concerns work engagement. This concept is characterized by high levels of energy and a strong identification with work and possibly has an influence on the relation between motivation and commitment. Present research will be aimed at the possible relation between intrinsic motivation, extrinsic motivation and the two forms of commitment. Also the possible mediating role of work engagement between motivation and commitment will be examined. Examining the relationship between motivation and commitment, will lead to a better understanding in the functioning of these processes. For that reason, this study will form an additive to existing research.



## **2 Motivation and commitment**

In the following section, the variables motivation and commitment will be described. After the outlines of these variables, the hypotheses have been developed on the basis of relevant literature.

### **2.1 Motivation**

Motivation can best be defined as ‘an internal state that induces a person to engage in particular behaviours’ (Spector, 2003). The field of motivation arose in an attempt to answer the question why people behave as they do. It also addresses what energizes and directs the behavior of people. To organize the findings of the field of motivation, several motivational theories are developed. These theories take into account the nature of people and the factors that are the driving force of action. Motivation theories can be divided into mechanistic theories and organismic theories. Where the mechanistic theories sees an individual as passive, organismic theories sees the individual as active in his behavior. The last theory states that individuals act on the energy provided by intrinsic needs and physiological drives. This assumption is derived from drive theories. These theories emphasize the role of drives in the explanation of behavior. Freud (1914) became a pioneer in developing theory regarding human motivation. His drive theory stated that behavior is motivated by a drive. According to Freud (1917) sex and aggression are two important drives. Whereas Freud mentioned two drives, Hull (1943) categorizes four drives. These drives are thirst, hunger, the avoidance of pain and sex.

Maslow built further on the work of Freud and Hull and became famous for his well-known theory regarding human motivation. He designed a needs pyramid in which he distinguished the following five needs: physiological needs, safety needs, love needs, esteem needs and the need for self-actualization physiological needs (Maslow, 1943). The physiological needs or drives are connected with the need to have food, drinks and to relieve oneself. If these needs are gratified, the need to have a certain kind of security emerges. These contain for example the need to have housing, a job and social relations. These are called the safety needs. After the gratification of the physiological and safety needs, the need to have friendship and love emerges, which are categorized as the love needs. The esteem needs contain the need for valuation, acknowledgement and respect. If all needs are satisfied, a desire to develop his or personality and the opportunity to grow emerges.

### **2.1.1 Self-determination theory**

In the first decades of the twentieth century the focus was on behavior as a consequence of a drive. Less attention was given to choices and intention in motivation theory. Several theorists, like Nunberg (1939), elaborated on the work of Freud and introduced the concept of self-regulation. This concept encompasses the extent to which an individual is driven by internal goals. To achieve these goals, several cognitive processes are involved.

Lewin (1936) was one of the cognitive theorists studying these processes to explain the direction of behavior.

A few decades later, several theorists compared intrinsic and extrinsic motives in an individual's behavior, which leads them to study the concept of self-determination (Lepper, Greene & Nisbett, 1973). Deci & Ryan (1985) attenuated that 'cognitive theories have had an important influence on the field of motivation by directing attention to the concept of choice'. The self-determination theory (SDT) focuses on the motivation preceding on the choice of an individual. According to this theory, the motivation for showing behavior comprises an intention to act. Self-initiation or external inducements predict this intention to act, which can be divided into two forms; intrinsic motivation and extrinsic motivation.

Where intrinsic motivation concerns the inherent drive to seek new challenges and possibilities, extrinsic motivation captures the need to attain a separable outcome (Ryan & Deci, 2000)

Meyer & Herscovitch (2001) derived the concept of goal regulation from the self-determination theory. Although this concept resembles self-determination, these terms are not equivalent. Meyer, Becker & Vandenberghe (2004) define goal regulation as 'a motivational mindset reflecting the reasons for, and purpose of, a course of action being contemplated or in progress.' Meyer & Herscovitch showed the impact of this new concept in their model of workplace commitments. They state that goal regulation influences goal choice, which start the goal mechanisms which result in particular behavior. In addition to this, Meyer, Becker and Vandenberghe (2004) state that the addition of goal regulation helps in explaining the predicting role of motivation with regard to work behavior. Although they state that the role of motivation as a predictor has to be investigated, they present motivation as a consequence in their research. There still is little known about the predicting role of motivation with regard to commitment. To investigate the role of motivation, the two most important types of motivation (intrinsic and extrinsic) will be elaborated in the following paragraphs.

### **2.1.2 Intrinsic motivation**

From the 1970's several authors studied the concept of intrinsic motivation. Very first, Lawler (1969) defined this concept 'as the degree to which a job holder is motivated to perform well because of some subjective rewards or feelings that he expects to receive or experience as a result of performing well.' In this way an individual performs well in his or her job to satisfy the higher order needs, which will ultimately lead to intrinsic motivation. External rewards play no role with regard to behavior in this definition of intrinsic motivation.

Although this definition was quite effective in the early 1970's, it did not take into account psychological processes underlying behaviors. To give a more vast definition of intrinsic motivation, Deci (1975) suggested that an individual also has the need to feel competent and self-determining. When an individual is intrinsically motivated, he or she experiences feelings of competence. As can be seen in the preceding paragraph, people feel self-determined when their own choice causes their behavior.

Deci (1971) also suggests that rewards decrease the frequency of behavior. This finding led to several studies with regard to the influence of rewards on intrinsic motivation. With Ryan (Deci & Ryan, 1985), he developed a research paradigm which implies that verbal feedback tends to increase intrinsic motivation, whereas expected tangible rewards tend to reduce it.

For intrinsic motivation, not the reward but the behavior itself is important. According to Amabile, Hill, Hennessey & Tighe (1994), intrinsically motivated behavior is self-initiated: someone undertakes an activity for its own sake. The activity-itself is interesting and results in feelings of accomplishment and self-fulfillment. Someone might go to work because he or she likes to learn new things regarding to the job, for instance. They state that elements of intrinsic motivation include competence, curiosity, enjoyment, interest, self-determination and task involvement.

### **2.1.3 Extrinsic motivation**

Within the traditional theory regarding to psychology there has been more attention to intrinsic rather than extrinsic motivation. Particular behaviors were more explained by the need to explore new things and challenges, which has to do with intrinsic motivation. (White, 1959)

Although the theory regarding to extrinsic motivation has received less attention, the view is more elaborated. Where extrinsic motivation was only based on external reinforcements formerly, nowadays the theory is more elaborated by the addition of cognitive assessment (Lepper & Green, 1978). Lazarus (1991) argued that people could not have an affective reaction on a stimulus without a cognitive appraisal of the stimulus. This means that a cognitive assessment of a situation precedes extrinsic motivation.

Deci and Ryan (1985) distinguish the following different types of extrinsic motivation which can be aligned along a continuum: amotivation, external, introjected, identified and integrated. On the one end is amotivation, which means that there is no intention to act. Amotivation is followed by external regulation in which individuals perform an activity to get a reward. The next type of extrinsic motivation is introjected regulation in which behavior is regulated through self-worth. Next is identified regulation, which means that someone is performing an activity for the reason of identification with its value. The last one concerns integrated regulation, in which the identification with the value of an activity becomes part of the sense of self of an individual (Ryan & Connell, 1989).

Amabile et al. (1994) define extrinsic motivation as ‘the motivation to work primarily in response to something apart from the work itself, such as reward or recognition or the dictates of other people’. In short: an activity is performed to attain a certain outcome. For example, when someone only is performing his job for the money (Ryan & Deci, 2000).

## **2.2 Commitment**

In the existing literature about commitment, there have been made several definitions of this construct. To give a concise definition of commitment, Allen & Meyer (1990) considered it to be “a psychological state that binds an individual to the organization.’ The strength of this psychological state depends on the involvement, loyalty and belief in organizational values of employees. Commitment in general is defined by Meyer & Herscovitch (2001) as ‘a force that binds an individual to a course of action that is of relevance to a particular target’. Shiverick & Janelle (2009) define commitment as ‘a measure of the alignment of the employee’s motivations with the mission of the organization; in other words, to what degree does the employee feel that he or she is making a positive contribution to the ultimate outcome?’

Notwithstanding the several definitions, Becker (1960) was one of the first authors who discussed about the concept of commitment. He stated that commitment emerges when someone makes a side bet and then links particular interests with activities. His statement is

inferred of his side bets theory in which someone stays within the organization because of value (e.g. money or time) that would be lost when he or she leaves this organization. Besides the side bets, an employee also takes into account the alternatives. When an employee has a lack of alternatives, he or she is more likely to stay committed to the organization.

Commitment is an important construct in improving employee performance according to Mowday, Porter & Dubin (1974). They mentioned that high commitment leads to high performance of employees. Moreover, commitment acts as an indicator of organizational effectiveness and is a predictor of turnover (Steers, 1977).

Meyer, Allen and Smith (1993) stress the importance of a multidimensional approach to the concept of commitment and demonstrated the importance of different forms of commitment. These other forms include commitment to the work group, to the manager, to the union and to other entities. Their research showed that ‘the prediction of various behaviors (e.g. turnover intention and responses to dissatisfaction) can be improved by considering commitment to both the organization and the occupation’ (Meyer, Allen & Smith, 1993).

During the end of the 20<sup>th</sup> century the employee commitment concept has been widely researched, which leads to different foci of this concept. The most widely researched focus of commitment concerns organizational commitment (ORC).

### **2.2.1 Organizational commitment (ORC)**

In the organizational literature, there exist several definitions of organizational commitment. There can be made a distinction between definitions that focus on behaviors and attitudes. At first we can define commitment in terms of behavior. According to Mowday, Steers, Porter (1979), this definition focuses on ‘overt manifestations of commitment’ in which individuals ‘choose to link themselves to the organization’. Organizational commitment could also be defined in terms of an attitude, which means that the goals of employees and those of the organization are congruent. Porter and Smith (1970) defined organizational commitment as ‘the relative strength of an individual’s identification with and involvement in a particular organization’.

Three related factors characterize organizational commitment: ‘(1) a strong belief in and acceptance of the organization’s goals and values; (2) a willingness to exert considerable effort on behalf of the organization; and (3) a strong desire to maintain membership in the organization.’ (Porter and Smith, 1970). According to Mathieu and Zajac (1990) ORC can be considered as ‘a bond or linking of the individual to the organization’. Allen and Meyer (1990) defined it as ‘a psychological state that binds the individual to the

organization (i.e. makes turnover less likely)' Brown (1996) defines ORC as 'dedication to and support of the organization (or referent unit beyond that associated with job expectations and rewards).' As can be seen in aforementioned terms, commitment includes a form of support.

During the 70's a growing interest in the concept of organizational commitment emerged. Commitment is an important construct in the clarification of employee behavior within organizations (Horn, Katerberg & Hulin, 1978; Porter, Steers, Mowday & Boulian, 1974; Mowday, Porter & Dubin, 1974). Several authors studied the topic of ORC (Hall & Schneider, 1972; Mowday, Porter, & Dubin, 1974; Kanter, 1977), but Mowday, Steers and Porter (1979) were the first authors who carried out a systematic research to ORC. To operationalize this construct, they developed the Organizational Commitment Questionnaire (OCQ) which measures employee commitment to work organizations. An example of a question concerns: 'I find that my values and the organization's values are very similar' (Mowday, Steers and Porter, 1979).

Meyer and Allen (1984) state that the measurement of the concept ORC not fully comprehends the theory, because it mainly consists of affective commitment. To fully conceptualize commitment, a change in the conceptualization of commitment is required. Allen & Meyer (1990) state that ORC consists of three types of commitment. They integrated these types into a three-component model of commitment. These types could be described as affective, continuance and normative commitment. When an employee shows an emotional attachment to the organization, this has been mentioned as affective organizational commitment (AOC). This emotional attachment is characterized by the identification with the organization's goals and values (Mowday, Steers & Porter, 1979). Continuance organizational commitment (COC) is based on the costs that are associated with leaving the organization. This type can be described as feelings of obligation to stay within the organization and was also described by Becker (1960) as a perceived lack of alternatives. When an employee is influenced by significant others (e.g. friends and family) and organizational practices to show loyalty to the organization, he or she shows normative organizational commitment (NOC). These significant others put normative pressures on the employee to act in line with the organization's expectations (Wiener, 1982).

Besides the explication of organizational commitment, several scientists determined the consequences and antecedents of this construct. Organizational commitment (ORC) is the most widely researched focus amongst the employee commitment foci because of the consequences it poses for organizations. Consequences of a committed workforce are

organizational effectiveness, reduced absenteeism, competitiveness and extra role behavior (Meyer and Allen, 1997). The development of ORC is influenced by early work experiences. When these work experiences are consistent with the expectations of the employee, job satisfaction is high and employees have an influence on decisions, ORC is greater (Meyer and Allen, 1987). Other antecedents of ORC can be categorized in four categories; job characteristics, personal needs, role states and work experiences (Mathieu & Hamel, 1989).

### **2.2.2 Occupational commitment (OCC)**

Occupational commitment (OCC) is another focus of employee commitment and can be referred to the attachment of an employee to his or her occupation or profession (Morrow, 1983). Lee, Carswell & Allen (2000) defined an occupation as ‘an identifiable and specific line of work that an individual engages in to earn a living at a given point in time’ Examples of specific occupations are doctors, professors or bankers. They conceptualize OCC as ‘a psychological link between a person and his or her occupation that is based on an affective reaction to that occupation. A strong OCC leads to a stronger identification with, and more positive feelings to one’s occupation, compared with a weak OCC.

During the last decades, OCC has become more important, which suggest that it is not only important to look at ORC, but also at OCC. There are several reasons why OCC is an important construct. Because of higher education levels, more specialized work and organizational change, OCC becomes more important to people (Burris, 1983).

Organizational strategies like outsourcing and downsizing has caused uncertainty within employees. These organizational restructurings and the increased job insecurity leads employees to reassess their commitment targets (Blau, 2003). They commit themselves to the occupation they are practicing, as they believe this is a part of their career over which they can exert control (Meyer, Allen & Topolnysky, 1998; Lee, Carswell & Allen, 2000; McAuley, Zeitz & Blau, 2006). Besides the importance for employees and employers, it is of scientific relevance to extend the insight in the field of work commitment.

Occupationally committed workforce has been regarded important not only for the organizations but for the societies on the whole. The fact is that occupational change is associated with higher ‘costs’ such as additional needed training and human capital investment, disrupted work relationships, and lost time and income, typically associated with occupational change. The benefits of OCC are lower job movement rates, higher national productivity and/or work quality is ensured (Matieu & Zajac, 1990).



Lee, Carswell and Allen (2000) stated a positive relationship between OCC and job involvement, job satisfaction and creativity at work . Moreover they have found a positive relationship between OCC and employee performance. Campbell (1995) pointed out that a committed workforce tends to have higher performance quality standards and are more motivated to achieve these standards than a less committed workforce. OCC could also increase performance by acquiring more relevant knowledge and skills. For example, when someone follows long-term education. Indirectly, OCC is associated with occupational and organizational turnover intentions, which implies a central role of attitude towards the job regarding to OCC (Lee, Carswell and Allen, 2000; Blau and Lunz, 1998). Besides research regarding to employee commitment as a predictor, this term is also referred as a consequence of several characteristics. These characteristics could belong to someone personally, the job or the organization.

The three component model of Meyer and Allen (1991) can also be applied to occupational commitment. These types could be described as affective occupational commitment (APC), continuance occupational commitment (CPC) and normative occupational commitment (NPC). Lee, Carswell and Allen (2000) report that APC contains a strong identification and positive feelings of the individual with his or her occupation. According to Meyer, Allen and Smith (1993) a person with high CPC shows a strong psychological bond with the occupation because of possible disadvantages when leaving the occupation. NPC includes feelings of obligation to stay in the occupation.

### **2.2.3 Commitment foci**

Meyer and Allen (1991) noted that the three types of commitment (affective, normative and continuance) consist of three separable psychological manifestations. At first, affective commitment consists a desire, continuance commitment implies a need and normative commitment contains an obligation.

Meyer and Herscovitch (2001) made a distinction between the antecedents of affective, normative and continuance commitment. They propose that these antecedents variables could be used to examine the development of commitment and recommend to conduct research on the influence of motives on multiple commitments.

To create the desire which characterizes affective commitment, an individual has to show identification and involvement. An important aspect of intrinsic motivation includes involvement, which suggests that there is a possible relation between intrinsic motivation and affective commitment. This brings us to the first hypotheses:



*Hypothesis 1a: Intrinsic motivated employees show more affective commitment to their organization than extrinsic motivated employees*

*Hypothesis 1b: Intrinsic motivated employees show more affective commitment to their occupation than extrinsic motivated employees*

### **2.3 Work engagement**

Psychological research has brought up much knowledge about the behavior of people in the last century. Within this research there was much attention to negative phenomena like depression and burnout. Instead of these negative psychological phenomena, Seligman (1999) motivated researchers to do research regarding to positive psychological phenomena. Main point was that human qualities deserve as much attention as human shortcomings. The psychological trend which arose is called the positive psychology. This discipline studies human power and optimal functioning. One of the subjects within the positive psychology which has deserved much more attention concerns work engagement (Bakker, 2009).

Work engagement can best be described as a positive state of ultimate satisfaction consisted of three characteristics: vigor, dedication and absorption (Schaufeli & Bakker, 2001). At first, vigor is related to feeling strong and having energy to continue to work long. Dedication refers to a strong involvement to work. Finally, absorption is related to being fully immersed in the job and forgetting everything else around.

Like commitment, work engagement can bring competitive advantage to organizations. This is because employees who are energetic, dedicated and absorbed by their work offer an added value to the organization. Moreover work engagement positively influences employee performance because engaged employees show positive emotions, a good health, creation of job resources and the transfer of engagement to their colleagues. (Bakker & Schaufeli, 2008).

Although work engagement is characterized by high levels of energy and a strong identification with work, it is different from related concepts like organizational commitment. Because it is not clear what the role is of work engagement with regard to the construct work engagement and commitment, Bakker, Schaufeli, Leiter & Taris (2008) argue that this should be further specified. A further specification might also demonstrate the added value of work engagement.

The first hypotheses state a possible relation between intrinsic motivation and affective commitment. To investigate whether the relation between intrinsic motivation and affective commitment is mediated by work engagement, the following hypotheses were developed:

*H2a: Work engagement acts as a mediator in the relation between intrinsic motivation and affective commitment to the organization.*

*H2b: Work engagement acts as a mediator in the relation between intrinsic motivation and affective commitment to the occupation.*

To investigate the influence of extrinsic motivation on commitment, the commitment profiles were further analyzed. When a person shows normative commitment, he or she feels an obligation to remain within the organization/occupation. Normative committed employees may be motivated to sacrifice their interests for the organization. This motivation does not come from within, but from external forces, which implies that there could be a relationship between extrinsic motivation and normative commitment. This leads to the following hypotheses:

*H3a: Extrinsic motivated employees show more normative commitment to their organization than intrinsic motivated employees*

*H3b: Extrinsic motivated employees show more normative commitment to their occupation than intrinsic motivated employees*

Continuance commitment includes a need to continue a course of action, which originates from the investments of an individual. This possibly implies that a person is extrinsically motivated to perform a course of action. To investigate the possible relation between extrinsic motivation and continuance commitment, the following hypotheses were developed:

*H4a: Extrinsic motivated employees show more continuance commitment to their organization than intrinsic motivated employees*

*H4b: Extrinsic motivated employees show more continuance commitment to their occupation than intrinsic motivated employees*

### **3 Method**

#### **3.1 Sample**

The hypotheses were tested using data collected from university teachers. Among these teachers are professors, assistant professors, associate professors and PhD candidates, which are the target population in this research. This target population will be called teachers from now on. All other scientists who do not give lessons are not excluded in this study. The purpose was to recruit at least 200 teachers who would like to participate in this research.

An online English survey was developed to collect data from university teachers. To get a list of all professors, assistant professors, associate professors and PhD candidates the secretariats of the departments were contacted. The surveys were distributed by email to 1358 university teachers. To get a higher response rate, there were sent several follow-ups.

#### **3.2 Measures**

##### *3.2.1. Dependent variables*

To measure organizational commitment, the affective, continuance and normative organizational commitment scales of Allen & Meyer (1990) were used. Respondents have to indicate the degree of their agreement or disagreement with each statement at a Likertscale (1; strongly disagree, 5; strongly agree). ‘I really care about the fate of this organization’ is an example of an item measuring organizational commitment.

Occupational commitment was measured by Meyer et al.’s (1993) three-component (affective, continuance and normative) occupational commitment scale. All items could be answered on a five-point Likertscale (1= completely disagree, 5 = completely agree). ‘This is the ideal vocation for a life work’ is an example of an item measuring occupational commitment.

Work engagement was measured by a scale containing eight items (Schaufely, Bakker & Salanova, 2006). An example of an item is ‘At my job, I feel strong and vigorous’. The answer categories range from 0 (never) to 6 (always).

### 3.2.2 Independent variables

To measure intrinsic and extrinsic motivation, a twenty-item scale (Amabile et al., 1994) was used. 'What matters most to me is enjoying what I do' is an example of an item measuring intrinsic motivation. An example of an item with regard to extrinsic motivation is 'I am strongly motivated by the money I can earn'. The answer categories range from 1 (strongly disagree) to 5 (strongly agree).

### 3.2.3 Demographic variables

Four variables for individual differences in demography were included: At first *gender* (using two categories; 1=male, 2=female) and *age* (consisted of nine categories; 1= less than 30 years, 2= between 30 and 40 years, 3 = between 40 and 50 years, 4 = more than 50 years) were measured. Besides that, there is asked how long the respondents are active in their current job (*tenure in the occupation*) and in their organization (*tenure in the organization*). The answer categories for these two variables range from 1= Less than 5 years, 2= Between 5 and 10 years till 3= More than 10 years. These two types of tenure are different from each other, as teacher tenure means how long an individual has been working as a teacher and university tenure means how long an individual has been working at the particular university.

## 4 Results

### 4.1 Sample

In total 212 professors, assistant professors, associate professors and PhD candidates filled in the questionnaire, which gives a response rate of 16%. Because of missing answers, only 162 from the 212 people were included in this research. A summary of all sample characteristics can be found in table 1.

The complete sample consisted of 111 men and 51 women, of which the greatest part is younger than 40 years. The majority of the respondents are less than 5 years operative, on both the university as in their profession. Possibly most of the respondents are PhD candidates, which explains why the questionnaire is filled in by young scientific professionals which have a short organizational tenure.

**Table 1**  
General data respondents

	Number	Percentage
<i>Gender</i>		
Male	111	68,5
Female	51	31,5
<i>Age</i>		
Less than 30 years	49	30,2
Between 30 and 40 years	49	30,2
Between 40 and 50 years	36	22,2
More than 50 years	28	17,3
<i>Number of years at current job</i>		
Less than 5 years	96	59,3
Between 5 and 10 years	33	20,4
More than 10 years	33	20,4
<i>Number of years at UT</i>		
Less than 5 years	85	52,5
Between 5 and 10 years	31	19,1
More than 10 years	46	28,4

To get an insight in the reliability of the scales and the descriptive statistics, table 2 mentions the results. As can be seen in table 2 almost all standard deviations have a value lower than one, which means that the answers do not vary much from their means.

**Table 2**

Means, standard deviations, reliabilities and correlation coefficients among the variables (N = 162)

Variables	M	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Intrinsic motivation	3.96	.40	.74											
(2) Extrinsic motivation	3.01	.52	-.19*	.77										
(3) Affective ORC	2.97	.75	-.17*	.09	.82									
(4) Normative ORC	2.44	.58	-.18*	.10	.44**	.81								
(5) Continuance ORC	2.88	.80	-.25**	.22**	.29**	.08	.71							
(6) Affective OCC	3.89	.73	.07	-.09	.16*	.12	.08	.87						
(7) Normative OCC	2.30	.81	-.24**	.09	.23	.56**	.22**	.07	.80					
(8) Continuance OCC	2.69	.76	-.19*	.17*	.20	.13	.64**	.12	.29**	.85				
(9) Work engagement (a)	2.16	.93	.45**	-.01	.24*	.11	-.09	.17*	-.07	-.06	.82			
(10) Gender (b)	1.31	.47	-.07	.13	-.15	-.05	-.01	-.06	-.17*	-.11	-.01	-		
(11) Age (c)	2.27	1.07	.08	-.20*	.12	.05	.09	.33**	.06	.20*	.26**	-.27**	-	
(12) Occupational tenure (d)	1.61	.81	.02	-.21**	.06	.03	.08	.28**	.03	.18*	.14	-.23**	.78**	-
(13) Organizational tenure (e)	1.76	.87	.03	-.20**	.09	.01	.10	.30**	.00	.21**	.11	-.23**	.75**	.87**

Note. Scale reliabilities are on the diagonal.

\*\* p&lt;.01.

\* p&lt;.05.

(a) Never = 0; Almost never = 1; Rarely = 2; Sometimes = 3; Often = 4; Very often = 5; Always = 6

(b) Man = 1; woman = 2

(c) Less than 30 years = 1; Between 30 and 40 years = 2; Between 40 and 50 years = 3; More than 50 years = 4

(d) Less than 5 years = 1; Between 5 and 10 years = 2; More than 10 years = 3

(e) Less than 5 years = 1; Between 5 and 10 years = 2; More than 10 years = 3

All other variables are measured with a Likert-scale ranging from 1 (strongly disagree) till 5 (strongly agree)

## 4.2 Relation of intrinsic motivation and affective commitment

To test the first hypothesis *Intrinsic motivated employees show more affective commitment to their organization than extrinsic motivated employees*, a linear regression analysis is applied, using an alpha level of 0.05 (see table 3). Regression analysis is useful in predicting scores on the dependent variable on the basis of scores on the independent variable (Kaplan & Saccuzzo, 2009).

**Table 3:**  
Hierarchical regression analyses of intrinsic motivation on organizational affective commitment (ORCA)

	b	SEb	$\beta$
<i>Step 1</i>			
Constant	3.13	.26	
Sex	-.20	.13	-.13
Age	.11	.09	.16
Occupational tenure	-.18	.16	-.20
Organizational tenure	.11	.14	.13
<i>Step 2</i>			
Constant	4.57	.65	
Sex	-.22	.13	-.14
Age	.12	.09	.19
Occupational tenure	-.20	.16	-.22
Organizational tenure	.11	.14	.13
Intrinsic motivation	-.36	.15	-.20*

Note:  $R^2 = .04$  for Step 1;  $\Delta R^2 = .04$  for Step 2 ( $ps < .05$ ). \*  $p < .05$ , \*\*  $p < .01$ .

As opposed to the hypothesis, the linear regression showed a significant negative relation (-.20) between intrinsic motivation and affective commitment to the organization (ORCA). To describe the direction and magnitude of the relation, correlation analyses are executed which can be found in table 2. The results of the correlation analysis with regard to intrinsic motivation and ORCA also demonstrate a significant negative relation (-.17). This implies that high scores on intrinsic motivation are associated with low scores on ORCA. As there is a significant negative relationship between intrinsic motivation and ORCA, it will be sensible to see whether there is a positive relationship between extrinsic motivation and ORCA. The results of the correlation analysis show a positive relationship between extrinsic motivation and ORCA, although it is not significant (see table 2).

With regard to the second hypothesis *Intrinsic motivated employees show more affective commitment to their occupation than extrinsic motivated employees*, there was used a linear regression analysis once again, using an alpha level of 0.05 (see table 4).

**Table 4:**  
Hierarchical regression analyses of intrinsic motivation on occupational affective commitment (OCCA)

	b	SEb	$\beta$
<i>Step 1</i>			
Constant	3.19	.25	
Sex	.09	.13	.06
Age	.18	.09	.27
Occupational tenure	-.11	.16	-.12
Organizational tenure	.17	.14	.20
<i>Step 2</i>			
Constant	2.83	.64	
Sex	.10	.13	.06
Age	.18	.09	.26
Occupational tenure	-.10	.16	-.11
Organizational tenure	.17	.14	.20
Intrinsic motivation	.09	.15	.05

Note:  $R^2 = .12$  for Step 1;  $\Delta R^2 = .12$  for Step 2 ( $p < .05$ ). \*  $p < .05$ , \*\*  $p < .01$ .

The linear regression showed a weak positive relation (.05) between intrinsic motivation and affective occupational commitment (OCCA). After describing the linear regression, a correlation analysis was executed to describe the direction and magnitude of the relationship. As can be seen in table 2, the results of the correlation analysis demonstrate also a weak positive correlation of .07. In contrast to this, the results of the correlation analysis with regard to extrinsic motivation show a negative relation. It is important to note that all the results of the correlation and regression analyses are not significant, which means that one has to be careful with making judgements.

### 4.3 The role of work engagement

To test the hypothesis *Work engagement acts as a mediator in the relation between intrinsic motivation and affective commitment to the organization*, mediator analyses are executed which can be found in the following table.

**Table 5:**  
Mediation analysis of work engagement on the relation between intrinsic motivation and ORCA

	b	SEb	$\beta$
Constant	4.74	.59	
Intrinsic motivation	-.60	.16	-.32**
Work engagement	.29	.07	.35**

Note: \*  $p < .05$ , \*\*  $p < .01$



The mediation analysis shows a significant result with regard to work engagement (.35). The result with regard to intrinsic motivation is also significant, but negative (-.32), which means that both intrinsic motivation and work engagement have a significant influence on affective commitment to the organization (ORCA). This implies that there is a partial mediation of work engagement between intrinsic motivation and ORCA.

It is not possible to test the last hypothesis *Work engagement acts as a mediator in the relation between intrinsic motivation and affective commitment to the occupation*. This is because the relation between intrinsic motivation and affective commitment to the occupation is not significant. A mediation analysis can only be executed if the regression coefficient is significant.

#### 4.4 Relation of extrinsic motivation and normative commitment

To test the third hypothesis *Extrinsic motivated employees show more normative commitment to their organization than intrinsic motivated employees*, a linear regression analysis is applied, using an alpha level of 0.05 (see table 5).

**Table 6:**  
Hierarchical regression analyses of extrinsic motivation on organizational normative commitment (ORCN)

	b	SEb	$\beta$
<i>Step 1</i>			
Constant	2.50	.22	
Sex	-.06	.11	-.05
Age	.04	.08	.08
Occupational tenure	.04	.13	.06
Organizational tenure	-.08	.11	-.12
<i>Step 2</i>			
Constant	2.08	.37	
Sex	-.07	.11	-.06
Age	.05	.07	.09
Occupational tenure	.05	.13	.07
Organizational tenure	-.08	.11	-.12
Extrinsic motivation	.14	.10	.12

Note:  $R^2 = .01$  for Step 1;  $\Delta R^2 = .02$  for Step 2 ( $ps < .05$ ). \*  $p < .05$ , \*\*  $p < .01$ .

The linear regression showed a positive relation (.12) between extrinsic motivation and normative commitment to the organization (ORCN), although it is not significant. The results of the correlation analysis with regard to intrinsic motivation and ORCN also demonstrate a not significant positive correlation (.10).

In contrast to this, the correlation between intrinsic motivation and ORCN was significantly negative (-.18), which implies that high scores on intrinsic motivation are associated with low scores on ORCN and reversed.

With regard to the fourth hypothesis *Extrinsic motivated employees show more normative commitment to their occupation than intrinsic motivated employees* , there was used a linear regression analysis once again, using an alpha level of 0.05 (see table 6).

**Table 7:**  
Hierarchical regression analyses of extrinsic motivation on occupational normative commitment (OCCN)

	b	SEb	$\beta$
<i>Step 1</i>			
Constant	2.68	.29	
Sex	-.28	.15	-1.88
Age	.07	.09	.69
Occupational tenure	.02	.10	.12
Organizational tenure	-.13	.18	-.82
<i>Step 2</i>			
Constant	2.12	.50	
Sex	-.29	.15	-.17*
Age	.07	.10	.10
Occupational tenure	.04	.18	.04
Organizational tenure	-.13	.15	-.14
Extrinsic motivation	.18	.13	.12

Note:  $R^2 = .03$  for Step 1;  $\Delta R^2 = .05$  for Step 2 ( $ps < .05$ ). \*  $p < .05$ , \*\*  $p < .01$ .

The results of the regression analysis demonstrate a not significant positive relationship (.12) between extrinsic motivation and normative commitment to the occupation (OCCN). To complement the linear regression, a correlation analysis was executed.

Where the correlation analysis showed a not significant positive relation (.09) between extrinsic motivation and OCCN, the relation between intrinsic motivation and OCCN is negative and significant (-.24). This significant negative relation means that high scores on intrinsic motivation are associated with low scores on OCCN and reversed.

#### 4.5 Relation of extrinsic motivation and continuance commitment

To test the fifth hypothesis *Extrinsic motivated employees show more continuance commitment to their organization than intrinsic motivated employees*, a linear regression analysis is applied, using an alpha level of 0.05.

As can be seen in table 7, the linear regression showed a significant positive relation (.25) between extrinsic motivation and continuance commitment to the organization (ORCC). The results of the correlation analysis with regard to extrinsic motivation and ORCC demonstrate also a significant positive correlation of (.22). This means that high scores on extrinsic motivation are associated with high scores on ORCC.

With regard to intrinsic motivation and ORCC, the results show a significant negative correlation of -.25, which implies that high scores on intrinsic motivation are associated with low scores on ORCN and reversed (see table 2).

**Table 8**

Hierarchical regression analyses of extrinsic motivation on organizational continuance commitment (ORCC)

	b	SEb	$\beta$
<i>Step 1</i>			
Constant	2.55	.28	
Sex	.08	.14	.05
Age	.08	.10	.11
Occupational tenure	-.05	.18	-.05
Organizational tenure	.07	.15	.08
<i>Step 2</i>			
Constant	1.35	.48	
Sex	.05	.14	.03
Age	.09	.10	.12
Occupational tenure	.00	.17	.00
Organizational tenure	.06	.15	.07
Extrinsic motivation	.38	.13	.25**

Note:  $R^2 = .02$  for Step 1;  $\Delta R^2 = .06$  for Step 2 ( $ps < .05$ ). \*  $p < .05$ , \*\*  $p < .01$ .

With regard to the sixth hypothesis *Extrinsic motivated employees show more continuance commitment to their occupation than intrinsic motivated employees*, there was used a linear regression analysis once again, using an alpha level of 0.05 (see table 8).

Both regression as correlation showed a significant positive relation (.24 and .17) between extrinsic motivation and continuance occupational commitment (OCCC), which implies that high scores on extrinsic motivation are associated with high scores on OCCC. With regard to intrinsic motivation and OCCC, the results of the correlation analysis demonstrate a significant negative correlation of -.19. It is meant that high scores on intrinsic motivation are associated with low scores on OCCC and reversed.

**Table 9:**

Hierarchical regression analyses of extrinsic motivation on occupational continuance commitment (OCCC)

	b	SEb	$\beta$
<i>Step 1</i>			
Constant	2.42	.27	
Sex	-.06	.14	-.04
Age	.09	.10	.12
Occupational tenure	-.05	.17	-.05
Organizational tenure	.14	.14	.16
<i>Step 2</i>			
Constant	1.27	.48	
Sex	-.08	.14	-.05
Age	.12	.10	.17
Occupational tenure	-.03	.16	-.03
Organizational tenure	.14	.14	.16
Extrinsic motivation	.36	.12	.24**

Note:  $R^2 = .05$  for Step 1;  $\Delta R^2 = .05$  for Step 2 ( $ps < .05$ ). \*  $p < .05$ , \*\*  $p < .01$

## 5 Discussion & Conclusion

The results of the regression analysis and correlation analysis do not support all the hypotheses of this study and will be discussed one by one.

The hypothesis *Intrinsic motivated employees show more affective commitment to their organization than extrinsic motivated employees* was rejected because of a significant negative relation. A possible explanation for this significant negative relation is that organizational commitment may be a multiple construct. Bartels, Pruyn, de Jong and Joustra (2007) point out that identification with the organization exists of more concrete organizational levels. According to Bartels et al. (2007), one can identify oneself not only with the organization but also with the work group or department. The results of the study present that perceived external prestige has a positive influence on organizational identification as a whole. Another explanation may be that intrinsic motivation encompasses more than undertaking an activity for its own sake (Amabile et al. 1994). It also may consist of more elements, which may also be the case in organizational commitment.

As the results of testing the hypothesis *Intrinsic motivated employees show more affective commitment to their occupation than extrinsic motivated employees* are not significant, the hypothesis had to be rejected. Although ORCA and OCCA share the affective part of commitment, the coefficients of the first hypotheses were contradictory. A reason for this may be that the respondents did not make a distinction between organizational commitment and occupational commitment. They may filled in the part with regard to their organization similar as to their occupation.

A mediation analyses was executed to test the hypotheses *Work engagement acts as a mediator in the relation between intrinsic motivation and affective commitment to the organization* Although there is a partial mediation of work engagement between intrinsic motivation and ORCA, the hypothesis had to be accepted. A possible explanation for this partial mediation may be that there may be other mediators or moderators who have an influence on this relationship.

A mediation analysis can only be executed if the regression coefficient is significant. As the regression coefficient is not significant with regard to *Work engagement acts as a mediator in the relation between intrinsic motivation and affective commitment to the occupation*, the hypothesis had to be rejected.

The hypothesis *Extrinsic motivated employees show more normative commitment to their organization than intrinsic motivated employees* had to be rejected, as the result is not significant. To test the influence of extrinsic motivation on normative commitment to the occupation (OCCN), the hypothesis *Extrinsic motivated employees show more normative commitment to their occupation than intrinsic motivated employees* was formed. Regression and correlation analyses show positive not significant results, which leads to the rejection of the hypothesis. A reason for the insignificant results with regard to extrinsic motivation may be that extrinsic motivation exists of more types. The Organismic Integration Theory describes four types to show how extrinsically motivated behaviour is regulated (Deci and Ryan, 1985).

The hypothesis *Extrinsic motivated employees show more continuance commitment to their organization than intrinsic motivated employees* had to be accepted, as the regression and correlation analyses are positive. In line with this data, the relation between extrinsic motivation and continuance commitment to the organization is also positive and significant. This supports the hypothesis *Extrinsic motivated employees show more continuance commitment to their occupation than intrinsic motivated employees*.

## **6 Recommendations**

This research explored the relationship between motivation and commitment, which has implications for the management of universities. Besides that, the results of this research will form an occasion for other scientists to further investigate the impact of motivation on commitment

### **6.1 Practical recommendations**

To get and retain committed employees, it is important to know how the preceding motivational processes show their influence. A possibility to get an insight into the motives of an applicant is to take an assessment, which contains several tests and simulations. These tests can be related to intelligence or personality and will give a complete view of the applicant. To get an insight into the work attitude, a work simulation can be applied during the assessment.

To retain committed employees, it is important to get an insight into the motives of an employee is to ask him or her in a function conversation what the motivation is to perform the job. When the management has an insight into the motives of their employees, it will be necessary to use this information by making decisions with regard to human resource management. The decision to chose particular human resource tools will be based on the motives of the employees. For example, if someone is motivated to develop oneself it might be useful to offer training courses. Or if someone is triggered to work harder when there are bonuses in the prospect, the management can implement rewards into the human resource strategy.

### **6.2 Future research recommendations**

Besides the practical implications there are some recommendations for future research. At first, it will be useful to research whether organizational commitment is a multiple construct. This type of commitment might have more concrete organizational levels, for example the work group or department. Besides more research into organizational commitment, it is necessary to further investigate the intrinsic motivation. This construct may also exist of more elements. More investigation into intrinsic motivation and organizational commitment will lead to a better understanding of the relation between these two elements. The types of extrinsic motivation could also be further analyzed according to the Organismic Integration Theory.

Second, as this research is executed in the university setting only it is recommended to do more research in other settings, for example in the private sector. Markovits, Davis, Fay and van Dick (2010) state that ‘employees in the public and private sectors experience different working conditions and employment relationships. Therefore, it can be assumed that their attitudes toward their job and organizations, and relationships between them, are different.’ The results support this assumption because of a stronger relation between satisfaction and both affective as normative commitment among public sector employees. Replicating this research on other settings than this particular university, makes the results more generalisable.

Third, an interesting topic to further investigate is commitment foci. Meyer and Herscovitch (2001) used the three commitment components affective, normative and continuance to create eight commitment profiles. These combinations consist of profiles with one high commitment component, two high commitment components, all high commitment components and all low commitment components. Carson, Carson, Roe, Birkenmeier and Philips(2009) make the following distinction between commitment profiles; organizationist, careerists, uncommitted and dually committed. According to Tsoumbri and Xenikou (2010), there are four commitment profiles which consistently emerge in the literature: the non-committed, the high-committed, the affective-normative dominant and the continuance dominant profile. All the information with regard to the several commitment profiles is too abundant to investigate it in this research, which paves the way for other scientists to do research on the commitment profiles in relation to motivation

Finally, there are some recommendations which are based on the observed limitations during the research. For some people it was not clear if they belong to the target group, as it concerns both professors and PhD’s. To overcome this problem, a question has to be formulated which makes a distinction between the different types of teachers. Sources of non-response are aversion of questionnaires and inability to answer the questionnaire. Further, respondents indicate that many questions look the same. They hardly distinguish between the questions with regard to the organization and occupation. This could be improved by making a more clear distinction between the questions relating to the organization and questions relating to the occupation. The respondents also indicate that many questions exist of one or two negations. This will lead to more difficulty in answering the question, which could be improved by the use of more positive wording. Finally, it is important to note that the low response rate can have an influence on the reliability of the results. The application of all these recommendations will ultimately lead to a much better response rate and indirectly lead to a better reliability.

## Literature

- Allen, N.J. & Meyer, J.P. (1996). Affective, Continuance, and Normative Commitment to the Organization: An Examination of Construct Validity. *Journal of Vocational Behavior*, 49 , 252–276.
- Allen, N.J. & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63 , 1-18.
- Amabile, T.M., Hill, K.G., Hennessey, B.A. & Tighe, E.M. (1994, Vol. 66, No. 5). The Work Preference Inventory: Assessing Intrinsic and Extrinsic Motivational Orientations. *Journal of Personality and Social Psychology* , 950-967.
- Bakker, A.B. & Demerouti, E. (2009). *Work engagement and performance: The role of conscientiousness*. Working paper, Erasmus Universiteit Rotterdam.
- Bakker, A.B., Schaufeli, W.B., Leiter, M.P. & Taris, T.W. (2008) Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, Vol. 22, No.3, July-September, 187-200
- Barney, J.B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *Academic Management Review*, 11 , 656-665.
- Bartels, J., Pruyn, A., de Jonge, M. & Joustra, I. (2007). Multiple organization identification levels and the impact of perceived external prestige and communication climate. *Journal of Vocational Behavior*, Vol. 28, 2, 173-190.
- Becker, H.S. (1960). Notes on the concept of commitment. *The American Journal of Sociology* , 32-40.
- Becker, T.E. (1992). Foci and basis of commitment: are the distinctions worth making? *Academy of Management Journal*, 35 , 232-244.
- Bedeian, A. Kemery, E. & Pizzolatto, A. (1991). Career commitment and expected utility of present job as predictors of turnover intentions and turnover behavior. *Journal of Vocational Behavior*, 39 , 331-343.
- Blau, G. & Lunz, M. (1998). Testing the Incremental Effect of Professional Commitment on Intent to Leave One's Profession beyond the Effects of External, Personal and Work-Related Variables. *Journal of vocational behavior*, 52 , 260-269 .
- Blau, G. (2003). Testing for a four-dimensional structure of occupational commitment. *Journal of Occupational and Organizational Psychology*, 76 , 469–488.
- Blau, G.J. (1985). The measurement and prediction of career commitment. *Journal of Occupational Psychology*, 58 , 277-288.
- Brown, R.B. (1996). Organizational Commitment: Clarifying the Concept and Simplifying the Existing Construct Typology. *Journal of Vocational Behavior*, 49 , 230-251.
- Burris, B.H. (1983). The human effects of unemployment. *Social problems*, 31 , 96-110.
- Carson, K.P., Carson, P.P., Roe, C.W., Birkenmeier, B.J. & Philips, J.S. (1999). Four commitment profiles and their relationship to empowerment, service recovery and work attitudes. *Public Personnel Management*, 28, 1-13.
- Chang, H.T., Chi, N.W. & Miao, M.C. (2007). Testing the relationship between three-component organizational/occupational commitment and organizational/occupational turnover intention using a non-recursive model. *Journal of Vocational Behavior*, 70, 352-368



- Chiaburu, D. S. & Harrison, D.A. (2008, Vol. 93, No. 5). Do Peers Make the Place? Conceptual Synthesis and Meta-Analysis of Coworker Effects on Perceptions, Attitudes, OCBs, and Performance. *Journal of Applied Psychology* , 1082–1103.
- Connelly, C.E. & Gallagher, D.G. (2004). Emerging Trends in Contingent Work Research. *Journal of Management*;30 (6) , 959-983.
- Connelly, C.E. & Colloway, E.K. (2003). Predictors of employees' perceptions of knowledge sharing cultures. *Leadership & Organization Development Journal*, 24 , 294-301.
- Coyle-Shapiro, J.A.M. & Kessler, I. (2002). Contingent and non-contingent working in local government: contrasting psychological contracts. *Public administration*, 80 (1) , pp. 77-101.
- Cropanzano, R. & Mitchell, M.S. (2005). Social Exchange Theory: An Interdisciplinary Review. *Journal of Management*, 31 , 873-900.
- Cropanzano, R. & Mitchell, M.S. (2005). Social Exchange Theory: An Interdisciplinary Review. *Journal of Management*, 31, 873-900
- Davis-Blake, A. Broschak, J.P. & George, E. (2003). Happy Together? How Using Nonstandard Workers Affects Exit, Voice, and Loyalty among Standard Employees. *The Academy of Management Journal*, Vol.46, No. 4 , 475-485.
- De Moura, G.R., Abrams, D., Retter, C., Gunnarsdottir, S. & Ando, K. (2009). Identification as an organizational anchor: How identification and job satisfaction combine to predict turnover intention. *European Journal of Social Psychology*, 39 , 540-557.
- Deci, E.L. & Ryan, R.M. (2002). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Deci, E.L. (1975). *Intrinsic motivation*. New York: Plenum Press.
- Deci, E. L. & Ryan, R.M. (1985). *Intrinsic motivation and self determination in human behavior*. New York: Plenum.
- Eisenberger, R. Hutchinson, S. & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*,71 , 500-7.
- Falk, A. & Fischbacher, U. (2006). *A theory of reciprocity*. Games and economic behavior, Vol 54, 293-315.
- Freud, S. (1917). *Mourning and Melancholia*. New York: The Macmillan Company.
- Freud, S. (1914). *Psychopathology of Everyday Life*. New York: The Macmillan Company.
- Galup, S. Saunders, C., Nelson, R.E. & Cerveney, R. (1997). The use of temporary staff and managers in a local government environment. *Communication research*, 24 , 698-730.
- George, J.M. & Brief, A.P. (1992). Feeling good-doing good: A conceptual analysis of the mood at work-organizational spontaneity relationship. *Psychological Bulletin*, 112 , 310-329.
- George, J. M. & Jones, G.R. (2008). *Understanding and Managing Organizational Behavior*. New Jersey: Pearson Apprentice Hall.
- Greenberger, E., Goldberg, W.A., Hamill, S., O'Neill, R. & Payne, C. (1989). Contributions of a supportive work environment to parents' well-being and orientation to work. *Annual Journal Communication Psychology*, 17 , 755-783.

- Hall, D.T., Schneider, B. & Nygren, H.T. (1972). Correlates of organizational identification as a function of career pattern and organizational type. *Administrative Science Quarterly*, 17, 340-350.
- Herzberg, F. (1987). One more time: How do you motivate employees? *Harvard Business Review*, September-October, 109-120.
- Horn, P.W., Katerberg, R. & Hullin, C.L. (1943) *Principles of Behavior*. New York: Appleton-Century-Crofts
- Hull, C. (1943). *Principles of Behavior*. New York: Appleton-Century-Crofts .
- Igbara, M. & Guimaraes, T. (1999). Exploring Differences in Employee Turnover Intentions and Its Determinants Among Telecommuters and Non-Telecommuters. *Journal of management information systems*, 16, 147-164.
- Kanter, R.M. (1968). Commitment and social organization: A study of commitment mechanisms in utopian communities. *American Sociological Review*, 33, 499-517.
- Kanter, R.M. (1977). *Men and women of the corporation*. New York: Basic Books.
- Kaplan, R.M. & Saccuzzo, D.P. (2009). *Psychological testing*. Belmont: Wadsworth.
- Kiesler, C.A. (1971). *The psychology of commitment: Experiments linking behavior to belief*. San Francisco, CA: Academic Press.
- Kirchmeyer, C. (1995). Managing the work-nonwork boundary: an assessment of organizational responses. *Human Relations*, 48, 515-536.
- Koster, F. & Sanders, K. (2007). Serial solidarity: the effects of experiences and expectations on the co-operative behaviour of employees. *International Journal of Human Resource Management* 18:4, April, 568-585.
- Lawler, E. E. (1969). Job design and employee motivation. *Personnel Psychology*, 22, 426-435.
- Lazarus, R. (1991). Progress on a cognitive motivational relational theory of emotion. *The American psychologist*, 46, 819-834.
- Lee, K., Carswell, J.J. & Allen, N.J. (2000). A meta-analytic review of occupational commitment: Relations with person and work related variables. *Journal of Applied Psychology*, 85, 799-811.
- Lepper, M. & Greene, D. (1978). Overjustification research and beyond: Toward a means-ends analysis of intrinsic and extrinsic motivation. In M. & Lepper, *The hidden costs of reward* (pp. 109-148). Hillsdale, NJ: Erlbaum.
- Lewin, L. (1936). *Principles of topological psychology*. McGraw-Hill book company, inc.: New York and London.
- Markovits, Y., Davis, A.J., Fay, D. & van Dick, R. (2010) The Link Between Job Satisfaction and Organizational Commitment: Differences Between Public and Private Sector Employees. *International Public Management Journal*, 177-196.
- Maslow, A.H. (1943). A theory of human motivation. *Psychological Review*. 50, 370-396.
- Mathieu, J.E. & Hamel, K. (1989). A Causal Model of the Antecedents of Organizational Commitment among Professionals and Nonprofessionals. *Journal of Vocational Behavior*, 34, 299-317.

- Mathieu, J.E. & Zajac, D.M. (1990). A Review and Meta-Analysis of the Antecedents, Correlates, and Consequences of Organizational Commitment. *Psychological Bulletin*, 108 , 171-194.
- Mayer, R.C, Davis, J.H. & Schoorman, F.D. (1995). An integrative model of organizational trust. *Academic Management Review*. 20 , 709-734.
- Mc Lean Parks, J., Kidder, D.L. & Gallagher, D.G. (1998). Fitting square pegs into round holes: Mapping the domain of contingent work arrangements onto the psychological contract. *Journal of Organizational Behavior*, 19 , 697-730.
- Mc Auley, B.J., Zeitz, G. & Blau, G. (2006). *Testing the 'push-pull' theory of work commitment among organizational professionals*. The Social Science Journal, 43, 571-596.
- Meyer, J.P. & Allen, N.J. (1987) A longitudinal analysis of the early development and consequences of organizational commitment. *Canadian Journal of Behavioral Science*, April, 1-17.
- Meyer, J.P. & Allen, N.J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management*, 1, 61-89.
- Meyer, J.P. & Allen, N.J. (1997). *Commitment in the workplace: Theory, research and application. Advanced topics in organizational behavior*. CA: Sage: Thousand Oaks.
- Meyer, J.P. & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review*, 11 , 299-326.
- Meyer, J.P. & Allen, N.J. (1984). Testing the side-bet theory of organizational commitment: some methodological considerations. *Journal of Applied Psychology*, 69 , 372-378.
- Meyer, J.P., Allen, N.J. & Topolnytsky, L. (1998). *Commitment in a changing world*. Canadian Psychology, 39, 83-93.
- Meyer, J.P., Allen, N.J. & Smith, C.A. (1993). Commitment to organizations and occupations - extension and test of a 3-component conceptualization. *Journal of Applied Psychology*, 538-551.
- Meyer, J.P., Becker, T.E. & Vandenberghe, C. (2004). Employee Commitment and Motivation: a Conceptual Analysis and Integrative Model. *Journal of Applied Psychology*, 89 , 991-1007.
- Morrow, P.C (1983). Concept redundancy in organizational research: The case of work commitment. *Academy of Management Review*, 8 , 486-500.
- Morrow, P.C., McElroy, J.C., Lacznia, K.S. & Fenton, J.B. (1999). Using absenteeism and performance to predict employee turnover: early detection through company records. *Journal of Vocational behavior*, 55 , 358-374.
- Mowday, R.T., Porter, L.W. & Steers, R.M. (1982). *Employee-organizational linkages*. New York: Academic Press.
- Mowday, R.T., Porter, L.W. & Dubin, R. (1974). Unit performance, situational factors, and employee attitudes in spatially separated work units. *Organizational Behavior and Human Performance*, 231-248.
- Mowday, R. T., Steers, R.M. & Porter, L.W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14 , 224-247.
- Murphy, K.R. & Saal, F.E. (1990). *Job performance and productivity. Psychology in organizations: Integrating science and practice*. Hillsdale, NJ, England: Lawrence Erlbaum Associates.

- Nunberg, H. (1939). Clinical: Herman Nunberg. 'Psychological Interrelations between Physician and patient'. *International Journal of Psycho-Analysis*, 20 , 86-87.
- Pinder, C. (1998). *Motivation in work organizations*. Upper Saddle River, NJ: Prentice Hall.
- Polivka, A. E. & Nardone, T. (1989). The definition of contingent work . *Monthly Labor Review*, 112 , 9-16.
- Porter, L.W. & Smith, F.J. (1970) *The etiology of organizational commitment*. Irvine: Unpublished manuscript, University of California.
- Porter, L.W., Steers, R.M., Mowday, R.T. & Boulian, P.V. (1974). Organizational commitment, job satisfaction and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59, 603-609
- Reichers, A.E. (1985). A review and reconceptualization of organizational commitment. *Academy of management review*. 10 , 465-476.
- Riketta, M. (2008, Vol. 93, No. 2). The Causal Relation Between Job Attitudes and Performance:A Meta-Analysis of Panel Studies. *Journal of Applied Psychology* , 472–481.
- Rousseau, D.M. (1997). Organizational behavior in the new organizational era. *Annual review psychology*, 48 , 515-546.
- Rousseau, D.M. (1995). *Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements*. CA: Sage: Newbury Park.
- Ryan, R.M. & Connell, J.P. (1979). Perceived locus of causality and internalization. *Journal of Personality and Social Psychology*, 57 , 749-761.
- Ryan, R.M. & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55 , 68-78.
- Schaufeli, W.B. & Bakker, A.B. (2001). Werk en welbevinden: Naar een positieve benadering in de Arbeids- en Gezondheidspsychologie. *Gedrag & Organisatie*, 14 , 229-253.
- Schaufely, W. B., Bakker, A.B. & Salanova, M. (2006). The Measurement of Work Engagement With a Short Questionnaire. *Educational and Psychological Measurement*, Vol. 66, Number 4 , 701-716.
- Scholl, R.W. (1981). Differentiating organizational commitment from expectancy as a motivating force. *Academy of Management Review*, 4 , 589-599.
- Seligman, M.E.P. (1999). The president's address. APA 1998 Annual rapport. *American Psychologist* , 559-562.
- Shiverick, B. & Janelle, P. (May 2009). Achieving Excellence Through Employee Commitment. *My Inner View* , 1-4.
- Shoemaker, D.J., Snizek, W.E. & Bryant, C.D. (1977). Toward a further classification of Becker's side-bet hypothesis as applied to organizational and occupational commitment. *Social Forces*, 598-603.
- Sinclair, R.R., Hannigan, M.A. & Tetrick, L.E. (1995). Benefit coverage and employee attitudes: a social exchange perspective. In L. & Tetrick, *Changing Employment relations: Behavior and Social Perspectives* (pp. 163-185). Washington, DC: American Psychological Association.
- Somers, M.J. & Birnbaum, D. (2000). Exploring the relationship between commitment profiles and work attitudes, employee withdrawal, and job performance. *Public Personnel Management*, 29, 353-364.

Spector, P. (2006). *Industrial and organizational psychology, research and practice*. New York: John Wiley and Sons Ltd.

Steers, R. P. (1996). *Motivation and leadership at work*. New York: McGraw-Hill.

Tett, R.P. & Meyer, J.P. (1993). Job Satisfaction, Organizational Commitment, turnover intention and turnover: path analyses based on meta-analytic findings. *Personnel Psychology*, 46 , 259-293.

Tsoumbis, P. & Xenikou, A. (2010), Commitment profiles: The configural effect of the forms and foci of commitment on work outcomes. *Journal of Vocational Behavior*, 77, 401-411

Tsui, A.S., Pearce, J.L., Porter, L.W., & Tripoli, A.M. (1997), Alternative approaches to the employee-organization relationship: Does investment in employees pay off? *Academy of management journal*, 1089-1121.

White, R. (1959). Motivation reconsidered: the concept of competence. *Psychological Review*, 66 , 297-323.

Wiener, Y. (1982). Commitment in organizations: A normative view. *Academy of Management Review*, 7, 418-428

## Appendix 1

The following scales were used:

### **Intrinsic motivation** (Amabile et al., 1994)

To which extent do you agree with the following statements?

1. I prefer to figure things out for myself
2. It is important for me to be able to do what I most enjoy
3. I enjoy doing work that is so absorbing that I forget about everything else
4. It is important for me to have an outlet for self expression
5. What matters most to me is enjoying what I do
6. The more difficult the problem, the more I enjoy trying to solve it.
7. I want my work to provide me with opportunities for increasing my knowledge and skills
8. No matter what the outcome of a project, I am satisfied if I feel I gained a new experience.
9. I enjoy relatively simple, straightforward tasks
10. Curiosity is the driving force behind much of what I do
11. I enjoy tackling problems that are completely new to me
12. I prefer work I know I can do well over work that stretches my abilities
13. I enjoy trying to solve complex problems
14. I want to find out how good I really can be at my work
15. I'm more comfortable when I can set my own goals

### **Extrinsic motivation** (Amabile et al., 1994)

To which extent do you agree with the following statements?

1. I seldom think about salary and promotions
2. As long as I can do what I enjoy, I'm not that concerned about exactly what I'm paid
3. I am not that concerned about what other people think of my work
4. I prefer having someone set clear goals for me in my work
5. I am keenly aware of the income goals I have for myself
6. To me, success means doing better than other people .
7. I am keenly aware of the promotion goals I have for myself
8. I'm less concerned with what work I do than what I get for it
9. I'm concerned about how other people are going to react to my ideas

10. I believe that there is no point in doing a good job if nobody else knows about it
11. I am strongly motivated by the money I can earn.
12. I prefer working on projects with clearly specified procedures
13. I am strongly motivated by the recognition I can earn from other people
14. I have to feel that I'm earning something for what I do
15. I want other people to find out how good I really can be at my work

**Work engagement** (Schaufeli, Bakker & Salanova, 2006)

Decide if you ever feel this way about your job

1. At my work, I feel bursting with energy
2. I find the work that I do full of meaning and purpose
3. Time flies when I am working
4. At my job, I feel strong and vigorous
5. I am enthusiastic about my job
6. When I am working, I forget everything else around me
7. My job inspires me
8. When I get up in the morning, I feel like going to work
9. I feel happy when I am working intensely

**Organizational commitment** (Allen & Meyer, 1990)

To which extent do you agree with the following statements?

1. I would be very happy to spend the rest of my career with this organization
2. I enjoy discussing my organization with people outside it
3. I really feel as if this organization's problems are my own
4. I think that I could easily become as attached to another organization as I am to this one
5. I do not feel like 'part of the family' at my organization
6. I do not feel 'emotionally attached' to this organization
7. This organization has a great deal of personal meaning for me
8. I do not feel a strong sense of belonging to my organization
9. I am not afraid of what might happen if I quit my job without having another one lined up
10. It would be very hard for me to leave my organization right now, even if I wanted to
11. Too much in my life would be disrupted if I decided I wanted to leave my organization now



12. It wouldn't be too costly for me to leave my organization now
13. Right now, staying with my organization is a matter of necessity as much as desire
14. I feel that I have too few options to consider leaving this organization
15. One of the few serious consequences of leaving this organization would be the scarcity of available alternatives
16. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice — another organization may not match the overall benefits I have here
17. I think that people these days move from company to company too often
18. I do not believe that a person must always be loyal to his or her organization
19. Jumping from organization to organization does not seem at all unethical to me
20. One of the major reasons I continue to work for this organization is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain
21. If I got another offer for a better job elsewhere I would not feel it was right to leave my organization
22. I was taught to believe in the value of remaining loyal to one organization
23. Things were better in the days when people stayed with one organization for most of their careers
24. I do not think that wanting to be a 'company man' or 'company woman' is sensible anymore

**Occupational commitment** (Meyer et. al, 1993)

To which extent do you agree with the following statements?

1. Teaching is important to my self-image
2. I regret having entered the teaching profession
3. I am proud to be in the teaching profession
4. I dislike being a teacher
5. I do not identify with the teaching profession
6. I am enthusiastic about teaching
7. I have put too much into the teaching profession to consider changing now
8. Changing professions now would be difficult for me to do
9. Too much of my life would be disrupted if I were to change my profession now
10. It would be costly for me to change my profession now
11. There are no pressures to keep me from changing professions



12. Changing professions now would require considerable personal sacrifices
13. I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time
14. I do not feel any obligation to remain in the teaching profession
15. I feel a responsibility to the teaching profession to continue in it
16. Even if it were to my advantage, I do not feel that it would be right to leave teaching now
17. I would feel guilty if I left teaching
18. I am in teaching because of a sense of loyalty to it

