

# Exploring the relationship between employability and organizational commitment

A quantitative study on the effect of employability on organizational commitment, moderated by age

**Radboud University**



Master thesis  
Business Administration  
Specialization: Strategic Human Resources Leadership

Supervisor: Prof. Dr. Beatrice van der Heijden  
Second examiner: Dr. Yvonne van Rossenberg

Name: M.M. (Marlijn) Fonken  
Student number: s4475402

17-06-2019

## **Acknowledgement**

After an intense six months, it is finally time to finish my master thesis for the master specialization ‘Strategic Human Resources Leadership’.

At first, I did not have a lot of experience with doing quantitative research. However, I’m really proud of the progress I made during this half year. I would not have come to this result without the help of a few people.

First of all, I would like to thank my supervisor, Prof. Dr. Beatrice van der Heijden, for her constructive feedback during this process. She definitely encouraged me to make the most out of this master thesis. I really appreciated her support, the answers to my questions and her encouraging words. Thereafter, I learned a lot of the thesis circle meetings with my fellow master students. I’m glad we could collect the data of this study together, under supervision of Dr. Yvonne van Rossenberg. Without them I would not have been able to get so many respondents, which has improved the quality of my research in multiple ways.

Finally, I’m grateful for having so many supporting people in my life. I would like to thank my family, friends, and boyfriend for their support, feedback and believe in me. They were and are always there for me, to motivate me or distract me in many ways.

Thank you for everything.

Marlijn Fonken

Nijmegen, 17<sup>th</sup> of June 2019

## **Abstract**

This master thesis deals with the effect of the five dimensions of employability on employees' organizational commitment, with a possible moderating effect of age. Here, the relationship between employability and organizational commitment has been based upon the Social Exchange Theory. If employers facilitate the growth of their employees' employability, they expect a favor of their employees in return. In this research, this favor was expected to be employees' organizational commitment. In order to find out if a relationship between employability and organizational commitment exists and if this relationship differs for younger and older workers, two hypotheses have been formulated. A survey has been developed and sent out to people of the Dutch workforce. For this study, the respondents have been categorized as either younger (< 40 years old) or older ( $\geq$  40 years old) workers, with a total of 735 respondents. After executing a multiple regression analysis and a test for the moderation effect, the hypotheses have been tested. The results showed that three out of the five dimensions (balance, anticipation and optimization, and corporate sense) of employability have a positive effect on employees' organizational commitment. Nevertheless, there was no moderating effect of age on this relationship. Since the relationship between employability and commitment has not been studied before, this research contributes to the existing literature. Additionally, these results can support employers and HR managers to retain their employees and improve their employees' organizational commitment by enhancing the growth of their employees' employability, focusing on these three dimensions.

**Key words:** employability, organizational commitment, ageing workforce, age groups, quantitative study

## Table of contents

1. Introduction .....	6
2. Theoretical background.....	9
2.1 <i>Organizational commitment</i> .....	9
2.2 <i>Employability as a possible antecedent of commitment</i> .....	10
2.3 <i>Combining the fields of commitment and employability using the Social Exchange Theory</i> .....	11
2.4 <i>Differences between younger and older workers regarding employability and commitment</i> .....	14
3. Methodology .....	18
3.1 <i>Approach, methodology and design</i> .....	18
3.2 <i>Sampling and procedure</i> .....	18
3.2.1 <i>Response rates</i> .....	19
3.3 <i>Measurement instruments and tools</i> .....	20
3.3.1 <i>Dependent variable</i> .....	21
3.3.2 <i>Independent variables</i> .....	21
3.3.3 <i>Moderating variable</i> .....	22
3.3.4 <i>Control variables</i> .....	22
3.4 <i>Data analysis</i> .....	22
3.5 <i>Research ethics</i> .....	24
4.1 <i>Preliminary analyses</i> .....	25
4.1.1 <i>Descriptive statistics</i> .....	25
4.1.2 <i>Test for outliers</i> .....	28
4.1.3 <i>Assumption testing</i> .....	28
4.1.4 <i>Psychometric analyses of variables</i> .....	29
4.2 <i>Hypotheses testing</i> .....	31
4.2.1 <i>Regression</i> .....	31
4.2.2 <i>Moderation</i> .....	33
5. Conclusion and Discussion .....	35
5.1 <i>Reflection on the outcomes</i> .....	35
5.2 <i>Limitations of the study and recommendations for future research</i> .....	37
5.3 <i>Practical implications</i> .....	38
References .....	40
Appendices .....	46
<i>Appendix 1. Outliers</i> .....	46

<i>Appendix 2. Assumptions</i> .....	48
<i>Appendix 3. Exploratory factor analyses and reliability analyses</i> .....	49

## 1. Introduction

Due to several trends arising in the workplace, the increased life expectancy (OECD, 2012) and the fast changing market developments, today's workforce is changing (Van der Heijden, Notelaers, Peters, Stoffers, De Lange, Froehlich, & Van der Heijde, 2018). Some of these trends include the remarkable growth of the ageing workforce, the reduction of new workforce entrants because of decreased birth rates, and the concerns about sustaining social security and retirement benefits for retirees both in the present and future (Wargo-Sugleris, Robbins, Lane, & Phillips, 2017). Because of these trends, the retirement age is gradually increasing (Van Dalen, Henkens, & Wang, 2014). Postponing retirement can be made possible by extending working lives, which is a response to the problem of rising pension costs (Van Dalen et al., 2014). As a result of the rising retirement age, the older workers make up a growing percentage of today's workforce (Stirpe, Trullen, & Bonache, 2018), the ageing workforce.

Managing this ageing workforce has become a key challenge for employers. Multiple articles state that training and education for older workers, even though costly, may help them to be able to work till the rising retirement age (Carson & Kerr, 2005; Gavan, 2005; Patrickson & Ranzijn, 2005; Van Dalen et al., 2014). In this way, older workers are getting more employable (Fleischmann, Koster, & Schippers, 2015). Employability is a capacity that enables individuals to fulfil their employment in their current, or possibly another, organization (Van der Heijden et al., 2018). Due to the ageing labor market and the decreasing opportunities for early retirement, there is an increased need to protect workers' sustainable employability (Van der Heijden, Gorgievski, & De Lange, 2016). Nevertheless, most employers are reluctant to invest in their older workers' employability, because of several stereotypes that exist for these older workers (Fleischmann et al., 2015). These employees are perceived as costly, less flexible and less willing to learn. Since their retirement age is close, the period of investment payoff is also expected to be shorter for them compared to younger workers (Fleischmann et al., 2015). Older workers' added value to an organization declines as they reach the retirement age and therefore the employer consequently considers the investment in older workers as costly (Van der Heijden, Schalk, & Van Veldhoven, 2008).

To make the investment in older workers also attractive for the employers themselves, they should get something in return. According to the Social Exchange Theory (SET), the receiving party of a benefit should respond with a benefit for the giving party (Blau, 1964; Cropanzano & Mitchell, 2005). The SET is based on reciprocity and ensures that a relationship between employer and employee can evolve into trusting and mutual commitments over time

(Blau, 1964). When employees see their organization as supportive, they are likely to return the gesture. Employees who experience greater support from their organization will repay the organization by remaining in the organization (Armstrong-Stassen & Ursel, 2009). If the organization can support the employees and reduce their uncertainty of finding another job when needed, these employees might feel more committed to the organization and stay (Yousaf & Sanders, 2012). Therefore, when an organization supports their employees in becoming more employable, these employees may respond to this benefit by becoming more committed to the organization.

Even though the world of work is changing due to increased job mobility and alternative work arrangements, organizations are still in need of a committed workforce (Van Rossenberg et al., 2018). An individual can psychologically be committed to multiple workplace targets (Klein, Cooper, Molloy, & Swanson, 2014). However, commitment to the organization continues to be the primary focus of research and has already been subject to research several times (Yalabik, Swart, Kinnie, & Van Rossenberg, 2017). When employees are committed to their organization, they are less likely to leave their organization voluntarily (Blau & Boal, 1987). If an organization cannot convince their workers of staying within the organization, the organization may face labor shortages (Armstrong-Stassen & Ursel, 2009). Although it is costly to invest in older workers (Van der Heijden et al., 2008), these employees are needed in order to counteract the labor shortages caused by the ageing workforce (Stirpe et al., 2018).

Since older workers benefit from becoming more employable (Fleischmann et al., 2015) and employers benefit from committed employees in their organization (Meyer, 2016), it is of interest to see if there is a direct relationship between the employability of older workers and their organizational commitment, and if this relationship differs for younger workers. Therefore, the research question of this master thesis is as follows:

*What is the effect of employability on organizational commitment, and is this effect moderated by age?*

First of all, this master thesis is relevant in a theoretical way. A lot of research has already been devoted to the core concepts: commitment (Benson, 2006; Klein et al., 2014; Meyer & Allen, 1991; Meyer, 2016), employability (De Cuyper & Notelaers, 2009; Van Dam, 2004; Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009; Van der Heijden et al., 2018), and the Social Exchange Theory (Blau, 1964; Cropanzano & Mitchell, 2005). Several studies investigated a mediating relationship between employability, commitment, and another variable

(Camps & Majocchi, 2010; De Cuyper & De Witte, 2009; Phillippaers, De Cuyper, Forrier, Vander Elst, & De Witte, 2016). De Cuyper and Notelaers (2009) and Yousaf and Sanders (2012) focused on the affective dimension of organizational commitment, affected by employability. Van Dam (2004), on the other hand, studied the relationship between employability and continuance commitment, another form of commitment (Meyer & Allen, 1991). Unfortunately, the direct relationship between employability and organizational commitment has not been investigated yet. A research combining these fields might be relevant in both the fields of employability and of commitment. Building upon the Social Exchange Theory, the relationship between employability and commitment can be investigated. Additionally, it is of interest to find out if this relationship differs for younger and older employees. Since no study investigated the direct relationship of employability on organizational commitment, with a moderating effect of age, this research will fill in this theoretical gap. Here, organizational commitment has been chosen as focus. The relationship between employability and organizational commitment is already new, so it is useful to add a concept that has been investigated often (Yalabik et al., 2017).

Additionally, researching the relationship between employability and commitment regarding the Social Exchange Theory can be of practical relevance for employers and HR managers as well. If the Social Exchange Theory can explain the relationship between employability and organizational commitment, employers should enhance the enlargement of their employees' employability in order to enhance their employees' organizational commitment. Besides that, it can explain if this relationship is different for older and younger employees, so employers can accurately respond to that difference. It might therefore give implications for dealing with an ageing workforce, a currently arising problem (Wargo-Sugleris et al., 2017). The results could help to reduce labor shortages that most organizations are facing because of the ageing workforce (Armstrong-Stassen & Ursel, 2009), by providing suggestions regarding the improvement of employees' organizational commitment.

To fill in both the theoretical and practical gap, the research question will be answered by the means of a quantitative research. In the next chapter, more theories on commitment, employability, the Social Exchange Theory, and the differences between younger and older workers will be elaborated on. Thereafter, the methodology chapter explains the steps in conducting this research, which then leads to the results of this study. It will end with a conclusion and discussion, with a reflection on the outcomes, an answer to the research question, limitations, recommendations for future research, and practical implications.

## 2. Theoretical background

In this chapter, the concepts organizational commitment and employability will be explained in detail and combined based upon the Social Exchange Theory. Thereafter, these concepts will be related to the differences between younger and older workers in order to formulate hypotheses.

### *2.1 Organizational commitment*

Organizational commitment is the dependent variable in this research and has already been investigated in different ways (e.g. Mowday, Steers, & Porter, 1979). The Three-Component Model (TCM) of Meyer and Allen (1991) has ruled the view of commitment for the past decades (Van Rossenberg et al., 2018). Commitment was defined as “a force that binds an individual to a course of action of relevance to one or more targets” (Meyer & Herscovitch, 2001, p. 301). That force could be experienced with different mindsets: affective, normative, and continuance commitment (Meyer & Allen, 1991). Affective commitment implies that employees will continue their organizational membership because they ‘want’ to do so, which is closely related to emotional attachment, identification and involvement (Gautum, Van Dick, & Wagner, 2004). Employees’ choice to engage in consistent lines of activity based on the recognition of the costs regarding discontinuity of this activity can be defined as continuance commitment (Meyer & Allen, 1991). Normative commitment is mainly about the obligation to remain (Meyer, Becker, & Vandenberghe, 2004), when an employee feels he or she needs to continue the employment due to socially accepted norms (Meyer & Allen, 1991; Gautum et al., 2004).

After thorough research with the model of Meyer and Allen (1991), the TCM has been criticized for a lack of theoretical justification for the three mindsets and for being too broad (Klein, Molloy, & Brinsifield, 2012; Klein et al., 2014; Van Rossenberg et al., 2018). The model overlapped with closely related constructs and needed to be adapted to other commitment targets instead of organizational commitment only (Van Rossenberg et al., 2018). Therefore, Klein et al. (2014) conceptualized commitment as a specific type of bond that is applicable across targets, diminishing the need for conceptualizations that are target-specific. Commitment nowadays is defined as “a volitional psychological bond reflecting dedication to and responsibility for a particular target” (Klein et al., 2012, p. 222). Volition requires individuals to decide to be committed. Since it is defined as a psychological bond, commitment is a psychological state that can change over time. From a measurement perspective, this target-free

definition requires that scale items are applicable to any target (Klein et al., 2014). Therefore a measurement scale of commitment has been developed, namely the Klein Unitary Target (KUT) measure of workplace commitment, which is target-neutral (Klein et al., 2014). Employees can develop commitments towards targets within and outside the organization. Commitment can be directed towards multiple foci, or various targets, including the organization, occupation, supervisor, team, program, customer, and union (Meyer et al., 2004). Organizational commitment, however, remains to be the primary focus in research (Becker, 1992; Meyer, 2016; Yalabik et al., 2017).

## *2.2 Employability as a possible antecedent of commitment*

Framing the concept of employability from a Social Exchange theoretical perspective, it could possibly be an antecedent of organizational commitment. This concept enables employees to cope with the fast-changing job requirements of today's workplace, and those highly employable workers are needed by employers in order to meet fluctuating demands for both numerical and functional flexibility (Marginson, 1989). Employability is a concept that is of use for both employees and employers (Van der Heijde & Van der Heijden, 2006). Career development, and thus employability, is largely dependent on the investments of the employees themselves, however, this development must be stimulated by the employer (Hall, 1976). In practice, employability can be improved by the means of increased investments in employee development to guarantee that employees' skills are up to date and wanted by other employers, or organizations, if they are unexpectedly unemployed (Yousaf & Sanders, 2012). Van der Heijde and Van der Heijden (2006) describe employability as "an individual's capacities that enable his or her potential for permanent acquisition and fulfillment of employment, within or outside one's current organization, for one's present or new customer(s), and with regard to future prospects" (p. 453). Both employees and organizational outcomes can benefit from stimulating workers' employability (Van der Heijden et al., 2009). It is a requirement for enabling career success at the individual level, and sustained competitive advantage at the firm level (Van der Heijde & Van der Heijden, 2006). A distinction can be made between self-regulated employability (SRE) and employability enhancement provided by the employer. Examples of employability enhancing policies and practices are formal training and job rotation programs (Fleishmann et al., 2015). On the other hand, SRE is about the perception of individuals on their possibilities to find a new job when needed (Rothwell & Arnold, 2007).

Van der Heijde and Van der Heijden (2006) operationalized employability including five different dimensions, namely: occupational expertise, personal flexibility, balance

anticipation and optimization, and corporate sense. Firstly, occupational expertise refers to professional knowledge and skills, and can mostly be related to excellent professionals and high performers (Van der Heijde & Van der Heijden, 2006). The second dimension, personal flexibility, refers to the adaptation to changes occurring in their work and labor market, either self-chosen or unexpected changes (Van der Heijde & Van der Heijden, 2006). It encloses “adapting easily to all kinds of changes in the internal and external labor market” (Van der Heijde & Van der Heijden, 2006, p. 455). According to the third dimension, balance, both employers and employees should balance their contributions and benefits in their exchange relationship (Paauwe, 1997). The fourth dimension, anticipation and optimization, can be described, by Van der Heijde and Van der Heijden (2006, p. 454), as “entailing preparation for future work changes in a personal and creative manner in order to strive for the best possible job and career outcomes” (Bhaerman & Spill, 1988; North, Mallabar, & Desrochers, 1988). This is a way of adapting to changes and development at different levels. Corporate sense, the last dimension of employability, extends employees’ social capital by participating in different networks (Nahapiet & Ghoshal, 1998; Podsakoff, MacKenzie, Paine, & Bachrach, 2000), engaging more as members of an integrated team (Van der Heijde & Van der Heijden, 2006). This aspect also builds on employees’ social skills and emotional intelligence (Mayer & Salovey, 1997).

### *2.3 Combining the fields of commitment and employability using the Social Exchange Theory*

As mentioned before, the direct relationship between employability and organizational commitment has not been investigated yet. Nevertheless, some kind of relationship between employability and organizational commitment can be expected when discussing different theories, in this research the Social Exchange Theory of Blau (1964). Therefore, the SET will be explained here in order to elaborate on this relationship.

According to the Social Exchange Theory, a social exchange “involves unspecified obligations, the fulfillment of which depends on trust because it cannot be enforced in the absence of a binding contract” (Blau, 1964, p. 113). Positive actions of an organization, directed at employees, make employees reciprocate in positive ways (Cropanzano & Mitchell, 2005). The norm of reciprocity is central to the Social Exchange Theory (SET), because it requires individuals to respond positively to a favorable behavior of another party (Coyle-Shapiro, 2002). According to the norm of reciprocity, employees will act in ways that support the organization when they receive beneficial treatment in return (Coyle-Shapiro, 2002). In other

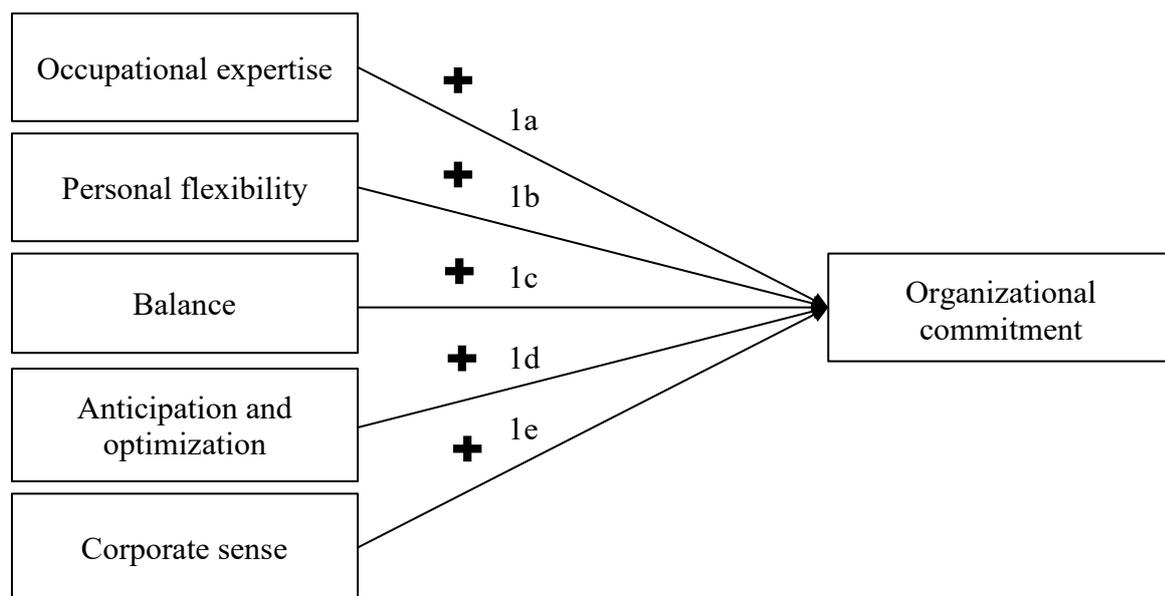
words, positive social exchanges can lead to mutual benefits for both the organization and the employee (Gould-Williams & Davies, 2005). Moreover, the Social Exchange Theory emphasizes the socio-emotional aspects of an exchange (Birtch, Chiang, & Van Esch, 2016).

Relational obligations are a key concept within the Social Exchange Theory. An example of a relational obligation is job security. An economic exchange, on the other hand, can refer to a transactional obligation (Blau, 1964). Employees oriented on the relational obligations instead of transactional obligations are more likely to be committed to their organization and behave as organizational citizens (Rousseau, 1995). Therefore, the exchange of opportunities for enhancing employability and organizational commitment can be seen as a social exchange, a relational obligation. Employees might remain loyal to their employer in return for job security or other long-term gains, for example career development (Millward & Hopkins, 1998). Providing training and development programs, examples of employability enhancing practices (Fleishmann et al., 2015), make employees reciprocate desirable work-related behaviors (Moorman, Blakely, & Niehoff, 1998). In regard to this research, enhancing the growth of employees' employability by the employer might make the employee feel obligated to return the favor, for example by becoming more committed to the organization (De Cuyper & De Witte, 2011).

For a long time the Social Exchange Theory was all about mutual commitments. On the one hand the employee shows commitment towards the organization, and on the other hand the employer exchanges Perceived Organizational Support (POS) (Eisenberger, Huntington, Hutchison, & Sowa, 1986). This support can also be perceived as some kind of commitment of the organization towards them, which in turn enhances employees' organizational commitment (Eisenberger et al., 1986). However, due to the upcoming trend of flexibility (Baruch, 2001; Benson, 2006), a new type of exchange has been coming up in the past years. Organizations are in need of new ways to retain their employees and keeping them committed to their organization (Benson, 2006). This can be made possible by offering training and career development in the exchange between employee and employer. Here, organizations invest in people and provide employees with training and development (Baruch, 2001). A central component here is the opportunity of career development (Scholarios et al., 2008). Where normally job security is offered by the employer in the social exchange, the stimulation of the improvement of employees' employability can possibly replace this benefit (Bagshaw, 1997; Scholarios et al., 2008). This exchange consists of employers providing self-development for their employees, who take advantage of those opportunities and can return the favor by becoming more committed to the organization (Bagshaw, 1997). When an organization cares about their

employees' employability, these employees will reciprocate in positive ways (Wayne, Shore, & Liden, 1997). Responding by being more committed to the organization is based on the higher organizational support that employees perceive when receiving more opportunities for developing their employability (Nishii, Lepak, & Schneider, 2008). If an organization can minimize the uncertainty of finding another job when needed, their employees might feel more committed and therefore stay in the organization (Galunic & Anderson, 2000). Building upon the Social Exchange Theory between employer and employee, it can thus be expected that there is a positive relationship between employability and commitment. Therefore, the first hypothesis is:

*Hypothesis 1: There is a positive relationship between employability (occupational expertise (1a), personal flexibility (1b), balance (1c), anticipation and optimization (1d), and corporate sense (1e)) and organizational commitment.*



*Figure 1. Conceptual model hypothesis 1*

Especially employees who are more in need of enhancing their skills and employability, for example the older workers, may react favorably (Fleischmann et al., 2015). It is of interest to investigate if this relationship is different as age increases, regarding the exchange of employability and organizational commitment.

#### *2.4 Differences between younger and older workers regarding employability and commitment*

Since the growth of the ageing workforce is one of the upcoming trends in today's workforce (Wargo-Sugleris et al., 2017), age is a key factor in this research. It is of interest to see whether age has an effect on the relationship between employability and organizational commitment. Ageing encompasses changes in functioning over time (Schalk et al., 2010). According to Kooij, De Lange, Jansen and Dikkers (2008), age can be conceptualized in five different ways: chronological age, functional or performance based age, subjective age, organizational age, and the life span concept of age. The chronological age is mainly used to facilitate the translation of findings to the organizational environment (Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011) and is often utilized to make a distinction between younger and older employees (De Lange, Taris, Jansen, Kompier, Houtman, & Bongers, 2010). The chronological age refers to the calendar age (Sterns & Doverspike, 1989) or the number of lived years of an individual (Schalk et al., 2010). Even though individuals can have the same chronological age, they may differ in terms of health, career stage, and family status. According to the chronological age, workers aged from 40 to 75 can be referred to as 'older workers' (Veth, Emans, Van der Heijden, Korzilius, & De Lange, 2015). However, from the age of 50, the decline in participation rates of employees starts (OECD, 2012), and this can also be used as a dividing line for older workers (Kooij, De Lange, Jansen, & Dikkers, 2008). In this research the chronological age will be used as a basis, because this conceptualization of age is the principal indicator of ageing in the workplace (Kooij et al., 2011). Additionally, in line with the ADEA (U.S. Age Discrimination in Employment Act of 1967), the age of forty seems to be a good dividing line to "distinguish between younger and older workers" (Dordoni & Argentero, 2015, p. 395). Thus, respondents in this research younger than 40 years old can be defined as the 'younger workers', and respondents of 40 years and older as the 'older workers'.

Since a distinction can be made between younger and older workers, some differences have been found between these two groups. On the subject of organizational commitment, younger generations seem to have lower levels of organizational commitment, compared to previous generations, which results in higher turnover of younger workers (Lub, Bijvank, Bal, Blomme, & Schalk, 2012). Overall, younger workers have lower organizational commitment and higher turnover intentions (Lub et al., 2012), because they have a strong preference for multiple job movements (Eddy, Schweitzer, & Lyon, 2010).

With regard to employability, Van der Heijden (2002) showed that the employability of employees decreases as they are getting older. The group of employees of 50 years and older

could be seen as almost unemployable. However, the most important task for these seniors is to develop the capabilities and new relevant expertise that are necessary in the foreseeable future (Van der Heijden, 2002). Besides that, older people value personal growth more than younger people do, as stated by Chen and Choi (2008), and therefore employability can be valued more by the older employees. They appreciate the opportunities to acquire new skills and improve their lifelong learning (Armstrong-Stassen & Ursel, 2009). Nevertheless, opportunities to participate in developmental training decrease with age (Taylor & Urwin, 2001), even though these opportunities are needed and preferred as well.

Even though some differences between younger and older workers have already been found regarding commitment and employability, the differences between these groups on the relationship between commitment and employability have not been investigated yet. Only little research on the dynamics of interpersonal exchanges with age has been done (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000). Some differences between younger and older workers can be discussed in order to come to a few expectations.

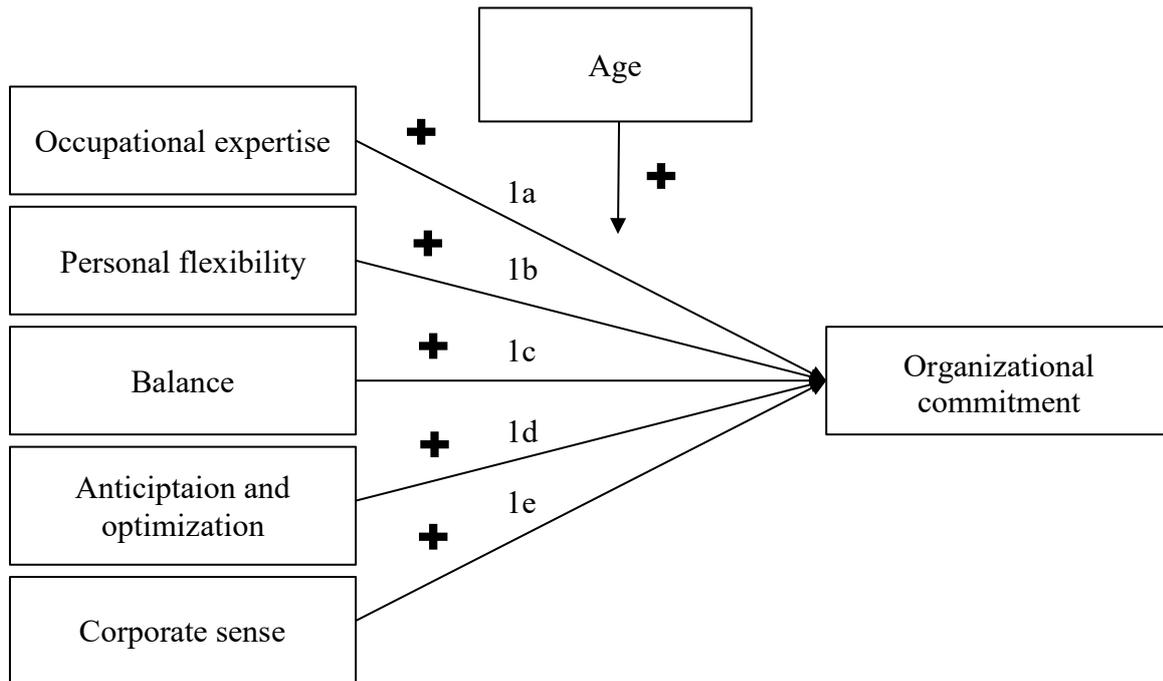
First of all, the Socioemotional Selectivity Theory states that older people increasingly experience time as running out (Carstensen, Isaacowitz, & Charles, 1999). They become less optimistic about the future and see less options available (Rakowski, 1979). Bal, De Lange, Zacher and Van der Heijden (2013) explained that the future time perspective of people determines how they react to psychological contract fulfilments. Because of the higher experience and expertise older workers have, they have higher expectations of their employer. Therefore, older workers will respond much stronger to incentives offered by their employer or organization (Bal et al., 2013). Contrarily, younger workers experience their future as more open-ended, and are more likely to see remaining opportunities in work and also in life. Older workers are more focused on what they have and strengthening their relationship with their employer or organization (Bal et al., 2013). As people age, they change from a mainly growth- and future-oriented focus to a maintenance- and present-oriented focus (Veth, Korzilius, Van der Heijden, Emans, & De Lange, 2017).

Furthermore, according to The Life Span Theory of Control (Heckhausen & Schulz, 1995), the strategy an individual applies to control their situation may shift when ageing (Kooij et al., 2011). Older workers do not rely that much on primary control strategies directed towards efforts that alter external circumstances, but they show more interest in security (Kooij et al., 2011). Therefore, regarding the Selective Optimization with Compensation (SOC) theory, they are more likely to go with strategies for minimizing losses and maximizing gains using available

personal resources (Van der Heijden et al., 2016). In this regard, developmental opportunities at work are highly beneficial to increase the ability to adopt these strategies for older workers.

When taking into account these theories, a second hypothesis, dealing with an ageing moderating effect, can be formulated. Younger workers are more oriented on their growth and future and already have lower levels of organizational commitment than older workers (Lub et al., 2012). Since older workers minimize their losses (Van der Heijden et al., 2016), show more interest in security (Kooij et al., 2011), and are more maintenance-oriented (Veth et al., 2017), they also are more committed to their organization and it can be expected that they respond stronger to the support they receive from their employer (Bal et al., 2013). Above all, because older workers are less employable (Van der Heijden et al., 2009), the enhancement of the growth of this employability by their employers can improve their organizational commitment by reason of the strong relationship older workers have with their organization (Bal et al., 2013). Especially employees who are more in need of enhancing their skills and employability, like the older workers, may reciprocate the benefits they receive (Fleischmann et al., 2015). Following the line of reasoning of the Social Exchange Theory, older workers need to be employable to be able to work till the retirement age (Van Dalen et al., 2014) and will therefore respond more favorably to the organization supporting employees' employability. Therefore, age is expected to moderate the positive relationship between employability and commitment. In particular, we assume that the effect of employability on commitment is stronger for the older employees in comparison with the younger ones. Concluding, a second hypothesis on the moderation of age has been formulated:

*Hypothesis 2: Age moderates the relationship between employability (occupational expertise (2a), personal flexibility (2b), balance (2c), anticipation and optimization (2d), and corporate sense (2e)) and organizational commitment, such that the effect will be stronger for the older employee in comparison with their younger counterparts.*



*Figure 2. Conceptual model hypothesis 2*

In order to test these hypotheses, a quantitative study will be executed regarding the effect of the dimensions of employability on organizational commitment, moderated by age, and thus younger and older workers. In the next chapter the methodology used to define whether these hypotheses will be accepted or rejected will be explained.

### **3. Methodology**

In this chapter, an elaboration on the methodology of this research will be given. First, the approach and the design will be explained by the means of the choices for a quantitative method with surveys. Thereafter, the way of sampling and the procedure can be substantiated, which will be followed up by the explanation of the measurement instruments and tools, and data analysis that has been used. This chapter will end with a paragraph about the research ethics.

#### *3.1 Approach, methodology and design*

In order to get an answer to the research question: ‘What is the effect of employability on organizational commitment, and is this effect moderated by age?’ a quantitative study has been executed. A quantitative research method has been chosen, since this enabled the gathering of much data in a short period of time (Field, 2013) and made it possible to test hypotheses (Ritchie, Lewis, Nicholls, & Ormston, 2013). This study used a deductive approach, since it examined existing theory (Babbie, 2016; Field, 2013). Hypotheses have been developed on the basis of general principles (Babbie, 2016), as described in the theoretical background of this research. The hypotheses have been tested to find out whether the expectations based on theory accurately describe reality (Babbie, 2016). Since hypothesis testing was an important method here, a positivist epistemology approach has been used. Related to the positivist epistemology, the realist ontology was of use as well in this research (Symon & Cassell, 2012). In conclusion, the choices regarding a quantitative research, in a deductive way with a positivist epistemology and realist ontology approach were in line.

In this research, the answers to a survey have been used to get a hold on the core concepts of this research: organizational commitment and the dimensions of employability, moderated by the third variable: age groups. These concepts have been measured on the individual level, since the employability and organizational commitment of the individual were at stake.

#### *3.2 Sampling and procedure*

Part of the data that has been used in this study has been collected previously, in April and May of 2018, by eight bachelor and six master students under supervision of Dr. Yvonne van Rossenberg and Dr. Michel van Berkel. The data has been collected in the Netherlands and Flanders and has been used for several theses and an international research project concerning the cross-cultural equivalence study on workplace commitment. This has been related to the

study of the cross-cultural and cross-language equivalence of the Klein Unitary Target (KUT) measure of workplace commitment (Klein et al., 2014).

Additional data has been collected by other master students, in April of 2019, under the supervision of Prof. Dr. Beatrice van der Heijden and Dr. Yvonne van Rossenberg, in order to make the dataset more complete. The same kind of respondents were aimed at, namely people who are (self-)employed, have a temporary or permanent contract, work part-time or full-time, in any type of organization or industry. These respondents needed to speak the Dutch language and live in the Netherlands or Flanders. The online survey tool 'Qualtrics' has been used to distribute the survey, anonymously, to the personal networks of the students, especially through social media. The respondents were selected because of their convenience accessibility, the technique of convenience sampling (Babbie, 2016). This sampling technique has been followed up by a snowball sampling technique. A snowball sampling technique is a technique for finding research subjects where a participant gives the researcher the name of another possible participant, who in turn provides the name of a third, and so on (Vogt, 1999). The sampling aim, which has been arrived at with these techniques, was to reach a diverse set of workers from a variety of organizations and industries.

### *3.2.1 Response rates*

Since this survey has been sent out through social media, it was not possible to determine the number of people who have seen the survey. Therefore, the response rate could not be calculated. Nevertheless, it was still possible to find out if the sample was representative for this study.

A total of 1,209 people responded to the survey which was sent out in 2018 and 2019. However, not every respondent completely filled in the whole survey. Only the respondents who responded to the questions about employability, organizational commitment, and age were included in this study. The respondents who did not fill in at least 20% of the survey were also excluded, since these respondents mostly did not respond to all the items of a variable, for example of employability. When only one item was missing of a dependent or independent variable, the mean of the other items replaced this missing variable in order to keep as many respondents as possible in the sample. Since this study is focused on the organizational commitment, only the respondents who worked directly for an organization have been included. This came down to a final total of 735 respondents that have been used in this study, which is 60.8% of the total sample.

In this sample, a majority of women and highly educated people were represented, mostly with a bachelor degree or higher ( $n = 522$ , 71%). There were a total of 480 women

(65.3%) and 245 men (33.3%), the other 10 didn't want to respond to this question or chose for 'transgender'. The average age of the respondents was 37. Out of the 735 respondents, 290 of them could have been defined as an older worker, according to their chronological age. 445 respondents were younger than 40 and were thus the younger workers (Kooij et al., 2011; Veth et al., 2015). Most respondents were working in the healthcare sector (n = 164, 22.3%), and worked for a company (n = 408, 55.5%). The organizations where the respondents were working in were in general big, with more than 1000 employees. A total of 259 respondents were working in such an organization (35.2%), however the smaller organizations with less than 500, 100 or 25 employees were also well-represented with a total of 410 respondents (55.8%). Additionally, there were more full-time employees (n = 317, 43.1%) than part-time employees (n = 255, 34.7%) or respondents with a side-job (n = 161, 21.9%). This study also included more respondents who were permanently employed, namely 450 of them (61.4%). There were 285 respondents who were temporarily employed (38.6%).

When comparing this sample to the Dutch workforce, as described by 'Centraal Bureau voor de Statistiek' (CBS), some differences and some similarities have been found (CBS, 2019). On the Dutch labor market, the distribution of men and women is almost equal, with slightly more men (53.3%) than women (46.7%). This has been the biggest difference compared to the sample of this research, since here the women were overrepresented. Another difference has been found in relation to employees' educational level. According to CBS (2019), 29.5% of the Dutch workforce is highly educated and in this research almost 70% was highly educated. The distribution of permanent and temporary contract employees was more comparable to the statistics of CBS (2019), with 74.6% having a permanent contract and 25.4% having a temporary contract. The same applies to the number of full-time employees (51.2%) and part-time employees (48.8%) (CBS, 2019). Concluding, the sample used in this study is not completely comparable to the Dutch workforce, but does have some similar characteristics. Therefore, it was not possible to generalize the results to the whole population, the Dutch workforce, but it was still possible to unravel some interesting findings.

### *3.3 Measurement instruments and tools*

The core concepts of this study, employability and organizational commitment, have been measured by the means of a survey and were all of ratio scale (Babbie, 2016). The scales for these items were constructed beforehand and used in prior research.

### *3.3.1 Dependent variable*

The dependent variable, commitment, has been operationalized as “a specific type of bond that is applicable across targets”, diminishing the need for conceptualizations that are target-specific (Klein et al., 2014, p. 222). This variable has been measured by the means of four questions, regarding five different targets of commitment: profession, career, co-workers, organization, and leader. The measurement scale of the Klein Unitary Target (KUT) has been used (Klein et al., 2014), with a total of four items per target. In this study, only the organizational commitment has been focused on, since this target continued to be the primary focus of research (Yalabik et al., 2017). Therefore, only one out of the five targets of commitment has been used. The scale used to answer these questions was a 7-point Likert scale ranging from ‘Not at all’ to ‘Extremely’. A Likert scale has been used to determine the relative intensity of different items (Babbie, 2016). The higher the score on organizational commitment for an individual, the more committed this employee was to their organization. An example of one of the questions was: “How committed are you to [your/the/this] organization?”.

### *3.3.2 Independent variables*

The independent variable, employability, has been measured according to the conceptualization of Van der Heijde and Van der Heijden (2006) and their five-factor instrument, consisting of: occupational expertise, anticipation and optimization, corporate sense, personal flexibility, and balance. Here, employability has been operationalized as: “an individual's capacities that enable his or her potential for permanent acquisition and fulfillment of employment, within or outside one's current organization, for one's present or new customer(s), and with regard to future prospects” (Van der Heijde & Van der Heijden, 2006, p. 453). The 22 item-scale, related to the five dimensions, has been used to get a grip on the concepts of the dimensions of employability. Examples of the questions were: “During the past year, I was, in general, competent to perform my work accurately and with few mistakes” (occupational expertise); “I adapt to developments within my organization” (personal flexibility); “I achieve a balance in alternating between reaching my own work goals and supporting my colleagues” (balance); “I adapt to developments within my organization” (anticipation and optimization); “I share my experience and knowledge with others” (corporate sense). The response categories to the items of the dimensions of employability ranged from 1 till 7, where 1 can stand for ‘Very bad’ or ‘Never’, and 7 for ‘Very good’ or ‘Very often’. The score of the five-factor instrument of employability was determined by calculating the mean scores for the five dimensions. The higher the respondent’s score on the continuum from 1 till 7, the more employable the respondent.

### *3.3.3 Moderating variable*

The moderating variable of this research was age. A moderating variable has been defined as “a second independent variable, which changes the strength of the relationship between another independent variable and the dependent variable” (Hair et al., 2014, p. 176). This variable has been used to see if there was a difference in the relationship between employability and organizational commitment for younger and older workers. In this survey, respondents could choose their year of birth. This variable has been computed to a measuring of age in years, which made it possible to calculate the average age for the whole sample and make age groups of younger (20 up to and including 39 years old) and older workers (40 years and older). This conceptualization of younger and older workers was based on the chronological age (Kooij et al., 2011; Veth et al., 2015) and the dividing line as determined by the ADEA (Dordoni & Argentero, 2015).

### *3.3.4 Control variables*

A few control variables have been used in order to rule out external effects. Because of these control variables, some differences can be expected (Hair et al., 2014). In this research, the control variables were: gender, organizational tenure, type of contract, and type of job. These variables have been chosen since it can be expected that these had an influence on organizational commitment. For example, employees with a permanent work contract could have been more committed to their organization since they also receive more commitment from their organization due to the type of contract, which can be linked to the Social Exchange Theory (Blau, 1964). In order to use these variables for controlling the analyses, a reference category has been chosen for type of job. This reference category is full-time job, because this is the largest group of this control variable. There is no reference category for organizational tenure, because of the metric level of this variable. Gender and type of contract have been treated as dichotomous variables with only two categories. For gender these categories were ‘male’ and ‘female’, and for type of contract ‘permanent’ and ‘temporary’. The categories ‘transgender’, ‘other’ and ‘I prefer not to provide this information’ were not included since these categories were very small ( $n < 10$ ). As an example, the question for type of contract in the survey was: “My contract at this organization is... [permanent / temporary]”.

## *3.4 Data analysis*

The data analysis of this research started with preliminary analyses. First of all, the descriptive statistics of the data have been analyzed, including the frequencies, means, standard deviations and correlations. Thereafter, some test for outliers have been executed in order to determine if

they existed in the data and whether they should be deleted. This has been followed up by tests to verify if the following four assumptions have been met: 1. Normal distribution of the residuals, 2. Linearity, 3. Homoscedasticity, and 4. Independence of the error items (Field, 2013). The measurement scales of this study already existed and have been used before. Nevertheless, some exploratory factor analyses and reliability analyses were needed to verify the internal validity and to see whether these scales were still reliable (Field 2013).

Additionally, in order to test the hypotheses of this research, a dependence technique has been used. A dependence technique is a statistical technique where a set of variables can be identified as the dependent variables and the other variables as the independent variables (Hair, Black, Babin, & Anderson, 2014; Field, 2013). For this technique, a regression analysis can be used. A multiple regression analysis considers one dependent and multiple independent variable and can estimate the change in the dependent variable in response to changes in the independent variables (Hair et al., 2014). In this research, the dependent variable was the organizational commitment and the independent variables the dimensions of employability. All the independent variables were metric variables, because of the ratio measurement level (Hair et al., 2014). According to the first hypothesis, the effects of the five dimensions of employability on the dependent variable, organizational commitment, have been tested. In order to accept or reject the first hypothesis and add control variables, a hierarchal multiple regression analysis has been executed (Hair et al., 2014). A hierarchical regression analysis creates a new model every time a new variable has been added to the analysis (Field, 2013), with in this study a total of three models for the inclusion of control variables, independent variables and the variable age groups. For the second hypothesis, the variable age groups has been entered as a moderating variable. The effect of this variable has been included via the tool 'Process' (Hayes, 2019) to see whether the relationship between the dimensions of employability and organizational commitment was different for younger and older workers, in order to accept or reject this hypothesis.

To see whether a relationship existed between employability and organizational commitment, the level of significance was of importance. The overall model fit has been evaluated to ascertain whether it attains acceptable levels of statistical criteria, like the significance level (Hair et al., 2014). Moreover, the regression analysis also showed whether the relationship between both concepts is positive or negative and if the relationship is weak or strong. This analysis measured whether an individual would become more committed to their organization when they were more employable, or if employability would have had a negative impact on the organizational commitment. The coefficient (*b*) indicated the strength of the

relation between the dimensions of employability and organizational commitment (Hair et al., 2014; Field, 2013). The coefficient of determination ( $R^2$ ) explained how much variance of the dependent variable could have been explained by the independent variable. The higher the value, the greater the explanatory power of the regression equation (Hair et al., 2014).

### *3.5 Research ethics*

Furthermore, a few ethical issues needed to be considered in order to make this study as legitimate as possible. In research there is always a risk of producing harm (Haggerty, 2004), and research should not be conducted if harm is an issue. Research ethics provide guidelines for conducting research in a responsible way. Examples of research ethics are: honesty, objectivity, integrity, carefulness, openness, confidentiality, and social responsibility (Resnik, 2015).

First of all, the informed consent of the participants is of importance. Researchers must always secure the consent of the subjects of the research. This consent needs to be voluntary, competent, informed, and comprehending (Haggerty, 2004), which means that participants know where they are participating in and that they are free to withdraw from the research at any time. In this study, the respondents were aware of the goal of the survey, namely the theses of the students and the international research project. This can be related to the openness of the researcher, since it has been disclosed what the purpose of the research is (Symon & Cassell, 2012). Moreover, there was a possibility for respondents to withdraw from participating when filling in the survey. Additionally, the data obtained from the participants has been handled with sensitivity. The participants of this research have been treated anonymously during the study, since the survey was completely anonymous. Anonymity can be achieved when the researcher cannot identify a given response with a given respondent (Babbie, 2016).

In addition, researchers need to take into account the role they have in research, which is called reflexivity (Symon & Cassell, 2012). When being reflexive, the researcher is aware of his or her role and will make sure that this role has no influence on the research itself. Here, the researcher was aware of her role and did, therefore, not affect the research.

## 4. Results

This chapter elaborates on the data analysis of this research and provides the results of the statistical tests that have been executed. First, preliminary analyses have been done, followed up by tests for regression and moderation, regarding the hypotheses testing.

### *4.1 Preliminary analyses*

The preliminary analyses consist of the descriptive statistics for both the non-metric and metric variables. Additionally, the assumptions for regression analyses have been tested, as well as the psychometric analyses of variables, including the exploratory factor analyses and reliability analyses.

#### *4.1.1 Descriptive statistics*

In table 1, the non-metric variables of this study are summarized. These variables consist of 3 out of the 4 control variables, namely: gender, type of contract, and type of job. Outstanding here is the greater number of women ( $n = 480$ ) than men ( $n = 245$ ). There were also more employees with a permanent contract ( $n = 450$ ) than with a temporary contract ( $n = 285$ ). The respondents most often had a full-time job ( $n = 317$ ), followed up by part-time jobs ( $n = 255$ ) and side-jobs ( $n = 161$ ). In addition, the younger ( $< 40$  years old) and older workers ( $\geq 40$  years old) have been compared, since the second hypothesis deals with an ageing moderating effect. There were in total 445 younger workers and 290 older workers. The distribution of females and males was comparable, of the younger workers 67.7% was female, and of the older workers 61.7%. On the contrary, the distribution of permanent and temporary contracts of employment was very different. In this research, more younger workers had a temporary contract of employment (58%) than the older workers (9.3%). Moreover, there were more younger workers who worked full-time (41.6%) than there were younger workers who were having a side-job (34.6%) or a part-time job (23.6%). Contrarily, most older workers had a part-time job (53.4%) instead of a full-time job (43.8%) or side-job (2.4%).

Table 1: Frequencies of the nominal variables

Variable	Categories	Frequency	Percentage	Younger workers	Older workers
<i>Gender</i>	Female	480	65.3%	301	179
	Male	245	33.3%	139	106
	Other	10	1.4%	5	5
<i>Type of contract</i>	Permanent	450	61.4%	187	263
	Temporary	285	38.6%	258	27
<i>Type of job</i>	Full-time job <sup>1</sup>	312	43.1%	185	127
	Part-time job	255	34.7%	105	155
	Side-job	161	21.9%	154	7
	I prefer not to provide this information	2	0.3%	1	1

<sup>1</sup> = Reference category

The metric variables of this study consist of the dependent, independent, and moderating variables and one control variable. These variables are summarized in table 2, where the means, standard deviations, Pearson's correlations, and Cronbach's alpha's are presented. Out of the five dimensions of employability, occupational expertise had the highest mean ( $M = 5.64$ ), and anticipation and optimization the lowest ( $M = 4.40$ ) on a scale from 1 till 7. The dependent variable, organizational commitment had a mean of 4.91. The mean of age was 36.79, which means that the average age of the respondents was 37 years. The mean of organizational tenure ( $M = 88.82$ ) shows that respondents had an average of working almost 89 months in the same organization, which is about 7 years.

According to the Pearson's correlations, the independent variable that had the highest correlation with the dependent variable, organizational commitment, is corporate sense ( $r = .439, p < .01$ ). Therefore, the relationship between these two variables was the strongest (Field, 2013). The other independent variables also correlated with organizational commitment ( $p < .01$ ). Additionally, the five dimensions of employability all correlated with each other, with the highest correlation between corporate sense and anticipation and optimization ( $r = .625, p < .01$ ) and the lowest correlation between corporate sense and balance ( $r = .143, p < .01$ ). The moderating variable, age, did not significantly correlate with personal flexibility and anticipation and optimization. Organizational tenure did not significantly correlate with personal flexibility as well. These were the only relationships that did not correlate significantly. Overall, all the existing significant correlations were positive, and a summary can be found in table 2.

Table 2: Descriptives: means, standard deviations, Pearson's correlations (with Cronbach's alpha on the diagonal)

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. Organizational tenure (months)	88.82	112.69	-							
2. Age	36.79	14.38	.696**	-						
3. Organizational commitment	4.91	0.863	.207**	.201**	.892					
4. Occupational expertise	5.64	0.675	.102**	.116**	.257**	.809				
5. Personal flexibility	5.41	0.713	-.012	.004	.257**	.511**	.743			
6. Balance	4.81	0.880	.094*	.090*	.237**	.341**	.304**	.732		
7. Anticipation and optimization	4.40	0.947	.104**	.068	.364**	.329*	.455**	.157**	.785	
8. Corporate sense	4.82	0.873	.154**	.143**	.439**	.376*	.467**	.143**	.625**	.789

\*\* = Correlation is significant at the 0.01 level, \* = Correlation is significant at the 0.05 level

Since a distinction has been made between the younger and older workers for the second hypothesis, the means of the dependent and independent variables between these groups have been compared. The older workers had, on average, a higher organizational commitment ( $M = 5.10$ ,  $SD = .75$ ) than the younger workers ( $M = 4.80$ ,  $SD = .90$ ). Regarding the five dimensions of employability, the means of the older workers were also higher than the means of the younger works, see table 3.

Table 3: Compare means younger and older workers

	Younger workers	Older workers
Occupational expertise	$m = 5.61$ $SD = .63$	$m = 5.70$ $SD = .67$
Personal flexibility	$m = 5.40$ $SD = .67$	$m = 5.43$ $SD = .71$
Balance	$m = 4.75$ $SD = .89$	$m = 4.92$ $SD = .85$
Anticipation and optimization	$m = 4.37$ $SD = .95$	$m = 4.46$ $SD = .93$
Corporate sense	$m = 4.73$ $SD = .85$	$m = 4.98$ $SD = .86$

#### *4.1.2 Test for outliers*

In order to see if there were scores that were different from the rest of the data, a test for outliers has been executed (Field, 2013). The output of these tests can be found in Appendix 1. For the dependent, independent, and control variables, a few outliers have been found. An outlier of the dependent variable, organizational commitment, has been found in case 204. For the independent variables, outliers have been found for occupational expertise (168, 219, 347 and 751), personal flexibility (347, 477, 751, 839), and corporate sense (349, 751, 770 and 904). Also, the control variable organizational tenure had some cases with outliers (999, 1006, 1010, 1013, 1015, 1018, 1020 and 1026). This means that some scores deviated from the rest of the scores in the data set. However, these outliers were all meaningful answering categories. Therefore, these outliers did not affect the research and were not deleted.

#### *4.1.3 Assumption testing*

For the regression equation reported below, which included both the control and independent variables, the underlying model assumptions have been checked. An assumption is “a condition that ensures that what you’re attempting to do works” (Field, 2013, p. 165). The first assumption was about the normal distribution of the residuals. As visualized in the Normal P-Plot and the histogram (Appendix 2), the residuals in this research were approximately normally distributed since the points were aligned along the diagonal line of the P-Plot (Field, 2013). From the partial regression plot, it can also be concluded that there was linearity, which is the second assumption. This means that the outcome variable, organizational commitment, was linearly related to the predictors, the dimensions of employability and age (Field, 2013). The third assumption, homoscedasticity, had to be met in order to assume that the variance of the outcome variable was stable at all levels of the predictor variables (Field, 2013). When looking at the scatterplot of standardized residuals versus unstandardized residuals in Appendix 2, homoscedasticity can indeed be assumed since the residuals were randomly scattered. The assumption of the independence of error items has been checked by the Durbin-Watson statistic, which is specifically designed to test if the residuals are not correlated from one observation to the next observation (Field, 2013). In this research, there was independence of error items, assessed by a Durbin-Watson statistic of 1.787. When the value of this statistic is around 2, there is no correlation between residuals (Field, 2013). Besides that, when the value lies between 0 and 2, this is increasingly more positive. For this assumption the scatterplot has been used as well. In conclusion, the independence of error items has been assumed. The last assumption was to check for multicollinearity. The VIF (Variance Inflation Factors) scores and the values of Tolerance of the model indicate the level of multicollinearity (Hair et al., 2014).

The level of multicollinearity indicates the extent to which two variables are strongly related and do not explain unique variance (Field, 2013). When the VIF score is higher than 10 and the Tolerance level is less than 0.1, there is a high level of multicollinearity (Hair et al., 2014). Multicollinearity should not have been an issue, because all the scores of VIF in the models were below 10 and the Tolerance values above 0.1. In conclusion, all assumptions have been met.

#### 4.1.4 Psychometric analyses of variables

Since the variables organizational commitment and the five dimensions of employability consist of multiple items, exploratory factor analyses and reliability analyses have been executed. These tests can verify the internal validity of this research (Field, 2013). In the factor analyses, the Kaiser-Meyer-Olkin (KMO) of sampling adequacy needed to be higher than .5 to be applicable. Additionally, the Bartlett's test of Sphericity needed to be significant (Field, 2013). When the communalities after extraction were higher than .2, the items shared variance with the other items (Field, 2013). The number of factors that needed to be selected for these items can be based on an 'Eigenvalue' higher than 1 or a 'total variance explained' higher than 60% (Field, 2013). As a further matter, conducting a reliability analysis can also verify the internal validity of a scale. Here, the Cronbach's alpha needs to be at least higher than .6 and is very reliable if higher than .8. This analysis can verify if the items of a variable correlate with each other (Field, 2013). When the Cronbach's alpha increases after deleting an item, the deletion of this item should be considered as well.

First of all, the variable organizational commitment consisted of 4 items. This measure has been developed by Klein et al. (2014) and has been used before. However, to verify the internal validity, an additional exploratory factor analysis and reliability analysis have been executed. The full SPSS output can be found in Appendix 3. The value of the KMO test for organizational commitment was .844 and the Bartlett's test of Sphericity was highly significant ( $p < .001$ ). All the communalities after extraction were above .2 and did share variance with each other. Based on the Eigenvalue ( $> 1$ ) and the total variance explained (76.5%), only one factor should have been extracted. The four items of organizational commitment all loaded highly on this factor, as shown in the component matrix (table 4). This meets the expectations, since organizational commitment was the only variable here. Moreover, to test the reliability of the scale of organizational commitment, a reliability analysis has been executed. The Cronbach's alpha of this analysis was .892, which means the scale is highly reliable. Furthermore, the Cronbach's alpha would not be improved after deleting an item (see Appendix 3).

Table 4: Component matrix: organizational commitment

Items	Component
OrgCom1	.832
OrgCom2	.885
OrgCom3	.898
OrgCom4	.883

Regarding the independent variables of this study, the short-form employability five-factor instrument developed by Van der Heijden et al. (2018) has been used, which consists of the five dimensions of employability (Van der Heijde & Van der Heijden, 2006). For these dimensions, five exploratory factor analyses and reliability analyses have been executed to ensure internal validity. The KMO test values for all the dimensions were above .5: occupational expertise (.804), personal flexibility (.784), balance (.725), anticipation and optimization (.772), corporate sense (.783), all with a highly significant Bartlett's test of Sphericity ( $p < .001$ ). The communalities after extraction were all above .2. Per dimension only one factor was extracted because of the Eigenvalue and total variance explained. In line with the predictions, all the items of each dimension loaded highly on one factor. The results of these analyses can be found in Appendix 3.

Additionally, reliability analyses for all the five dimensions have been executed. The Cronbach's alpha for the scale of occupational expertise was .809 and could have been improved with .013 when deleting the fifth item. However, since this is a pre-existing scale and this would only lead to a slight improvement, this item has not been deleted. For personal flexibility the Cronbach's alpha was .743 and could also have been improved by the deletion of an item. When deleting the fourth item of personal flexibility, the Cronbach's alpha would have been improved with .017, which is also a small improvement and therefore no item has been deleted. The scale of balance had a Cronbach's alpha of .732 and would not increase if an item would have been deleted. The Cronbach's alpha of anticipation and optimization (.785) and corporate sense (.789) would also not have been improved after deletion of an item. In conclusion, not one item has been deleted, since all the scales were already reliable. Considering all the scales of the dependent and independent variables reliable, these scales have been used in the next section for the hypotheses testing.

## 4.2 Hypotheses testing

Since all the assumptions and the reliability of the scales have been tested, it was possible to use this data for the hypothesis testing of this research. The first hypothesis deals with a multiple regression analysis, the second hypothesis with a moderation effect.

### 4.2.1 Regression

In order to accept or reject the first hypothesis, *There is a positive relationship between employability (occupational expertise (1a), personal flexibility (1b), balance (1c), anticipation and optimization (1d), and corporate sense (1e)) and organizational commitment*, a multiple regression analysis has been executed. The full details of each regression model can be found in table 5. In the analyses, standardized variables have been used for the independent variables, since that made it easier to compare the effects of the variables (Field, 2013).

Firstly, the effects of the control variables on organizational commitment have been tested in model 1. In order to use this model, the F-ratio needed to be significant. Model 1 was significant ( $F\text{-change}(5,715) = 15.111, p < .001$ ) and had an Adjusted  $R^2$  of .089. The Adjusted  $R^2$  shows the exploratory power of the model, how much of the variance is explained by this model (Field, 2013). In conclusion, this model could be used and explained 8.9% of the variance. In order to use all control variables in the analysis, a dummy has been made for the control variable type of job with full-time job as the reference category. The other categories of this control variable have been included in the analyses. The coefficients of dummy variables represent the differences in a group (Hair et al., 2004). Therefore, it was only possible to interpret the dummy variables in relation to their reference category. First of all, the dummy variable side-job had a significant negative relationship with organizational commitment ( $b = -.298, p < .001$ ) in model 1. The other dummy variable, part-time job, did not show a significant relationship with organizational commitment. Since at least one of the dummy variables of type of job was significant, it can be concluded that this control variable had an influence on employees' organizational commitment (Field, 2013). The negative coefficient of side-job resembled a lower organizational commitment for the respondents with a side-job than the respondents with a full-time job, the reference category. The coefficient of the control variable type of contract was also negative and significant ( $b = -.306, p < .01$ ), which means that respondents with a temporary contract of employment ( $M = 4.63, SD = .90$ ) had a lower organizational commitment than respondents with a permanent contract of employment ( $M = 5.09, SD = .79$ ). Moreover, organizational tenure had a positive significant relationship with organizational commitment ( $b = .073, p < .05$ ). The longer the employee is working at the organization, the higher the employee's organizational commitment. At last, gender did not

have a significant relationship with organizational commitment.

Additionally, model 2 also included the dimensions of employability: the independent variables of this research. The addition of these dimensions to the prediction of organizational commitment led to a statistically significant increase in  $R^2$  of .184, with an Adjusted  $R^2$  of .260, ( $F\text{-change}(5,710) = 33.895, p < .001$ ). Therefore, this model predicted significantly more variance than the first model. In this model, the control variables side-job ( $b = -.219, p < .001$ ) and type of contract ( $b = -.198, p < .001$ ) still had a significant relationship with organizational commitment. Organizational tenure, on the other hand, did not have a significant relationship anymore. Therefore, under control of the independent variables, organizational tenure did not have an influence on organizational commitment. Moreover, out of the five dimensions of employability, three dimensions had a positive significant relationship with organizational commitment. Corporate sense had the strongest positive relationship with organizational commitment ( $b = .258, p < .001$ ), followed up by balance ( $b = .140, p < .001$ ) and anticipation and optimization ( $b = .092, p < .05$ ). Personal flexibility had a negative, non-significant relationship with the dependent variable. The relationship between occupational expertise and organizational commitment was positive, however, also non-significant.

Finally, in the third model, the moderator variable has been included as well, as an independent variable. In order to compare both the younger and older workers in the next step (4.2.2 *Moderation*), age groups have been made. The first group consisted of the younger workers, aged between 20 and 39, and the second group consisted of respondents of 40 or older, the older workers. Therefore, this variable consisted of two values and has been treated as a dichotomous variable. However, after including the moderating variable age groups as an independent variable in the regression analysis, the third model was not significant and could therefore not be used. In addition, the variable age groups did not show a significant relationship with organizational commitment. Therefore, including this variable did not lead to an improvement of the regression model.

In conclusion, since only three out of the five dimensions of employability had a significant relationship with organizational commitment, hypothesis 1 has been confirmed partially, for balance (1c), anticipation and optimization (1d), and corporate sense (1e).

Table 5: Hierarchical multiple regression predicting organizational commitment from the control variables, the dimensions of employability and age groups

Variable	Organizational commitment					
	Model 1		Model 2		Model 3	
	B	$\beta$	B	$\beta$	B	$\beta$
Constant	5.08**		5.01**		5.05**	
Gender	.073	.040	.062	.034	.062	.034
Part-time	-.028	-.016	.037	.021	.047	.068
Side-job	-.298**	-.143	-.219**	-.105	-.244**	-.117
Type of contract	-.306**	-.174	-.198**	-.113	-.214**	-.122
Organizational tenure	.073*	.082	.038	.045	.063	.074
Occupational expertise			.038	.044	.038	.044
Personal flexibility			-.011	-.013	-.011	-.012
Balance			.140**	.160	.144**	.165
Anticipation and optimization			.092*	.104	.086*	.096
Corporate sense			.258**	.284	.261**	.287
Age groups					-.100	-.056
$R^2$	.096		.270		.271	
$F$	15.11**		26.24**		24	
$\Delta R^2$	.096		.184		.001	
$\Delta F$	15.11**		33.9**		1.428	

\*\* = significant at the 0.01 level, \* = significant at the 0.05 level

#### 4.2.2 Moderation

The second hypothesis, *Age moderates the relationship between employability (occupational expertise (2a), personal flexibility (2b), balance (2c), anticipation and optimization (2d), and corporate sense (2e)) and organizational commitment, such that the effect will be stronger for the older employee in comparison with their younger counterparts*, could have been accepted or rejected by testing the moderating effect. This moderation has been executed via ‘Process’, a modeling tool for SPSS and SAS written by Andrew Hayes (Hayes, 2019).

In order to see if age did have an effect on the relationship between employability and organizational commitment, two age groups have been distinguished. Via the tool ‘Process’ (Hayes, 2019), it has been possible to test the moderation effect of the age groups on the relationship between the five dimensions of employability and organizational commitment. The tests for the moderation effects have been executed separately, per dimension, since only one independent variable can be added in this tool. In table 6 the outcomes of these tests are summarized. Nevertheless, there was no statistically significant moderator effect of age. In contrast to the multiple regression analysis, as summarized in table 5, in this model all the

effects of the dimensions of employability and age groups turned out to be statistically significant. However, the independent variables had more power in this model, since the control variables could not have been included in these tests, as well as the other independent variables (Field, 2013). Since a few control variables did have a relationship with organizational commitment according to the multiple regression analysis, it is necessary to use the multiple regression analysis as a basis to accept or reject the first hypothesis. Moreover, regarding the non-significant results of the modeling tool, the second hypothesis has been rejected.

*Table 6: Moderation effect executed by the tool Process*

	<b>Coefficient</b>	<b>SE</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
Occupational expertise	.2085	.0403	5.1732	.000	.1294	.2877
Age groups	.2740	.0631	4.3451	.000	.1502	.3978
Interaction term (occupational expertise * age groups)	.0113	.0631	.1795	.858	-.1126	.1352
Personal flexibility	.2321	.0408	5.6880	.000	.1520	.3122
Age groups	.2973	.0627	4.7431	.000	.1742	.4204
Interaction term (personal flexibility * age groups)	-.0173	.0628	-.2753	.783	-.1406	.1060
Balance	.1489	.0394	3.7841	.000	.0717	.2262
Age groups	.2637	.0636	4.1444	.000	.1388	.3887
Interaction term (balance * age groups)	.1061	.0657	1.6150	.107	-.0299	.2352
Anticipation and optimization	.3207	.0388	8.2655	.000	.2445	.3968
Age groups	.2744	.0607	4.5206	.000	.1552	.3936
Interaction term (anticipation and optimization * age groups)	-.0145	.0633	-.2294	.819	-.1388	.1098
Corporate sense	.3792	.0392	9.6850	.000	.3023	.4561
Age groups	.2030	.0599	3.3893	.000	.0854	.3205
Interaction term (coporate sense * age groups)	-.0084	.0631	-.1334	.894	-.1322	.1154

## 5. Conclusion and Discussion

In this final chapter, a reflection on the outcomes will be given in order to answer the research question. Additionally, the limitations of this thesis and suggestions for future research are presented, followed by the practical implications of this study.

### 5.1 Reflection on the outcomes

In this study, building upon the Social Exchange Theory, the fields of employability and commitment have been combined. According to this theory (Blau, 1964), employers should be rewarded for supporting the growth of their employees' employability. One of the positive effects could be employees' organizational commitment. Moreover, organizations are still in need of a committed workforce (Meyer, 2016; Van Rossenberg et al., 2018), especially since today's workforce is changing (Van der Heijden et al., 2018). Therefore, the research question of this study was: 'What is the effect of employability on organizational commitment, and is this effect moderated by age?'.

This research question has been investigated by the means of hypotheses testing, based on a multiple regression analysis and a moderation effect. The first objective was to determine if a relationship exists between employability and organizational commitment. Hypothesis 1, *There is a positive relationship between employability (occupational expertise (1a), personal flexibility (1b), balance (1c), anticipation and optimization (1d), and corporate sense (1e)) and organizational commitment*, has been confirmed partially. Only balance, anticipation and optimization, and corporate sense had a significant relationship with organizational commitment. In other words, when employers support the enhancement of their employees' balance, anticipation and optimization, and corporate sense, these employees will be more committed to their organization. Nevertheless, facilitating the growth of employees' occupational expertise and personal flexibility will not have an impact on employees' organizational commitment.

The second hypothesis, *Age moderates the relationship between employability (occupational expertise (2a), personal flexibility (2b), balance (2c), anticipation and optimization (2d), and corporate sense (2e)) and organizational commitment, such that the effect will be stronger for the older employee in comparison with their younger counterparts*, was rejected since there was no statistically significant moderating effect. Therefore, age does not moderate the relationship between employability and organizational commitment. The

relationship between employability and organizational commitment is for that reason not different for younger and older workers.

In conclusion, as an answer to the research question, there is a positive effect of three of the five dimensions of employability on organizational commitment. Nevertheless, these effects are not moderated by age. Specifically, enhancing the growth of employees' balance, anticipation and optimization, and corporate sense will improve employees' organizational commitment, equally for younger and older workers.

Based on the Social Exchange Theory (Blau, 1964), it was expected that all the dimensions of employability had an effect on organizational commitment. Nevertheless, occupational expertise and personal flexibility did not have a relationship with organizational commitment, which contrasts these expectations. Specifically, supporting the enlargement of employees' occupational expertise and personal flexibility will not affect employees' organizational commitment, and therefore, no social exchange will take place. The Social Exchange Theory can thus only explain the relationship between three of the five dimensions of employability and organizational commitment.

On the basis of the Socioemotional Selectivity Theory (Carstensen et al., 1999) and the Life Span Theory of Control (Heckhausen & Schulz, 1995), some differences between the younger and older workers were expected in regard to the relationship between employability and organizational commitment. Nevertheless, there was no moderating effect of age and therefore the results of this research did not conform these theories. Even though there is no moderating effect of age on the relationship between employability and organizational commitment, this commitment was higher for the older respondents than for the younger respondents, as already expected by Lub et al. (2012). However, the variable age groups did not have an effect on the organizational commitment, which contrasts the differences found between younger and older workers regarding their organizational commitment. Besides that, younger workers are expected to be more employable than older workers (Van der Heijden, 2002), but in this study the older workers were more employable.

Since age did not influence the relationship between employability and organizational commitment, there could possibly be an alternative explanation for the difference between younger and older workers' organizational commitment. For example, when comparing the younger and older workers, there were substantially more older workers who were having a permanent contract of employment, in contrast to the younger workers who were more often temporarily employed. The control variable type of contract had an effect on employees' organizational commitment, which means that the organizational commitment of the

respondents with a temporary contract was lower than for the respondents with a permanent contract. Considering the majority of the older respondents having a permanent contract, it could be that, instead of age, the type of contract moderates the relationship between employability and organizational commitment. This could also explain why the older workers were more committed to their organization, because most older workers had a permanent contract of employment.

The results of this research contribute to the existing literature of employability and commitment. A lot of research has already been devoted to the core concepts of this study: employability (Van der Heijde & Van der Heijden, 2006; Van der Heijden et al., 2009; Van der Heijden et al., 2018; De Cuyper & Notelaers, 2009; Van Dam, 2004) and commitment (Benson, 2006; Klein et al., 2012; Klein et al., 2014; Meyer & Allen, 1991; Meyer, 2016). In this study, the fields of employability and commitment have been combined for the first time, building upon the Social Exchange Theory of Blau (1964). Organizational commitment has been studied before based on a social exchange (Cropanzano & Mitchell, 2005), but not with employability being part of this mechanism. The results of this study contribute to the theories of both fields and showed that there is indeed a positive relationship between some dimensions of employability and organizational commitment. Besides that, the differences between younger and older workers regarding their organizational commitment and their employability have already been investigated (Lub et al., 2012; Van der Heijden, 2002). This study showed that the relationship between employability and organizational commitment was not moderated by age and thus not differ for younger and older workers. Therefore, this study also contributes to the literature on differences between younger and older employees, especially regarding their employability and commitment and the relationship between both concepts.

### *5.2 Limitations of the study and recommendations for future research*

Despite the interesting outcomes of this study, it should be noted that this research has some limitations as well. Because of these limitations, some recommendations for future research can be formulated.

First of all, there were some limitations regarding the sample of the research, which hindered the generalizability of the outcomes. Primarily, respondents in the range of 30 to 50 years old were underrepresented due to the limited access to these people. The researchers who collected the data were mainly students, who have reached out to peer students and friends. In addition, they collected data from their parents, who were most often older than 50 years old. These specific groups caused a distorted average age of the sample and a lot more ‘younger

workers' than 'older workers'. Because of this sample, it was difficult to compare younger and older workers, especially in regard to the second hypothesis. Furthermore, there was an overrepresentation of women and highly educated respondents. This sample was therefore not completely generalizable to the Dutch workforce, compared to the statistics of CBS (2019). However, according to CBS (2019), in recent years more women and highly educated people entered the Dutch workforce, which could make this sample a little more representative.

Besides that, there was a lack of prior research on the relationship between employability and commitment. In this research, this relationship is built upon the Social Exchange Theory of Blau (1964). However, there was no certainty that this relationship actually depends on this theory. As a further matter, the Social Exchange Theory only explained the relationship of three out of the five dimensions of employability and organizational commitment. Therefore, the substantiation of this relationship can be seen as a limitation in this research.

In future research, it is recommended to use a sample more representative to the Dutch workforce, with a better distribution of men and women, and lower and higher educated respondents. In other words, more men and more lower educated respondents should be included. In addition, there should be more respondents aged between 30 and 50 years old, to achieve more comparable sizes of the groups for younger and older workers. Since the relationship between employability and organizational commitment has not been studied before, it can be suggested to study this relationship in different ways and based on different theories instead of the Social Exchange Theory only. Furthermore, it is recommended to investigate if the relationship between employability and organizational commitment can be moderated by another variable, since there was no moderating effect of age. For example, comparing employees with a temporary and permanent contract of employment instead of comparing younger and older workers.

### *5.3 Practical implications*

In practice, the results of this research are of most interest to employers and HR managers who have problems with retaining their employees. These results show that it is useful for employers to enhance the growth of their employees' employability, in order to make them more committed to their organization. Especially the dimensions balance, anticipation and optimization, and corporate sense should be enhanced, since these dimensions had a significant positive relationship with organizational commitment. Therefore, with regard to the dimension balance, employers should make sure that their interests are in balance with the interests of their

employees (Paauwe, 1997). Regarding anticipation and optimization, employers should stimulate their employees to be prepared for future changes in work and enhance the performance of their work (Bhaerman & Spill, 1988; North et al., 1988; Van der Heijde & Van der Heijden, 2006). Finally, in relation to employees' corporate sense, their participation in different teams should be stimulated in order to shape their social capital and social skills (Nahapiet & Ghoshal, 1998; Podsakoff et al., 2000). Since there was no moderating effect of age, younger and older workers can be approached by their managers in the same way, when it comes to enhancing the growth of their employability.

## References

- Armstrong-Stassen, M., & Ursel, N. D. (2009). Perceived organizational support, career satisfaction, and the retention of older workers. *Journal of Occupational and Organizational Psychology* (2009), 82, 201–220.
- Babbie, E. (2016). *The practice of social research*, Boston, MA: Cengage Learning, Fourteenth edition.
- Bagshaw, M. (1997). Employability - creating a contract of mutual investment, *Industrial and Commercial Training*, Vol. 29 Issue: 6, pp.187-189.
- Bal, P. M., De Lange, A. H., Zacher, H., & Van der Heijden, B. I. J. M. (2013). A lifespan perspective on psychological contracts and their relations with organizational commitment, *European Journal of Work and Organizational Psychology*, 22:3, 279-292.
- Baruch, Y. (2001). Employability: a substitute for loyalty?, *Human Resource Development International*, 4:4, 543-566.
- Becker, T. E. (1992). Foci and bases of commitment: Are they distinctions worth making? *Academy of management journal*. 35(1), 232-244.
- Benson, G. S. (2006). Employee development, commitment and intention to turnover: a test of 'employability' policies in action. *Human Resource Management Journal*, Vol 16, no 2, pages 173–192.
- Bhaerman, R., & Spill, R. (1988). A dialogue on employability skills: How can they be taught? *Journal of Career Development*, 15, 41–52.
- Birtch, T. A., Chiang, F. F. T., & Van Esch, E. (2016). A social exchange theory framework for understanding the job characteristics–job outcomes relationship: the mediating role of psychological contract fulfillment, *The International Journal of Human Resource Management*, 27:11, 1217-1236.
- Blau, P. (1964). *Exchange and power in social life*. New York: Wiley.
- Blau, G. J. (1987). Conceptualizing How Job Involvement and Organizational Commitment Affect Turnover and Absenteeism. *Academy of Management Review* Vol. 12, No. 2, 288-300.
- Camps, J., & Majocchi, A. (2010). Learning Atmosphere and Ethical Behavior, Does It Make Sense? *Journal of Business Ethics*. 94:129–147.
- Carson, E., & Kerr, L. (2005). Transitions and portability of skills: soft skills and task specific. *International Social Policy Conference* (2005: Melbourne).
- Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist*, 54(3), 165-181.

- Carstensen, L. L., Pasupathi, M., Mayr, U., & Nesselroade, J. R. (2000). Emotional experience in everyday life across the life span. *Journal of Personality and Social Psychology*, 79, 644–655.
- Centraal Bureau voor Statistiek (CBS). (2019). *Arbeidsdeelname; kerncijfers*. Retrieved on 30 April 2019, via:  
<https://opendata.cbs.nl/statline/#/CBS/nl/dataset/82309NED/table?ts=1556632026246>
- Chen, P., & Choi, Y. (2008). Generational differences in work values: A study of hospitality management. *International Journal of Contemporary Hospitality*, 20, 595-615.
- Coyle-Shapiro, J. A-M. (2002). A psychological contract perspective on organizational citizenship behavior. *Journal of Organizational Behavior*, 23, 927–946.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31, 874-900.
- Dordoni, P. & Argentero, P. (2015). When Age Stereotypes are Employment Barriers: A Conceptual Analysis and a Literature Review on Older Workers Stereotypes. *Ageing International*, 40(4), 393-412.
- De Cuyper, N., & De Witte, H. (2009). The management paradox: Self-rated employability and organizational commitment and performance. *Personnel Review*, Vol. 40 Issue: 2, pp.152-172.
- De Cuyper, N., & Notelaers, G. (2009). Job Insecurity and Employability in Fixed-Term Contractors, Agency Workers, and Permanent Workers: Associations With Job Satisfaction and Affective Organizational Commitment. *Journal of Occupational Health Psychology* 2009, Vol. 14, No. 2, 193–205.
- De Lange, A. H., Taris, T. W., Jansen, P., Kompier, M. A. J., Houtman, I. L. D., & Bongers, P. M. (2010). On the relationships among work characteristics and learning-related behavior: Does age matter? *Journal of Organizational Behavior*, 31, 925–950.
- Eddy, S. W., Schweitzer, L., & Lyons, S. T. (2010). New generation, great expectations: A field study of the millennial generation. *Journal of Business and Psychology*, 25, 281-292.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500-507.
- Field, A. (2013). *Discovering Statistics Using IBM SPSS* (4<sup>th</sup> ed.). London: Sage Publications Ltd.
- Galunic, D., & Anderson, E. (2000). From security to mobility: generalized investments in human capital and agent commitment. *Organizational Science*, 11: 1, 1–20.
- Gautum, T., Van Dick, R., & Wagner, U. (2004). Organizational identification and organizational commitment: Distinct aspects of two related concepts. *Asian Journal of Social Psychology* (2004) 7: 301-315.

- Gavan, C. (2005). The incidence and outcomes associated with the late attainment of qualifications in the United Kingdom. *Education economics*, vol. 13(1), March 2005. p. 27-45.
- Gould-Williams, J., & Davies, F. (2005). Using social exchange theory to predict the effects of HRM practice on employee outcomes, *Public Management Review*, 7:1, 1-24.
- Haggerty, K. D. (2004). Ethics Creep: Governing Social Science Research in the Name of Ethics. *Qualitative Sociology*, Volume 27, Issue 4, pp 391–414.
- Hall, D. T. (1976). *Careers in organizations*. Pacific Palisades, CA: Goodyear.
- Hayes, A. F. (2019). *The Process macro for SPSS and SAS*. Retrieved on 23 May 2019, via: <http://processmacro.org/index.html>
- Heckhausen, J., & Schulz, R. (1995). A Life-span theory of control. *Psychological Review*, 102, 284–304.
- Kooij, D., De Lange, A., Jansen, P., & Dikkers, J. (2008). Older workers' motivation to continue to work: five meanings of age: A conceptual review, *Journal of Managerial Psychology*, Vol. 23 Issue: 4, pp.364-394.
- Kooij, D. T. A. M., De Lange, A. H., Jansen, P. G. W., Kanfer, R., & Dikkers, J. S. E. (2011). Age and work-related motives: Results of a meta-analysis. *Journal of Organizational Behavior*. 32, 197-225.
- Klein, H. J., Molloy, J. C., & Brinsfield, C. T. (2012). Reconceptualizing workplace commitment to redress a stretched construct: Revisiting assumptions and removing confounds. *Academy of Management Review*, 37, 130–151.
- Klein, H., Cooper, J., Molloy, J., & Swanson, J. (2014). The Assessment of Commitment: Advantages of a Unidimensional, Target-Free Approach. *Journal of Applied Psychology* 2014, Vol. 99, No. 2, 222–238.
- Lub, X., Bijvank, M. N., Bal, P. M., Blomme, R., & Schalk, R. (2012). Different or alike?: Exploring the psychological contract and commitment of different generations of hospitality workers, *International Journal of Contemporary Hospitality Management*, Vol. 24 Issue: 4, pp.553-573.
- Marginson, P. (1989). Employment flexibility in large companies: Change and continuity. *Industrial Relations Journal*, 20, 101–109.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–31). New York: Basic Books.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61–89.

- Meyer, J. P., Becker, T. E., & Vandenberghe, C. (2004). Employee commitment and motivation: A conceptual analysis and integrative model. *Journal of Applied Psychology* 2004, Vol. 89, No. 6, 991–1007.
- Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review*, 11, 299–326.
- Meyer, J. P. (2016). *Handbook of Employee Commitment*. Northampton, MA: Edward Elgar Publishing, 2016.
- Millward, L. J., & Hopkins, L. J. (1998). Psychological Contracts, Organizational and Job Commitment, *Journal of Applied Social Psychology*, 1998, 28, 16, pp. 1530-1556.
- Moorman, R. H., Blakely, G. L., & Niehoff, B. P. (1998). Does Perceived Organizational Support Mediate the Relationship between Procedural Justice and Organizational Citizenship Behavior?, *Academy of Management Journal*. 41:3 pp 351 – 7.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(2), 224-247.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23, 242–266.
- Nishii, L. H., Lepak, D. P., & Schneider, B. (2008). Employee attributions of the ‘why’ of HR practices: their effects on employee attitudes and behaviors, and customer satisfaction, *Personnel Psychology*, Vol. 61, pp. 503-45.
- North, J., Mallabar, M., & Desrochers, R. (1988). Vocational preparation and employability development. *Child Welfare*, 67, 573–585.
- Organization for Economic Cooperation and Development (OECD). (2012). *Ageing and employment policies*. Retrieved from <http://www.oecd/els/employment/olderworkers>.
- Paauwe, J. (1997, October 14). Zonder eerlijke ruilrelatie geen employability. [No employability without an honest exchange relationship]. Trouw, p. 11.
- Patrickson, M., & Ranzijn, R. (2005). Workforce ageing: the challenges for 21st century management. *International Journal of Organisational Behaviour*, vol. 10 (4) July-December 2005 p.729-739.
- Phillippaers, K., De Cuyper, N., Forrier, A., Vander Elst, T., & De Witte, H. (2016). Perceived Employability in Relation to Job Performance: A Cross-lagged Study Accounting for a Negative Path via Reduced Commitment. *Scandinavian Journal of Work and Organizational Psychology*, 1(1): 2, 1–15.
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26, 513–563.

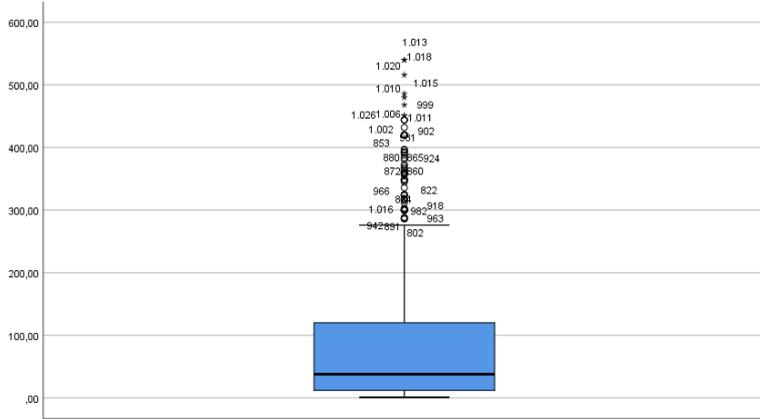
- Rakowski, W. (1979). Future time perspective in later adulthood: Review and research directions. *Experimental Aging Research*, 5, 43-48.
- Resnik, D. B. (2015). What is Ethics in Research & Why is it Important? *U.S. National Institute of Environmental Health Sciences*.
- Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (Eds.). (2013). *Qualitative research practice: A guide for social science students and researchers*. Sage.
- Rothwell, A., & Arnold, J. (2007), Self-perceived employability: development and validation of a scale, *Personnel Review*, Vol. 36 No. 1, pp. 23-41.
- Rousseau, D. M. (1995). *Psychological contracts in organizations: Understanding written and unwritten agreements*. London, UK: Sage.
- Schalk, R., Van Veldhoven, M., De Lange, A. H., De Witte, H., Kraus, K., Stamov-Roßnagel, C., Tordera, N., Van der Heijden, B. I. J. M., Zappalà, S., Bal, M., Bertrand, F., Claes, R., Crego, A., Dorenbosch, L., De Jonge, J., Desmette, D., Gellert, F. J., Hansez, I., Iller, C., Kooij, D., Kuipers, B., Linkola, P., Van den Broeck, A., Van der Schoot, E., & Zacher, H. (2010). Moving European research on work and ageing forward: Overview and agenda. *European Journal of Work and Organizational Psychology*, 19:1, 76-101.
- Scholarios, D. Van der Heijden, B. I. J. M., Van der Schoot, E., Bozionelos, N., Epitropaki, O., Jedrzejowicz, P., Knauth, P., Marzec, I., Mikkelsen A., & Van der Heijde, C. M. (2008). Employability and the psychological contract in European ICT sector SMEs. *The International Journal of Human Resource Management*, 19:6, 1035-1055.
- Sterns, H.L., & Doverspike, D. (1989). Aging and the retraining and learning process in organizations, in Goldstein, I. and Katze, R. (Eds), *Training and Development in Work Organizations*, Jossey-Bass, San Francisco, CA, pp. 299-332.
- Stirpe, L., Trullen, J., & Bonache, J. (2018). Retaining an ageing workforce: The effects of high-performance work systems and flexible work programmes. *Human Resource Management Journal*.
- Symon, G., & Cassell, C. (2012). *Qualitative organizational research: core methods and current challenges*, Sage Publications Ltd.
- Taylor, P., & Urwin, P. (2001). Age and participation in vocational education and training. *Work, Employment & Society*, 15, 763-779.
- Van Dam, K. (2004). Antecedents and consequences of employability orientation. *European Journal of Work and Organizational Psychology*. Volume 13, 2004 - Issue 1.
- Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management*, Fall 2006, Vol. 45, No. 3, Pp. 449–476.
- Van der Heijden, B. I. J. M., De Lange, A., Demerouti, E., & Van der Heijde, C. (2009). Age effect on the employability-career success relationship. *Journal of Vocational Behavior* 74 (2009) 156-164.

- Van der Heijden, B. I. J. M., Gorgievski, M. J., & De Lange, A. H. (2016). Learning at the workplace and sustainable employability: a multi-source model moderated by age, *European Journal of Work and Organizational Psychology*, 25:1, 13-30.
- Van der Heijden, B. I. J. M., Notelaers, G., Peters, P., Stoffers, J., De Lange, A., Froehlich, D., & Van der Heijde, C. (2018). Development and validation of the short-form employability five-factor instrument. *Journal of Vocational Behavior* 106 (2018) 236-248.
- Van der Heijden, B. I. J. M., Schalk, R., & Van Veldhoven, M. (2008). Ageing and careers: European research on long-term career development and early retirement, *Career Development International*, Vol. 13 Issue: 2, pp.85-94.
- Van Dalen, H., Henkens, K., & Wang, M. (2014). Recharging or Retiring Older Workers? Uncovering the Age-Based Strategies of European Employers. *Gerontologist*, 2015, Vol. 55, No. 5, 814-824.
- Van Rossenberg, Y. G. T., Klein, H. J., Asplund, K., Bentein, K., Breitsohl, H., Cohen, A., Cross, D., De Aguiar Rodrigues, A. C., Duflot, V., Kilroy, S., Ali, N., Rapti, A., Ruhle, S., Solinger, O., Swart J., & Yalabik, Z. Y. (2018). The future of workplace commitment: key questions and directions, *European Journal of Work*.
- Veth, K. N., Korzilius, H. P. L. M., Van der Heijden, B. I. J. M., Emans, B. J. M., & De Lange, A. H. (2017). Which HRM practices enhance employee outcomes at work across the life-span?, *The International Journal of Human Resource Management*.
- Veth, K. N., Emans, B. J. M., Van der Heijden, B. I. J. M., Korzilius, H. P. L. M., & De Lange, A. H. (2015). Development (f)or Maintenance? An Empirical Study on the Use of and Need for HR Practices to Retain Older Workers in Health Care Organizations. *Human Resource Development Quarterly*, vol. 26, no. 1, Spring 2015.
- Vogt, W. P. (1999). *Dictionary of Statistics and Methodology: A Nontechnical Guide for the Social Sciences*, London: Sage.
- Wargo-Sugleris, M., Robbins, W., Lane, C., & Phillips, L. (2017). Job satisfaction, work environment and successful ageing: Determinants of delaying retirement among acute care nurses. *Journal of Advanced Nursing*. Volume 74, Issue 4.
- Wayne, S. J., Shore, M., & Liden, R. C. (1997). Perceived organizational support and leader-member exchange: A social exchange perspective. *Academy of Management Journal*, 40(1): 82-111.
- Yousaf, A., & Sanders, K. (2012). The Role of Job Satisfaction and Self-Efficacy as Mediating Mechanisms in the Employability and Affective Organizational Commitment Relationship: A Case From a Pakistani University. *Thunderbird International Business Review* Vol. 54, No. 6.

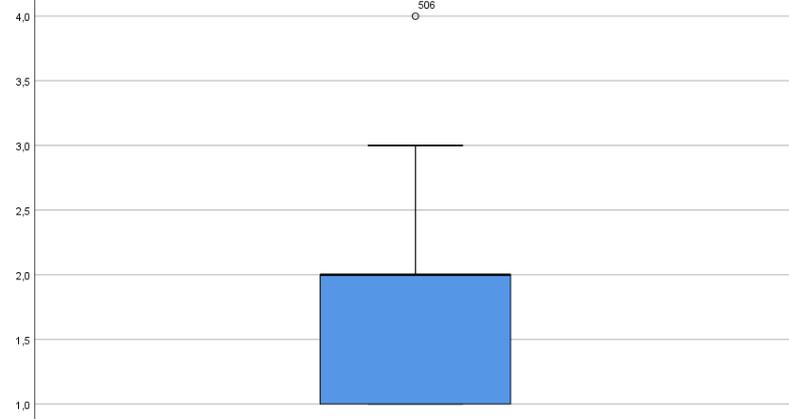
# Appendices

## Appendix 1. Outliers

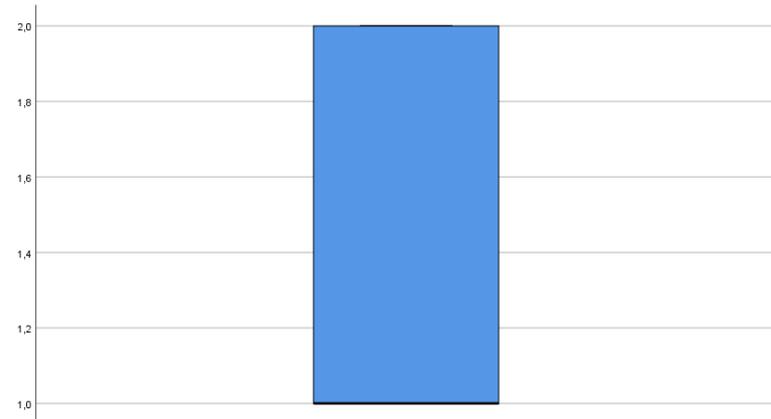
### Organizational tenure



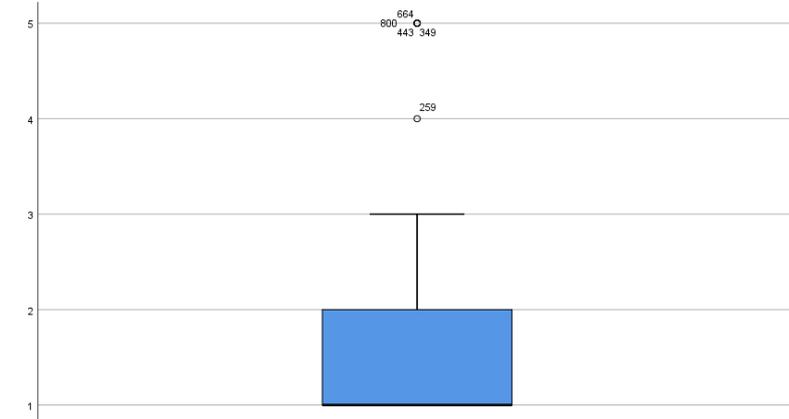
### Type of job



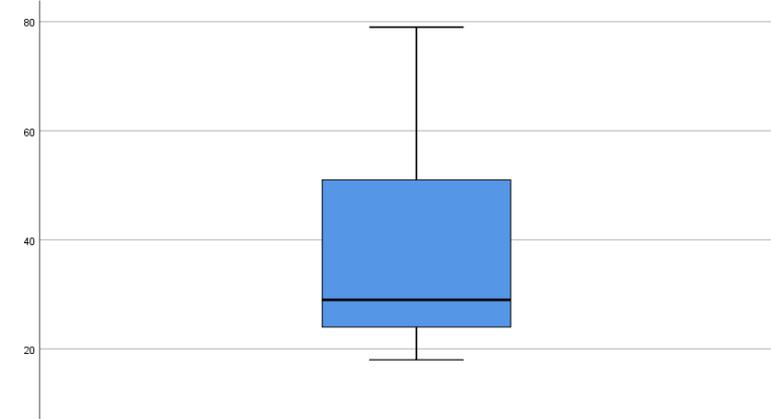
### Type of contract



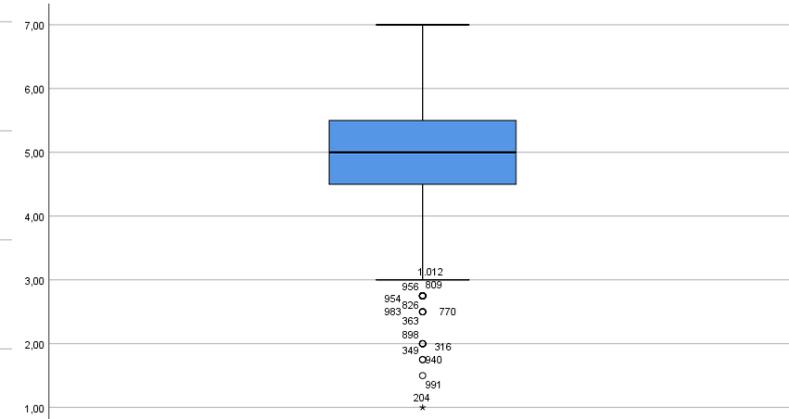
### Gender



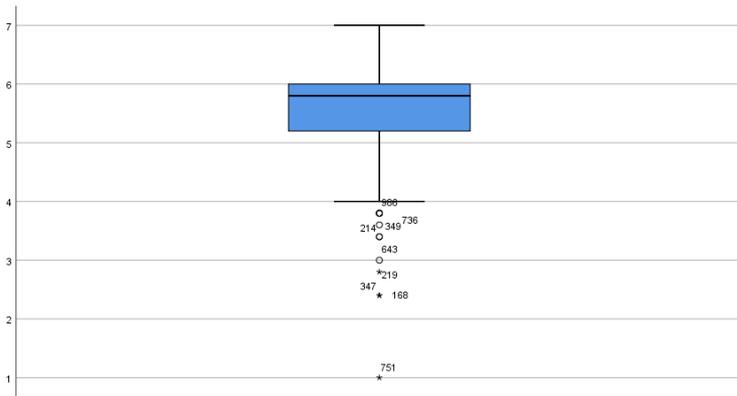
### Age



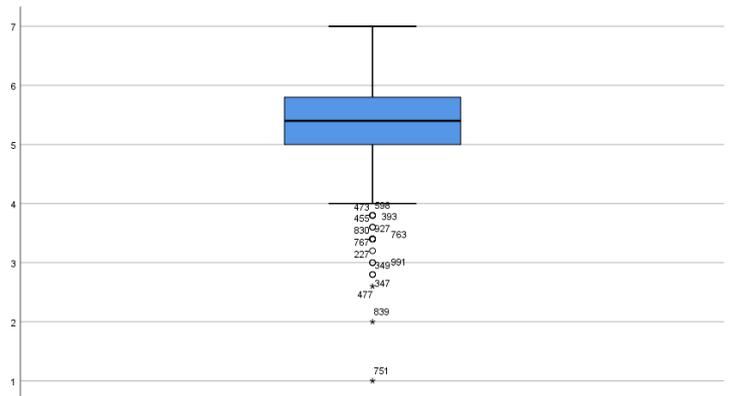
### Organizational commitment



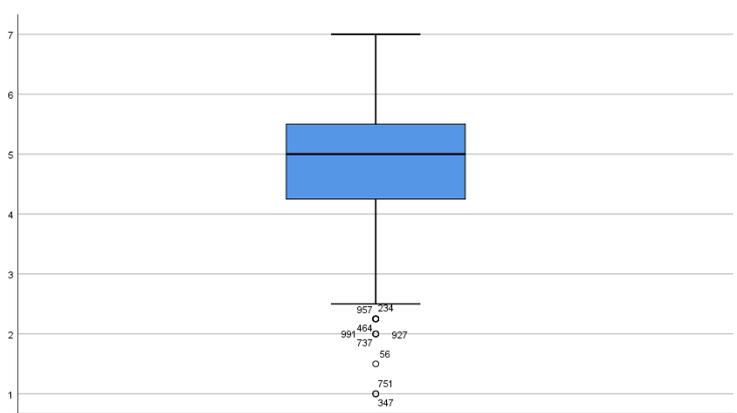
Occupational expertise



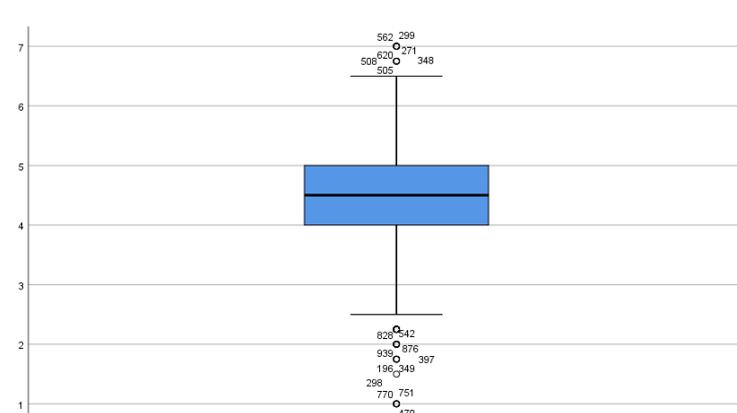
Personal flexibility



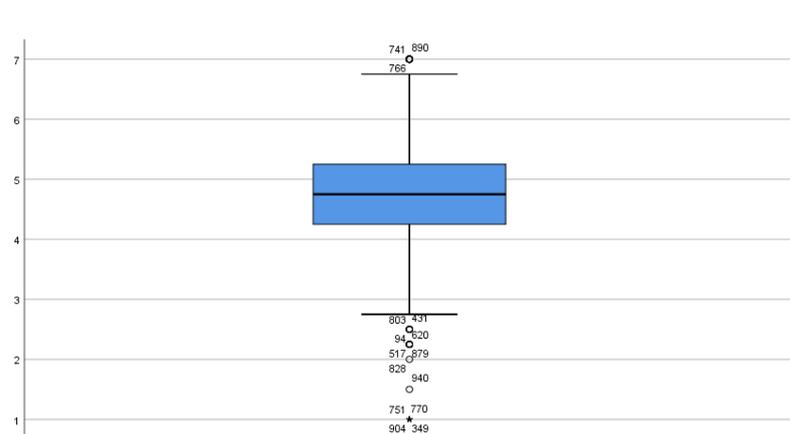
Balance



Anticipation and optimization

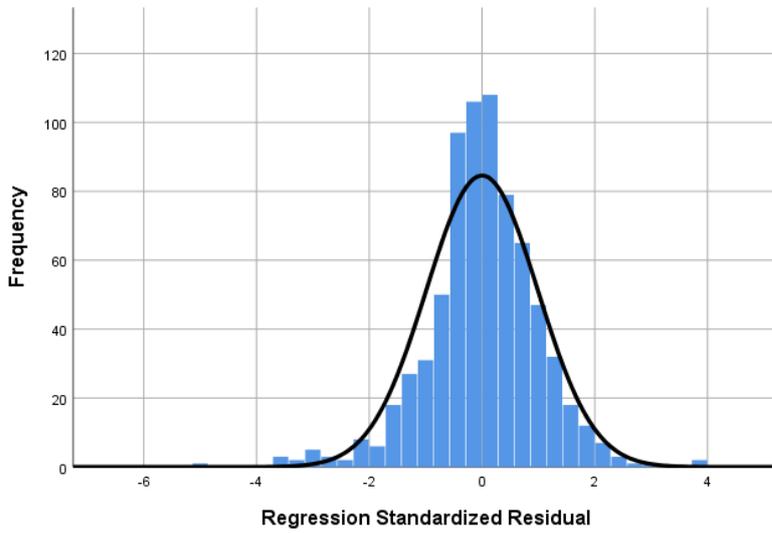


Corporate sense

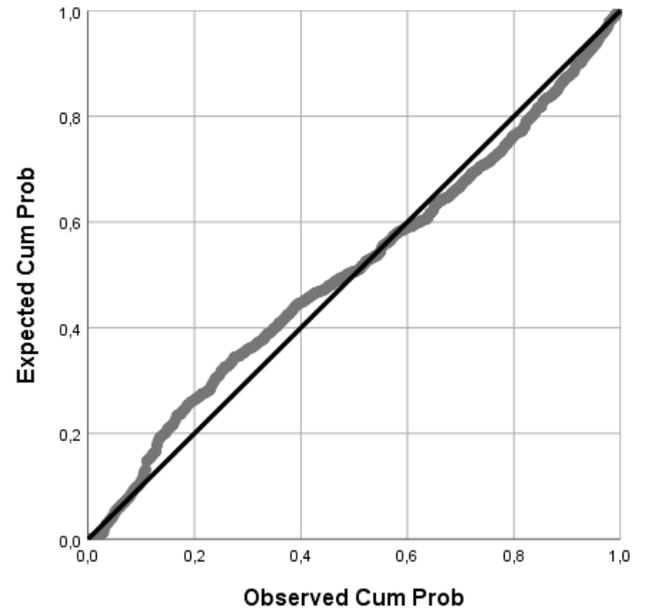


## Appendix 2. Assumptions

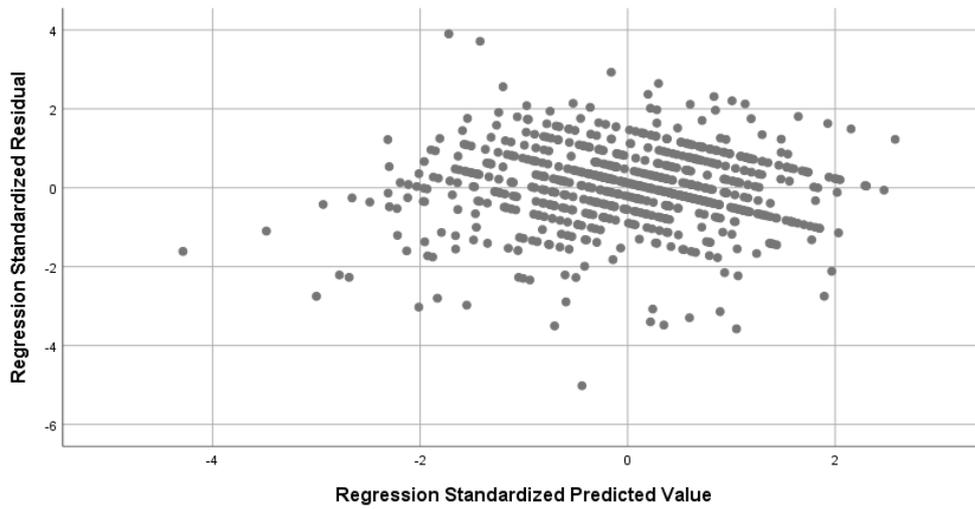
### 1. Histogram



### 2. Normal P-Plot



### 3. Scatterplot



## Appendix 3. Exploratory factor analyses and reliability analyses

### 4.1 Organizational commitment

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.844
Bartlett's Test of Sphericity	Approx. Chi-Square	1769
	df	6
	Sig.	.000

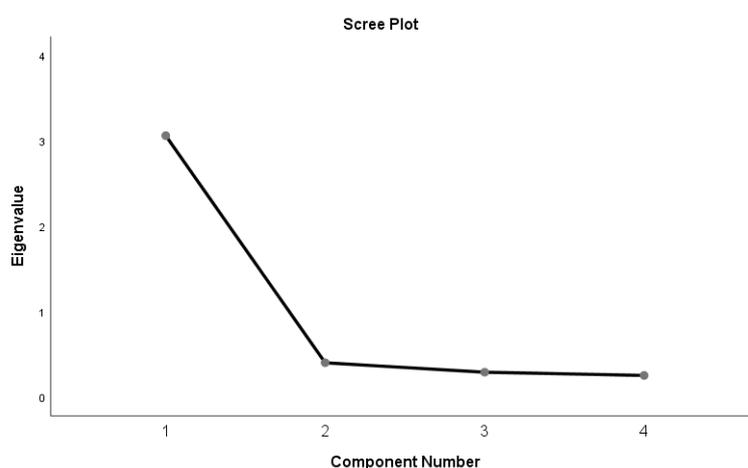
<b>Communalities</b>		
	Initial	Extraction
OrgCom1	1.000	.691
OrgCom2	1.000	.784
OrgCom3	1.000	.806
OrgCom4	1.000	.779

Extraction Method: Principal Component Analysis.

<b>Component Matrix<sup>a</sup></b>	
	Component
	1
OrgCom1	.832
OrgCom2	.885
OrgCom3	.898
OrgCom4	.883

Extraction Method: Principal Component Analysis.

a. 1 components extracted.



<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.060	76.505	76.505	3.060	76.505	76.505
2	.400	9.989	86.494			
3	.289	7.220	93.714			
4	.251	6.286	100.000			

Extraction Method: Principal Component Analysis.

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.892	4

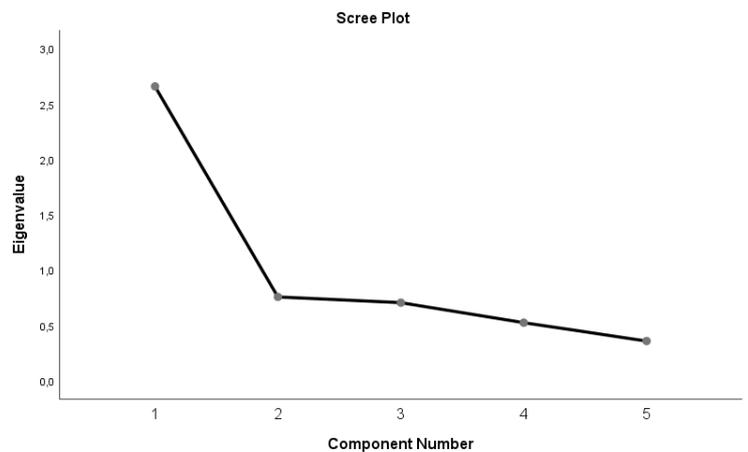
	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
OrgCom1	14.95	6.534	.709	.889
OrgCom2	14.69	7.206	.785	.855
OrgCom3	14.55	7.203	.804	.849
OrgCom4	14.73	6.848	.778	.855

## 4.2 Occupational expertise

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.804
Bartlett's Test of Sphericity	Approx. Chi-Square	1210.203
	df	10
	Sig.	.000

<b>Component Matrix<sup>a</sup></b>	
	Component
	1
Employ_Occ_Ex1	.779
Employ_Occ_Ex2	.814
Employ_Occ_Ex3	.806
Employ_Occ_Ex4	.776
Employ_Occ_Ex5	.583
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

<b>Communalities</b>		
	Initial	Extraction
Employ_Occ_Ex1	1.000	.607
Employ_Occ_Ex2	1.000	.663
Employ_Occ_Ex3	1.000	.649
Employ_Occ_Ex4	1.000	.602
Employ_Occ_Ex5	1.000	.340
Extraction Method: Principal Component Analysis.		



<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.861	57.211	57.211	2.861	57.211	57.211
2	.751	15.017	72.228			
3	.645	12.891	85.120			
4	.389	7.777	92.896			
5	.355	7.104	100.000			
Extraction Method: Principal Component Analysis.						

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.809	5

	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
Employ_Occ_Ex1	22.41	7.690	.623	.764
Employ_Occ_Ex2	22.57	7.185	.667	.750
Employ_Occ_Ex3	22.53	7.159	.655	.753
Employ_Occ_Ex4	22.52	7.710	.622	.765
Employ_Occ_Ex5	22.78	8.438	.423	.822

### 4.3 Personal flexibility

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.798
Bartlett's Test of Sphericity	Approx. Chi-Square	1106.667
	df	10
	Sig.	.000

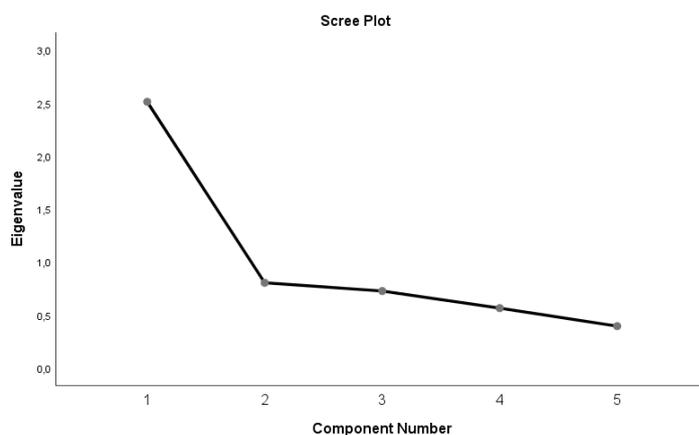
<b>Communalities</b>		
	Initial	Extraction
Employ_Pers_Flex1	1.000	.693
Employ_Pers_Flex2	1.000	.583
Employ_Pers_Flex3	1.000	.667
Employ_Pers_Flex4	1.000	.288
Employ_Pers_Flex5	1.000	.515

Extraction Method: Principal Component Analysis.

<b>Component Matrix<sup>a</sup></b>	
	Component
	1
Employ_Pers_Flex1	.833
Employ_Pers_Flex2	.764
Employ_Pers_Flex3	.817
Employ_Pers_Flex4	.537
Employ_Pers_Flex5	.718

Extraction Method: Principal Component Analysis.

a. 1 components extracted.



<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.747	54.931	54.931	2.747	54.931	54.931
2	.866	17.327	72.258			
3	.586	11.719	83.977			
4	.450	9.005	92.982			
5	.351	7.018	100.000			

Extraction Method: Principal Component Analysis.

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.781	5

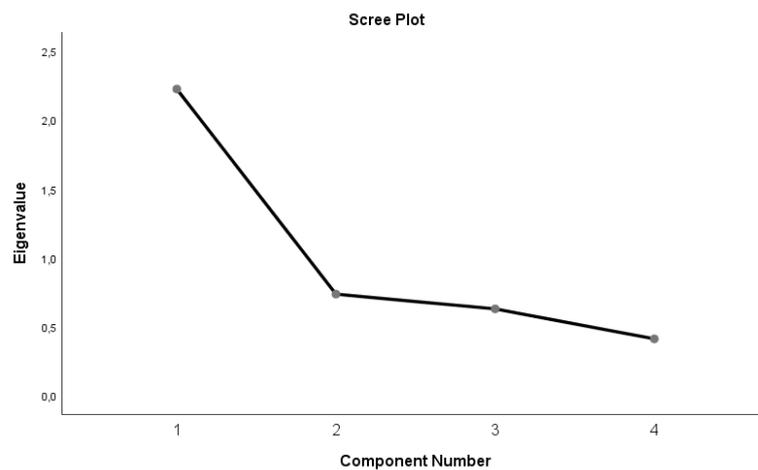
	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
Employ_Pers_Flex1	21.56	8.288	.665	.705
Employ_Pers_Flex2	21.35	9.017	.568	.739
Employ_Pers_Flex3	21.91	7.978	.655	.706
Employ_Pers_Flex4	21.50	9.005	.380	.805
Employ_Pers_Flex5	21.79	8.620	.554	.741

#### 4.4 Balance

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.725
Bartlett's Test of Sphericity	Approx. Chi-Square	630.128
	df	6
	Sig.	.000

<b>Communalities</b>		
	Initial	Extraction
Employ_Bal1	1.000	.490
Employ_Bal2	1.000	.547
Employ_Bal3	1.000	.722
Employ_Bal4	1.000	.465
Extraction Method: Principal Component Analysis.		

<b>Component Matrix<sup>a</sup></b>	
	Component
	1
Employ_Bal1	.700
Employ_Bal2	.740
Employ_Bal3	.850
Employ_Bal4	.682
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	



<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.225	55.623	55.623	2.225	55.623	55.623
2	.736	18.391	74.014			
3	.629	15.713	89.727			
4	.411	10.273	100.000			
Extraction Method: Principal Component Analysis.						

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.732	4

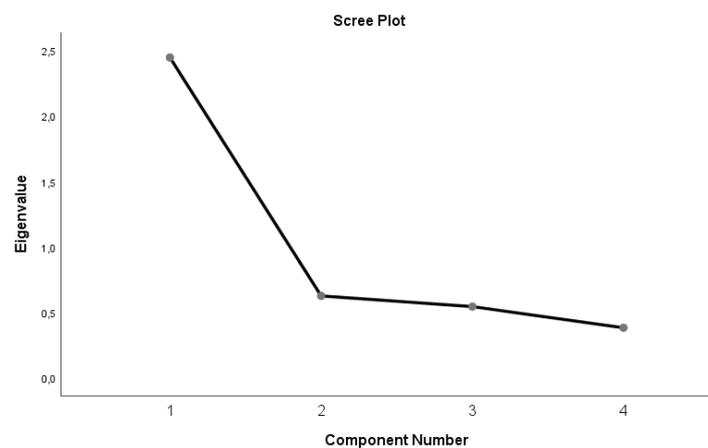
	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
Employ_Bal1	14.13	7.995	.470	.702
Employ_Bal2	14.52	7.490	.514	.678
Employ_Bal3	14.67	6.655	.664	.583
Employ_Bal4	14.42	8.258	.452	.711

#### 4.5 Anticipation and optimization

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.772
Bartlett's Test of Sphericity	Approx. Chi-Square	836.398
	df	6
	Sig.	.000

<b>Component Matrix<sup>a</sup></b>	
	Component
	1
Employ_Ant_Opt1	.717
Employ_Ant_Opt2	.765
Employ_Ant_Opt3	.826
Employ_Ant_Opt4	.816
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

<b>Communalities</b>		
	Initial	Extraction
Employ_Ant_Opt1	1.000	.514
Employ_Ant_Opt2	1.000	.586
Employ_Ant_Opt3	1.000	.682
Employ_Ant_Opt4	1.000	.666
Extraction Method: Principal Component Analysis.		



<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.447	61.183	61.183	2.447	61.183	61.183
2	.626	15.647	76.830			
3	.544	13.607	90.437			
4	.383	9.563	100.000			
Extraction Method: Principal Component Analysis.						

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.785	4

	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
Employ_Ant_Opt1	13.20	9.259	.517	.768
Employ_Ant_Opt2	12.77	9.780	.575	.747
Employ_Ant_Opt3	13.50	7.558	.655	.699
Employ_Ant_Opt4	13.34	7.975	.644	.705

#### 4.6 Corporate sense

<b>KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.783
Bartlett's Test of Sphericity	Approx. Chi-Square	844.801
	df	6
	Sig.	.000

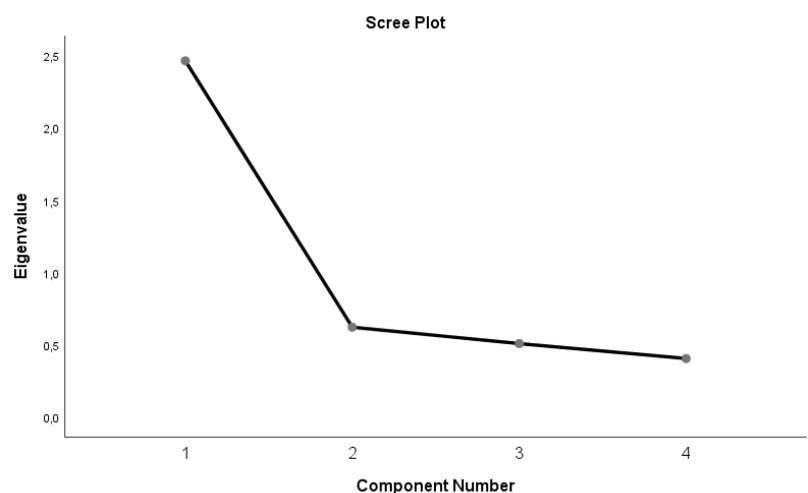
<b>Communalities</b>		
	Initial	Extraction
Employ_corp_sense1	1.000	.534
Employ_corp_sense2	1.000	.695
Employ_corp_sense3	1.000	.663
Employ_corp_sense4	1.000	.573

Extraction Method: Principal Component Analysis.

<b>Component Matrix<sup>a</sup></b>	
	Component
	1
Employ_corp_sense1	.731
Employ_corp_sense2	.834
Employ_corp_sense3	.814
Employ_corp_sense4	.757

Extraction Method: Principal Component Analysis.

a. 1 components extracted.



<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.465	61.636	61.636	2.465	61.636	61.636
2	.622	15.540	77.176			
3	.508	12.702	89.878			
4	.405	10.122	100.000			

Extraction Method: Principal Component Analysis.

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.789	4

	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
Employ_corp_sense1	14.42	7.604	.539	.766
Employ_corp_sense2	14.47	7.236	.667	.703
Employ_corp_sense3	14.75	6.458	.638	.718
Employ_corp_sense4	14.20	8.059	.563	.755