Occupational Future Time Perspective in the Work Organization.

A research about how occupational future time perspective will mediate the relation between age and intrinsic work motivation, and how job complexity moderate the effect between age and occupational future time perspective.

Master Thesis
Human Resource Studies
Henriëtte van der Maarel
S106082
Galjoenstraat 49-11
5017 CL Tilburg
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Tilburg University
Supervisor: T.A.M. Kooij
Second Supervisor: Dr. R.S.M. de Reuver
Theme: Future Time Perspective
Preface

For me, it is a little bit unbelievable but it is my master thesis which lies in front of you. After my first year in university I could not believe I would make it till “the end”. Now it is almost four years later and with a lot of setbacks and challenges I finally have finished all the work. I would like to thank some people, without them I never made it.

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Abstract

This study investigated occupational future time perspective (FTP) in work organizations. In this survey, other researches were followed; therefore occupational FTP was divided in remaining time and remaining opportunities. The study aimed to test whether remaining time and remaining opportunities mediated the relation between age and intrinsic motivation and how job complexity moderated the relation between age and occupational remaining time and remaining opportunities. It was expected that job complexity weakens this negative relationship. The analyses showed that the relation between age and intrinsic motivation was not mediated by occupational remaining time and remaining opportunities. Further, there was no moderating effect of job complexity on the relation between age and remaining time and opportunities. Nevertheless all direct effects between the variables in this research were significant. Furthermore, there was found a moderating effect of remaining time on the relation between age and intrinsic work motivation, which was not predicted in advance.

Keywords: future time perspective, intrinsic work motivation, age, job complexity, Socioemotional Selectivity Theory, Selection Optimization and Compensation theory, life-span theory of control.
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1. Introduction

There is a growing interest from organizations in how they can manage their workers who become older. The Bureau of Labor Statistics (2002) predicted that there will be a trend of aging in the developed Western countries. These trend predicts that in 2010, the half workforce is about forty-five years or older. (Kanfer & Ackerman, 2004). For example in The Netherlands, where this research will be conducted, this is a right prediction. According to the Central Statistics Office in the Netherlands (CBS), 40.95% of the total Dutch workforce is forty-five years or older (CBS Statline, 2010).

Consequently, there is a growing organizational interest in how to manage and motivate these workers who become older (Kanfer and Ackerman, 2004). There are two factors which make aging increasing seriously. The first factor is that people live longer; the second factor is a combination of falling birth rates and the retiring baby boom generation. Following these trends, it is important for organizations to manage and retain their workers who become older (Tempest, Barnatt, & Coupland, 2002). There was little attention in earlier research for the effects of aging on work motivation. Today, this interest is increasing. However, due to the lack of interest in the past, a gap in the literature exists, (Kanfer & Ackerman, 2004). Workers with a higher age are more interested in intrinsic goals with an emotional meaning (Carstensen, 1992). Kooij (2010) stated that when workers become older their intrinsic motivation increase; therefore, only intrinsic work motivation will be examined. It is important to investigate the relationship between age and intrinsic work motivation, since the retirement age in the Netherlands will increase and workers will work longer in organizations.

An important age-related factor which is partly responsible for motivational changes of employees is Future Time Perspective (FTP) (Cartensen, Isaacowitz, & Charles, 1999; Seijts, 1998). FTP describes how much time individuals believe they have left in the future (Cate & John, 2007). FTP focus on peoples’ subjective time experiences, instead of the objective calendar time (Lang & Carstensen, 2002). Zacher and Frese (2010) have focused on FTP in the work context and describe occupational FTP, which refers to the focus on remaining opportunities at work and the remaining time at work. Zacher and Frese (2011) only focus on remaining opportunities. In this research, both concepts of occupational FTP will be examined because outcomes are probably not the same for both concepts. For example in the research by Cate and John (2007), it was examined that outcomes changed when FTP was measured as one concept or when FTP was separated in remaining time and remaining opportunities. Cate and John (2007) showed a factor analysis with FTP. The first factor was
supported by items which describe focus on opportunities and explained 27% of the variance. The second factor explained 24% of the variance and was supported by items that describe a focus on limitations in time. After this factor analysis, it showed that the two factors were really separated, only 1 of the 11 items loaded on both factors. Thus, the data showed better evidence for a two-dimensional concept of FTP. Therefore it is chosen to split up occupational FTP in two concepts, namely remaining time and remaining opportunities. There is little research available which focuses on the role of occupational FTP as a two-dimensional concept; therefore this research will examine both concepts in organizations (Cate & John, 2007; Seijts, 1998; Zacher & Frese, 2010).

The theory which is important for the relation between age, occupational FTP, and intrinsic work motivation is the socioemotional selectivity theory (SST) of Carstensen (1991). The SST proposes that, as individuals grow older, they change their choice of investing in time and energy across the several activities in which they are engaged. Carstensen (1992) concludes that behavioral goals change with age. When people become older their goals are more based on intrinsic values. When workers age towards retirement and they feel their perceived time as finite, they add more importance to goals from which they obtain emotional meaning (Carstensen, 2006). Therefore, the intrinsic motivation changes too, because employees with an increasing age are more interested in intrinsic goals with emotional meaning. In this way, FTP is an important age-related factor that is partly responsible for motivational changes. In this research it will be examined if intrinsic work motivation will change by FTP. As stated earlier, there is chosen to separate the FTP in two concepts, which means that two mediation effects will be tested.

In this research there will be expected that characteristics of the work context are related to occupational FTP. One important work characteristic is job complexity, which refers to possibilities in decisions (Zacher & Frese, 2009). According to Frese (1987b) high-complexity jobs provide employees many decision responsibilities and these jobs involve various elements that have to be regarded, for instance job plans, goals, and feedback. A low-complexity job involves tasks which are simple and can be learned easily. A low complexity job has the same work design as a Taloristic job (Fay & Kamps, 2006).

Because of the allegation that job complexity is an important situational factor for employees and that it is related to FTP (Zacher and Fese, 2009), job complexity will be examined too. It will be examined if job complexity moderates the relationship between age, remaining time and remaining opportunities. In earlier research by Zacher, Heusner, Schmitz, Zwierzanska, & Frese (2009), job complexity is examined as a moderator between age and
remaining opportunities. Zacher et al. (2009) found that job complexity moderated the relationship between age and remaining opportunities. With an increasing age, employees working in high complex job perceive more remaining opportunities than employees in a low complex job. In this research will be examined if people with a complex job perceive more remaining opportunities and perceive more remaining time, than people with a lower complex job. There will be examined if job complexity has the same outcomes if remaining time is added and if remaining opportunities is added. The last one was already investigated by Zacher et al. (2009). They showed that the negative relationship between age and remaining opportunities weakens when it was moderated by job complexity. Organizations can manage jobs in a way that they can allow workers to maintain a focus on remaining opportunities and time. Therefore it is important for organizations to examine if remaining time and remaining opportunities influence this relationship, because they should retain and motivate the workers who become older.

To investigate what the influence of age is in work organizations and the effect for occupational FTP, job complexity and intrinsic work motivation, the research question runs as follows: To what extent will occupational FTP mediate the relation between age and intrinsic work motivation? And does job complexity moderate the relation of age and occupational FTP?

In the next chapter a description of all the variables which are important for this research is given and several relevant theories will be discussed too. Chapter three outlines the procedure, sample, measures, and statistical analysis of this study. Results derived after the statistical analyses are summarized in chapter four. Finally, chapter five outlines a conclusion and discussion with practical implications and recommendations for future research.
2. **Theoretical framework**

2.1 **Chronological age**

In most industrialized countries, the aging of the workforce has led to improved research in order to understand the role of age in the work context (Hedge, Borman, & Lammlein, 2006; Kanfer & Ackerman, 2004). In this research age will be measured by chronological age. It facilitates the translation of findings to the organizational context and it is the main indicator of aging in organizations (Kooij, de Lange, Jansen, Kanfer, & Dikkers, 2010). The definition of chronological age is the length of time since one’s birth (Chang, 2008).

2.2 **Occupational Future Time Perspective**

Zacher and Frese (2010) have extended the literature of aging by adding the concept of occupational FTP. They transform it from adult development and life span psychology research to the work context. They have focused on FTP in the work context and describe occupational FTP. Occupational FTP refers to the focus on remaining time and opportunities at work. Zacher and Frese (2010) describe the dimension of remaining opportunities, which is derived from Cate and John’s (2007) focus on opportunities and state that “the focus on opportunities describes how many new goals, options, and possibilities employees believe they have in their personal future work” (p. 186). Remaining time at work is adapted by Carstensen (2006) and is defined as the limited time left. Zacher and Frese (2010) showed that age is negatively related to both concepts of occupational FTP.

2.3 **Intrinsic work motivation**

A variable which will be proposed as changing with an increasing age is motivation. According to Latham and Pinder (2005), motivation is a psychological process and is about the interaction between an individual and his surroundings. Work motivation will be examined in this research and is stated as a set of energetic forces that create both within as well as beyond an individual’s being. It will initiate work-related behaviour and determine its form, direction, strength, and endurance (Pinder, 1998). In this research the focus will be on intrinsic work motivation. According to Deci (1971) “one is said to be intrinsically motivated to perform an activity when he receives no apparent rewards except the activity itself” (p.105).

Only intrinsic work motivation will be examined in this research, because it is stated by Kooij (2010) that intrinsic motives, for example an interesting job content, will increase with age. Earlier research of Kanfer and Ackerman (2004) and Ebner, Freund, & Baltes
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(2006) indicate that when employees become older they are likely to retire when they are not motivated to work. However, when these employees are motivated to work, it is stated in their studies that they have less intentions to retire because the work itself provide them sufficient satisfaction and enjoyment to stay active in the organization (De Lange & Thijssen, 2007; Deci & Ryan, 1991; 2000; Van Leeuwen, 2009).

2.4 Job complexity

In this study, it will be examined which effect job complexity has on the relation of age and remaining opportunities and remaining time. Morgeson and Humphrey (2006) describe job complexity as: “Job complexity refers to the extent to which the tasks on a job are complex and difficult to perform” (p.1323). Generally, job complexity is thought to have positive effects on the individual and work outcomes (Frese, 1982; Morgeson & Humphrey, 2006). Different research has shown that job complexity is positively related to mental health (Kornhauser, 1965), work motivation (Hackman & Oldham, 1976) and work satisfaction and performance (Fried & Ferris, 1987). As stated earlier, high-complexity jobs involve decision responsibilities (Frese, 1987b), while low-complexity jobs are simple and can be learned easily. Low-complexity jobs are associated with negative employee outcomes, such as lower readiness to change and personal initiative (Fay & Kamps, 2006).

2.5 Age and intrinsic work motivation

Following the research question, there are some hypotheses that will be examined. Van der Velde, Feij, & Van Emmerik (1998), state that intrinsic work values become more important to individuals as they get older. Furthermore, Rhodes (1983) found that age has a positive relation to internal or intrinsic motivation.

The theory which is important for the relation between age and intrinsic work motivation is the socioemotional selectivity theory (SST) of Carstensen (1991). The SST states that as individuals grow older, their choice of investing time and energy across the several activities in which they are engaged will change. Carstensen (1991) suggests that adults have two social key goals in life: knowledge acquisition and emotional regulation. Knowledge acquisition is defined as new or changing elements in one’s environment, analyzing the new information, and incorporating that knowledge into job performance or career advancement activities. Emotional regulation is defined as behaviors aimed at finding meaning in life, establishing intimacy with others and developing a sense of belonging in the social environment. Socioemotional selectivity theory states that individuals adapt to aging by
trying to maximize social and emotional gains and minimize social and emotional risks. Young adults tend to prioritize knowledge acquisition goals more highly. When young adults engage in a social activity, they are driven by the desire to gain valuable information that could advance their careers in the long run. In contrast, adults who become older tend to prioritize emotion regulation goals more highly. Thus, the theory states that chronological age is associated with increased preferences for and investment in emotionally meaningful goals (Carstensen, Fung & Charles, 2003).

Another theory which confirms the relation between age and intrinsic motivation is the life span theory of control. The life span theory of control handles with the motivational system which regulates the behavior of people through their whole life (Heckhausen & Schulz, 1995). In this theory, the construct of control is an essential theme for human development from youth to old age. The underlying statement is that humans desire to influence the control of their environment and life span. The theory states that control can take two forms, namely primary and secondary control. The primary control has a functional precedence, since without it an organism could not successfully adapt or attain to its developmental possibilities (Heckhausen & Schulz, 1995). According to Heckhausen and Schulz, (1995) primary control focuses on the goal someone is attempting to control and shape it to what he desires. The secondary control embodies adjusting oneself internally instead of changing the external environment.

Thus, the primary control refers to control over the external world and tries to achieve effects in the direct environment external to the individual. Secondary control is the self and tries to achieve changes directly within the individual. The strategy of choice leans with the use of secondary control strategies during the middle and old age. As the relative amount of grow to losses in primary control declines and are less favourable, the individual increasingly resorts to secondary control processes. This will be made by increasing age-related social and life challenges. Primary and secondary control work collectively to optimize development of humans in their life course, by selection processes and compensation failure. Relations about the person’s environment are driven by the motivation for primary control and are guided by selection processes. These selection processes are regulated by competencies and motivational resources of the person. A certain relation will result in a positive or negative outcome, such as the realization of goals, or failure. This realization of goals leads to the improvement of competencies and motivational resources. When people get older they are focused internally rather than externally. The external environment or primary control becomes less important, while an older person focuses more on the stabilization of their personal life and relations.
Secondary control becomes more important (Schulz & Heckhausen, 1996). When people get older they will trust on more internally oriented secondary control strategies, and change their own cognitions. When they change their cognitions they will change their mental activity from inside and from their selves, and consequently changes their intrinsic motivation (Heckhausen & Schulz, 1995).

Therefore, hypothesis 1 is stated as follows: Age has a positive influence on intrinsic work motivation.

2.6 Age and occupational FTP

Achievements in life have to be done in a finite amount of time. Considering the acquisition of skills, knowledge, and high levels of expertise takes a great deal of time as well (Ericsson & Charness, 1994). According to Fries (1983), there are serious limits to the amount of time available to live one's life. The ability to effectively shift from one domain to another is severely confined. Especially when the career planning is near retirement age, creating long-term plans is no longer necessary.

A theoretical approach which explains age differences is future time perspective (FTP). The Socioemotinal Selectivity Theory (SST) states that people are aware of their time left in life, and that perceived boundaries of time have a direct effect to emotionally meaningful aspects of life (Lang & Carstensen, 2002). According to Carstensen et al. (2003) there are age differences in time perspective. Adults observe the sense that time passes more and more rapidly as they age (Kennedy, Fung, & Carstensen, 2001).

Lang and Carstensen (2002) found a linear effect across adults from 20 to 90 years, such that when adults become older, they have more limited future than younger adults, even after controlling for health. Fung, Lai, and Ng (2001) found that adults with a higher age are more likely to feel that time is running out and perceive more limitations on their future options.

In this context, Zacher and Frese (2010) show a negative relationship between age and remaining time. Therefore, in this research, it is expected that age is negatively related to remaining time at work.

Thus, hypothesis 2a is stated as follows: Age has a negative influence on remaining time.
Moreover, there are different reasons why age is negatively related with remaining opportunities. Firstly, there are the age-related norms in the work context, which lead to decreasing possibilities of future opportunities for employees who become older since they are expected to plan for their retirement instead of making future work plans (Zacher et al., 2009). Secondly, adults with higher ages receive fewer supports for career development than younger adults (Maurer, Weiss, & Barbeite, 2003). Thirdly, many organizations are not prepared to meet the needs and capabilities of employees who become older, such as the transfer of knowledge or coaching of younger employees (Kanfer & Ackerman, 2004). This is the same for work-related opportunities in the future, which are now more intertwined with age than in past years (Zacher & Frese, 2010). At last, physical health and the ability to process the information decrease with age. For this reason, employees who become older may conclude that they have less future opportunities at work (Kanfer & Ackerman, 2004).

The relationship between age and remaining opportunities is already investigated by Zacher and Frese (2010; 2011). They found a negative relationship between age and remaining opportunities. Moreover, young adults are more likely to perceive to have plenty of opportunities in the years to come than workers who’s age is increasing. Baltes and Baltes (1990) explain a successful aging theory, the Selection, Optimization, and Compensation (SOC) theory. It is a life span approach and states that there are three primary processes contributing to successful life management (Wiese, Freund, & Baltes, 2002). The three strategies that individuals can use to adjust effectively in situations where developmental losses dominate are Selection, Optimization, and Compensation (Baltes & Baltes, 1990). Selection concentrates on the choice of goals which can be ranged from quite abrupt and restricted goals, for example getting a good grade for an exam, to goals that are about someone’s life, or health. For instance being successful or having nice work and family. The last type of goals is more likely. These goals create positive outcomes in personality and in humanity (Gestsdottir, Lewin-Bizan, von Eye, Lerner, & Lerner, 2009). Optimization concentrates on the acquisition, enhancement, and application of skills or resources which are relevant for the goals. Compensation concentrates on the use of strategies to make up for developmental losses (Wiese et al., 2002). Thus, the SOC theory provides a theoretical view which supports the decrease of age and growth-related motives. Research shows that the use of SOC theory has beneficial effects when applied in the work context (Abele & Wiese, 2008). The SOC theory proposes that the preferences of workers which are related to maintenance and regulation and work-related losses will increase and the focus on growth decrease with age. Thus, the interplay of these three processes becomes more important when...
age increases. Mc Dowd, Vercruyssen, and Birren, 1991 agree that the SOC theory states that across the life span, individuals develop adaptively by maximizing their potential gains and minimizing potential losses. In this way, the SOC theory states that the preferences of workers which are related to grow will decrease and that preferences of workers which are related to maintenance and regulation and work-related losses will increase. Based on the SOC theory there will be stated that the focus on growth and promotion will decrease with age. Therefore, in this research will be expected that this decrease in performance levels and focus on growth and promotion deliver a decrease in someone’s opportunities as well.

Thus, hypothesis 2b is stated as follows: Age has a negative influence on remaining opportunities.

2.7 Occupational FTP and intrinsic work motivation

FTP examines how people think about the future. FTP is described in terms of how far people typically plan into the future, what the content is of their future imaginings and their extent to which those imaginings are realistic. These future conceptions are linked to goal setting and other important aspects of motivation (Greene and DeBacker, 2004). Löckenhoff and Carstensen (2004) state that when time in life is limited, people are more focused on the emotional aspects of situations and prefer the emotionally social contacts they have in their work. They do not work for a reward. As stated earlier, according to the SST, time perspective is involved in individuals’ behavior and human motivation to achieve goals (Carstensen, et al. 1999). The SST assumes that goals are always set in temporal contexts. The importance of specific goals change as a function of perceived time. Goals change when time is limited. Workers who are older are present-oriented and concerned about the present, not the past (Carstensen et al., 1999). Carstensen et al. (1999) state that workers with higher ages in relation to the younger workers illustrate their future as limited and that they are familiar with that the fact they do not have “all the time in the world” to pursue their goals. When future time seems limited, goals which are emotional and meaningful become more important because they are related with short-term benefits (Lang & Carstensen, 2002).

In contrast, when individuals perceive their future as open-ended, their knowledge-related goals become more important (Lang & Carstensen, 2002). Fung and Carstensen (2006) conclude that individuals will then follow goals which weigh most heavily and optimize the long-range outcomes. Therefore, when there are long-term goals and there is limited time, workers are more intrinsically motivated to fulfill these goals. Because when
workers are older, there will be less time, moreover they are more intrinsic motivated. For example, they are less likely to invest some firm-specific information which they cannot benefit from when the goal is achieved, simple because they do not work in the company anymore.

Following the SST, *hypothesis 3a* is stated as follows: Less remaining time influence intrinsic work motivation negatively.

As stated earlier, the life span theory of control handles with the motivational system which regulates the behavior of people through their entire life (Heckhausen & Schulz, 1995). The theory proposes that control can take two forms, primary and secondary control. Employees with fewer opportunities cannot change their environment anymore and have less primary control. Therefore, a couple of goals are not feasible anymore. That is the reason why the strategy of control moves to the secondary control, which emphasize the intrinsic motivation. Thus, when employees cannot attain to their developmental possibilities and should adapt internally to the organization, their intrinsic motivation will be higher, because they will focus on their secondary control. This is confirmed by Kanfer and Ackerman (2004), as they state that workers who become older are more motivated in jobs that offer opportunities for positive events, however motivation will decrease when it comes to performing new tasks. In this way, they are limited in their opportunities, since they cannot participate in developmental activities. For example, when an employee cannot develop himself, because he is not able to join developmental activities, he will focus on the secondary control and more intrinsically motivated. In this case, the opportunities offered do not exist for employees who become older, as follows by the conclusion of Zacher and Frese (2010); employees who become older acquire fewer opportunities.

To test for this, *hypothesis 3b* is stated as follows: Less remaining opportunities influence intrinsic work motivation negatively.

**2.8 Age and intrinsic work motivation: mediated by occupational FTP**

Carstensen et al. (1999) argued that the perception of time as limited as opposed to open-ended has implications for emotion and motivation. In the study of Carstensen et al. (1999) it was concluded that when human age, they realize that time is running out and they will focus on the present instead on their future. When people become older, they care about
their social environment and expanding their possibilities became less important. According to Carstensen et al. (2003): “This motivational shift leads to a greater investment in the quality of important social relationships and a generally enhanced appreciation of life” (p.107). In this way, the SST suggests that age differences lead to different knowledge related and emotional goals. And SST states that future time has important consequences for the emotional and social life of individuals and it will predict social motivation across one’s lifespan. Thus, FTP is dominating and will arrange human motivations and goals (Lang & Carstensen, 2002).

Next, the SST states that perceived limitations on time lead to motivational shifts. These motivational shifts have a direct effect on emotional meaningful goals. Carstensen (1992) states that behavioral goals change with age, because the SST suggests that people monitor how much time they have left. The theory has received strong empirical support in explaining the relationships of age and work attitudes, such as intrinsic motivation (Carstensen & Turk-Charles, 1994). When age increase and there are limitations in time, people are more interested in goals which are emotionally important, such as intrinsic goals. Furthermore, the SST states that time perspective drives changes of goals during adulthood, not chronological age (Carstensen et al., 1999). In goal selection is time perspective a criterion, especially in situation where goals compete. Expansive goals are pursued when time is observed as open-ended, which is typically in ones youth, while emotional meaningful goals are pursued when boundaries on time are noted, most probably since the payoff is in the contract itself and not plausible at a defined moment in time in the near future (Carstensen et al., 2003).

Therefore, hypothesis 4a is defined as follows: Remaining time (at least partially) mediates the relationship between age and intrinsic work motivation.

There is an age related decrease in work related and intrinsic motivation (Kooij et al., 2010, in press). Kooij et al. (2010; in press) stated that workers who become older are less interested in learning and job enjoyment than younger employees. As stated earlier, the SOC theory provides a theoretical view which supports the decrease of growth-related motives with age (Baltes & Baltes, 1990). Research shows that the use of the SOC theory has beneficial effects when applied in the work context (Abele & Wiese, 2008). The SOC theory states that the preferences of workers which are related to maintenance, regulation and work-related losses will increase with age. When age increase and there are limitations in opportunities,
people are more interested in goals which are intrinsic. The same is stated by the life span theory of control by Heckhausen & Schultz (1995). They state that when employees age and have fewer opportunities they cannot change their environment anymore and have less primary control. Then, the strategy of control moves to the secondary control, which emphasis the intrinsic motivation.

Thus, *hypothesis 4b* is defined as follows: Remaining opportunities (at least partially) mediates the relationship between age and intrinsic work motivation.

### 2.9 Age and occupational FTP: moderated by job complexity

In this research, it will be expected that job complexity has a positive influence on the relation between age and remaining time. The emphasis in organizations is changed by reducing routine and monotony in jobs to an increasing opportunity for creativity and autonomy in decision making in jobs (Gould, 1979). Gould (1979) state that when the complexity of a job increase, it results in a higher challenge. Other research showed that this increasing job complexity and higher challenge results in a higher job involvement and organizational commitment (Hall, 1976; Hall & Nougaim, 1968). An employee with a higher age normally works longer in one organization, since the employee has a permanent contract and a lot of company-specific knowledge. For obtaining a more complex job, enough time is needed (Gould, 1979). Since a worker’s commitment is higher when the job is more complex, it will be stated that he or she is more positive about the remaining time. Thus, the relation between age and remaining time will be less negative when it is moderated by job complexity.

Therefore, *hypothesis 5a* is defined as follows: Job complexity moderates the negative relationship between age and remaining time, such that the relation is weaker for employees with a more complex job.

It will be expected that job complexity has a positive influence on the relation between age and remaining opportunities. As stated earlier, Zacher et al. (2009) found that job complexity moderated the relationship between age and remaining opportunities. With an increasing age, employees working in high complex job perceive more remaining opportunities than employees in a low complex job.

In this research it will be expected that when a job is more complex, workers are more positive to stay in the organization and probably will have more opportunities. This is
examined by Gould (1979) and he stated that when a job is more complex it has a higher challenge and results in a higher job involvement and commitment. Because the employees feel more committed to the organization when they have a more complex job, they will experience more remaining opportunities than people with a low-complex job.

Furthermore, according to Avolio and Waldman (1987, 1990), workers who become older and are in a job with a high degree of complexity, are more able to maintain cognitive functioning, and intellectual flexibility (Schooler, Mulatu, & Oates, 1999). These resources should influence these employees in their learning and development positively (Colquitt, LePine & Noe 2000), and in this way, increase their participation in development activities (Maurer et al., 2003). Consequently with an increasing age and a high complex job, employees still participate in development activities. Therefore it will be expected that job complexity influence the relation between age and remaining opportunities positively.

Therefore, hypothesis 5b is defined as follows: Job complexity moderates the negative relationship between age and remaining opportunities, such that the relation is weaker for employees with a more complex job.

2.10 The conceptual model
3. Method

3.1 Procedure

In this research data was obtained by using a structured questionnaire which was developed in Thesis Tools. The collection of data was conducted among employees in organizations in The Netherlands at a single point in time. The type of research was a survey design (Bryman, 2008). All the variables in the conceptual model were examined by different questions. First, the demographic variables were presented in the questionnaire, then occupational FTP, intrinsic motivation, and job complexity. Items of two colleagues were asked in the questionnaire as well. Their variables were human resource practices and organizational citizenship behavior.

Examples of organizations which participated in the research include:
TAF B.V. in Eindhoven, TAF is an insurer for unemployment, disability, and life-insurances. Fifty employees work at this company. Another organization was Eijerkamp at Veenendaal, this is a huge furniture shop, which sells different international and modern living brands. There are two Eijerkamp stores in the Netherlands, only one store is involved in this research. About fifty employees work at this company. Another example of an organization was the municipality of Houten. A feature of the organization is that it is non-profit and it has no univocal primary process. The office staff exists of about 350 employees. Fieldworkers are not taken into account for this research.

These were only examples of organizations; there will be given a short overview with all the participating organizations in this research in appendix 2. Colleagues had disseminated the questionnaire as well, which means that there was a great distribution in different kind of organizations which operate in several sectors. At least fifteen respondents per organization had filled in the questionnaire. The questionnaire was spread across employees by e-mail, and was online for eight weeks because of the Christmas break. The respondents were sent two reminders.

3.2 Sample

The original sample was 342 of which 81 questionnaires could not be used because of missing data\(^1\). Therefore, the sample consists of 261 respondents now. Of the participants, 49% were male and 51% were female with a mean age of 37.42 years (with an SD of 10.99).

\(^1\) In this research 81 questionnaires could not be used, probably because the questionnaire was too long.
This was somewhat lower than the mean age of the labor force in The Netherlands. According to the Central Statistics Office in The Netherlands (CBS, 2009), the mean age of the labor force was 40.3 years. The mean age ranged from 20 till 62 years. In this research, 198 respondents were younger than 45 years. 42 respondents were between 45 and 55 years old and 21 respondents were older than 55 years. All the respondents had at least a lower vocational diploma. Almost 17% had a secondary education diploma, while 52% had a higher vocational diploma and nearly 21% had a university education. For The Netherlands, 31% had a higher vocational diploma (CBS Statline, 2010) thus in this sample the respondents were higher educated. The mean hours someone works for an organization is 34.31 hours a week (SD of 8.19), with a minimum of 0 hours and a maximum of 40 hours. Someone with 0 hours a week probably had a contract on call basis. According to the CBS Statline (2010), the mean of the hours employed a week was 34.3 hours. This was the same in the sample for this research.

Next, the mean of organizational tenure was 6.82 years (SD 7.78) and had a minimum of 0 and a maximum of 36. The respondents were from different kind of organizations, operating in several sectors. For example: industrial (2.3%), trading (5.7%), financial services (12.3%), commercial services (20.3%), government (33.7%), healthcare (10.3%), and media (6.9%).

Health had a mean of 3.35 (SD .753) and 65.5% of the respondents were in good shape. Respondents had a good (57.9%) very good (26.1%) or even excellent health (8.4%). Only 7.7% were in ill health. In The Netherlands 81.4% had a good or very good health (CBS Statline, 2010). After comparing the data from the sample and from the CBS Statline, it seems that the sample was representative.

3.3 Measures

Age

Age was measured by chronological age, which is the length of time since one’s birth (Chang, 2008). Respondents were asked to fill in their age.

Occupational FTP: Remaining time

Occupational FTP was measured by the scales from Carstensen and Lang (1996). The scales were distinguished in remaining time and remaining opportunities and have been used in previous studies (Cate & John, 2007; Zacher & Frese, 2010; 2011). It was adapted by adding the word ‘occupational’ to each item. The five items of the remaining time (occupational FTP) scale were assessed on a 5-point scale (ranging from 1 ‘does not apply all’ to 5 ‘applies completely’). An example of an item from this scale was: “My working future
seems infinite for me”. In this scale, two items were reverse recoded. After the factor analysis, for remaining time, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) is .709, and the Bartlett’s Test of Sphericity, is significant (.000). The Cronbach’s alpha of this scale is .714.

**Occupational FTP: Remaining opportunities**

The scale for measuring remaining opportunities (Carstensen & Lang, 1996) was used in previous studies too (Cate & John, 2007; Zacher & Frese, 2010; 2011). The scale was adapted by adding the word ‘occupational’ to each item. The five items of the remaining opportunities (occupational FTP) scale were assessed on a 5-point scale (ranging from 1 ‘does not apply all’ to 5 ‘applies completely’). An example of one of the items was: “In my job, the future is filled with possibilities”. In this scale, one item was reverse recoded. Factor analysis showed that remaining opportunities scale had a KMO of .816 and the Bartlett’s Test is significant (.000). The Cronbach’s alpha of this scale is .841.

**Job complexity**

The items of job complexity were adapted from Van Veldhoven & Meijman (1994). It consists of three items. The items were assessed on a 4-point scale (1 is ‘never’, 4 is ‘always’). An example of one of the items was: “Do you think that your work is complicated?” After the factor analysis the items showed a sufficient Cronbach’s Alpha (.669).

**Intrinsic work motivation**

Intrinsic work motivation was examined by the scale of Bakker (2001) and consisted of five questions. The items were assessed on a 6-point scale (0 is ‘never’ to 6 is ‘always). An example of one of the items was: “I get my motivation from the work itself and not from the reward for it”. After the factor analysis all the five items loaded on one component. The Cronbach’s alpha was .676. However, item four (“When I am working on something, I am doing it for myself”) had a factor loading of .339. Although this was a sufficient value, this item was removed from the analysis because of the influence on the reliability value. After removing this item, the Cronbach’s alpha was sufficient (.718).
Control variables

In this research six control variables were examined: gender, education level, working hours a week in the employment contract (hours employed), organizational tenure, organization sector, and health. Education level was measured on a nine-point scale ranging from 1 (no education) to 9 (university education). Hours employed in the employment contract and organizational tenure were both measured by time in hours a week and years, which respondents had to fill in by themselves. At organization sector respondents could choose between 15 kind of sectors, which for example included industry, trade, and government. Health was measured on a five-point scale ranging from 1 (bad) to 5 (excellent).

3.4 Statistical Analysis

All the statistical analyses in this research were performed with SPSS. First there were several checks to identify errors or missing values. The data was examined with the descriptive functions in SPSS and there were no missing or erroneous values. After that, a factor analysis and a reliability test were formalized for determining the Cronbach’s alpha and for testing if the scales were reliable. To test the hypotheses, a hierarchical multiple regression analysis is conducted. Next analysis consists of the steps of Baron and Kenny (1986). They described a few steps for testing the mediation. The first step was to regress intrinsic work motivation (dependent variable) on age (the independent variable), (Hypothesis 1). Then, the second step consisted of regressing occupational FTP, distinguished in remaining time and remaining opportunities (the mediator) on age (the independent variable), (Hypotheses 2a en 2b). Next step was to regress intrinsic work motivation (dependent variable) on remaining time and remaining opportunities (Hypothesis 3a and 3b). Then, intrinsic work motivation (dependent variable) was to regress on remaining time and remaining opportunities, and age for exploring if there was an effect between age and intrinsic motivation when remaining time and remaining opportunities were added to the analysis (Hypothesis 4a and hypothesis 4b). If this was the case, a Sobel test was done for testing the mediation effects.

Next, the moderating effect of job complexity was tested to measure the interaction effect. For this analysis, all the variables were standardized. The moderator variable (job complexity) and the independent variable (age) were both continuous. It was expected that the effect of age on remaining time and opportunities varied linearly with respect to job complexity. Therefore, a product variable approach was used to test the hypothesis. The linear hypothesis was tested by adding the product of job complexity and age. Thus, remaining time and remaining opportunities were regressed on age and age x job complexity. In this case,
moderator effects are indicated by the significant effect of age x job complexity, while age and job complexity are controlled (Baron & Kenney, 1986), (Hypotheses 5a and 5b).

4. Results

4.1 Correlations
First the correlations were analyzed and illustrated in table 1. There is a large correlation between remaining time and remaining opportunities ($r = .71, p < .01$) this was not predicted. Further, remaining time correlated with intrinsic work motivation ($r = .12, p < .05$), age ($r = -.61, p < .01$), education level ($r = .24, p < .01$), organizational tenure ($r = -.39, p < .01$), hours employed ($r = .19, p < .01$), and health ($r = .27, p < .01$). Remaining time was not correlated with job complexity.

Remaining opportunities correlated with age ($r = -.42, p < .01$), education level ($r = .24, p < .01$), organizational tenure ($r = -.34, p < .01$), hours employed ($r = .25, p < .01$), and health ($r = .30, p < .01$). Remaining opportunities was not correlated with job complexity and intrinsic work motivation.

Further, intrinsic work motivation correlated with age ($r = .15, p < .05$), education level ($r = .14, p < .05$), working hours ($r = .13, p < .05$) and health ($r = .20, p < .01$).

Job complexity was not correlated with the variables at all. It was predicted that job complexity influenced the relation between age and remaining time and remaining opportunities, which was investigated by Zacher and Frese (2010).

Thus, remaining time ($r = -.61, p < .01$), remaining opportunities ($r = -.49, p < .01$), and intrinsic work motivation ($r = .15, p < .05$) correlated with age in the direction which was expected earlier. Remaining time and intrinsic work motivation correlated too ($r = .12, p < .05$) only it was a positive effect while a negative effect was expected. There were some control variables which correlated with age too, namely education level ($r = -.14, p < .05$), organization tenure ($r = .59, p < .01$), and health ($r = -.15, p < .05$). This explained that when someone’s age is older his education level and health decrease, and the organization tenure of someone will increase. Because of the correlations between the variables and the control variables, all these continuous variables were selected in the regression analyses.
One-way ANOVA’s were conducted to examine the impact of the control variables. After these analyses it was obvious if the predictor variables will differ significantly for the control variables. In table 2a, the F-score of the first categorical control variable organizational sector, was illustrated. Almost all of the F-scores were significant; therefore, these control variables were selected for regression analyses. After the ANOVA, the Bonferroni test was carried out for organization sector. It seems that only for two sectors this test was significant. That is the reason why the organizational sector variable was recoded into two different dummy variables, namely “Trade Sector”, which consists of organizations were products were sold. The other one is “Commercial Services Sector”, which consists of organizations where services were sold. Only these two sectors were selected for the regression analyses.

In table 2b, the F-score of gender is illustrated. One item was significant, so gender was selected for the regression analyses too.

**Table 1: Correlations**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
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<tr>
<td>1. Remaining Time (a)</td>
<td>3.74</td>
<td>.83</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Remaining Opp. (a)</td>
<td>3.71</td>
<td>.85</td>
<td>.712**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Intrinsic Work Mot. (b)</td>
<td>4.07</td>
<td>1.03</td>
<td>.122*</td>
<td>.121</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Job Complexity (c)</td>
<td>1.68</td>
<td>.43</td>
<td>.060</td>
<td>.073</td>
<td>.030</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Age (d)</td>
<td>37.42</td>
<td>10.99</td>
<td>-609**</td>
<td>-.491**</td>
<td>.154*</td>
<td>-.081</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6. Education Level (e)</td>
<td>7.67</td>
<td>1.26</td>
<td>.237**</td>
<td>.237**</td>
<td>.140*</td>
<td>.070</td>
<td>-.140*</td>
<td>1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7. Org. Tenure (d)</td>
<td>6.82</td>
<td>7.78</td>
<td>-.386**</td>
<td>-.341**</td>
<td>.102</td>
<td>-.071</td>
<td>.589**</td>
<td>-.198**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Hours Employed (f)</td>
<td>34.31</td>
<td>8.19</td>
<td>.194**</td>
<td>.254**</td>
<td>.138*</td>
<td>.090</td>
<td>.007</td>
<td>.153*</td>
<td>-.059</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>9. Health (a)</td>
<td>3.35</td>
<td>.753</td>
<td>.271**</td>
<td>.300**</td>
<td>.207**</td>
<td>.032</td>
<td>-.154*</td>
<td>.176**</td>
<td>-.088</td>
<td>.027</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: * p < 0.05 (two-tailed), ** p < 0.01 (two-tailed)
Note: a.) scale ranged from 1 till 5
Note: b.) scale ranged from 1 till 6
Note: c.) scale ranged from 1 till 4
Note: d.) measured in years
Note: e.) scale ranged from 1 till 9
Note: f.) measured in working hours a week in the employment contract

**Table 2a: ANOVA - Organizational Sector**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>4.768.176</td>
<td>10</td>
<td>476.818</td>
<td>4.472</td>
<td>.000</td>
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<tr>
<td>Remaining Time</td>
<td>16.322</td>
<td>10</td>
<td>1.632</td>
<td>2.54</td>
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<tr>
<td>Remaining Opp.</td>
<td>26.065</td>
<td>10</td>
<td>2.606</td>
<td>4.072</td>
<td>.000</td>
</tr>
<tr>
<td>Intrinsic Work Mot.</td>
<td>20.276</td>
<td>10</td>
<td>2.028</td>
<td>1.975</td>
<td>.037</td>
</tr>
<tr>
<td>Job Complexity</td>
<td>5.439</td>
<td>10</td>
<td>0.544</td>
<td>3.207</td>
<td>.001</td>
</tr>
</tbody>
</table>

Note: * p < 0.05 (two-tailed), ** p < 0.01 (two-tailed)
4.2 Hierarchical multiple regression analysis

A hierarchical multiple regression analysis was used for testing the hypotheses and illustrated the relationships between the independent and dependent variables. First the dependent variable intrinsic work motivation was tested for all the control variables (table 3). In this model, 11.3% of the variance was explained for intrinsic work motivation ($R^2 = .11$, $F = 4.62$, $p < .01$). There was a significant relationship for organizational tenure ($\beta = .15$, $p < .01$), health ($\beta = .21$, $p < .01$) and trade sector ($\beta = .17$, $p < .01$) with intrinsic work motivation. People who worked longer in an organization were more intrinsically motivated. If people had a good health, they were more intrinsically motivated too. It seems that people who worked in the trade sector had a higher intrinsic work motivation than people in other sectors. In the second step it was tested if there is a linear relationship between age and intrinsic work motivation (table 3). Therefore, age was added in this step. The variance which was explained extra was 1.6% ($\Delta R^2 = .02$, $F = 4.70$, $p < .01$). For the control variables, the only change was that organization tenure was not significant anymore. However, the added variable age was significant ($\beta = .17$, $p < .05$). This beta was positive, which was expected in the first hypothesis. When age increased, someone’s intrinsic motivation increased too. Thus, hypothesis 1: “Age has a positive influence on intrinsic work motivation” was confirmed.

Next, there was tested if age had a significant effect on remaining time. In the first model (table 5), the control variables were entered into the analysis, they explained 25% of the variance in remaining time ($R^2 = .25$, $F = 12.03$, $p < .01$). For the control variables only hours employed ($\beta = .20$, $p < .05$), organization tenure ($\beta = -.33$, $p < .01$), and health ($\beta = .23$, $p < .01$) showed a significant relationship to remaining time. Thus, when hours employed and health became higher and better, remaining time was higher too. For organization tenure, the effect was negative. Thus, the lower the organization tenure, the higher was remaining time. In the second model (table 5) age was added in the regression analysis. This explained 20.3% extra variance in remaining time ($\Delta R^2 = .20$, $F = 25.95$, $p < .01$). For the control variables, the
only change was that organization tenure had no significant effect anymore. However, the added variable age was significant ($\beta = - .58, p < .01$). When age increased, remaining time decreased, thus hypothesis 2a: “Age has a negative influence on remaining time” was confirmed.

In the following analysis was tested if age had a significant effect on remaining opportunities. In the first model (table 6), the control variables were entered into the analysis, which explained 25.7% of the variance in remaining opportunities ($R^2 = .25, F = 12.50, p < .01$). For the control variables only hours employed ($\beta = .22, p < .05$), organization tenure ($\beta = -.28, p < .01$), and health ($\beta = .24, p < .01$) showed a significant relationship to remaining opportunities. Then age was added to the regression analysis. In this model (table 6) 11.7% of the variance was explained extra for remaining opportunities ($\Delta R^2 = .11, F = 18.8, p < .01$). Further, organization tenure was not significant anymore either. The added variable age was significant ($\beta = -.44, p < .01$), and it had a negative relationship with remaining opportunities, which also appeared from the correlation analysis and was predicted in hypothesis 2b. Thus, hypothesis 2b: “Age has a negative influence on remaining opportunities” was confirmed.

After that it was examined what influence remaining time had on intrinsic work motivation (table 3). In this model, 3.3% of the variance will be explained extra while remaining time was added ($R^2 = .03, F = 5.42, p < .01$). There was a significant positive relation between remaining time and intrinsic work motivation ($\beta = .25, p < .01$). As different as was expected according to the hypothesis remaining time influenced intrinsic work motivation positively, therefore hypothesis 3a: “Remaining time influence intrinsic work motivation negatively” was rejected.

Next was examined the influence of remaining opportunities on intrinsic work motivation (table 4). In this model remaining opportunities was added and it had an extra variance which was explained of 1.7% ($\Delta R^2 = .01, F = 4.79, p < .01$). Remaining opportunities and intrinsic work motivation showed a significant relation ($\beta = .16, p < .05$). A negative relationship was expected, however the regression analysis showed a positive relationship. Therefore hypothesis 3b: “Remaining opportunities influence intrinsic work motivation negatively” was rejected.

For testing the mediation, the steps of Baron & Kenney (1986) were used. However, in the first case there is no mediation effect. The reason for this is that there was found a significant positive effect between remaining time and intrinsic work motivation. Moreover, there was expected that this direct effect was negative. This is the same for the second case, a positive significant effect between remaining opportunities and intrinsic work motivation was
founded too. Therefore, there were no mediation effects and Baron & Kenney’s steps were not used further. Thus, hypothesis 4a: “Remaining time (at least partially) mediates the relationship between age and intrinsic work motivation” was rejected.

Next, hypothesis 4b: “Remaining opportunities (at least partially) mediates the relationship between age and intrinsic work motivation” was rejected too.

Further, a multiple hierarchic regression analysis was conducted for analyzing a moderating effect when age x job complexity was added in the analysis (table 5). First all the variables were standardized. In the third model, 0.5% of the variance was explained extra ($\Delta R^2 = .01, F = 21.01, p < .01$). The moderating effect of age x job complexity ($\beta = -.08, p > .05$) showed no significant moderating effect. There was expected that there was a significant moderating effect of job complexity on the negative relation between age and remaining time. After the regression analysis it seems that there was no moderating effect, thus hypothesis 5a “Job complexity moderates the negative relationship between age and remaining time, such that the relation is weaker for employees with a more complex job” was rejected.

Next regression analysis was conducted for analyzing a moderating effect when age x job complexity was added in the analysis with remaining opportunities (table 6). In this model, 0.1% of the variance was explained extra ($\Delta R^2 = .00, F = 14.97, p < .01$). The moderating effect of age x job complexity ($\beta = -.03, p > .05$) showed no significant moderating effect. There was expected that there was a significant moderation effect of job complexity on the negative relation between age and remaining opportunities, however hypothesis 5b: “Job complexity moderates the negative relationship between age and remaining opportunities, such that the relation is weaker for employees with a more complex job” was rejected.
### Table 3: Multiple regression analysis – Intrinsic Work Motivation

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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<tr>
<td><strong>β</strong></td>
<td><strong>β</strong></td>
<td><strong>β</strong></td>
<td><strong>β</strong></td>
<td><strong>β</strong></td>
</tr>
<tr>
<td>Gender</td>
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<td>.084</td>
<td>.083</td>
<td>.013</td>
</tr>
<tr>
<td>Education level</td>
<td>.073</td>
<td>.078</td>
<td>.060</td>
<td>-.003</td>
</tr>
<tr>
<td>Hours employed</td>
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<td>.058</td>
<td>.019</td>
<td>.020</td>
</tr>
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<td>Org. Tenure</td>
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<td>.059</td>
<td>.061</td>
<td>-.005</td>
</tr>
<tr>
<td>Trade Sector</td>
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<td>.141*</td>
<td>.123</td>
<td>.047*</td>
</tr>
<tr>
<td>Comm. Services Sec.</td>
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<td>-.066</td>
<td>-.075</td>
<td>-.040*</td>
</tr>
<tr>
<td>Health</td>
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<td>.230**</td>
<td>.187**</td>
<td>.017</td>
</tr>
<tr>
<td>Age</td>
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<td>.309**</td>
<td>-1.049**</td>
<td></td>
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<td>Remaining Time</td>
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<td>.006</td>
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<td>Age x Remaining Time</td>
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<td>1.527**</td>
<td></td>
</tr>
<tr>
<td><strong>R²</strong></td>
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<td>.130</td>
<td>.163</td>
<td>.922</td>
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<td><strong>R²</strong> change</td>
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<td>.016</td>
<td>.033</td>
<td>.759</td>
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<tr>
<td><strong>F</strong></td>
<td>4.620**</td>
<td>4.697**</td>
<td>5.418**</td>
<td>295.780**</td>
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<td><strong>F</strong> change</td>
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<td>4.753*</td>
<td>9.866**</td>
<td>2347.438**</td>
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</table>

Note: * p < 0.05 (two-tailed), ** p < 0.01 (two-tailed)

### Table 4: Multiple regression analysis – Intrinsic Work Motivation

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>β</strong></td>
<td><strong>β</strong></td>
<td><strong>β</strong></td>
<td><strong>β</strong></td>
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<td>Gender</td>
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<td>Org. Tenure</td>
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<tr>
<td>Trade Sector</td>
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<td>.141*</td>
<td>.135</td>
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<td>Comm. Services Sec.</td>
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<td>-.066</td>
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<tr>
<td>Health</td>
<td>.214**</td>
<td>.230**</td>
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<td>.147</td>
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<td><strong>R²</strong> change</td>
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<td>.016</td>
<td>.017</td>
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<td><strong>F</strong></td>
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<td>4.697**</td>
<td>4.789**</td>
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<tr>
<td><strong>F</strong> change</td>
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<td>4.753*</td>
<td>4.943*</td>
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Note: * p < 0.05 (two-tailed), ** p < 0.01 (two-tailed)
### Table 5: Multiple regression analysis - Remaining Time

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.098</td>
<td>.003</td>
<td>-.002</td>
</tr>
<tr>
<td>Education level</td>
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<td>.073</td>
<td>.083</td>
</tr>
<tr>
<td>Hours employed</td>
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<td>.156**</td>
<td>.141*</td>
</tr>
<tr>
<td>Org. Tenure</td>
<td>-.328**</td>
<td>-.009</td>
<td>-.006</td>
</tr>
<tr>
<td>Trade Sector</td>
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<td>.080</td>
<td>.074</td>
</tr>
<tr>
<td>Comm. Services Sec.</td>
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<td>.034</td>
<td>.030</td>
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<tr>
<td>Health</td>
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<td>.175**</td>
<td>.172**</td>
</tr>
<tr>
<td>Age</td>
<td>-.587**</td>
<td>-.597**</td>
<td></td>
</tr>
<tr>
<td>Job Complexity</td>
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<td>-.039</td>
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<tr>
<td>Age x Job Complexity</td>
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<td></td>
<td>-.075</td>
</tr>
<tr>
<td>$R^2$</td>
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<td>.453</td>
<td>.458</td>
</tr>
<tr>
<td>$R^2$ change</td>
<td>.250</td>
<td>.203</td>
<td>.005</td>
</tr>
<tr>
<td>F</td>
<td>12.031**</td>
<td>23.053**</td>
<td>21.099**</td>
</tr>
<tr>
<td>F change</td>
<td>12.031**</td>
<td>46.488**</td>
<td>2.376</td>
</tr>
</tbody>
</table>

Note: * p < 0.05 (two-tailed), ** p < 0.01 (two-tailed)

### Table 6: Multiple regression analysis - Remaining Opportunities

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.013</td>
<td>-.086</td>
<td>-.088</td>
</tr>
<tr>
<td>Education level</td>
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<td>.086</td>
<td>.089</td>
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<tr>
<td>Hours employed</td>
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<td>.183**</td>
<td>.179**</td>
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<tr>
<td>Org. Tenure</td>
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<td>-.035</td>
<td>-.034</td>
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<tr>
<td>Trade Sector</td>
<td>-.048</td>
<td>.034</td>
<td>.032</td>
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<tr>
<td>Comm. Services Sec.</td>
<td>-.061</td>
<td>-.026</td>
<td>-.027</td>
</tr>
<tr>
<td>Health</td>
<td>.236**</td>
<td>.194**</td>
<td>.193**</td>
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<tr>
<td>Age</td>
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<td>-.448**</td>
<td></td>
</tr>
<tr>
<td>Job Complexity</td>
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<td>-.006</td>
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<tr>
<td>Age x Job Complexity</td>
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<td>-.025</td>
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<tr>
<td>$R^2$</td>
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<tr>
<td>$R^2$ change</td>
<td>.257</td>
<td>.117</td>
<td>.001</td>
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<tr>
<td>F</td>
<td>12.503**</td>
<td>16.655**</td>
<td>14.966**</td>
</tr>
<tr>
<td>F change</td>
<td>12.503**</td>
<td>23.431**</td>
<td>.227</td>
</tr>
</tbody>
</table>

Note: * p < 0.05 (two-tailed), ** p < 0.01 (two-tailed)
4.3 Post-Hoc Analysis

After it was obvious there was no mediation effect of remaining time and remaining opportunities in the relation of age and intrinsic motivation, it was tested if there was a moderating effect of remaining time and remaining opportunities on the relation between age and intrinsic motivation. Since the effect of age on intrinsic work motivation was stronger when remaining time was added (table 3), there it was expected that there could be a moderating effect of remaining time on the relation between age and intrinsic work motivation. Therefore, after standardizing the variables, a multiple hierarchic regression analysis was conducted (table 3, model 4). In this model, 92.2% of the variance was explained ($R^2 = .92, F = 295.78, p < .01$). The analysis showed that, after the product variable of age x remaining time was added, the moderation effect was significant ($\beta = 1.53, p < .01$). Thus, remaining time moderates the relationship between age and intrinsic work motivation.

After the regression analysis it was examined with a simple slope analysis how remaining time moderates the relation between age and intrinsic work motivation. It will be examined if the moderation effect differs when age increase and remaining time is short or when remaining time is long. An overview of the formula’s and a graph of this moderation effect is enclosed in appendix 3. Subsequently, a second regression analysis was tested. When remaining opportunities was added in the regression analysis, age increased too in the third model (table 4). There is a presumption again that there is a moderating effect of remaining opportunities on the relation between age and intrinsic work motivation. After the regression analysis was performed that there was no significant moderating effect of remaining opportunities at all.
5. Conclusion & Discussion

5.1 Conclusion

In this study the mediating effects of remaining time and remaining opportunities on the relation between age and intrinsic work motivation were investigated. Furthermore, the moderating effect of job complexity on the relation between age and remaining time and remaining opportunities were researched. Several (lifespan) theories were used for predicting the effects and creating the hypotheses. With a sample of 261 respondents from different organizations in several sectors in The Netherlands it was investigated whether the predicted hypotheses could be rejected or confirmed. A multiple regression analysis was conducted to test the hypotheses. Firstly, results showed that age has a positive effect on intrinsic work motivation. Secondly, it became clear that age has a negative effect on remaining time and remaining opportunities. Thirdly, remaining time and opportunities had a significant positive effect on intrinsic work motivation. After conducting a post-hoc analysis there was found a significant moderating effect from remaining time on the relation between age and intrinsic work motivation. No support was found for the hypotheses predicting that remaining time and remaining opportunities mediate the relationship between age and intrinsic motivation. Moreover, a moderating effect of job complexity on the relation between age and remaining time and remaining opportunities was predicted; however there is no significant effect at all.

5.2 Discussion

As expected, there was found a positive significant effect of age on intrinsic motivation (Hypothesis 1). This hypothesis suggested that workers who become older show an increase in their intrinsic work motivation. After the analysis it was confirmed that workers who become older were more motivated to fulfill their social and emotional needs at work, earlier research supports these findings (Ebner et al., 2006; Kanfer & Ackerman, 2004). The hypothesis was substantiated by the socioemotional selectivity theory (SST) (Carstensen, 1991). The theory stated that chronological age was associated with increased preferences for and investment in emotionally meaningful goals (Carstensen et al., 2003). They changed in how they invest energy and time across the several activities in which they were engaged and their intrinsic work motivation became more important.

Research by Zacher and Frese (2010) was used to predict the relation between age and remaining time and opportunities. They showed a negative relationship between age and remaining time. In this research the expectation of the relation between age and remaining
time and opportunities was the same. After the analysis the results showed a negative relationship too, therefore, hypothesis 2a was supported. Remaining time will decrease when workers become older. The same effect was found by Lang and Carstensen (2002), in such a way that adults who become older had a more limited future than younger adults, even after controlling for health.

The analysis showed a negative significant effect of age and remaining opportunities too. Thus, hypothesis 2b was supported as well. When workers became older, they have less remaining opportunities. A possible reason for this outcome is that employees who become older were expected to plan their retirement instead of making future work plans (Zacher et al., 2009). Another reason is that many organizations were not prepared to meet needs and capabilities of employees who become older, like transfer of knowledge or coaching of younger employees (Kanfer & Ackerman, 2004). The outcome was consistent with the SOC theory as well. The SOC theory proposes that the preferences of workers related to growth will decrease and that preferences related to maintenance, regulation and work-related losses will increase. Employees who become older are more motivated to fulfill their social and emotional needs at work and less to fulfill extrinsic needs (Ebner et al., 2006). Based on the SOC theory there was proposed that the focus on growth and promotion will decrease with age. This explains the negative effect of age on remaining opportunities. Furthermore, Zacher and Frese (2010; 2011) found a negative relationship between age and remaining opportunities too.

For hypothesis 3a, a negative relationship between remaining time and intrinsic work motivation was predicted. The results showed a significant relationship between those variables; however it was a positive relation instead of a negative relation. An explanation for this result was found by Simons, Vansteenkiste, Lens & Lacante (2004). They state that people with higher FTP perceived their present activities as more influential because it helps them to achieve future goals and they also value their present task-engagement because the expected importance of the future goal is higher. People with a higher FTP were more motivated to finish their current activities and put more effort into them, since they were more positive about time. Their research indicated that positive outcomes are likely when people foresee the future results of their behavior and when contexts orient people toward those future results.

Next explanation why the relation between remaining time and intrinsic work motivation is positive is from the theory by Super (1957), this theory is extended by others (Gould, 1979; Schein, 1971). The theory state that in a person’s career are four stages:
Exploration, Establishment, Maintenance, and Disengagement. This last stage can be adapted to workers who become older and is the main stage for this research. Disengagement is for individuals who must cope with the switch from their career life to retirement. The individual begins to disengage from their career in good turn of other concerns. This can be a reason why the relation between remaining time and intrinsic work motivation is positive. When time is limited, humans will be intrinsically motivated by processes which help them to switch from career life to retirement.

For hypothesis 3b, a negative effect was proposed between remaining opportunities and intrinsic work motivation. However, after the multiple regression analysis, it appeared to be a positive effect. An implication which can explain this positive relationship is the Job Demands-Resources model (JD-R) by Bakker and Demerouti (2007). According to Bakker and Demerouti (2007), this model includes many possible working conditions. Some risk factors in the model are linked to job stress and these risk factors can be distinguished in job demands and job resources. Job demands consist of aspects which are physical, psychological, social, or organizational. For instance, a high work pressure or a critical physiological environment. Job resources refer to physical, psychological, organizational, or social aspects of a job which are practical in achieving work goals, reduce job demands and stimulate someone’s growth and development. When organizations offer opportunities, employees’ growth and development will be stimulated. Therefore, Schaufeli and Bakker (2004) state that job resources play an intrinsic motivational role, because they foster employees’ learning and development. The job resources will encourage the increasing well-being in the work context and enlarge intrinsic motivation (Schaufeli and Bakker, 2004). Since remaining opportunities is, as same as job resources, about learning, growth, and development it can be explained that the relation is positive.

Another result after the multiple regression analysis was that hypothesis 4a was rejected. It proposed that remaining time mediated the relationship between age and intrinsic work motivation, which appeared not to be the case after the analysis. A mediation effect was not possible since the relation between remaining time and intrinsic work motivation was positive. The same applies for hypothesis 4b. There was no mediating effect of remaining opportunities on the relationship between age and intrinsic work motivation.

After it seemed that those mediation effects had no significant effect, there was tested with a post-hoc analysis if these variables might cause a moderation effect. After the analyses it seems that remaining time and remaining opportunities influences the effect of age. Age became stronger when those two variables were added to the analysis. After a multiple
regression analysis it was proved that remaining time moderates the relationship. Thus with an increasing age, employees having a perception of more remaining time, perceives more intrinsic work motivation than employees having a perception of less remaining time. In a second as tested if remaining opportunities moderated the relation between age and intrinsic work motivation; however it had no effect at all.

An explanation for the unexpected moderating effect of remaining time is that for older humans the motivation for the work situation and the private situation differ. There will be expected that when workers become older they have other priorities when they are influenced by time. When time is shorter they are more concerned about their family and environment, while when time is longer they have enough time to concentrate on their work situation.

According to Gubrium and Holstein (2000) disengagement starts during middle life when some changes of perception occur. The most important one is that humans have another and new perception about the death, which is approaching. The middle-aged person reaches a point in life where losses begin to run faster than his ability to replace them. These losses can be personal or public, for instance, business closes, a family member dies or children move out. Most important is the freedom from responsibility which replaces the restriction of being needed in an interlocking system of separated tasks. In this case, the disengaged human is more “free” and has fewer responsibilities and time will be spent in another way at work. This complains why there was found a significant effect between age and intrinsic work motivation, moderated by remaining time. When workers get older and have fewer responsibilities, they have more time left at work, thus their intrinsic motivation will increase.

After the regression analysis, no significant moderating effect was found for job complexity on the relation between age and remaining time and remaining opportunities. However, in earlier research by Zacher and Frese (2010), they investigated remaining time and remaining opportunities and they examined the moderator effect of job complexity too. As same in this research, between age and remaining time was a negative relation. This can be explained by the fact that individuals retire in almost a similar range. Zacher and Frese (2010) therefore had not examined the moderating role of job complexity on age and remaining time, since remaining time has already a very strong relation with age. Moreover, there is a small influence of other factors. This is especially in the work context because the retirement age is established. Thus an explanation for the insignificant effect of job complexity on the relation between age and remaining time (Hypothesis 5a) can be that the influence of age is too large.
For hypothesis 5b, no significant effect was found for the moderator of job complexity on the relation between age and remaining opportunities. Explanations for the fact that Zacher and Frese (2010; 2011) found a significant effect with job complexity as moderator on age and remaining opportunities can be that they split job complexity in low-and high job complexity. Furthermore, they examined job complexity with another scale and items. Moreover, they had a smaller sample and obtained data in a different manner and in another country. This can be several explanations for the insignificant moderator effect of job complexity on age and remaining opportunities in this study. Furthermore, in this research is tried to split the concept of job complexity in low and high too, the same as Zacher et al. (2010) did. However, according to the fact that another scale was used it became difficult. There was attempted to run a median split, which can help by defining the median. Any value below the median was for the category “low”, and values above the median was coded as “high”. However, after splitting the sample was unevenly distributed. Nevertheless, with this median a regression analysis was conducted which examined if there was an effect when job complexity was split in low and high. After the analysis there were no significant moderating effects of low or high job complexity on the relation between age and remaining time. The same analysis was conducted with remaining opportunities instead of remaining time; however there was no significant effect either.

5.3 Practical implications

This study has several practical implications for organizations. Nowadays it is very important for organizations to motivate and retain their current workers. In this research it is proven that age and remaining time and opportunities have a significant negative relationship. For organizations it is important to understand what happens when people grow older and experience their time as limited. They should respond to their workers who become older by having some possibilities in a way that they will see their time not as limited. A possible implication for organizations is offering less working-hours or more vacation days. In this way they will have another notion of time. When an employer offers more free time for focussing on things next to their work, they are more motivated to stay in the organization.

Another practical implication which will help to retain workers with higher ages in organizations is to offer them job resources about learning, growth and development. Remaining opportunities will increase by these job resources and play an intrinsic motivational role to retain workers who become older.
The last interesting finding for the business was that organizations should motivate workers with higher ages intrinsically. For organizations it is important to keep in mind when employees become older they need obvious, feasible and challenging goals. They can work for these goals and are challenged for reaching these goals. In this way, they will be more intrinsically motivated for reaching goals before finishing their job.

5.4 Theoretical implications

According to the socioemotional selectivity theory (SST) (Carstensen, 1991) older humans are more focused on their existing relations with others and they set more emotional meaningful goals in the life, because they realize that time is limited. This research revealed that the SST is more a theoretical prospect instead of a prospect which can be involved in the work context. The SST proposes that, as individuals grow older, they change their choice of investing in time and energy across the several activities in which they are engaged. This is not the case in the work context, since the two mediation effects were not found and remaining time and remaining opportunities have a positive influence on intrinsic work motivation. Another reason why the SST is less applicable in the work context is that it focuses on emotional regulation which is defined as behaviors aimed at finding meaning in life, establishing intimacy with others and developing a sense of belonging in the social environment. These behaviors can be developed in the social context too; therefore the work context is not necessary.

Another theoretical implication is about the life span theory of control. In this research it was proved that this theory is developed for the work context which was evidenced by the relation between age and intrinsic work motivation. The theory stated that primary control is the external world and tries to achieve effects in the direct environment, external to the individual. When people gets older their secondary control is more important, which is about the self and tries to achieve changes within the individual. The primary and secondary control are intertwined and dependent on each other. For this research it is a useful theory to work with, because when individuals become older it is important they are intrinsically motivated.

The final theoretical implication is about the two concepts remaining time and remaining opportunities. In this research it was stated that occupational FTP should be examined with two separated constructs, which was conducted in earlier research by Cate and John, (2007); Seijts, (1998) and Zacher and Frese, (2010). After the statistical analysis, remaining time and opportunities were two separated constructs; however the two concepts show practically the same results. Therefore the current constructs should be improved for
measuring the difference in the concepts. Moreover it is possible that when occupational is added to the FTP constructs there are different results. This implies that in the original scale, the FTP concept is developed with age in a range from birth till death. While occupational implies an age from 15 till 65. When people are 65 they have other time experience at work, than in life.

5.5 Limitations and Future Research

This study has a number of limitations outlined below. First, this research has a cross-sectional design. Data was collected with a questionnaire at one single point in time. Thus, it is difficult to provide evidence for a causal relationship between the variables, since the cause and outcomes are measured at the same time. Further, the sample of this research is very divergent. There are a lot of organizations which participate in the research, however, only organizations the researcher know are involved in the study. This can be another limitation; because there were mostly organizations which the researcher know and were employees had a higher education level than the general working population. Next, there was probably some bias because the questionnaire was quite long, which can influence the answers of the respondents. Besides, in the questionnaire there were used different scales and different answer categories. It is possible it confused the respondents a bit. However, respondents can be encouraged for paying attention. Next limitation is that it is not examined if workers have a temporal or permanent contract. Workers with a temporally contract probably have other thoughts about time and opportunities than workers with a permanent contract. Besides that, age is examined as a continuous variable and there was no restriction for respondents in answer the questionnaire for special ages, for example only respondents who are 45 years or older can fill in the questionnaire. This results in only 63 of the total respondents (261) who where 45 years or older. This can be a limitation for concluding about workers who became older. Another limitation is that in case of motivation only intrinsic motivation is examined. Other results can be obtained when, for instance, extrinsic work motivation will be examined too.

Thus, future research could examine the FTP dimensions with extrinsic motivation, to investigate what influence they have and if this effect have the same or a different direction. Moreover, in several studies is examined that age and extrinsic motivation has a negative relationship. Future research could examine if this relationship will differ when occupational FTP will be added as a mediator or moderator. Furthermore, age should be split in subgroups; in this case consequences per subgroup are more obvious. Next, there can be investigated if
job complexity influences the variables in this research when another scale of job complexity will be used. Probably there will be important findings in the moderator concepts. Furthermore, future research could adapt the occupational FTP dimensions in other sectors, or better, just in one sector. Differences of how workers think about their occupational FTP are more obvious when workers are in the same sector. Since in different sectors workers have several possibilities, this can influence their perception of opportunities and time, therefore it is recommended to examine in one sector at the same time. Another possibility is to expand the survey in different countries, because other values and perspectives of remaining time and remaining opportunities can influence the variables.

In conclusion, this study provides a basis for further research on the two dimensions of occupational FTP. It contributes to research in aging and employees perceptions by adapting occupational FTP to it and job complexity and intrinsic motivation from employees in work organizations.
6. References


Leeuwen, G., van. (2009). *Reasons why older employees are willing to continue to work; the mediation of motivation and flexibility*. Tilburg: Universiteit van Tilburg.


arbeidsbelasting met een vragenlijst: de Vragenlijst Beleving en Beoordeling van de Arbeid (VBBA). Amsterdam: NIA.


Appendix 1: The research scales and questions

All the variables in the conceptual model were examined by different scales. First there was age in the conceptual model, which will measured by chronological age, which is the length of time since one’s birth (Chang, 2008). Then Occupational FTP which was measured by the two scales from Carstensen and Lang (1996), remaining time and remaining opportunities. The scales were validated in previous studies (Cate & John, 2007; Zacher & Frese, 2009). It was adapted by adding the word ‘occupational’ to each item.

Remaining opportunities was measured by the following items:
1. Many opportunities await me in my occupational future.
2. I expect that I will set many new goals in my occupational future.
3. My occupational future is filled with possibilities.
4. I could do anything I want in my occupational future.
5. There are only limited possibilities in my occupational future. (reverse coded)

Remaining time was measured by the following items:
6. Most of my occupational life lies ahead of me.
7. My occupational future seems infinite to me.
8. As I get older, I begin to experience time in my occupational future as limited. (reverse coded)
9. I have the sense that my occupational time is running out. (reverse coded)
10. There is plenty of time left in my occupational life to make new plans.

All items of the FTP scales were assessed on a 5-point scale (ranging from 1 ‘does not apply all’ to 5 ‘applies completely’).

The items of job complexity are adapted from Van Veldhoven & Meijman (1994) and consist of three questions:
1. Do you think that your work is complicated?
2. Do you attempt your work, because it has been more complicated in the last years?
3. Is your work too difficult for you?
The items were assessed on a 4-point scale (1 is ‘never’, 4 is ‘always’).

Intrinsic work motivation was examined by the scale of Bakker (2001) and consists of 5 questions.

1. I would still do this work, even if I received less pay
2. I find that I also want to work in my free time
3. I work because I enjoy it
4. When I am working on something, I am doing it for myself
5. I get my motivation from the work itself and not from the reward for it

The items were assessed on a 6-point scale (0 is ‘never’ to 6 is ‘always’).

In this research six control variables were examined: gender, education level, working hours a week in the employment contract (hours employed), organizational tenure, organization sector, and health.
Appendix 2: Organizations participating in the research

<table>
<thead>
<tr>
<th></th>
<th>Organization Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TAF B.V. Eindhoven</td>
<td>Insurance company in Eindhoven</td>
</tr>
<tr>
<td>2.</td>
<td>Eijerkamp Veenendaal</td>
<td>Furniture shop in Veenendaal</td>
</tr>
<tr>
<td>3.</td>
<td>Radio 538</td>
<td>Dutch radio station</td>
</tr>
<tr>
<td>4.</td>
<td>Province of Noord-Brabant</td>
<td>Government organization of the province of Noord-Brabant</td>
</tr>
<tr>
<td>5.</td>
<td>Province of Zeeland</td>
<td>Government organization of the province of Zeeland</td>
</tr>
<tr>
<td>6.</td>
<td>Municipality of Houten</td>
<td>Government organization of the municipality of Houten</td>
</tr>
<tr>
<td>7.</td>
<td>Municipality of Maastricht</td>
<td>Government organization of the municipality of Maastricht</td>
</tr>
<tr>
<td>8.</td>
<td>Municipality of Valkenburg aan de Geul</td>
<td>Government organization of the municipality of Valkenburg aan de Geul</td>
</tr>
<tr>
<td>9.</td>
<td>Municipality of Valkenswaard</td>
<td>Government organization of the municipality of Valkenswaard</td>
</tr>
<tr>
<td>10.</td>
<td>ZLTO</td>
<td>Agriculture and Horticulture organization in Tilburg</td>
</tr>
<tr>
<td>12.</td>
<td>Youthcare office Limburg</td>
<td>Take care for youth and young adults in the province of Limburg</td>
</tr>
<tr>
<td>13.</td>
<td>Capgemini</td>
<td>Consulting, Technology and Outsourcing company widespread in the Netherlands</td>
</tr>
<tr>
<td>14.</td>
<td>Vodafone</td>
<td>Company with services for (mobile) phones widespread in the Netherlands</td>
</tr>
<tr>
<td>15.</td>
<td>Albert Heijn Veenendaal</td>
<td>Supermarket in Veenendaal</td>
</tr>
<tr>
<td>16.</td>
<td>MAN Truck &amp; Bus</td>
<td>International dealer in trucks and busses, Vianen.</td>
</tr>
</tbody>
</table>
Appendix 3: Simple Slope Analysis

First an equation is constructed which relates age to intrinsic work motivation. The unstandardized B values are used, because the variables were standardized already (Aiken & West, 1991). The equation is constructed as follows:

\[
\text{Intrinsic work motivation} = -0.263 - 1.049 \times \text{age} + 0.006 \times \text{remtime} + 1.527 \times \text{ageXremtime}
\]

Second, there will be constructed two equations for determine the effect:

- The equation that represents the relationship between age and intrinsic work motivation when remaining time is below average, the Z-value of remaining time is -1 or 1 standard deviation below average. (Intrinsic work motivation = -0.269 – 2.576*age) Thus, when remaining time is low, intrinsic work motivation is negatively related to age.

- The equation that represents the relationship between age and intrinsic work motivation when remaining time is above average, the Z-value of remaining time is +1 or 1 standard deviation above average. (Intrinsic work motivation = -0.257 + 0.478*age) Thus, when remaining time is high, intrinsic work motivation is positively related to age.

A table is constructed for both slopes (table 7). It shows the increase or decrease in intrinsic work motivation, when remaining time is low or high and when age increase.

<table>
<thead>
<tr>
<th>Age</th>
<th>Low Remaining Time</th>
<th>High Remaining Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 years</td>
<td>-51.79</td>
<td>9.30</td>
</tr>
<tr>
<td>40 years</td>
<td>-103.31</td>
<td>18.86</td>
</tr>
<tr>
<td>60 years</td>
<td>-154.83</td>
<td>28.42</td>
</tr>
</tbody>
</table>

A graph is constructed on the next page.
The following graph is constructed:

On the Y-axis, intrinsic work motivation is illustrated. The X-axis illustrates someone’s age. This graph explains that when someone’s age increases and remaining time is low, he or she will be less intrinsically motivated at work (explained by the dotted line). While when someone’s age increases and remaining time is high, he or she is more intrinsically motivated at work (explained by the black line). After the simple slope analysis it is found that the effect of low and high remaining time differs for several ages.