

# *NEW WAYS OF WORKING*

*The influences of New Ways of Working on work-life  
balance at Alliander Bellevue*

Bregje Kok

Master Thesis  
22 August 2017

University of Twente  
Master of Business Administration  
Track: Human Resource Management

First supervisor: Dr. J. de Leede  
Second supervisor: Dr. J.G. Meijerink

## TITLE PAGE

---

Title: New Ways of Working  
*The influences of New Ways of Working on work-life balance at  
Alliander Bellevue*

Author: Bregje Kok

Student number:

University: University of Twente  
Drienerlolaan 5  
7522 NB Enschede

Course: Master Thesis

Education: Master of Business Administration

Track: Human Resource Management

Study year: 2016 – 2017

Version: 1

First supervisor: Dr. J. de Leede

Second supervisor: Dr. J.G. Meijerink

Date of completion: 22-08-2017

## ABSTRACT

---

The management philosophy of new ways of working is a phenomenon that tries to anticipate on the trends and developments organizations face in the field of work nowadays. Central to new ways of working is that employees can organize their work flexibly: employees are expected to decide for themselves when they work, where they work, and by which communication tool/medium they work (Baane et al., 2010; Ten Brummelhuis et al., 2012). Opinions vary when it comes to the relationship between new ways of working and work-life balance and moderators which influence the relationship between these two constructs. This research brought new empirical data on the new ways of working management philosophy with the involvement of a large number of work-related and person-related factors and brought clarification into the debate about relationships between new ways of working and work-life balance. The aim of this research was to investigate to what extent new ways of working practices influence work-life balance within Alliander Bellevue in comparison with the moderating effects of work-related and person-related factors.

This study made use of quantitative research since it entails a deductive approach to the relationship between theory and research concerning new ways of working and work-life balance. This research method was chosen because it provides a basis for more precise measures of the degree of effects between the various concepts (Bryman & Bell, 2011). Data was collected by means of an online questionnaire, resulting in a sample of 375 employees working at Alliander Bellevue, an organization in which the new ways of working management philosophy has been implemented for several years.

Results indicated that new ways of working has a significant positive influence on the work-life balance within Alliander Bellevue. In addition, it turns out that the moderating effect hours worked at home has a significant negative effect on the relationship between new ways of working and work-life balance. Besides that, there are moderators who have a direct impact on work-life balance. The first significant positive effect is found in the direct relationship between job characteristics and work life balance. The second direct significant effect is found in the negative relationship between the need for recovery and work-life balance.

Using the results of this research, the organization has a better understanding of the extent upon which new ways of working practices affect work-life balance and associated influences of work-related and person-related factors. This information can be used to optimize new ways of working within the organization. Because the role of different person and work-related factors in relationship with new ways of working and work-life balance has become clear, Alliander can obtain a better impression of the recent situation and can make adjustments to their HR policies. The above data, in conjunction with the theoretical implications, indicate that it is important to take into account aspects such as new ways of working, job characteristics, and recovery needs as direct effects on work-life balance. Besides that, the significant relationship between working home and the relationship between new ways of working and work-life balance provides input for further research into the optimum of hours associated with the highest work-life balance.

*Key words: new ways of working, work-life balance, person-related factors, work-related factors.*

## TABLE OF CONTENTS

---

<b>1. Introduction</b>	<b>5</b>
<b>2. Literature review and Hypotheses</b>	<b>7</b>
2.1 <i>New ways of working</i>	7
2.2 <i>Work-life balance</i>	8
2.3 <i>NWW in combination with Work-life balance</i>	9
2.3.1 Person-related factors	10
2.3.2 Work-related factors	16
2.4 <i>Research model</i>	18
<b>3. Methodology</b>	<b>19</b>
3.1 <i>Sample description</i>	19
3.2 <i>Research method</i>	19
3.3 <i>Operationalisation</i>	20
3.4 <i>Data Analysis</i>	23
<b>4. Results</b>	<b>24</b>
4.1 <i>Descriptive statistics</i>	24
4.2 <i>Correlations and multicollinearity</i>	24
4.3 <i>Multiple linear regression</i>	27
<b>5. Discussion and conclusion</b>	<b>34</b>
5.1 <i>Theoretical implications</i>	34
5.2 <i>Practical Implications</i>	37
5.3 <i>Limitations and further research</i>	38
5.4 <i>Conclusion</i>	40
<b>Reference list</b>	<b>41</b>
<b>Appendix</b>	Fout! Bladwijzer niet gedefinieerd.
<i>Appendix I: Survey</i>	<b>Fout! Bladwijzer niet gedefinieerd.</b>

# 1. INTRODUCTION

---

In the last decades, the way how people work, where people work, and what time people work has changed more than any time in history, which led to the rise of new ways of working (NWW). More and more organizations see the potential opportunities of implementing forms of NWW and have started to redesign their approach to work. Central to this new approach is that employees are asked to organize their work flexible. Employees are expected to decide for themselves when they work (schedule flexibility), where they work (e.g. telecommuting), and by which communication tool/medium (smartphone, email, videoconference) they work (Baane et al. 2010; Ten Brummelhuis et al. 2012). This implies that the emphasis has shifted to output, which mainly steer on results and not on the number of productive hours. The factors above play a critical role in a successful implementation of NWW and aroused the interest to investigate the effect of NWW on work-life balance.

Whereas the organizational benefits of NWW have been emphasized in previous studies (Sánchez et al. 2007), little is known yet about how NWW influences employees and their work-life balance (Demerout, Derks, Ten Brummelhuis & Bakker, 2014). Work-life balance, of course, stands not in itself, but could also be an important link to factors such as performance and sustainable employability. This indicates that by knowing more about the influences of NWW on work-life balance, there could also be a contribution to the improvement of these factors. In addition, opinions vary when it comes to the relation between NWW and work-life balance and the different moderators which influence the effect between these two constructs. Some authors suggest that the balance will increase because employees can divide their time better (Kirchmeyer, 1995). Others (Jenson, 1994; Illegems & Verbeke, 2004) state that because of the flexible work arrangements there is an increased satisfaction among work-life balance. In contrast to those assumptions, other authors (Pitt Catsouphe & Marchetta, 1991; Edwards & Rothbard, 2000) claim that because of the vague boundaries some employees are always working, and work-life balance can be influenced negatively. Bijl (2009) mentioned the same contradictions and is also not sure what influence NWW has on work-life balance. This contributes to the fact that work-life balance becomes a very important working condition for employees (Pierik, 2011). This research therefore contributes to the debate whether different moderators have an effect on work-life balance. Groups that have value in order to obtain a better understanding of the moderators who have an impact on NWW and work-life balance can, based on these outcomes, adjust their HR policies to find an optimal balance and make use of segmentation. By doing research on this subject, insights can be obtained that were previously unknown. This will be done by writing a detailed theoretical foundation. After that, the effects of NWW, will be examined within Alliander Bellevue.

Alliander is a network company responsible for the distribution of energy, such as electricity, (bio) gas and heat and is formed by a group of companies, including Liander, Liandon, Kenter and Allego. Together they stand for high-quality knowledge of energy networks, energy technology and technical innovations. In 2010, Alliander introduced the company-wide program 'Alliander Works!'. The program was designed to promote an effective and enjoyable working environment for employees. Strategies include offering flexible working opportunities, measuring performance based on output instead of attendance, and encouraging effective cooperation. This research focuses on the headquarters 'Bellevue' in Arnhem. This company is very suitable for conducting this research because it has been made use of NWW in their organization for several years. This means that you no longer measure the

first change, but actually the effect of the change that takes place between the relationship of NWW and work-life balance. Data will be collected by questionnaires, which will be the first step to scientifically explain the topic. The questionnaire consists of many aspects of NWW, whereby data is collected from 375 employees, who fully completed the survey.

This paper attempts to show the effect of NWW on work-life balance within Alliander Bellevue. Within this Master Thesis, NWW consists of four practices, namely teleworking, flexible workplaces at work, flexible working hours and IT. Factors that may affect work-life balance are divided into two parts, namely work-related factors and person-related factors. As mentioned previously, this research contributes to the debate about the volatility whether different moderators have an effect on the relationship between NWW and work-life balance. Based on the problem definition and research objectives, the following research question can be formulated:

*“To what extent do New Ways of Working practices influence work-life balance within Alliander Bellevue and what are the moderating effects of work-related and person-related factors?”*

The study contributes to current scientific literature on the subject of NWW both by adding empirical evidence to the body of knowledge and further examining the NWW's influences on employee's work-life balance. The aim of this research is to give Alliander Bellevue insights in the NWW theme and the associated work-life balance. Within this research, factors that may affect work-life balance are split up in work-related and person-related factors.

In the next chapter, a literature review is presented which provides more insights into NWW together with the associated variables. This will be done by making use of scientific theories and empirical articles. Chapter 3 will continue with the methodology, in which the research method of this study will be discussed. After this part, the results will be presented. This research ends with a conclusion and discussion in which the research question is answered and the results are discussed.

## 2. LITERATURE REVIEW AND HYPOTHESES

---

This literature review has been conducted to provide insight into current theories relevant to this research. The literature used consists of several scientific articles and research reports, which have been critically evaluated. The first section gives a definition of NWW, followed by section two, who gives an explanation of NWW in combination with work-life balance. Factors that may affect work-life balance are split up in work-related and person-related factors and will be discussed in succession.

### 2.1 NEW WAYS OF WORKING

---

"NWW are practices in which employees are able to work independent of time, place and organization, supported by a flexible work environment which is facilitated by information technologies." NWW is divided into four components, namely (1) Teleworking, (2) Flexible Workplaces at Work, (3) Flexible Working Hours, and (4) IT (De Leede, 2017). These factors contribute to the fact that employees get more and more control over the way of performing work.

Teleworking is defined as "a form of organizing and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular basis" (EFILWC, 2010, p. 2). In practice, "telework" is a work arrangement that allows an employee to perform work, during any part of regular, paid hours, at an approved alternative worksite (e.g., home, telework center). This definition of telework includes what is generally referred to as remote work but does not include any part of work done while on official travel or mobile work.

Flexible Workplaces at Work is defined as a "continuum of discretion concerning how frequently employees conduct their work away from the main work site" (Thompson, 2011, p. 6). It involves flexibility in the use of the location where work is conducted. This concept addresses not only all aspects of the physical work environment such as premises and facilities like open offices and shared workspaces, but also the work environment at home or elsewhere. This is characterized by an offices concept aimed at flexible work, work areas furnished according to concept of "activity-related work," inspiring office environments which are set up as a home base and meeting place, and an open network environment that brings the "outside world" inside (Baane et al., 2010). Both teleworking and flexible workplaces are sometimes used to describe what is generally referred to as "telework." While "remote" and "mobile" work are also terms that are sometimes used as synonyms for telework, they tend to operate differently than telework as is apparent in the detailed operational definition.

Flexible Working Hours is defined as "having the ability to schedule flexible starting and quitting times, sometimes with a core-hours requirement" but also to have the flexibility in taking days off (Eaton, 2003, p. 146). A flexible schedule allows an employee to work hours that differ from the normal company start and stop time. This means that the working hours, instead of being repetitive and fixed, can involve changes and variations. Flexibility in working hours includes flexibility in the scheduling of hours worked, such as alternative work schedules (e.g., flex time and compressed workweeks), and arrangements regarding shift and break schedule

The last component is IT and stands for "Information Technology" (IT). IT encompass a broad array of

communication media and devices which link information systems and people including e-mail, voice conferencing, video conferencing, groupware and collaboration tools, social media, corporate intranets, personal digital assistants and so on. The most important characteristics in this dimension are real-time availability and accessibility of information for all, technology that adjusts to the user, implementing web 2.0 software and the use of smartphones and laptops to empower employees to work together virtually (Baane et al., 2010).

NWW can be seen as a vision to make work more efficiently and effectively, but also more enjoyable for both the organization and the employee. This vision is realized by focusing on employees and giving them - within certain limits - the space and freedom in determining how they work, where they work, when they work, what they work, and with whom they work. Recent developments in ICT make the NWW technically possible and social developments make it desirable (Bijl, 2009). However, NWW is known to have some drawbacks as well. One such drawback is the possible (information) overload. Hiltz and Turoff (1985) foresaw that when email became widely available for everyone, workers would struggle with managing the inflow of messages. A handful of studies, however, has found that workers' perceived overload stems from aspects of their email use other than, or in addition to, the number and length of messages received (Rennecker and Derks 2012). Other factors contributing to perceived overload include pressures to respond quickly (Derks and Bakker 2010), unanticipated tasks generated by received messages (Thomas et al. 2006), interruptions and task-switching associated with responding to emails (Dabbish and Kraut 2006; Russell et al. 2005), numerous and diverse role demands (Derks and Bakker 2010), and lack of control over incoming messages (Allen & Shoard, 2005). Moreover, NWW and particularly the use of electronic communication, i.e. smartphones, may also extend the workday. Fenner and Renn (2004) reported that extending the workday to the home during evenings, weekends, and holidays is of all times. However, the availability of technological tools (e.g., the smartphone) facilitating anytime-anywhere connectedness of employees to their employers is a relatively new tendency.

## **2.2 WORK-LIFE BALANCE**

---

Work plays a central role in the lives of many people. More and more people find it important to have enough time to care for each other, and also leisure time becomes more and more important. Finding the right balance between work and private is therefore a difficult task for many people (Peeters & Heiligers, 2013). The work-life balance is defined as the degree to which an individual is able to balance the emotional and behavioral demands of work and family with each other (Hill et al., 2001). According to Clutterbuck (2003), work-life balance is the condition of an individual in which he or she manages potential conflicts regarding time and energy in order to obtain self-fulfillment otherwise seen as the absence of unacceptable levels of conflict between work and life demands (Greenblatt, 2002).

A good work-life balance means that work and personal life do not negatively interfere with each other, which means that there is less work-family conflict (Allen, 2001). When an employee has a good work life balance, an organization can also benefit from that. Increased satisfaction (Frone, Yardley & Markel, 1997), less absenteeism and turnover are mentioned as positive effects. According to Konrad and Mangel (2000), a good balance also contributes to organizational performance and productivity. A greater work-life conflict implies a feeling that the organization is treating not well enough, which results in less commitment (Siegel et al., 2005).



In this research, work-life balance is defined by means of a two-dimensional concept, involving work interference with personal life (WIPL) and personal life interference with work (PLIW). The impact work can have on the private situation is often referred to as work interference with personal life (WIPL). Thus, for example, whether work interference with personal life as employees constantly worrying at home about their jobs or making too much overtime. Conversely, the home situation may also affect someone's performance at work. This impact is often referred to as personal life interference with work (PLIW). This can be the case, when for example, employees whose partner or child is ill may struggle to focus on work (Peeters & Heiligers, 2013).

Before 1960, the fields 'work' and 'home' were seen as separate worlds. These domains were politically independent (Lambert, 1990). In the late sixties the focus shifted, as more women enrolled at the labor market. The first researchers in the field of WIPL were primarily based on role theory and especially on the concept of role conflict. The type of role conflict in WIPL is called an interrole conflict: a conflict that arises from the combination of work roles and non-work roles. The individual cannot handle the role expectations and role requirements of both roles (employee role and family role), which leads to conflicts and stress experiences. Advancing insight led to nuances in the type of role conflict. Greenhaus and Beutell (1985) argue that a WIPL conflict arises as the time spent on one role makes it difficult to meet the obligations of the other role.

### **2.3 NWW IN COMBINATION WITH WORK-LIFE BALANCE**

---

From the NWW management philosophy, it becomes clear that work-life balance is seen as an important performance goal in which employees are granted freedom and flexibility to fit their ideal situation. Opinions vary when it comes to the relation between NWW and work-life balance. Some authors suggest that the balance will increase because employees can divide their time better (Kirchmeyer, 1995). Others (Jenson, 1994; Illegems & Verbeke, 2004) state that because of the flexible work arrangements there is an increased satisfaction among work-life balance. In contrast to those assumptions, other authors (Pitt Catsouphe & Marchetta, 1991; Edwards & Rothbard, 2000) claim that because of the vague boundaries some employees are always working, and work-life balance can be influenced negatively. Bijl (2009) mentioned the same contradictions and is also not sure what influence NWW has on work-life balance. What can be concluded from the information above is that work-life balance becomes a very important working condition for employees (Pierik, 2011).

According to Baruch (2000), employees who make use of teleworking need to have self-discipline with inner motivation both to work and to stop. Going to work as a ritual is eliminated. The physical artefacts of office life are removed. The official 'knowledge' of what it is to be a worker loses its capacity to 'normalize'." On the other hand, Baruch (2000) found that there was no loss of identity (as an employee), and that telework had a positive effect on the role of family member. Research by Raghuram and Wiesenfeld (2004) shows that NWW reduces work stress by increasing flexibility for employees, which reduces work-life conflicts. Also from the research of Kossek, Lautsch, and Eaton (2006), positive results of NWW on work-life balance are found. It appears that NWW can be an important resource for individuals, with heavy work and family requirements, to manage these dual requirements. Research from Hill et al. (2001) shows that the flexibility created by NWW is considered as an important part for a good work-life balance at the time when there is more flexibility for the employee and it better deals with the different demands that require work and private life.

Previous research also showed that the benefits of NWW may have the form of an intervened U-shape. The association with positive outcomes is positive to a certain extent, when it will reach an optimum and finally becomes a bit negative when employees work more than 15.1 hours per week at home (Golden & Veiga, 2005; Virick, DaSilva & Arrigton, 2010). The professional isolation literature (e.g., Golden et al., 2008) provides strong reasons to believe that the number of hours spent at the office is an important moderating factor in the relationship between telework intensity and individual productivity and performance. Professional isolation has several consequences: employees do not have social reference points to compare with others (Golden et al., 2008); they are less able to share and receive tacit knowledge in order to perform their jobs more effectively (Nonaka & Takeuchi, 1995); and they believe that they lack relevant information to perform their jobs (ibid). A combination of telework and traditional work can remedy or eliminate professional isolation, because it provides employees the opportunity to share and receive experiences and knowledge, and to keep in contact with their organization and coworkers (Di Martino & Wirth, 1990). According to Golden et al. (2008), the longer you work 'out of sight' the more you might suffer from professional isolation, which is decreasing productivity and organizational commitment. In practice, 1- 2 days working at home seems to be optimal, longer is not productive (De Leede, 2017).

---

### 2.3.1 PERSON-RELATED FACTORS

---

Within the theme work-life balance, various person-related factors play a role in behavior and perception of employees. The person-related factors that are included in this study are demographic characteristics, family characteristics, recovery needs and structure needs. These variables will be explained below.

#### **Demographic characteristics**

For some, NWW may fit better than for others. For example, research by Pérez, Sánchez and Carnicer (2002) show that the increase in performance and productivity does not apply to everyone and every organization. They state that a young organization benefits more from the increase in productivity and their research also show that female employees benefit more from the benefits of NWW and thus show a greater increase in productivity. It may be that it not only applies to performance and productivity, but also the extent to which employees can recover. Kossek, Lautsch, & Eaton (2006) found that women with children who were teleworking had a lower rate of depression. The ability to work at home can contribute to combining various roles at work and at home (Sullivan & Lewis, 2001; Thompson et al., 1999). Mostly women with children are offered more facilities than men and they also use it more often. Examples of such facilities include parental leave, part-time work, flex work, childcare at work and home work (Bragger et al., 2005; Kossek et al., 2006). According to Sullivan and Lewis (2001), women who work at home (especially mothers) more often tend to combine work and family within the flexibility of working hours than men. Research from Arbo Unie (2011) among 19,000 employees shows that women have more effort to combine their work and private life, especially between the ages of 35 and 45. This age range is also the most difficult period for men (Arbo Unie, 2011). Jansen and colleagues (2004) did a cohort study in the Netherlands. This study also shows that men and women between the ages of 36 and 45 experience the most disruption in their work-life balance. In addition, it appears that employees who make a lot of overtime experience a worse balance

between work and private life. Fox et al. (2011) have researched the experienced work-life balance within the academic world. They show that female employees experience more disruption in the work-life balance than male employees. The factors affecting the balance are somewhat different between men and women. A work environment without competition and stress depends on a better balance for both men and women. In response to the literature found, the following Hypothesis is proposed:

*Hypothesis 1a: The positive relationship between work-life balance and NWW is stronger for females than for males*

Tausing and Fenwick (2001) state that younger and better educated persons perceive more work-life imbalance. However, they also report higher levels of schedule control and since schedule control improves work-life balance, it may be more important for unbinding time than schedule alternatives. Work-life balance increases with age, and is greater among those with less than a high school education and high school degrees, while it is lower among those with a B.A. or advanced college degree and those currently attending school (Tausing and Fenwick, 2001). The study of Lippe et al. (2008) also show that higher educated employees experience more work-life conflict than those with a lower education level. A possible explanation for this could be that higher educated employees are taking their jobs more seriously and working more ambitiously, which means that they feel a certain pressure both in their career and in their private lives to perform well (Lippe et al., 2008).

Currently, the literature only looks at a direct relationship between education level and work-life balance, but not to a moderator effect of education level between NWW and work-life balance. Now the literature suggests that a direct relationship between education level and work-life balance should be seen as a negative, but when education level is seen as a moderator, it may be appropriate so that it just strengthens the relationship. This because it can be expected that lower educated workers already have a good work-life balance, due to for example less heavy responsibilities and fixed working hours. So, adding NWW as an independent variable would not make a big difference for this target group. Educated workers, on the other hand, are more at risk of having a weaker work-life balance as this group often hold a position with more responsibilities and a higher level of difficulties. These employees could use NWW to find a better balance between their work and private life, implying a stronger relationship between NWW and Work-life balance. In this way, education level can have a positive effect on the relationship between NWW and work-life balance. Therefore, the following Hypothesis can be proposed:

*Hypothesis 1b: The higher the education level, the stronger the positive relationship between NWW and work-life balance*

According to Baane et al. (2010), working conditions are flexible applied to fit a personally desired work-life balance whereby young workers choose their employer based on flexible working arrangements. Companies therefore need to invest in order to be attractive to the future workforce (Deusen, James, Gill, & McKechnie, 2008), but also for today's young worker (Bijl, 2009). Flexible working arrangements thus shift from a preference to a necessity (Deusen et al, 2008). Most exposed organizations in the research of Baane et al. (2010) allow employees to choose their package of working conditions and fit it more or less to their personal preferences. Bijl (2009) indicates that the older generation often wants to keep work and private separate and the younger generation needs

more freedom of choice. According to Bijl (2009), this is often related to the ability to combine work and care responsibilities. Grzywacz, Almeida and McDonald (2002) note that the older an employee, the better the balance between work and private. This effect can be explained, among other things, because older workers have long been confronted with obstacles to a good work-to-private balance, which makes the older employee better aware of these obstacles than a younger employee. Based on the results of the study by Grzywacz et al. (2002), it can be expected that the older an individual, the smaller the conflict between work and private life. In addition, it is likely that older workers with a family often have older children than young workers with children. Older children are often more independent than younger children and generally need less care (Nagel, 2002). Due to this independence of the children, older workers may spend less time on the care of their children, thereby better combining work and private life.

Again, the literature above only tests the direct relationship between age and work-life balance. Using this theory, an older employee indeed has a stronger work-life balance. When in this case NWW is introduced into the organization, older employees do not experience a greater benefit because they already find a good balance between work and private. Therefore, it can be suggested that younger employees experience a greater positive effect of work-life balance by introducing NWW, given the fact that they are the ones who can benefit most from the advantages of NWW and previously experienced a lower work-life balance than older employees. This leads to the following Hypothesis:

*Hypothesis 1c: The younger the employee, the stronger the positive relationship between NWW and work-life balance*

Acerta (2016), which did research of organizational tenure on work-life balance on more than 2000 respondents in Belgium, found that employees with twenty or more years of service are noticeably more satisfied with their work-life balance than colleagues with less or no prior experience. Those who have already gained experience under another statute are usually also more satisfied with their work-life balance. According to Smith and Gartner (2007), employees with longer service with an organization may be more likely to adjust their work commitments when non-work commitments arise but may have greater responsibilities at work and be less able to take time off work to tend to non-work demands. Employees with longer tenures also tend to have greater non-work demands (Finegold et al, 2002; Kirchmeyer, 1992). Employees with longer service may be more aware of available work-life balance initiatives and make more use of these initiatives.

The theory above states that employees with higher organizational tenure experience a better work-life balance. For these employees, there would not be a lot of difference in the degree of balance by introducing NWW because they already experienced a good work-life balance. For employees who are employed shorter and, according to the theory, experience a lower degree of work-life balance, the introduction of NWW may have a greater positive impact on the balance of work and private life. After the introduction of NWW, they can experience a greater degree of work-life balance than those who are employed for a long time and are already experiencing a high level of work-life balance. In response to the information above, the following Hypothesis is proposed:

*Hypothesis 1d: The shorter the organizational tenure, the stronger the positive relationship between NWW and work-life balance*

### **Family Characteristics**

Several variables related to the family have been identified in the scientific literature to predict family to work conflict; as opposed to work to family conflict. A number of factors, related to the family-related work, have been found to be related to family to work conflict: including, childcare and household chores; time involvement and psychological involvement with one's family; and the number and age of children (Bellavia et al, Eds). Ten Brummelhuis and Van der Lippe (2010) showed that telecommuting and flexible work schedules were only effective for singles and not for employees with a partner and/or children. Their study found that work-life balance support was associated with only a marginal improvement in the work outcomes of employees with a partner and children and weakly support the idea derived from the conflict approach that support helps when it is given to employees with heavy demands. Tausing and Fenwick (2001) also found that married, working couples without children report greater balance, while the presence of children—married or not—is significantly related to lower balance. Instead, Ten Brummelhuis and Van der Lippe (2010) found more support for the enrichment approach, assuming that work-life balance support works by complementing family resources, because singles and then couples profited most from various work-life balance support measures. Various other studies suggested that an increased number of children at home results in increased home demands causing additional stress and work family conflict (Lundberg and Chesney, Eds). Elliott (2003) investigated major difficulties faced by the employed parents of small children particularly of age below six years, in providing adequate child care. For women, mainly children living at home aged from 6-18 contribute to more disturbance, for men this applies to children under 6 years (Lunenborg, 2006).

The information above suggests that introducing NWW, where aspects such as working home and flexible hours play a role, affect the relation between home-living children, NWW and work-balance. This may lead to the argument that more home-living children leads to a weaker relationship between NWW and work-life balance. One reason may be that through the introduction of NWW, households with more home-living children experience more difficulties with working home and other characteristics of NWW than households with less or no home-living children, because home-living children act as a distracting factor and need more care and attention. Households without children are not affected by these factors which makes the features of NWW easier to apply. This is why is stated that households without home-living children generally experience a better relationship between the introduction of NWW and work-life balance. This leads to the following Hypothesis:

*Hypothesis 2: The more home-living children, the weaker the relationship between NWW and work-life balance*

### **Recovery needs**

Recovery is a very important component within NWW. Recovery of work is described as the process of reducing or removing physical and psychological stress symptoms caused by work demands and stressful events at work (Sonnentag & Fritz, 2015). The recovery needs are defined as the desire of a person to be temporarily relieved of requirements to restore his / her source (Sonnentag & Zijlstra, 2006). The need for recovery can be recognized, in private situations, the feelings of being left alone after work or just relaxing after a second day off (Jansen, Kant, van Amelsvoort, Nijhuis & van den Brandt, 2003). Research has shown that the recovery process is very important for reducing the negative effects of work stress. In addition, recovery appears to be important for the well-being and

performance of the employees (Hahn, Binnewies, Sonnentag & Mojza, 2011). Important to the recovery process are not just the holidays and weekends, but the daily restoration or rest periods play a major part in this.

The common factor underlying most recovery definitions is that recovery occurs after strain when the stressor is no longer present (Sonnentag and Geurts, 2009). The important role of recovery can be illustrated from the perspective of Effort-Recovery theory (Meijman and Mulder, 1998). Its central assumption is that effort expenditure at work is unavoidably associated with acute load reactions. Under optimal circumstances, these stress-related acute load reactions return to pre-stressor levels during after-work hours, and recovery is completed before the next working day starts. In this situation, health is not at risk (Meijman and Mulder 1998). However, when stress-related acute load reactions prolong or re-occur during after-work hours, recovery is incomplete. In this situation, the worker will start the subsequent workday in a suboptimal condition and will have to invest compensatory effort in order to perform adequately at work. According to Derks et al. (2011), it is questionable to what extent intensive smartphone users really experience evenings off. They examined whether intensive smartphone users have more difficulties to actively engage in recovery activities. It was hypothesized that it might be very difficult for intensive smartphone users to engage in recovery activities (e.g., low-effort or social activities) in response to high work-life interference. In other words, especially when employees need recovery the most, the probability that they will succeed in undertaking activities aimed at recovery decreases. Results showed that smartphone users facing high work-home interference did not succeed in engaging in these recovery activities. This implies that being connected to work in the evening hours through smartphones has consequences for the extent to which employees succeed in adopting recovery strategies. This finding is explained by the fact that in most cases the request to work initiated by the smartphone is external and uncontrollable, and continues the confrontation with work-related matters (Duxbury, Higgins and Lee 1994).

Empirical research has shown that employees who successfully detach from work during after-work hours experience higher levels of life satisfaction and well-being (Sonnentag and Fritz 2007), and show better performance (e.g., Binnewies et al. 2009; Demerouti et al. 2009; Meijman and Mulder 1998). Continuous preoccupation with work during after-work hours and the inability to switch off from work is part of an unhealthy pattern characterized by high levels of fatigue, sleep complaints, and other indicators of poor well-being (Grebner et al. 2005; Van Hooff et al. 2006). Derks and Bakker (2011) argued that work-home interference, and the inability to switch off, are stronger related to poor well-being for intensive smartphone users in comparison to less intensive users. Assuming that intensive smartphone users use their smartphones during evening hours, they drain the same energy resources during the evening as during the workday, which accelerates the fatigue process. Since employees who decide to stay connected have no prior information about the frequency and quantity of requests that will be made on them, they might experience low levels of control (Middleton and Cukier 2006). In addition, the smartphone facilitates working overtime. As a result, it is plausible that extensive smartphone use during evening hours contributes to the prolonged exposure to work demands and its associated negative consequences. Taken together, it seems that NWW have both positive and negative effects on work-family interaction. The positive effects are due to the flexibility (in location and hours of working) that NWW enable, while the negative effects are due to the increased risk that individuals are constantly busy with their work during non-work times (Demerouti, Derks, Ten Brummelhuis & Bakker, 2009).

As the boundaries of the working day have become more opaque, many salaried workers are expected to work long hours to demonstrate commitment and to match the working hours of different time zone, employees with high need for recovery have less time to recover. The positive relationship between NWW and work-life balance depends on whether employees engage in recovery activities after work related to employee recovery needs. In addition, NWW is often used in the literature as a synonym of always at working. For employees with a high need for recovery, the introduction of NWW can have a major impact on work-life balance. Therefore, it can be suggested that employees who experience a high need for recovery benefit greatly from recovery activities. Based on the evidence above, the following Hypothesis is formulated:

*Hypothesis 3: The higher the need for recovery, the weaker the positive relationship between NWW and work-life balance*

### **Structure needs**

The development and implementation of NWW practices can be described as an organizational change. In response to the changes that come along with NWW, organizational design, structures and processes need to become adaptive and more flexible (Bell & Kozlowski, 2002). New working patterns have eroded the boundaries and collective rhythms of working life and the concept and reality of a fixed working day have declined for many people. As the boundaries of the working day have become more opaque, many salaried workers are expected to work long hours to demonstrate commitment (Doyle and Reeves, 2001; Fagan, 2001; Hochschild, 1997; McDowell, 1997) and to match the working hours of different time zones. Research by Raghuram and Wiesenfeld (2004) shows that the stress is increased by the removal of boundaries between work and private domains. The removal of this separation creates interfering thoughts, feelings and behaviors from one domain to another. This leads to a disappearance of a sense of structure and may lead to more work-life conflicts. The study by Davis (2002) also shows that blurred boundaries by NWW between work and private life, where associated with more conflicts.

On the other side, research shows that employees who are managed on output have more space and freedom to perform their work, because they can determine where and how the work is done. To manage these employees, a different kind of control is needed. This control shifts from a presence-oriented to an output-oriented form of control (Vos & Van der Voordt, 2001) and requires a situational form of anticipation in which employees being granted a more personal form of guidance to the necessary extent (Baane et al., 2010). This same freedom leads to more employee satisfaction and ultimately results in better customer satisfaction, which at the end results in more employee productivity. But this structural change can also have negative effects for employees who need this structure. They can experience this freedom as an uncertain factor, which can lead to a decrease in employee satisfaction (Baane et al., 2010). Bijl (2009) states that an employee should be able to function optimally, thus being more effective and therefore being granted enough freedom, challenge, and responsibility. An important effect of additional freedom and responsibility is an increase in organizational commitment (Bijl, 2009). Depending on the situation this requires that the manager acts as a coach, mentor, or even a service provider (Te Lintelo, 2011). NWW expects a mature relationship between employee and employer in which mutual agreement and understanding feeds collaboration. The “traditional” working conditions are not natural anymore. Although modern work allows

employees to work flexibly and autonomously, not every employee may welcome these ‘benefits’. The possibility to make decisions about many aspects of one’s job may result in uncertainty and role ambiguity (Burger, 1989). Employees do not clearly know what is expected from them, and, therefore, motivation and performance may decrease. Hence, in order to benefit from job autonomy in terms of motivation and performance, employees also have to be able to deal with the ambiguity and uncertainty that follows from it. Alternatively framed, if people are not able to tolerate ambiguity, autonomy will not be beneficial (Slijkhuis, 2012). The structural need plays an important role in the effects of NWW and work-balance, which also distinguishes between different types of employees. Therefore, the following Hypothesis is proposed:

*Hypothesis 4: The higher the need for structure, the weaker the positive relationship between NWW and work-life balance*

---

### 2.3.2 WORK-RELATED FACTORS

---

Within the theme work-life balance, also various work-related factors play a role in behavior and perception of employees. The work-related factors that are included in this study are job characteristics and the amount of hours worked at home. These variables will be explained below.

#### **Job characteristics**

Certain job characteristics, under various titles, have long been theorized as providing resources that may positively affect workers. The level of independence given to a worker (i.e., authority) and the extent to which jobs vary in content, location, and routine (i.e., variety) are included in several established models in the literature. Recently, scholars have argued that job characteristics such as authority and variety and the resources they enfold create positive load effects in the form of motivation, energy, new skills, or attitudes that can be mobilized to facilitate functioning in other life domains such as in the family (Friedman & Greenhaus, 2000; Geurts & Demerouti, 2003). Study results from several disciplines support the idea that authority and variety provide workers with resources beneficial to workers’ families. Evidence consistently indicates that workers with more authority in their jobs engaged in developmentally generative parenting practices (e.g., reading to children, engaging children in independent problem solving, and accepting children’s intellectual curiosity) more consistently than workers with less authority in their jobs (Grimm-Thomas & Perry-Jenkins, 1994; MacDermid & Williams, 1997; Menaghan & Parcel, 1991; Ritchie, 1997). Barnett, Marshall, and Sayer (1992) found that the effect of poor parental role quality on women’s distress was significantly attenuated for women whose jobs had more variety. Lower levels of positive spillover from work to family were associated with lower levels of decision latitude (Grzywacz & Marks, 2000), a measure that captures aspects of both autonomy and variety. Thus, there is theoretical and empirical evidence supporting the plausibility that jobs with high levels of authority and variety provide workers with resources that create positive load effects that may benefit work life balance.

A reason for this evidence could be that employees with high levels of authority need to have the freedom to make use of teleworking possibilities, such that teleworking only helps improving work-life balance when coupled with autonomy. In addition, the introduction of NWW can ensure that positive load effects in the form of motivation, energy, new skills, or attitudes that can be mobilized to facilitate



functioning in other life domains are only reinforced by a greater degree of authority and variety in the work. Experienced meaningfulness is shaped by three job characteristics: skill variety, task identity, and task significance. These three job characteristics are expected to be additive, in that meaningfulness is enhanced to the extent that any or all of them are present. When employees experience a high meaningfulness of the job, this provides a positive impact on the field of work-life balance and contributes to the fact that employees feel involved at work. This provided the foundation for the following Hypothesis:

*Hypothesis 5: The higher the autonomy and meaningfulness of the job, the stronger the relationship between NWW and work-life balance*

### **Hours worked at home**

According to the Central Bureau of Statistics (CBS, 2017), the Netherlands had almost 8.3 million employed persons in 2015. Almost 3 million of them work at home. Of these homeworkers, 62 percent incidentally work at home, while 38 percent usually work at home. Incidental homeworkers experience a relatively high workload. This applies to both employees and self-employed persons. Employees who work at home occasionally experience overworking more often than employees who usually work at home or do not work at home. Occasional teleworkers also have relatively often disrupted private life balance, whereby work suffers most often among family activities and vice versa (CBS, 2017). Dimitrova (2003) found difficulties for employees in managing the lack of direct supervision on the hours they work, because employees had schedules that were more flexible. However, most of the employees worked during regular working hours and several studies found that teleworkers work more hours than non-teleworkers (O'Neill, Hambley, Greidanus, MacDonnell, & Kline, 2009; Baruch, 2000). They state that teleworkers make more work hours because the protection for working too much is not there anymore: 'for all teleworkers, the changes in work schedules are better interpreted as collapse of the boundaries between'. Previous research also showed that the benefits of teleworking may have the form of an intervened U-shape. The association with positive outcomes is positive to a certain extent, when it will reach an optimum and finally becomes a bit negative when employees work more than 15.1 hours per week at home (Golden & Veiga, 2005). Full time working at home seems favorable for productivity in the short term, but productivity is slowing down and even less compared to "non-homework", Bluysen et al. (2002) concludes in an expert meeting on NWW's impact. Reason for this conclusion is that the link with the company and cooperation with colleagues greatly reduces. Partial homework, however, does have a permanent positive effect on productivity, because binding and cooperation are maintained.

According to Beckers et al. (2012) and Nijp et al. (2015), high worktime control can improve the fit between employees' work and private-life and may allow employees to align their work schedule with their chronotype (Wittman et al, 2006). Hill et al. (2003) investigated the effects of work-life balance on virtual, traditional, and home offices. The outcome showed that virtual workers were significantly less work-life balanced than home or traditional office workers. An explanation could be that home-based workers can combine work and private life by using non-productive hours (like dinner), to spend on their families. These results are consistent with other research that found support for a positive effect between the hours someone work at home and the job and life satisfaction and psychological empowerment. At the same time, it has a negative effect on burnout and stress (Redman, Snape, & Ashurst, 2009). Because of the evidence above, the following Hypothesis is formulated:

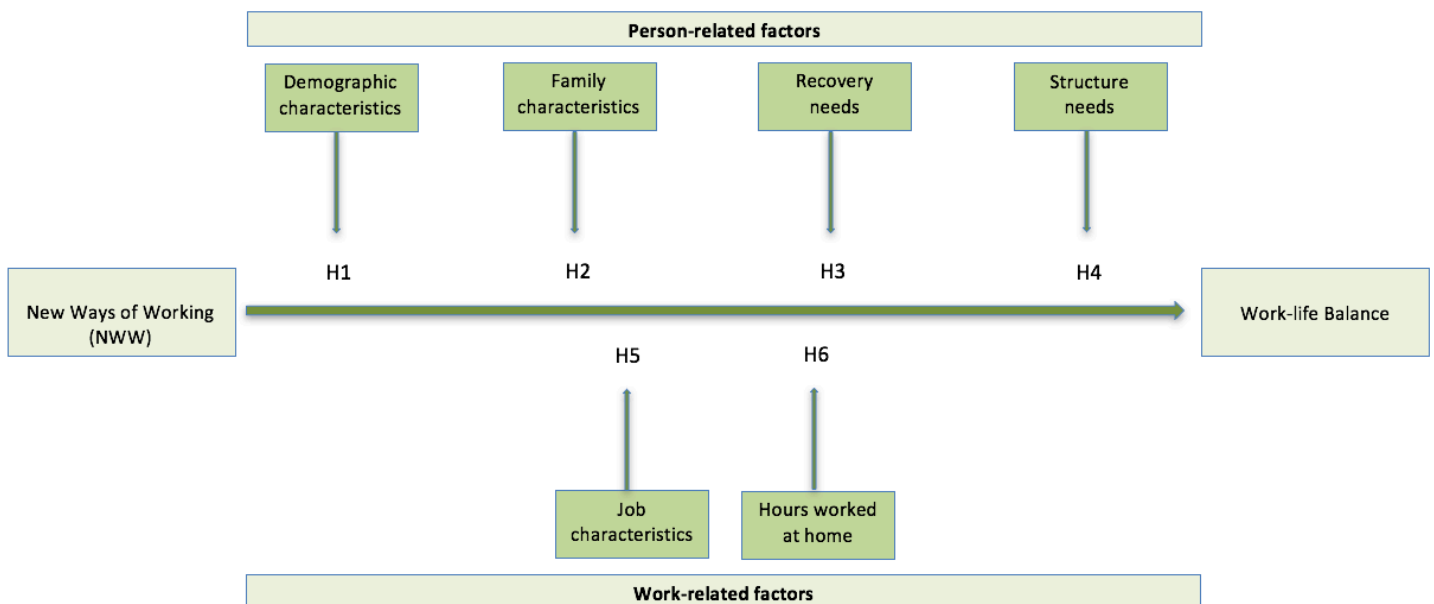
*Hypothesis 6: The more hours employees work at home, the weaker the positive relationship between NWW and work-life balance*

## 2.4 RESEARCH MODEL

---

The conceptual research model (Figure 1) gives an overview of the influences of NWW (independent variable) on work-life balance (dependent variables) which will be tested within Alliander Bellevue. This means that the dependent variables are those which are influenced by the independent variables. They are the outcome or the effect of the independent variable. Furthermore, it is expected that the effect of NWW on work-life balance will be influenced by work- and person related factors.

Figure 1: Research model



### 3. METHODOLOGY

---

In this chapter, the research design and the methodology will be discussed. The aim of the methodological part is to expand the research methods used in this research in order to achieve the research goal. The population of the research and the selection of the sample is discussed in section 3.1. In section 3.2 the choice of research method is discussed. The operationalization is discussed in section 3.3. Finally, section 3.4 contains a description of the data analysis.

#### 3.1 SAMPLE DESCRIPTION

---

The data for this study is collected from Alliander Bellevue. This company is very suitable for conducting this research because they made use of NWW in their organization for several years. This means that the first change is no longer measured, but the effect of the change that actually takes place between the relationship of NWW and work-life balance. The total sample size involved 1487 employees. This sample size concerns all employees based in Alliander Bellevue. All of these 1487 employees have received the survey by mail. Of these, 375 employees fully completed the survey. This represents a response rate of 25.22% percent. The reason to choose for the entire department Bellevue with both managers and employees is because there is such a full picture of all opinions and the view from both perspectives is given. This because an employee may have a different perception of their usage of NWW than a manager has and also could have a different view of their own work environment. A manager also cannot fully determine how employees see their balance between work and private life. In this survey, all respondents say something about their own situation as an employee. This leads to a perception of NWW and work-life balance from Alliander Bellevue as a whole, and not only from managers or operational staff.

Of the participants, 61.1% was male and 38.9% female. The average age of women was:  $M = 40.5$  ( $SD = 9.82$ ). For men, the average age:  $M = 43.81$  ( $SD = 10.86$ ). Of all participants, 59.5% had at least one home-resident child. Of the participants, 82.4% had an average or higher education (HAVO, VWO, HBO or WO) and 17.6% a lower education (Lower School, VMBO MBO or LBO). On average, employees worked 37.18 hours a week. Of these average working hours, an average of 8.86 hours is working at home and 3.22 hours at another location. The division of hours can be seen in Table 1.

Table 1: Average working hours at office, home and other locations

<i>Variables</i>	<i>N</i>	<i>Mean (M)</i>	<i>Std. Error of Mean</i>
Contract hours	375	37.18	.243
Working home	375	8.86	.284
Working elsewhere	375	3.22	.309

#### 3.2 RESEARCH METHOD

---

This study makes use of quantitative research since it entails a deductive approach to the relationship between theory and research concerning NWW. This means that the formulated Hypotheses are derived from existing theories. Quantitative research was chosen because it provides a basis for more precise measures of the degree of effects between the various concepts (Bryman & Bell, 2011).

Quantitative research is often performed by means of a survey (Bryman & Bell, 2011), whereby the subcomponents of the theoretical framework are used to operationalize the constructs to a level whereby they can be measured. As all concepts used in this research are well known and measurable by validated surveys, this study will gather the quantitative data necessary to answer the research question by a survey. The decision has been made to distribute the survey online due to the relatively large sample size and the geographic dispersion of the respondents.

In order to successfully analyze the data, there is only made use of reliable scales out of validated surveys. First of all, the survey was tested by four employees within Alliander Bellevue. Because of the feedback that emerged from this test session, the questionnaire was adjusted in some areas. The main focus was the length of the survey. The testers found the survey too long, allowing employees to lose attention to complete the whole survey. Based on this, the scales have been shortened. After the adjustments, the online survey was sent to all employees working at Alliander Bellevue using 'Lime Survey'. The respondents participated on a voluntary basis to ensure that they were willing to give a truthful answer on all questions. They were informed about the study via a digital cover letter which explained the goal, procedure and confidentiality of the study. This letter also included the link via which the survey was filled in. Respondents had an opportunity of 2 weeks to fill in the survey.

### 3.3 OPERATIONALISATION

---

This section describes the operationalization of the constructs used in this Master Thesis. Several reliable scales are used to measure the different constructs. Most of the scales are existing reliable scales. The survey consisted of seven variables which were; NWW, work-life balance, family characteristics, recovery needs, structure needs, work characteristics and hours worked at home.

*NWW.* New Ways of Working was measured by the 11-item New Ways of Working Scale (NWW Scale) developed by Ten Brummelhuis, et al. (2011). In this questionnaire, there is made use of 5 of these items. The scale is a theory-driven survey instrument designed to measure NWW, whereby employees have more control over several facets of their job. The scale is comprised of three subscales: 1. Control over work times (e.g. "I work at a time schedule that I plan myself"); 2. Control over location for work (e.g. "I can choose at which location I work"); and 3. Control over communication used for work (e.g. "I have the feeling of being in control over which communication tools I use."). In the theory section, NWW is defined using the four components teleworking, flexible workplaces at work, flexible working hours and IT. As no validated scale was available who measured these four components exactly, the above instrument came closest to it. In the scale used, the four components are measured in terms of control. All items were answered on a five-point Likert-Scale, ranging from 1 (not at all) to 5 (all the time). The Cronbach's alpha of this scale is 0.781. By making use of this scale, it could be measured to what extent the respondents had the opportunity to work according to the new ways of working approach (Kemp, 2013). Higher scores indicate a higher degree of NWW within the organization.

*Work-life balance.* Work life balance was measured with a shorted instrument reported by Fisher-McAuley, et al. (2003). This scale assessed three dimensions of work-life balance: 1. work interference with personal life (WIPL) (e.g. 'My work gives me the energy to carry out activities out of work that are important to me'); 2. personal life interference with work (PLIW) (e.g. "My private life gives me the

energy to do my job’); and 3. work/personal life enhancement (WPLE) (e.g. ‘I guard my boundaries between work and private life’). The WPLE dimension includes both work to personal life enhancement as well as personal life to work enhancement items. In the original scale, WIPL is measured with the questions ‘work gives me energy to perform activities outside of work’, ‘I set limits to the amount of work I take on me to protect my private time’, and ‘I screen of my working time so I can work undisturbed’. PLIW is measured with the questions ‘my private life gives me energy to do work’, ‘If a work related call during private time does not fit, I let it know’, and ‘I set limits to the amount of private tasks I take on me to protect my working time’. Last, WPLE is measured with the questions ‘I monitor my boundaries between work and private life’, and ‘I am satisfied with my work-life balance. Prior research using this scale (Fisher, 2001) found that a three-dimensional model fit the data better than a four- dimensional model in a confirmatory factor analysis, and results of a higher order factor analysis provided empirical evidence that the three dimensions were indicators of a single latent construct (Fisher-McAuley et al., 2003). Therefore, the items were combined to form three dimensions in the present study. All items were answered on a five-point Likert-Scale, ranging from 1 (not at all) to 5 (all the time). Higher scores indicate a higher degree of work-life balance.

Unfortunately, the constructs in the original scale did not meet the criterion for an alpha of .6 or higher. The factor analysis showed that there were three different components that expressed work-life balance (Table 2).

Table 2: Loading matrix of component solution after Varimax rotation

<i>Variables</i>	1	2	3
v1. Work gives me energy to perform activities outside of work		.839	
v2. My private life gives me energy to do work		.811	
v3. If a work related call during private time does not fit, I let it know	.622		
v4. I set limits to the amount of work I take on me to protect my private time	.807		
v5. I screen of my working time so I can work undisturbed			.847
v6. I set limits to the amount of private tasks I take on me to protect my working time			.871
v7. I monitor my boundaries between work and private life	.754		
v8. I am satisfied with my work-life balance.		.570	

To make the measurement reliable again, component 1 is labeled now as ‘setting boundaries’, because all three items are related to setting boundaries and demarcating the balance between work and private time. Component 2 is labeled now as ‘energy’, because here the three items are related to the energy extracted from both work and private factors. Component 3 is labeled now as ‘time monitoring’, because both constructs focus on monitoring time and finding a balance between work and private related factors. To test the extent to which the reconstructed constructs measure the desired construct, a factor analysis has been used (Table 3). The factor analysis shows that the scale measures only one factor with an eigenvalue greater than 1. The validity of this scale is therefore sufficient.

Table 3: Component transformation matrix after Varimax rotation

<i>Variables</i>	Component 1
Setting boundaries	.537
Energy	.825
Time monitoring	.729

*Family characteristics.* Family characteristics are assessed on the basis of questions about their household, if applicable, the number of children living at home and the age of these children. An example of a question related to this variable is 'How many home-living children do you have? ". The questions have to be answered by means of a multiple choice.

*Recovery needs.* Need for recovery will be assessed using the frequently used and validated 'need for recovery after work scale' of the Dutch VBBA questionnaire developed by van Veldhoven and Broersen (2003). This Dutch version of the Questionnaire on the Experience and Evaluation of Work (Dutch abbreviation VBBA) consists of 11 dichotomous items. In this questionnaire, there is made use of 5 of these items. The items of this scale inquire about the severity and duration of symptoms which indicate that the respondent is not fully recovered from the effects of sustained effort during the working day, for instance lack of attention and concentration at the end of the working day, and reduced motivation for activities in the evening with family or friends (van Veldhoven & Broersen, 2013). Typical items of the need for recovery after work scale are: "At the end of a working day I am really feeling worn-out" and "I find it hard to relax at the end of a working day." A need for recovery after work scale score is calculated by adding the individual's scores on the five items. Higher scores indicate a higher degree of need for recovery after work (de Croon, 2003). The reliability of this scale is sufficient with a Cronbach's Alpha of 0.844.

*Structure needs.* Structure needs was measured by a Personal Need for Structure (PNS) scale developed by Thompson et al. (1989). This scale was designed to capture the chronic preference for cognitive simplicity and structure and confirmed in various follow-up studies (e.g. Neuberg & Newsom, 1993). Within this questionnaire, the 12-item scale was reduced to a 6-item scale. Respondents indicate on a 5-point Likert scale how much they agree with a certain statement such as: "It upsets me to go into a situation without knowing what I can expect from it," or "I don't like situations that are uncertain." After completing, the overall score can be calculated to determine to what extent the employee needs structure. A higher score indicates a greater need for personal structure. The reliability of this scale is sufficient with a Cronbach's Alpha of 0.796.

*Job Characteristics.* The work characteristics were measured using the "Work Design Questionnaire (WDQ) of Morgeson and Humphrey (2006). There is made use of a reduced version of The WDQ which consists of 6 items, ranged on a 5-point Likert scale from 1 (not at all) to 5 (all the time). Various studies proved the WDQ to be a reliable and full scale to measure job characteristics (Hertel, Niedner, & Hermann, 2003; Shah, 2006; Truxillo, Cadiz, Rineer, Zaniboni, & Fraccaroli, 2012). Typical items of the work characteristics scale are: "In my job I can decide how to plan my work" and "in my job I have the ability to make many decisions myself". The first three question focus on task autonomy. Question 4, 5 and 6 about task variety, task significance, and task identity are merged into the factor meaningfulness of the job. The higher the score, the higher the presence of these factors.

*Hours worked at home.* To gain insight into the number of days and hours that employees work from home, there are asked questions about job classification. Questions asked here are about the days worked on average at home and the number of hours involved. These questions are linked to the general part of the questionnaire.

#### *Control variables*

Within research control variables are used to test for confounding factors that might alter the outcome of the effect on the dependent variable. Control variables do increase the statistical conclusion validity, because it provides understanding in the unsolved variance of the dependent variable. The control variables in this research are contract type, contract hours and travel time, which shows that none of them has an effect on the relationship. Multiple regressions show that the control variables do not have a significant effect on the outcome of the effect on the dependent variable.

### **3.4 DATA ANALYSIS**

---

Analysis of data is a process of inspecting, cleaning, transforming, and modelling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. Data analysis has multiple facets and approaches, and encompassing diverse techniques under a variety of names (Bihani & Patil, 2014). In this research, the data is analyzed by making use of the statistical program SPSS.

According to Dooley (2009), reliability “refers to the degree to which observes scores are free from errors of measurement” (p.76). Reliability is measured by the consistency of the scores. According to Babbie (2004) established measures is a method to ensure reliability. A reliability coefficient is Cronbach’s alpha. In this Master Thesis, only existing datasets are used. However, since sometimes formulation of the statements is changed and there is made use of a shorter version of scales, the Cronbach’s alpha is calculated. The values of the Cronbach’s alpha in this research have a value of at least .6 to provide reliable results (Nunnally & Bernstein, 1994).

A sample size calculation was performed, which uses a number of different equations to determine the minimum number of subjects that need to be enrolled in the study in order to have sufficient statistical power to detect a treatment effect (Rosner, 2011). With a confidence interval of 95% and a margin of error of 5%, the minimum population size would be 306. Within this research, the minimum has been achieved with a response of 375 employees.

Multiple linear regression analysis was used to analyze the data and to determine the effects of the various inputs. In this analysis, work-life balance is the dependent variable and NWW is the independent variable. Several moderators have been used to measure the relationship between NWW and work-life balance.

## 4. RESULTS

In this chapter, the data from the 375 sample respondents will be analyzed and measured against the established Hypotheses. All data analysis will be presented in tables and figures. Through extensive data analyses the Hypothesis of this research will be accepted or rejected.

### 4.1 DESCRIPTIVE STATISTICS

As can be seen in Table 4, the average age of the respondents is  $M=42.52$ . The average number of hours worked at home is  $M= 8.86$ . The variables work-life balance, NWW, recovery needs, structure needs and job characteristics were answered on a five-point Likert-Scale, ranging from 1 (not at all) to 5 (all the time). A higher score ( $M$ ) indicates that there is a higher degree of the relevant construct. These data show that there is a medium to high level of work-life balance ( $M= 3.43$ ) and NWW ( $M= 4.02$ ) within Alliander Bellevue. A score ( $M$ ) of 2.13 for recovery needs and 2.29 for structure needs indicates that there is a medium to low need for recovery and structure. A mean of 3.39 on job characteristics indicates that employees experience an above average level of autonomy and meaningfulness of the job. For the variables gender, education level and organizational tenure, multiple choice answers have been used. These variables are therefore difficult to interpret in this table.

Table 4: Descriptive statistics variables ( $N=375$ )

Variables	N	Mean ( $M$ )	Standard deviation ( $sd$ )
<i>Independent variable</i>			
Work-life balance	375	3.43	0.71
<i>Dependent variable</i>			
NWW	375	4.02	0.82
<i>Moderators</i>			
Gender	375	0.39	0.49
Education level	375	4.12	0.93
Age	375	42.52	10.58
Organizational tenure	375	3.26	0.98
Family characteristics	375	2.17	1.11
Recovery needs	375	2.13	0.85
Structure needs	375	2.29	0.68
Job characteristics	375	3.39	0.61
Hours worked at home	375	8.86	5.51

### 4.2 CORRELATIONS AND MULTICOLLINEARITY

Before the Hypotheses have been evaluated, the correlation between the different constructs has been explored by means of a bivariate correlation analysis (Table 6). By doing this analysis, one can scan the correlation matrix in order to see potential relations that may also show up in the regression models. According to Cohen (1992), values of .10, .30 and .50 can respectively be seen as small,



medium and large effect sizes. In this section only the most interesting correlations are highlighted. This analysis gives a first indication of correlating factors between NWW and work-life balance.

First of all, the cohesion of these constructs is analyzed by gender. The construct NWW ( $r = -.106$ ,  $p < 0.05$ ) has a significant negative correlation on gender, in contrast to work-life balance ( $r = .102$ ,  $p < 0.01$ ) which has a significant positive correlation on gender. This correlation indicates that females experience less NWW, but higher levels of work-life balance. NWW ( $r = .215$ ,  $p < .01$ ) is also significantly positively correlated to education level, which indicates that a higher level of education is associated with a higher degree of working according to the NWW management philosophy. Work-life balance ( $r = -.156$ ,  $p < 0.01$ ) is significantly negatively correlated to the need for recovery. This correlation indicates that the higher need for recovery, the higher disturbance in work-life balance. NWW ( $r = -.103$ ,  $p < 0.05$ ) is also significantly negatively correlated to structure need, which indicates that a higher need for structure is associated with a lower degree of working according to the NWW management philosophy. NWW ( $r = .186$ ,  $p < .01$ ) and work-life balance ( $r = .165$ ,  $p < .01$ ) are both significantly positively correlated to job characteristics. This correlation indicates that a high level of autonomy and meaningfulness of the job is associated with a higher degree of working according to the NWW management philosophy and less inference between work and private life. Finally, the construct work-life balance is significantly positively correlated to NWW, which indicates that a higher level of work-life balance is associated with a higher degree of working according to the NWW management philosophy.

#### *Multicollinearity*

In addition to check the correlation matrix, it is important to check on multicollinearity with the variance inflation factor (VIF). VIF indicates whether a predictor has a strong linear relationship with other predictors in the model. The largest VIF should not be greater than 10, and the average VIF should not be much higher than 1 (Field, 2005). The VIF for each predictors and the average are summarized in Table 5. All VIF values are well below 10 and the average is close to 1. One can therefore conclude that there are no signs of excessive multicollinearity within the model.

Table 5: Variance inflation factor of predictors

<i>Predictors</i>	VIF
1. Gender	1.071
2. Education level	1.196
3. Age	1.390
4. Organizational tenure	1.293
5. Family characteristics	1.073
6. Recovery needs	1.207
7. Structure needs	1.204
8. Job characteristics	1.084
9. Work classification	1.065
10. NWW	1.121

Table 6: Correlation table (N=375)

<i>Variables</i>	1	2	3	4	5	6	7	8	9	10	11
1.Gender	-										
2.Education level	-.076	-									
3.Age	-.153**	-.276**	-								
4.Organizational tenure	.020	-.160**	.407**	-							
5.Family characteristics	-.054	.118*	.067	.159**	-						
6.Recovery needs	.096 <sup>†</sup>	-.015	-.113*	.001	0.114	-					
7.Structure needs	.136**	-.062	-.132*	-.012	-.057	.376**	-				
8.Job characteristics	-.007	-.015	.146**	.003	-.010	-.121*	-.013	-			
9. Hours worked at home	-.011	-.129*	.154**	.210**	.005	.027	-.005	.062	-		
10. NWW	-.106*	.215**	-.012	.027	-.035	-.085 <sup>†</sup>	-.103*	.186**	-.019	-	
11.Work-life balance	.102*	.065	-.052	-.020	.114	-.156**	0.15	.165**	-.065	.170**	-

<sup>†</sup> p < .10, two-tailed; \* p < .05, two-tailed; \*\* p < .01, two-tailed; \*\*\* p < .001, two-tailed.

### 4.3 MULTIPLE LINEAR REGRESSION

This part of the analysis will look at the predicting powers of the established constructs on the dependent variable using linear regression, and inspect if the established Hypotheses can be confirmed or disconfirmed.

#### *Gender*

Table 7 tests Hypothesis 1 which state that the positive relationship between work-life balance and NWW is stronger for females than for males. When looking at the significant relationships, NWW ( $\beta = .182, p < .001$ ) appears to be an influential factor in the degree of balance between work and life. Model 3 shows that the interaction effect between NWW and gender is negative but not significant enough. ( $\beta = -.627, p < .10$ ). This indicates that Hypothesis 1a can be rejected.

Table 7: Results of regression analysis of NWW and gender

<i>Variables</i>	<i>Work-life balance</i>		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.029	.023
Contract hours	-.059	-.018	-.008
Travel time	-.052	-.040	-.044
<i>Independent variables</i>			
NWW		.182***	.297***
Gender		.110 <sup>†</sup>	.729**
<i>Interaction effect</i>			
NWW * Gender			-.627 <sup>†</sup>
R <sup>2</sup>	.007	.046	.062
Adjusted R <sup>2</sup>	-.001	.033	.047
$\Delta R^2$		.038	.016

<sup>†</sup>  $p < .10$ , two-tailed; \*  $p < .05$ , two-tailed; \*\*  $p < .01$ , two-tailed; \*\*\*  $p < .001$ , two-tailed.

#### *Education level*

Hypothesis 1b has been tested by means of a regression analysis with work-life balance as dependent variable and NWW as independent variable. Education level has been analyzed as a moderator. The results of the analysis are shown in Table 8. This table shows that only the independent variable NWW ( $\beta = 0.163, p < 0.01$ ) has a positive significant influence on work-life balance. Furthermore, no moderation or interaction effect occurs. This means that it cannot be shown that a higher education level is associated with a weaker positive relationship between NWW and work-life balance. Therefore, Hypothesis 1b can be rejected.

Table 8: Results of regression analysis of NWW and education level

<i>Variables</i>	<i>Work-life balance</i>		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.021	.13
Contract hours	-.059	-.077	-.076
Travel time	-.052	-.055	-.051
<i>Independent variables</i>			
NWW		.163**	-.059
Education level		.049	-.212
<i>Interaction effect</i>			
NWW * Education level			.382
R <sup>2</sup>	.007	.039	.043
Adjusted R <sup>2</sup>	-.001	.026	.028
$\Delta$ R <sup>2</sup>		.032	.004

<sup>†</sup> p < .10, two-tailed; \* p < .05, two-tailed; \*\* p < .01, two-tailed; \*\*\* p < .001, two-tailed.

#### Age

When the moderator age is added in the regression analysis (Table 9), it can be seen that also here NWW ( $\beta = .173$ ,  $p < 0.001$ ) is the only variable who has a significant positive influence on work-life balance. The moderator age ( $\beta = .051$ ) has a small negative influence on work-life balance, but is not significant. Also the interaction effect between NWW and age has a negligible non-significant effect on work-life balance. This indicates that Hypothesis 1c which state that the older the employee, the stronger the positive relationship between NWW and work-life balance can be rejected.

Table 9: Results of regression analysis of NWW and age

<i>Variables</i>	<i>Work-life balance</i>		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.012	.12
Contract hours	-.059	-.074	-.074
Travel time	-.052	-.046	-.046
<i>Independent variables</i>			
NWW		.173***	.172
Age		-.051	-.052
<i>Interaction effect</i>			
NWW * Age			.001
R <sup>2</sup>	.007	.039	.039
Adjusted R <sup>2</sup>	-.001	.026	.024
$\Delta$ R <sup>2</sup>		.032	.00

<sup>†</sup> p < .10, two-tailed; \* p < .05, two-tailed; \*\* p < .01, two-tailed; \*\*\* p < .001, two-tailed.

### Organisational tenure

When looking at the effect of organizational tenure on the relationship between NWW and work-life balance (Table 10), it can be said that organizational tenure has a positive, but non-significant effect on the relationship between NWW and work-life balance ( $\beta = .414, p < .10$ ). Also the interaction effect between NWW and tenure is not significant enough ( $\beta = -.531, p < .10$ ). This means that Hypothesis 1d, which states that the longer the organizational tenure, the stronger the positive relationship between NWW and work-life balance can be rejected.

Table 10: Results of regression analysis of NWW and organizational tenure

Variables	Work-life balance		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.011	.019
Contract hours	-.059	-.071	-.070
Travel time	-.052	-.048	-.054
<i>Independent variables</i>			
NWW		.173***	.462**
Tenure		-.019	.414 <sup>†</sup>
<i>Interaction effect</i>			
NWW * Tenure			-.531 <sup>†</sup>
R <sup>2</sup>	.007	.037	.045
Adjusted R <sup>2</sup>	-.001	.024	.030
$\Delta R^2$		.030	.008

<sup>†</sup>  $p < .10$ , two-tailed; \*  $p < .05$ , two-tailed; \*\*  $p < .01$ , two-tailed; \*\*\*  $p < .001$ , two-tailed.

### Family characteristics

Separately from each other, NWW ( $\beta = .176, p < .001$ ) and home-living children ( $\beta = .117, p < .10$ ) both have a positive significant effect on work-life balance. When you look at the interaction effect of these two variables (Table 11), you see that there is a positive relationship, but not significant. Hypothesis 3, which state that the more children living at home leads to a weaker relationship between NWW and work-life balance can therefore be rejected.

Table 11: Results of regression analysis of NWW and home-living children

Variables	Work-life balance		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.031	.030
Contract hours	-.059	-.060	-.064
Travel time	-.052	-.048	-.049
<i>Independent variables</i>			
NWW		.176***	.011
Home-living children		.117 <sup>†</sup>	-.320
<i>Interaction effect</i>			

NWW * Home-living children			.468
R <sup>2</sup>	.007	.050	.057
Adjusted R <sup>2</sup>	-.001	.037	.042
$\Delta$ R <sup>2</sup>		.043	.007

<sup>†</sup> p < .10, two-tailed; \* p < .05, two-tailed; \*\* p < .01, two-tailed; \*\*\* p < .001, two-tailed.

#### *Recovery needs*

Hypothesis 4 has been tested with work-life balance as dependent variable and NWW as independent variable. Recovery needs has been analyzed as a moderator (Table 12). This analysis shows that the need for recovery ( $\beta = -.146$ ,  $p < 0.01$ ) is significantly negative related to work-life balance. This indicates that a higher need for recovery leads to a weaker work-life balance. This is not proved by the interaction effect between NWW and recovery need. Therefore, the Hypothesis which indicates that a higher need for recovery leads to a weaker positive relationship between NWW and work-life balance is rejected.

Table 12: Results of regression analysis of NWW and recovery needs

<i>Variables</i>	<i>Work-life balance</i>		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.022	.019
Contract hours	-.059	-.082	-.089 <sup>†</sup>
Travel time	-.052	-.034	-.036
<i>Independent variables</i>			
NWW		.161**	.311 <sup>†</sup>
Recovery needs		-.146**	.142
<i>Interaction effect</i>			
NWW * Recovery needs			-.319
R <sup>2</sup>	.007	.058	.061
Adjusted R <sup>2</sup>	-.001	.045	.046
$\Delta$ R <sup>2</sup>		.051	.003

<sup>†</sup> p < .10, two-tailed; \* p < .05, two-tailed; \*\* p < .01, two-tailed; \*\*\* p < .001, two-tailed.

#### *Structure needs*

Hypothesis 5 has been tested with the need for structure as a moderator variable. The need for structure has no significant effect on work-life balance as an independent variable ( $\beta = .019$ ) as well as an interaction effect ( $\beta = .241$ ). The Hypothesis state that a higher need for structure leads to a weaker positive relationship between NWW and work-life balance. This is not proved in this study (Table 13), thereby rejecting the Hypothesis.

Table 13: Results of regression analysis of NWW and structure needs

<i>Variables</i>	<i>Work-life balance</i>		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.022	.022
Contract hours	-.059	-.067	-.062
Travel time	-.052	-.048	-.045
<i>Independent variables</i>			
NWW		.175***	.034
Structure needs		.019	-.187
<i>Interaction effect</i>			
NWW * Structure needs			.241
R <sup>2</sup>	.007	.037	.039
Adjusted R <sup>2</sup>	-.001	.024	.023
$\Delta R^2$		.030	.002

<sup>†</sup> p < .10, two-tailed; \* p < .05, two-tailed; \*\* p < .01, two-tailed; \*\*\* p < .001, two-tailed.

#### *Job characteristics*

Hypothesis 6 has been tested with work-life balance as dependent variable and NWW as independent variable. Job characteristics have been analyzed as a moderator (Table 14). This analysis shows that job characteristics as an independent variable has a significant positive effect on work-life balance, which indicates that higher autonomy and meaningfulness of the job leads to a better balance between work and life. There is no significant relationship between the interaction of NWW and job characteristics. This leads to a rejection of Hypothesis 6, which indicates that the higher the autonomy and meaningfulness of the job, the stronger the relationship between NWW and work-life balance.

Table 14: Results of regression analysis of NWW and Job characteristics

<i>Variables</i>	<i>Work-life balance</i>		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.021	.019
Contract hours	-.059	-.066	-.065
Travel time	-.052	-.049	-.049
<i>Independent variables</i>			
NWW		.147**	-.012
Job characteristics		.136**	-.001
<i>Interaction effect</i>			
NWW * Job characteristics			.232
R <sup>2</sup>	.007	.055	.056
Adjusted R <sup>2</sup>	-.001	.042	.041
$\Delta R^2$		.048	.001

<sup>†</sup> p < .10, two-tailed; \* p < .05, two-tailed; \*\* p < .01, two-tailed; \*\*\* p < .001, two-tailed.

### *Hours worked at home*

Hypothesis 7 indicates that the more hours employees work at home, the weaker the positive relationship between NWW and work-life balance. The interaction effect (Table 15) between NWW and hours worked at home indeed shows a significant negative effect ( $\beta = -.858, p < .001$ ). This indicates that more hours working at home indeed leads to a weaker relationship between NWW and work-life balance. Therefore, Hypothesis 7 is supported.

Table 15: Results of regression analysis of NWW and hours worked at home

<i>Variables</i>	<i>Work-life balance</i>		
	Model 1 $\beta$	Model 2 $\beta$	Model 3 $\beta$
<i>Control variables</i>			
Contract type	.022	.015	.013
Contract hours	-.059	-.065	-.062
Travel time	-.052	-.041	-.032
<i>Independent variables</i>			
NWW		.172***	.441***
Hours worked at home		-.046	.751***
<i>Interaction effect</i>			
NWW * Hours worked at home			-.858***
R <sup>2</sup>	.007	.039	.072
Adjusted R <sup>2</sup>	-.001	.026	.057
$\Delta R^2$		.032	.033

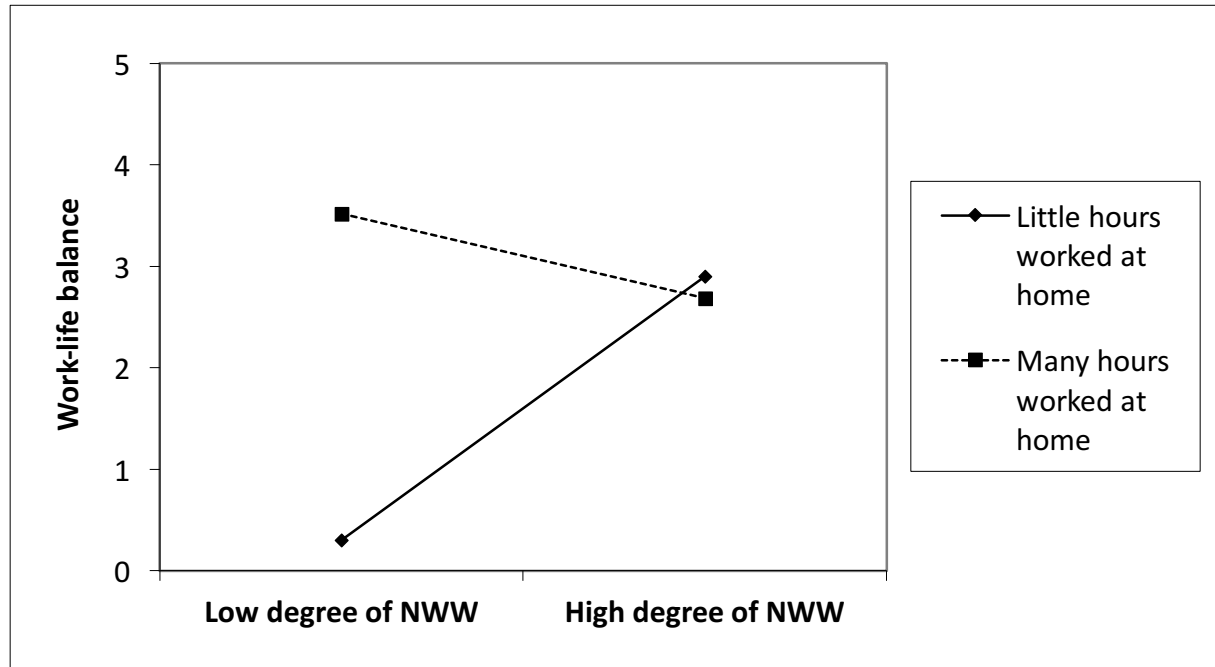
<sup>†</sup>  $p < .10$ , two-tailed; \*  $p < .05$ , two-tailed; \*\*  $p < .01$ , two-tailed; \*\*\*  $p < .001$ , two-tailed.

The R-square indicates how much of the variance in the dependent variable, in this case, work-life balance is explained by the independent variable, NWW. Nagelkerke's R<sup>2</sup>, after Model 1 in the analysis, gives a proportion of explained variation of 0.7%. In the second model, NWW and hours worked at home are added. Nagelkerke's R<sup>2</sup> gives a proportion of explained variation of 3.9%. Thus, adding NWW and hours worked at home has an impact on the proportion of variations in work-life balance. In Model 3, the interaction effect is measured. Nagelkerke's R<sup>2</sup>, after Model 3 in the analysis, gives a proportion of explained variation of 7.2%. Also here, the results suggest that the interaction effect has an impact on the proportion of variations in work-life balance. However, it should here be added that the results suggest a weak proportion of variation.



Figure 2 gives a graphical view of the relationship between the variables. This clearly shows that by more working at home, the positive relationship between NWW and work-life balance decreases. The Figure indicates that within Allander Bellevue, the highest level of work-life balance occurs when NWW is low and working at home high.

Figure 2: Interaction effect between NWW and hours worked at home on work-life balance



## 5. DISCUSSION AND CONCLUSION

---

This chapter answers the research question and makes recommendations for further research. In addition, it addresses the contribution to theory and practice. The main question examined to what extent NWW practices influence work-life balance and searches for moderating effects of work-related and person-related factors. This question is answered on the basis of the data that has been collected within Alliander Bellevue.

### 5.1 THEORETICAL IMPLICATIONS

---

When looking at the direct impact of NWW on work-life balance, NWW seems to have a positive significant impact on work-life balance in all regression analyzes. This means that a higher use of NWW within Alliander Bellevue, leads to an increase of the work-life balance of employees. This may be because employees are able to work independent of time, place and organization, supported by a flexible work environment which is facilitated by information technologies. Due to the freedom this new way of working brings along, the work can be done more efficiently and effectively to a certain extent and makes it more enjoyable for both the organization and the employee. Within certain limits, they have the space and freedom in determining how they work, where they work, when they work, what they work, and with whom they work. This research confirms that NWW indeed has a significant positive effect on work-life balance within Alliander Bellevue. Previous research into the relationship between NWW and the work-life balance gave ambiguous results. The findings from this study confirms the results from among others Kossek, Lautsch, and Eaton (2006), which state that NWW can be an important resource for individuals, with heavy work and family requirements. Kirchmeyer (1995) suggested that the balance increased because employees can divide their time better and others (Jenson, 1994; Illegems & Verbeke, 2004) stated that because of the flexible work arrangements there is an increased satisfaction among work-life balance. These views also correspond to the results of this research. In contrast to those assumptions, other authors (Pitt Catsouphe & Marchetta, 1991; Edwards & Rothbard, 2000) claimed that because of the vague boundaries some employees are always working, and work-life balance can be influenced negatively. Bijl (2009) mentioned the same contradictions and is also not sure what influence NWW has on work-life balance.

Due to prior collected data, it was thought that both work-related and person-related factors could have an influence on the relationship between NWW and work-life balance. This research has shown that of all examined moderators, only the work-related factor 'worked hours at home' has a significant negative impact on the positive relationship between NWW and work-life balance. There may be several reasons for this. Employees who work at home occasionally can experience overworking more often than employees who working home less frequently or do not work at home. A theory given by Dimitrova (2003), which causes the work-life balance to decrease as more work is done at home, is the lack of direct supervision on the hours they work, because employees have schedules that are more flexible. Home-based workers can combine work and private life by using non-productive hours (like dinner) to spend on their families, but the benefits of working home may have the form of an intervened U-shape, whereby the association with positive outcomes is positive to a certain extent. This finding is also confirmed by theories of Golden and Veiga (2005) and Virick, DaSilva, and Arrington (2010). Finding a good balance between working at the office and working home is therefore important

to experience an optimal work-life balance.

None of the person-related factors that were included in this research have a significant influence on the relationship between NWW and work-life balance. The variables education level, age, number of children, structure needs and job characteristics have a positive interaction effect between the relationship of NWW and work-life balance, but show no significance. The same applies to gender, organizational tenure and recovery needs which show a negative interaction effect on the relationship between NWW and work-life balance where also was no significance.

Hypothesis 1a which state that the positive relationship between work-life balance and NWW is stronger for females than for males had to be rejected. Within Alliander Bellevue this is not the case, in contrast to other theories. Within Alliander Bellevue, there was a negative relationship, which was not reliable enough to make statements about. Theories in other studies indicated that the factors affecting the balance are somewhat different between male and female (Fox, 2011). It appears that a better work environment without competition and stress depends on a better balance for both men and women. In previous theories, it is primarily assumed that females are offered more facilities such as parental leave, part-time work and child care at work or at home, and therefore better tend to combine work and family than males (Bragger et al., 2005; Kossek et al., 2006; Lewis, 2001). In this research there is no reason to assume that the relationship between work-life balance and NWW is stronger for females than for males and there may be several reasons for this. First of all, if a female employee has no children, the above theory is not going to matter. Besides that, the care for children could also be largely carried out by male employees. This implies that within Alliander Bellevue, factors other than gender play a role in the relationship between NWW and work-life balance.

Hypothesis 1b which state that the higher the education level, the stronger the positive relationship between NWW and work-life balance also had to be rejected. It was expected that lower educated workers already had a good work-life balance, due to for example less heavy responsibilities and fixed working hours. So, adding NWW as an independent variable would not make a big difference for this target group. Educated workers, on the other hand, are more at risk of having a weaker work-life balance as this group often hold a position with more responsibilities and a higher level of difficulties. These employees could use NWW to find a better balance between their work and private life, implying a stronger relationship between NWW and work-life balance. In this way, education level could have a positive effect on the relationship between NWW and work-life balance. Within this analysis, there was a positive effect, but not significant so the assumption cannot be made. A reason that can be attributed to the fact that in this research there no significant relationship between education level and the relationship between NWW and work-life balance, may be related to the distribution of the sample. Of the participants, 82.4% had an average or higher education (HAVO, VWO, HBO or WO) and 17.6% a lower education (Lower School, VMBO MBO or LBO). This may suggest that the survey is largely filled in by higher educated employees and therefore no significant effect could be demonstrated.

Hypothesis 1c state that the younger the employee, the stronger the positive relationship between NWW and work-life balance, also had to be rejected. Within these factors, there was only theory available regarding the direct relationship between age and work-life balance. This research expected that when introducing NWW into the organization, older employees do not experience a greater

benefit because they already find a good balance between work and private. Therefore, it could be suggested that younger employees experience a greater positive effect of work-life balance by introducing NWW, given the fact that they are the ones who can benefit most from the advantages of NWW and previously experienced a lower work-life balance than older employees. Within this analysis, there was a positive relationship, but also not significant enough to make reliable assumptions.

Hypothesis 1d which state that the shorter the organizational tenure, the stronger the positive relationship between NWW and work-life balance, also had to be rejected. Within this statement, little relevant literature was known, but available theories state that employees with higher organizational tenure experience a better work-life balance (Acerta,2016; Smith and Gartner, 2007) This research assumed that for employees with a higher organizational tenure, there would not be a lot of difference in the degree of balance by introducing NWW because they already experienced a good work-life balance. For employees who are employed shorter and, according to the theory, experience a lower degree of work-life balance, the introduction of NWW may have a greater positive impact on the balance of work and private life. Within the data, there was a negative relationship, but also not significant enough to make reliable assumptions. Also here, it should be noted that in the current sample there was no equal distribution of the organizational tenure. A large part of the participants has been working for Alliander Bellevue for a long period, and could be a reason why no significant effect emerged.

Hypothesis 2 which state that the more home-living children, the weaker the relationship between NWW and work-life balance had to be rejected as well. Prior studies found that working couples without children report greater balance, while the presence of children was significantly related to lower balance (Tausing and Fenwick, 2001). Various other studies suggested that an increased number of children at home results in increased home demands causing additional stress and work family conflict (Lundberg and Chesney, Eds; Elliot, 2003). In this data, no significant relationship exists to make reliable assumptions. A reason for the fact that no significant relationship can be found between the number of home-living children and the relationship between NWW and work-life balance can have various reasons. Within this study, it can play a role that a large part of the sample (40.5%) has no home-living children. Besides that, having no children living at home (anymore) does not always say that there is no major concern for care. Also many other family circumstances and the distribution of care tasks between parents can play a role in this effect.

Hypothesis 3 which states that the higher the need for recovery, the weaker the positive relationship between NWW and work-life balance also had to be rejected. It was expected that for employees with a high need for recovery, the introduction of NWW can have a major impact on work-life balance. This because prior theories state that the positive relationship between NWW and work-life balance depends on whether employees engage in recovery activities after work related to employee recovery needs. In addition, NWW is often used in the literature as a synonym of always at working. Within the data, there was a negative relationship, but not significant enough to make reliable assumptions. However, it should be noted that there was a significant negative relationship between the direct effect of recovery needs and work life balance, which indicates that a higher need for recovery leads to a weaker work-life balance for employees at Alliander Bellevue.

Hypothesis 4 states that higher need for structure leads to a weaker positive relationship between NWW and work-life balance. Also, this Hypothesis could not be accepted, because there was no significant relationship. Although modern work allows employees to work flexibly and autonomously, it was expected that not every employee may welcome these 'benefits'. The possibility to make decisions about many aspects of one's job where expected to result in uncertainty and role ambiguity (Burger, 1989). Within the data, there was a positive relationship, but not significant enough to make reliable assumptions.

Whereby Hypotheses 1 to 4 look at person-related moderators, Hypothesis 5 and 6 look at the work-related moderators which can play a role in the relationship between NWW and work-life balance. Hypothesis 5 states that the higher the autonomy and meaningfulness of the job, the stronger the relationship between NWW and work-life balance. Within the analysis, there is a positive relationship which is not significant and therefore had to be rejected. It was expected that employees with high levels of authority need to have the freedom to make use of teleworking possibilities, such that teleworking only helps improving work-life balance when coupled with autonomy. When employees experience a high meaningfulness of the job, this provides a positive impact on the field of work-life balance and contributes to the fact that employees feel involved at work. The aspects that are considered to be significant in other theories did not came up in this research. Therefore, no valid statements can be made regarding these factors. However, it should be noted that there was a significant positive relationship between the direct effect of job characteristics and work life balance, which indicates that higher autonomy and meaningfulness of the job leads to a better balance between work and private life. This can be explained by a higher degree of autonomy and meaningfulness of the job, which gives employees more freedom in organizing their work and tasks. Within Alliander Bellevue, this can lead to a sense of appreciation and the feeling of delivering added value, which has a positive contribution to the work environment

As mentioned previously, this research has shown that of all examined moderators, only the work-related factor 'worked hours at home' (Hypothesis 6) has a significant negative impact on work-life balance. According to Baruch (2000), employees who make use of teleworking needs to have self-discipline with inner motivation both to work and to stop. As mentioned by Golden and Veiga (2005) and Virick, DaSilva and Arrigto (2010), the benefits of NWW may have the form of an intervened U-shape. The association is positive to a certain extent, reaches an optimum and finally becomes a bit negative when employees work more than a certain number of hours at home per week. In this study there was no curvilinear connection and it appeared that the highest level of work-life balance occurs when NWW is low and the hours worked at home are high. This gives a different reason than previous literature, which is difficult to explain. To find out whether the use of new media, self-determination of working hours, and the use of communication tools have an impact on the negative relationship, they were one by one excluded from the analysis. But also here no explanatory connection could be found.

## 5.2 PRACTICAL IMPLICATIONS

---

This research brought renewal in research on the NWW management philosophy with the involvement of a large number of work-related and person-related factors and brings clarification into the debate about relationships between NWW and work-life balance. From the results, it is clear that

implementing NWW is beneficial to the employees' work-life balance. The research confirmed that NWW has a positive effect on work-life balance, but when the hours of working home increases, the positive relationship between NWW and work-life balance decreases.

In addition, there were also moderators who have a direct impact on work-life balance. The first significant positive relationship has been found between the direct effect of job characteristics and work life balance, which indicates that higher autonomy and meaningfulness of the job leads to a better balance between work and private life. For Alliander, this outcome can be valuable in discussing functions and responsibilities with employees. Since this effect has been demonstrated, the company can be more aware of the fact that job characteristics play a significant role in the relationship between work and private life and can show more interest in the wishes and needs of employees in this area. For Alliander Bellevue, it is important to let employees feel their added value and to give them their responsibilities where possible in order to improve the work-life balance of employees.

Second, a direct relationship with a significant effect has been found in relationship between the effect of recovery needs and work life balance. This effect indicates that a higher need for recovery leads to a weaker work-life balance for employees at Alliander Bellevue. This result can also be of value to know for Alliander because this outcome shows that paying attention to recovery is essential for an improvement in the balance between work and private life.

Using the results of this research, the organization has a better understanding of the extent upon which NWW practices affect work-life balance and the influence of work-related and person-related factors. This information can be used to optimize NWW within the organization. Because the role of different person and work-related factors in the relationship between NWW and work-life balance has become clear, Alliander can obtain a better impression of the recent situation and can make adjustments to their HR policies. The above data, in conjunction with the theoretical implications, indicate that it is important to take into account aspects such as NWW, job characteristics, and recovery needs as direct effects on work-life balance. In addition, it shows that issues such as gender and age play no significant role in the relationship to work-life balance, which indicates that less attention could be paid to this factors when drawing up procedures and policies.

In addition, the significant relationship between working home and the relationship between NWW and work-life balance provides input for further research into the optimum of hours associated with the highest work-life balance. More about this in the next section, which deals with recommendations for further research.

### 5.3 LIMITATIONS AND FURTHER RESEARCH

---

A first limitation in this study is that only a quantitative research method has been used. Had it been possible in the current research to include both a qualitative and a quantitative approach, greater insight may have been gained into the reasons why the introduction of NWW leads to a better work-life balance. In addition, it could have provided more insight into the effects of work and person-related factors. Qualitative data may also made it possible to identify new items which could have an influence on the relationship between NWW and work-life balance.

A second limitation of the current research is that there only has been looked into a part of person-related and work-related factors that could play a role in the relationship between NWW and work-life balance. This implies the limitations that there could be other person-related and work-related factors which are of influence. It is therefore important to study more about the role which person-related and work-related factors play in the field of NWW and work-life balance.

Another limitation is the cross-sectional nature of the study. In this cross-sectional study, data is collected at a single point in time to examine the relationship between NWW and work-life balance in combination with moderating effects of work-related and person-related factors. Besides, this is a good method for descriptive analyses and for generating Hypotheses, it is difficult to determine whether the outcome followed exposure in time or exposure resulted from the outcome and the associations identified may be difficult to interpret. In addition, it is worth noting that in this research the sample consist for 82.4% of average or higher educated participants (HAVO, VWO, HBO or WO). Although there were no significant differences in educational level on the relationship between NWW and work-life balance, the high percentage of higher educated employees may have affected the relationship which has been found in this research.

In a follow-up study, a qualitative study can be done, whereby respondents give their reasoning behind the answers so more detailed information can be gathered. For example, a starting point can be group discussions or in-depth interviews which will give the researcher an impression about the opinions of the employees and managers. This gives better insights into the balance between NWW and work-life balance, and policies can be adjusted to make this balance even more optimal. In addition, there will be more insight into the person-related and work-related aspects, which affect the relationship between NWW and work-life balance.

As mentioned previously, the significant relationship between worked hours at home and the relationship between NWW and work-life balance provides input for further research into the optimum of hours associated with the highest work-life balance. This research indicates that the highest level of work-life balance occurs when NWW is low and working hours at home are high. When there becomes a clearer picture into the optimum of working hours and the underlying reasons, adjustments can be made in terms of policy making and segmentation.

## 5.4 CONCLUSION

---

This Master Thesis studied to what extent NWW practices influence work-life balance within Alliander Bellevue in comparison with the moderating effects of work-related and person-related factors. Some Hypotheses were rejected in this Master Thesis, whereas some Hypotheses were accepted. However, this Master Thesis created some new insights into the relationship between NWW and work-life balance, and the role of person-related and work-related moderators. To answer the main question; NWW has a significant positive influence on the work-life balance within Alliander Bellevue. In addition, it turns out that the moderating effect hours worked at home has a significant negative effect on the relationship between NWW and work-life balance. Besides that, there are moderators who have a direct impact on work-life balance. The first significant positive relationship is found between the direct effect of job characteristics and work life balance. The second direct relationship with a significant relationship is found in the negative effect of need for recovery on work-life balance.

With the help of this research and results, the researcher hopes to contribute to the optimization of the NWW management philosophy within Alliander Bellevue. Hopefully, further research will contribute in assessing the optimum of working hours at home in in order to find a solid balance between work and private life.



## REFERENCE LIST

---

- Acerta. (2016, January 26). Een derde van zelfstandigen ontevreden over werk-privébalans. Retrieved June 7, 2017, from <http://www.kmo-insider.biz/nieuws/inside-info/een-derde-van-zelfstandigen-ontevreden-over-werk-privebalans>
- Allen, T.D. (2001). Family-supportive work environments: The role of organizational perceptions. *Journal of Vocational Behavior*, 58, 414 – 435.
- Allen, D. K., & Shoard, M. (2005). Spreading the load: mobile information and communication technologies and their effect on information overload. *Information Research* 10, paper 227. <http://InformationR.net/ir/10-2/paper227.html>. Accessed 15 January 2011.
- Arbo Unie. (2011, May 11). Balans Werk en Gezinsleven veelal goed. Retrieved from <https://www.arbounie.nl/nieuws/persberichten/balans-werk-en-gezinsleven-veelal-goed>
- Baane, R., Houtkamp, P., & Knotter, M. (2010). Het nieuwe werken ontrafeld [Unraveling new ways of working]. Assen, The Netherlands: Koninklijke Van Gorcum/Stichting Management Studies
- Babbie, E. (2004). *The practice of social research* (10th edition). Thomson Wadsworth.
- Baruch, Y. (2000). Teleworking: benefits and pitfalls as perceived by professionals and managers. *New Technology, Work and Employment* (15:1), 34-49.
- Barnett, R. C., Marshall, N. L., & Sayer, A. (1992). Positive-spillover effects from job to home: A closer look. *Women & Health*, 19, 13–41.
- Beckers, D. G., Kompier, M. A., Kecklund, G., & Härmä, M. (2012). Worktime control: theoretical conceptualization, current empirical knowledge, and research agenda. *Scandinavian journal of work, environment & health*, 291-297.
- Bell, B. S., & Kozlowski, S. (2002). A typology of virtual teams: Implications for effective leadership. *Group & Organization Management*, 27(1), 14-49.
- Bellavia, G.M., & Frone, M.R., 'Work-family conflict'. In: Barling, J., Kelloway, E.K., Frone, M.R (Eds), *Handbook of Work Stress*, Sage Publications, London, 2005, pp.113-147.
- Bluyssen, P., Bakker, L., Cox, C., De Groot, E., De Gids, W., Moons, A., Opstelten, J. (2002). Persoonlijke (decentrale) beheersing van het binnenmilieu op de werkplek: mogelijkheden nu en later. Retrieved July 24, 2017, from <https://repository.tudelft.nl/search/tno/?q=title%3A%22Persoonlijke%20%28decentrale%29%20beheersing%20van%20het%20binnenmilieu%20op%20de%20werkplek%3A%20mogelijkheden%20nu%20en%20later%22>
- Bragger, J., Kutcher, E.J., Indovino, L., & Rosner, E. (2005). Work-family conflict, work-family culture, and organizational citizenship behavior among teachers. *Journal of Business and Psychology*, 20(2), 303-324.
- Bryman, A., & Bell, E. (2011). *Business Research Methods* (3rd edition). New York: Oxford University Press Inc.

Burger, J. M. (1989). Negative reactions to increases in perceived personal control. *Journal of Personality and Social Psychology*, 56, 246-256. doi: 10.1037/0022-3514.56.2.246

Bihani, P., & Patil, S. T. (2014). A comparative study of data analysis techniques. *International Journal of Emerging Trends & Technology in Computer Science*, 3(2), 95-101.

Binnewies, C., Sonnentag, S., & Mojza, E. J. (2009). Daily performance at work: feeling recovered in the morning as a predictor of day-level job performance. *Journal of Organizational Behavior*, 30, 67–93.

Bijl, D. (2009). Aan de slag met het nieuwe werken. Zeewolde: ParCC.

Centraal Bureau voor statistiek. (2017, January 25). Thuiswerken door werknemers en zelfstandigen. Retrieved from <https://www.cbs.nl/nl-nl/achtergrond/2017/04/thuiswerken-door-werknemers-en-zelfstandigen>

Clutterbuck, D. (2003). *Managing work-life balance: a guide for HR in achieving organisational and individual change*. CIPD Publishing.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.

Cunningham, C.E., Woodward, C.A., Shannon, HS., MacIntosh, J., Lendrum B., Rosenbloom, D., &

Brown, J. (2002). Readiness for organizational change: A longitudinal study of workplace, psychological and behavioural correlates. *Journal of Occupational and Organizational Psychology*, 75, 377-392

Dabbish, L. A., R. E. Kraut. 2006. Email overload at work: An analysis of factors associated with email strain. *Proc. ACM Conf. Comput. Supported Cooperative Work*. ACM, New York, 431–440.

Davis, G. B. (2002). Anytime/anyplace computing and the future of knowledge work. *Communications of the ACM*, 45(12), 67–73.

Derks, D., & Bakker, A. B. (2010). The impact of e-mail communication on organizational life. *Cyberpsychology. Journal of Psychosocial Research on Cyberspace*, 4(1). <http://cyberpsychology.eu/view.php?cisloclanku=2010052401&article=1>.

De Jonge, J. & Rutte, C., (1999). Een quasi-experimenteel veldonderzoek naar de psychologische effecten van een flexibel kantoorconcept (A quasi-experiment investigating the psychological effect of desk-sharing). *Gedrag en Organisatie*, 12, 427–444.

Derks, D., & Bakker, A. B. (2011). The impact of smartphone use of work-home interference, recovery and daily well-being: a diary study. Manuscript under review.

Derks, D., ten Brummelhuis, L. L., Zecic, D., & Bakker, A. B. (2011). Switching on and off. Does smartphone use obstruct the possibility to engage in recovery activities? Manuscript under review.

Demerouti, E., Derks, D., Ten Brummelhuis, L. L., & Bakker, A. B. (2009). New ways of working: Impact on working conditions, work-family balance, and well-being. In P. Hoonakker & C. Karunka (Eds.), *Acceleration: Information technology and quality of working life*. Berlin: Springer Science.

- Deusen, F.R. van, James, J.B., Gill, N., & McKechnie, S.P. (2008). Overcoming the Implementation Gap: How 20 leading companies are making flexibility work. Boston College Center for Work & Family.
- Devaraj, S., Easley, R.F., & Crant, M. (2008). How does personality matter? Relating the five-factor model to technology acceptance and use. *Information Systems Research*, 19(1), 93-105
- de Croon, E. M. (2003). Stressful work, sickness absence and turnover in truck drivers from etiology to prevention.
- Dimitrova, D. (2003). Controlling teleworkers: supervision and flexibility revisited. *New Technology, Work and Employment*, 18(3), 181-195.
- Doyle, J. and Reeves, R. (2001) *Time Out: The case for Time Sovereignty* London: The Industrial Society.
- Duxbury, L. E., Higgins, C. A., & Lee, C. (1994). Work-family conflict: a comparison by gender, family type, and perceived control. *Journal of Family Issues* 15, 449–466.
- Devadoss AV, Minnie JB (2013) A study of personality influence in building work life balance using fuzzy relation mapping (FRM). *Indo-Bhutan International Conference on Gross National Happiness*. 2: 211-216.
- De Leede, J. (2017). *New ways of working practices: antecedents and outcomes* (Rev. ed.). Bringley, United Kingdom: Emerald Group Publishing Limited.
- Di Martino, V., & Wirth, L. (1990). Telework: A new way of working and living. *Int'l Lab. Rev.*, 129, 529.
- Dooley, D. (2009). *Social Research Methods* (4th edition). Harlow: Pearson Education Limited.
- Edwards, J.R. & Rothbard, N.P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review*, 25, 178 – 199.
- Ehrhart, M. G., Holcombe Ehrhart, K., Roesch, S. C., Chung-Herrera, B. G., Nadler, K., & Bradshaw, K. (2009). Testing the latent factor structure and construct validity of the ten-item personality inventory. *Elsevier*, 900-905.
- Elliot M (2003) Work and family role strain among university employees. *Journal of Family and Economic Issues*. 24(2): 157-180.
- Fagan, C. (2001) Time, Money and the Gender Order: Work Orientations and Working-Time Preferences in Britain. *Gender, Work and Organization*, 8, 3, 239-266
- Fenner, G. H., & Renn, R. W. (2004). Technology-assisted supplemental work: construct definition and a research framework. *Human Resource Management*, 43, 179–200.
- Finegold, D., Mohrman, S., & Spreitzer, G. M. (2002) Age effects on the predictors of technical workers' commitment and willingness to turnover. *Journal of Organizational Behavior*, 23, 655-674.
- Fisher, G. (2001). *Work/Personal Life Balance: A construct development study*. DISSERTATION ABSTRACTS INTERNATIONAL. 002119, August 2001.

- Fisher-McAuley, G., Stanton, J., Jolton, J., & Gavin, J. (2003). Modelling the relationship between work life balance and organisational outcomes. Paper presented at the ANNUAL CONFERENCE OF THE SOCIETY FOR INDUSTRIAL-ORGANISATIONAL PSYCHOLOGY. Orlando, April 12, 2003, 1-26.
- Fox, M. F., Fonseca, C., & Bao, J. (2011). Work and family conflict in academic science: Patterns and predictors among women and men in research universities. *Social Studies of Science*, 41(5), 715-735.
- Friedman, S. D., & Greenhaus, J. H. (2000). *Work and family—allies or enemies? What happens when business professionals confront life choices*. New York: Oxford University Press.
- Frone, M.R., Yardley, J.K. & Markel, K.S. (1997). Developing and testing an integrative model of the work-life interface. *Journal of Vocational Behavior*, 50, 145 – 167.
- Gajendran, R. S., & Harrison, D. A. (2007). The Good, the Bad, and the Unknown About Telecommuting: Meta-Analysis of Psychological Mediators and Individual Consequences. *Journal of Applied Psychology* (Vol. 92, No. 6), 1524-1541.
- Geurts, S. A. E., & Demerouti, E. (2003). Work/non-work interface: A review of theories and findings. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *The handbook of work and health psychology* (pp. 279– 312). New York: Wiley.
- Grzywacz, J. G., Almeida, D. M., & McDonald, D. A. (2002). Work–family spillover and daily reports of work and family stress in the adult labor force. *Family relations*, 51(1), 28-36.
- Grebner, S., Semmer, N. K., & Elfering, A. (2005). Working conditions and three types of well- being: a longitudinal study with self-report and rating data. *Journal of Occupational Health Psychology*, 10, 31–43.
- Greenblatt, E. (2002). Work/life balance: Wisdom or whining. *Organizational Dynamics*, 31(2), 177-193.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of management review*, 10(1), 76-88.
- Grimm-Thomas, K., & Perry-Jenkins, M. (1994). All in a day's work: Job experiences, self-esteem, and fathering in working-class families. *Family Relations*, 43, 174– 181.
- Golden, T. D., & Veiga, J. F. (2005). The impact of extend of telecommuting on job satisfaction: Resolving inconsistent findings. *Southern Management Association*, 31(2), 301-316
- Golden, B. L., Rashaan, S., & Wail, E. A. (Eds.). (2008). *The vehicle routing problem: latest advances and new challenges* (Vol. 43). Springer Science & Business Media.
- Gosling, S. D. ,Renfrew, P. J., and Swann Jr. W. B. (2003). A very brief measure of the Big-Five personality domains. *JOURNAL OF RESEARCH IN PERSONALITY*, 37, 504-528.
- Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work–family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psy- chology*, 5, 111–126.
- Hahn, V.C., Binnewies, C., Sonnentag, S. & Mojza, E.J. (2011). Learning how to recover from job stress: Effects of a recovery training program on recovery, recovery-related self-efficacy, and well-being. *Journal of Occupational Health Psychology* 16(2), 202- 216.

Hengst, M. den, Leede, J. de, Looze, M. de, Krause, F., & Kraan, K. (2008). Werken op afstand, virtuele teams en mobiel werken. TNO, Hoofddorp, 2008.

Hertel, G., Niedner, S., & Hermann, S. (2003). Motivation of software developers in open source projects: An internet-based survey of contributors to the linux kernel. *Research Policy*, 32, 1159-1177.

Hill, E. J., Ferris, M., & Martinson, V. (2003). Does it matter where you work? A comparison of how three work venues (traditional office, virtual office, and home office) influence aspects of work and personal/family life. *Journal of Vocational Behavior* (63), 220-241.

Hochschild, A. (1997) *The Time Bind*, New York: Metropolitan Books

Hudson (2005). The case for work/life balance: Closing the gap between policy and practice. Hudson Global Resources 20:20 series.

Illegems & Verbeke (2004). Moving towards the virtual workplace: managerial and societal perspectives on telework. *The Journal of Industrial Relations*, 46, 459–571.

Jansen, N., H. W., Kant, I., Nijhuis, F. J. N., Swaen, G. M. H., & Kristensen, T. S. (2004). Impact of worktime arrangements on work-home interference among dutch employees. *Scandinavian Journal of Work, Environment & Health*, 30(2), 139-148.

Jansen, N.W.H., Kant, I.J., van Amelsvoort, L.G.P.M., Nijhuis, F.J.N. & van den Brandt, P.A. (2003). Need for recovery from work: Evaluating short-term effects of working hours, patterns and schedules. *Ergonomics* 46(7), 664-680.

Jenson, G. (1994). *Balancing work and family: Challenges and solutions*. Logan, Utah: Utah State University.

Jung, D.I., Chow, C., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: hypotheses and some preliminary findings. *The Leadership Quarterly*, 14, 525–544.

Kaur J (2013) Work-life balance: Its correlation with satisfaction with life and personality dimensions amongst college teachers. *International Journal of Marketing, Financial Services & Management Research*. 2(8): 24-35.

Kemp, F. O. (2013). *New Ways of Working and Organizational outcomes: The role of Psychological Capital*. (Master's Thesis). Available from [innovatiefinwerk.nl](http://www.innovatiefinwerk.nl/sites/innovatiefinwerk.nl/files/field/bijlage/o.2013.mthese.kemp_.pdf) via: [http://www.innovatiefinwerk.nl/sites/innovatiefinwerk.nl/files/field/bijlage/o.2013.mthese.kemp\\_.pdf](http://www.innovatiefinwerk.nl/sites/innovatiefinwerk.nl/files/field/bijlage/o.2013.mthese.kemp_.pdf)

Kirchmeyer, C. (1992) Perceptions of nonwork-to-work spillover: Challenging the common view of conflict-ridden domain relationships. *Basic and Applied Social Psychology*, 13(2), 231-249.

Kirchmeyer, C. (1995). Managing the work-nonwork boundary: An assessment of organizational responses. *Human Relations*, 48, 515 – 536.

Kundnani, N., & Mehta, P. (2014). ROLE OF PERSONALITY TRAITS IN BALANCING WORK-LIFE. *International Journal of Management Research and Reviews*, 4(7), 722.

Konrad, A. & Mangel, R. (2000). The impact of work-life programs on firm productivity. *Strategic Management Journal*, 21, 1225 – 1237.

Kossek, E. E., Lautsch, B. A., & Eaton, S. C. (2006). Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work-family effectiveness. *Journal of Vocational Behavior* (68), 347-367.

Lambert, S. J. (1990). Processes linking work and family: A critical review and research agenda. *Human relations*, 43(3), 239-257.

Van der Lippe, T., Jager, A., & Kops, Y. (2003). In balans tussen werk en privé? De invloed van de arbeidssituatie en de thuissituatie op combinatiedruk van mannen en vrouwen. *Bevolking en Gezin*, 32(3), 3-24.

Lunenborg, P. 2006. De balans tussen werk en privé – Een explorerend onderzoek naar empirische verbanden met de satisfactiebalans. *Afstudeerscriptie Erasmus Universiteit Rotterdam, Faculteit der Economische Wetenschappen*

Lundberg, Chesney M (Eds.), *Women, work and health: Stress and opportunities* New York: Plenum. p. 111–136.

MacDermid, S. M., & Williams, M. L. (1997). A within- industry comparison of employed mothers' experiences in small and large workplaces. *Journal of Family Issues*, 18, 545–566.

Mann, S., & Holdsworth, L. (2003). The psychological impact of teleworking: stress, emotions and health. *New Technology, Work and Employment*, 18, 196–211.

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth & H. Thierry (Eds.), *Handbook of work and organizational psychology* (Vol 2: Work Psychology, pp. 5–33). Hove, England: Psychology Press.

Menaghan, E. G., & Parcel, T. L. (1991). Determining children's home environments: The impact of maternal characteristics and current occupational and family conditions. *Journal of Marriage and the Family*, 53, 417– 431.

McCrae, R.R., & Costa, P.T. (1997). Conceptions and correlates of openness to experience. In Hogan, R., Johnson, J. & Briggs, S. (Eds). *Handbook of Personality Psychology* (pp. 825-847). San Diego: Academic Press

McDowell, L (2001) Father and Ford revisited: gender, class and employment change in the new millennium. *Transactions of the Institute of British Geographers* 26 (4) 448-465.

Middleton, C. A., & Cukier, W. (2006). Is mobile email functional or dysfunctional? Two perspectives on mobile email usage. *European Journal of Information Systems*, 15, 252–260.

Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91, 1321-1339.

- Neuberg, S. L., & Newsom, J. T. (1993). Personal need for structure: Individual differences in the desire for simpler structure. *Journal of Personality and Social Psychology*, 65(1), 113-131.
- Nijp, H.H., Beckers, D., Geurts, S., Tucker, P., Kompier, M., 2012. Systematic review of the association between employee worktime control and work-nonwork balance, health, and well-being, and job related outcomes. *Scand. J. Work Environ. Health* 38, 299-313.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge creation company: how Japanese companies create the dynamics of innovation*. New York.
- Oreg, S. (2003). Resistance to change: Developing an individual differences measure. *Journal of Applied Psychology*, 88(4), 587-604
- O'Neill, T. A., Hambley, L. A., Greidanus, N. S., MacDonnell, R., & Kline, T. J. (2009). Predicting teleworker success: an exploration of personality, motivational, situational, and job characteristics. *New Technology, Work and Employment* (24:2), 144-162.
- Peeters, M. & Heiligers, P. (2013). De balans tussen werk en privé. In W. Schaufeli & A. Bakker (2013). *De psychologie van arbeid en gezondheid* (pp. 299-314). Houten: Bohn Stafleu Van Loghum.
- Perez M. P., Sanchez A. M., Carnicer P. and Jimenez J. V. (2002), "Knowledge tasks and teleworking: a taxonomy model of feasibility adoption", *Journal of Knowledge Management*, vol. 6, no. 3, 2002 pp. 272-284.
- Pierik, L. (2011). *The Effects of New Ways of Working*. Retrieved from [essay.utwente.nl/62939/1/Final\\_version\\_Master\\_Thesis\\_LPierik.pdf](http://essay.utwente.nl/62939/1/Final_version_Master_Thesis_LPierik.pdf)
- Pitt Catsouphe, M. & Marchetta, A. (1991). *A coming of age: Telework*. Boston: Boston University, Center on Work and Family.
- Raghuram, S., & Wiesenfeld, B. (2004). Work-nonwork conflict and job stress among virtual workers. *Human Resource Management*, 43(2-3), 259.
- Redman, T., Snape, E., & Ashurst, C. (2009). Location, Location, Location: Does Place of Work Really Matter? *British Journal of Management* (Vol. 20), 171-181.
- Rennecker, J., & Derks, D. (2012). Email overload: fine tuning the research lens. In D. Derks & A. B. Bakker (Eds.), *The psychology of digital media @ work*. London, UK: Psychology Press.
- Rennecker, J. and Godwin, L. (2003) "Theorizing the Unintended Consequences of Instant Messaging (IM) for Worker Productivity," *Sprouts: Working Papers on Information Environments. Systems and Organizations*, (3), Available at <http://weatherhead.cwru.edu/sprouts/2003/030307.pdf>
- Ritchie, D. (1997). Parents' workplace experiences and family communication patterns. *Communication Research*, 24, 175-187.
- Rosner B. *Fundamentals of Biostatistics*. 7th ed. Boston, MA: Brooks/Cole; 2011.
- Russell, W., Purvis, L.M., & Banks, A. (2005). Describing the strategies used for dealing with email interruptions according to different situational parameters. *Computers in Human Behavior*, 23, 1820-1837.

Sanchez, A.M., M.P. Perez, P. de Luis Carnicer and M.J. Vela-Jimenez (2007): "Teleworking and workplace flexibility: a study of impact on firm performance." *Personnel Review*, 36 (1), 42–64.

Shah, S. K. (2006). Motivation, governance, and the viability of hybrid forms in open source software development. *Management Science*, 52, 1000-1014.

Siegel, P. A., Post, C., Brockner, J., Fishman, A. Y., & Garden, C. (2005). The moderating influence of procedural fairness on the relationship between work-life conflict and organizational commitment. *Journal of Applied Psychology*, 90(1), 13.

Slijkhuis, M. (2012). A structured approach to need for structure at work. Proefschrift, Rijksuniversiteit Groningen.

Smith, J., & Gardner, D. (2007). Factors affecting employee use of work-life balance initiatives.

Sonnentag, S. & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model as an integrative framework. *Journal of Organizational Behavior* 36, 72-103.

Sonnentag, S., & Geurts, S. A. (2009). Methodological issues in recovery research. In S. Sonnentag, P. L. Perrewe & D. C. Ganster (Eds.), *Current perspectives on job-stress recovery*. (pp. 1–37). Bingley, UK: JAI press.

Sonnentag, S., & Zijlstra, F. R. (2006). Job characteristics and off-job activities as predictors of need for recovery, well-being, and fatigue. *Journal of Applied Psychology*, 91(2), 330-350.

Sullivan, C., & Lewis, S. (2001). Home-based telework, gender, and the synchronization of work and family: perspectives of teleworkers and their co-residents. *Gender, Work and Organizations*, 8(2), 123-145.

Te Lintelo, A. (2011). A practice oriented research to identify the competencies that are needed for a successful New Way of Working at Alliander. Retrieved from [http://essay.utwente.nl/62810/1/Masterthesis\\_-\\_Annemiek\\_te\\_Lintelo\\_\(s0220760\).pdf](http://essay.utwente.nl/62810/1/Masterthesis_-_Annemiek_te_Lintelo_(s0220760).pdf)

Ten Brummelhuis, L. L., Halbesleben, J. R. B., & Prabhu, V. (2011). Development and validation of the New Ways of Working Scale. Paper presented at the Annual meeting of the Southern Management Association, Savannah, USA.

Ten Brummelhuis, L. L., & van der Lippe, T. (2010). Effective work–life balance support for various household structures. *Human Resource Management*, 49, 175–195.

Ten Brummelhuis, L.L. ten, Bakker, A.B., Hetland, J., & Keulemans, L. (2012). Do new ways of working foster work engagement? *Psicothema*, 24(1), 113-120.

The Workforce Institute. (2011). Drive time to work. Retrieved June 6, 2017, from <https://www.kronos.com/pdfBuilder.aspx?id=13817&LangType=1033>

Thompson, J. (2011). *Organizations in action: Social science bases of administrative theory*. Transaction Publishers.

Thompson, C. A., Beauvais, L. L., & Lyness, K. S. (1999). When work–family benefits are not enough: the influence of work–family culture on benefit utilization, organizational attachment, and work–family conflict. *Journal of Vocational Behavior*, 54, 392–415.



Thompson, M.M., Naccarato, M.E. and Parker, K.E. "Assessing Cognitive Need: The Development of the Personal Need for Structure and the Personal fear of Invalidity Scales," Paper presented at the Annual meeting of the Canadian Psychological Association, Halifax, Nova Scotia (1989).

Truxillo, D. M., Cadiz, D. M., Rineer, J. R., Zaniboni, S., & Fraccaroli, F. (2012). A lifespan perspective on job design: Fitting the job and the worker to promote job satisfaction, engagement, and performance. *Organizational Psychology Review*, 2(4), 340-360.

Van Haren, N. (2012). The New Way of Working and Performance: The role of Human Resource Attributions. Retrieved from [arno.uvt.nl/show.cgi?fid=127266](http://arno.uvt.nl/show.cgi?fid=127266)

Van Veldhoven, M. J. P. M., & Broersen, S. (2003). Measurement quality and validity of the “need for recovery scale”. *Occupational and environmental medicine*, 60(suppl 1), i3-i9.

Vakola, M., Tsaousis, I., & Nikolaou, I. (2004). The role of emotional intelligence and personality variables on attitudes toward organization change. *Journal of Managerial Psychology*, 19(2), 88-110

Van Hooff, M. L. M., Geurts, S. A. E., Kompier, M. A. J., & Taris, T. W. (2006). Work-home interference: How does it manifest itself from day to day? *Work & Stress*, 20, 145–162.

Virick, M., DaSilva, N., & Arrington, K. (2010). Moderators of the curvilinear relation between extent of telecommuting and job and life satisfaction: The role of performance outcome orientation and worker type. *Human Relations*, 63(1), 137-154.

Vos, P., & van der Voordt, T. (2001). Tomorrow’s offices through today’s eyes: Effects of innovation in the working environment. *Journal of Corporate Real Estate*, 4(1), 48-65.

Wittmann, M., Dinich, J., Mellow, M., & Roenneberg, T. (2006). Social jetlag: misalignment of biological and social time. *Chronobiology international*, 23(1-2), 497-509.

Working Conditions (EFILWC). (2010). Telework in the European Union. Retrieved from <http://www.eurofound.europa.eu/eiro/studies/tn0910050s/tn0910050s.htm>. Accessed on December 30, 2016