If Time Does Not Matter:
Flextime and Trust-Based Working Time and their Relation to
Job Satisfaction, Affective Organizational Commitment,
Work-Home Interference and Job Autonomy

Sarah Wulfert
Radboud Universiteit Nijmegen

Sarah Wulfert
Studentnummer: 0548952
1ste Universitaire Begeleider: Drs. Gerard Bergers
2de Universitaire Begeleider: Dr. Debby Beckers
Universitair Onderwijsinstituut voor Psychologie en Kunstmatige Intelligentie
Radboud Universiteit Nijmegen
23 Augustus 2010
Acknowledgement

I would like to offer my sincere gratitude to my supervisor, Drs. Gerard Bergers, for his wide knowledge, his constructive feedback, encouragement and guidance and for his support and advice from the initial to the final level of this thesis. Additionally, I would like to thank Dr. Debby Beckers for reviewing my thesis.

I would like to show my gratitude to my internship-supervisor Inga Voss, for her trust in me, for her encouraging words, personal guidance, for giving detailed and constructive comments and for her help in my difficult moments.

I am deeply grateful to Janet Wulfert and Bastiaan Lap, for their essential assistance during the back translation procedures of the questionnaires used in this thesis.

In addition, I would like to show my gratitude to Suzan Leenders, Daan Plette, Vivian Pasman and Janet for their detailed spelling and grammar control.

Lastly, I offer my regards and blessings to all of those who supported me in any respect during the completion of this thesis.

Sarah Wulfert
Abstract

This present study was designed to examine flextime and trust-based working time and their relation to job satisfaction, affective organizational commitment, work-home interference and perceived job autonomy. In addition, the theoretical framework regarding trust-based working time (i.e. a flexible work time schedule without time recording) was outlined. Data was gathered from 55 employees of a German organization, specialized in information technology and travel industry. It was hypothesized that employees working under trust-based working time (TBWT) arrangements report more job satisfaction, affective organizational commitment and perceive more job autonomy than employees working under flextime conditions. Furthermore, it was expected that employees in the trust-based working time condition experience more positive work-home and home-work spillover and moreover, less negative work-home and home-work spillover. Additionally, it was tested for a mediating effect of perceived job autonomy. Results indicated that employees in the TBWT-condition indeed reported more job satisfaction, affective organizational commitment and perceived more job autonomy. The hypotheses regarding work-home interference were not supported. The relationship between TBWT and the aforementioned variables was fully mediated by employee perceived job autonomy. The findings underscore the importance of job autonomy by applying flexible work time schedules. Further implications and possible future directions are discussed.

Keywords: trust-based working time, flextime, job autonomy, flexible work time schedule, work-home interference, job satisfaction, affective organizational commitment
**Abbreviations**

ANCOVA = Analysis of Covariance

ß = effect size

DIHK = Deutsche Industrie und Handelskammer

e.g. = for example (exempli gratia)

F = ratio of the mean square of regression

H = hypothesis

i.e. = that is (id est)

IG Metall = Industriegewerkschaft Metall

M = mean

n = total sample size

Nmiss = created variable, consisting of missing answers of subjects

p = statistical significance (probability)

r = correlation coefficient

R² = effect size

s. = see

S = subject

SD = standard deviation

s.e. = standard error

SPSS = Statistical Package for the Social Sciences

SWING-survey = Survey Work-Home Interaction-Nijmegen

TBWT = trust-based working time

WHI = work-home interference
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1. Introduction

Clocks slay time... time is dead as long as it is being clicked off by little wheels; only when the clock stops does time come to life. ~William Faulkner

In the end of the 19th Century scientific management (Taylorism) emerged, shifting the focus on employee’s working hours. In Taylor’s (1911) view, his approach enabled the employees to do more work in less time and punctuality was next to subordination an emphasized virtue in that time. In 1913 working time was mainly determined by the assembly line, invented by Henry Ford (Fordism). Later on, it gained even more significance through the invention of the attendance clock. In the past fifty years, a shift from a Fordist- to a more post-Fordist society occurred and still occurs (Lipietz, 1987; Watson, 2003). The post-Fordist organization is characterized by greater flexibility, higher levels of autonomy and more responsibility for the workforce (Cappelli et al., 1997). To summarize, the world around organizations is changing, and with it the understanding and application of working time.

Nowadays changes organizations have to face are of environmental, social and demographic character. Main environmental changes affecting the organization are the ongoing globalization, technological innovations and a decline of manufacturing. For instance, while in 1950 the majority of employees worked in the industrial sector, today most of the employees are working in the service sector. Influential social and demographic changes are the increasing number of women in the economic and working environment, the increase in the number of working mothers, especially among mothers of young children (Halpern, 2005), dual-earner families (Baltes, Briggs, Huff, Wright, & Neumann, 1999) and the rising interest in work–life balance (Bailyn et al., 2001). Due to these changes the application of regular and inflexible work-time schedules has become insufficient and adjustments in the nature of employment towards flexibility have been seen as one attempt to address the aforementioned changes (Twiname et al., 2006).

For management the question arises how an organization can gain sufficient flexibility to cope with the challenge of these changes. In the past decades the usage of numerous different strategies of workplace flexibility as an alternative approach to regular employment dispersed. More flexible arrangements, which gained more interest in organizations, are part time working schedules, flextime working schedules or more recently the introduction to trust-based working time arrangements, which is part of a broader trend towards
decentralization and indirect management. For the purpose of this study, flextime (also known as gliding time) and trust-based working time are examined.

Although research is published differentiating between regular and flexible work time schedules\(^1\) only a few studies can be found differentiating the effects of two different flexible work time schedules on the employees. The aim of this study is to address this gap and analyze the possible different effects of flexible work time schedule arrangements on the employee. More specifically, flextime and trust-based working time and their possible different relation to the employees’ affective organizational commitment, job satisfaction and work-life interference are researched, under consideration of their perceived autonomy.

The following section provides the theoretical framework of this study, including a definition of flextime and trust-based working time. Less empirical research is done regarding the effects of trust-based working time (TBWT). Therefore, the main focus of this study lies on the relatively recently applied TBWT arrangements. To generate hypotheses, section three gives an outlined differentiation of flextime and trust-based working time. Section four deals with possible effects of flextime and TBWT on the employee. In section five the methods of this study will be introduced followed by the statistical analyses in section six and the results of this study in section seven. This study ends with the discussion, limitations of this study, suggested future research, implications and the conclusion with regards to the study results.

2. Theoretical Framework

2.1 Regular employment

Before explaining alternative working schedules, it seems to be useful for comparison, to give an explanation of regular employment. Although no uniform definition exits, it is usually explained as a durably conceived relationship which is carried out fulltime (Süß & Kleiner, 2010). Fulltime work consists of a weekly working base of 35-42 hours from Monday to Friday. Furthermore, regular employment usually excludes shift work, overtime hours and flextime.

2.2 Flextime

The invention of flextime is usually credited to William Henning and its practical realization can be attributed to the entrepreneur Johannes Hengstler and Wilhelm Haller. In the end of the sixties the German-based Hengstler Company manufactured the impulse

\(^1\)Please refer to Kauffeld et al, 2004 for a study differentiation regular work time schedule to flextime.
counter, registered the trademark “Flextime” and supplied a variety of mechanical time recording systems. Hengstler promoted flextime by using the slogan “Ai laik Gleitzeit”\(^2\).

Flextime schedules allow variability in the starting and ending times of a work day and employees may choose times of arrival and departure. Most commonly, organizations specify core times during which employees must be present on the job. Moreover, the flextime model usually consists of five interrelated components (Golembiewski & Proehl, 1978), which are displayed in Table 1.

A survey conducted by the DIHK in 2004\(^3\), revealed that approximately 30 percent of the German companies are providing flexible work time schedules with core hours, with an increased appearance in the service sector. Moreover, in relation to other alternative work schedules, flextime is the most frequently applied and most preferred organizational flexibility strategy (Galpin & Skinner, 2004).

In general, previous research suggested positive effects of flextime on the organization as well as the employee. Halpern (2005) elaborated on the benefits of flextime for the organization by using a large sample with a wide variety of types of employment. She states that: “…the greater the number of time-flexible work policies available to the employee, the greater their loyalty to their employer, the fewer reported symptoms of stress and the greater the reduced costs to their employers due to reductions in days late for work (or left early), missed deadlines, and absenteeism”. In addition, flextime is linked to an increase in employee job satisfaction, organizational commitment, decreased absenteeism, turnover (Rogier & Padgett, 2004) and a decrease in the employees work family conflict (Hammer, 1997). Furthermore, the results of a meta-analysis revealed that implementing flexible working schedules in work-groups lead to an increase in productivity (Baltes et al, 1999).

\(^2\) Please refer to Gemsheimer (1996) for an overview of the history of time recording.

\(^3\) For more information, please refer to: http://www.tdl.bayern.de/tote%20dateien/Arbeitszeit/Medienzustimmung/Umfragen/DIHK-Umfrage%20Arbeitszeit.pdf
Table 1
Components of a flexible work time schedule (Adapted from Golembiewski and Proehl, 1978)

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Band Width</td>
<td>Total number of hours in the interval between the earliest possible starting time and the latest finishing time (usually between 6:00 am to 6:30 pm)</td>
</tr>
<tr>
<td>Core Hours</td>
<td>Total number of daily hours the employee must be at work (usually 10:00 to 12:00 am and 2:00 to 4:00 pm)</td>
</tr>
<tr>
<td>Flexible Hours</td>
<td>Total number of daily hours after, or in between core times that allows employees to make choices about starting and finishing work</td>
</tr>
<tr>
<td>Banking</td>
<td>Refers to carrying forward a surplus/deficit of hours worked</td>
</tr>
<tr>
<td>Variability of Employee’s Schedule</td>
<td>Refers to employee's freedom to vary hours from day-to-day and week-to-week, without prior approval from supervisors</td>
</tr>
</tbody>
</table>

Less is published regarding negative consequences of flextime. For instance, Wharton (1994) found that flextime positively relates to long work hours. More recently, Kelliher and Anderson (2010) found a link between flextime and work intensification. Their research revealed that flextime could lead to an increased work load and increased effort of the employee, which was due to the employee’s feeling of obligation. Referring to the social exchange theory, Kelliher and Anderson state, that because employees are grateful for flexible work time arrangements, they feel the obligation to give something in return (i.e. more effort).

A relatively new concept for flexible work time scheduling is trust-based working time (Vertrauensarbeitszeit), which is mostly applied in Germany and will be explained in the following.

2.3 Trust-based working time

Trust is a shared belief that you can depend on each other to achieve a common purpose. Davis (2000) defines trust as “the willingness of a party (trustor) to be vulnerable to the actions of another party (trustee) based on the expectation that the trustee will perform an action important to the trustor, regardless of the trustor's ability to monitor or control the trustee”. Since the Mid-1990s, trust became a major issue in management literature as being the basis of qualitative interpersonal relationships and a source of competitive advantage for organizations (Tan, 2009). It became a key concept of the post-bureaucratic organization, emphasizing fewer controls, empowered employees, flattened structures and less
formalization (Kanter, 2008). With trust-based working time arrangements trust was applied to flexible work time scheduling.

It is not certain who the inventor of the concept of trust-based working time (TBWT) is but Dr Andreas Hoff was one of the first authors publishing literature regarding TBWT. Until now, there is no consistent definition of trust-based working time (Hoff, 2002; Necati, 2005) but what most of the definitions have in common are the criteria: flexibility, personal responsibility of the employees, managerial renouncement of control and the most distinctive criteria, the abandonment of time registration. Under trust-based working time conditions employees may determine their own daily starting and ending times by agreement with colleagues and supervisors, in which case the company refrains from controlling the employee’s working times. The abandonment of centralized time recording implies that employees are responsible to organize working time according to their tasks and workload (Boehm et al., 2004). Different from other alternative work time schedules, TBWT is the only strategy which does not refer to time and therefore is characterized by a shift from time-to a result driven organization (Singe & Croucher, 2003). Moreover, TBWT is designed to be a more practical approach than flextime models, which often involve time registration and complex administration.

Wingen et al. (2004) state that although no representative studies exist over the extension in Germany, branch or organizational based research revealed that in 2002, 31% of German organizations were already applying TBWT. According to Singe and Croucher (2003) TBWT is more commonly applied in the private sector than in the public sector and rather in larger than in smaller organizations. Furthermore, TBWT is used particularly, where research and development activities predominate and/or a strong customer orientation in service and production prevails.

To the author’s knowledge almost no empirical based research is conducted regarding trust-based working time. Most of the TBWT literature is published by governmental or management institutions and is often based on the effects on organizational and economic performance. Examples are the reduction of administrative costs of work time recording and the decrease in overtime costs (note that overtime hours are not recorded).

Promising advantages of TBWT for the employee are increased autonomy to balance work and non-work requirements. For instance, Hoff (2002) suggested that TBWT leads to reduced turnover due to an improved employee work-life balance. Furthermore, he states that TBWT positively affects intrinsic motivation and job satisfaction and that trust-based working time could be used as an effective tool for starting reorganization processes. In addition, one
advantage of trust-based working time is a fairer performance appraisal, in the sense that the time being at work no longer can be considered as an appraisal criterion, which leads to an actual evaluation of personal achievements (Weidinger, 2002).

Possible negative consequences of TBWT are captured in the expression “Arbeit ohne Ende” (working without end), which describes the discrepancy between hours contractually agreed on and the hours actually worked (IG Metall, 2000; Pickshaus et al., 2001). Because the boundaries between work-and non-work are not clearly formulated, employees may have more difficulties to dissociate themselves from work and may make more overtime hours than under regular work time circumstances.

Before an analysis of flextime and trust-based working time and their possible different relation to employee related criteria can be accomplished, the following section gives a closer examination of the differences of the two alternative work time schedules.

3. Differentiation of flextime and trust- based working time

In this section, it is further elaborated on basic conditions of trust-based working time, with the intention to differentiate trust-based working time more clearly to flextime arrangements. Generally speaking, it is expected that due to a greater extend of trust, autonomy, responsibility, flexibility and the employee’s retaining of control, trust-based working time affects the employee more positively than flextime.

The main difference between flextime and trust-based working time is that, under flextime conditions employees have to clock their working time while under TBWT-conditions the registration of time is omitted. From a psychological perspective the abandonment of time registration enhances the individual responsibility of the employee. In this case the employee is trusted to a greater extend to organize his/her own workday than employees who do have to clock their work time. Research revealed that enhancing trust in the employee leads to more employee-side loyalty, motivation, commitment and job satisfaction. For instance Morgan and Hunt (1994) found in their study that trust works as a precursor of commitment. Garbarino and Johnson (1999) stated that there is a positive relationship between job satisfaction and perceived trust of the employee. Furthermore, trust influenced valued outcomes such as increased performance, enhanced communication, and decreased turnover (Burke et al., 2007).

Regarding autonomy, responsibility and control, two theoretical frameworks are of particular interest in this study, the “Job Characteristics Model” and the “Job Demand-
Control Model”. The Job Characteristics Model developed by Hackman and Oldham (1975) proposes that autonomy, as one of the five core job dimensions, influences critical psychological states such as experienced meaningfulness of work and experienced responsibility for outcomes of the work. The experienced autonomy in turn affects individual and organizational outcomes, like intrinsic work motivation and job satisfaction.

The relationship between autonomy and work is also described in the Job Demand-Control Model (Karasek, 1979). This model states, that the two dimensions job demands and job control lead to four different types of jobs. For instance, a job providing high demands and high job control would lead to an active job which offers the most learning possibilities.

Frese and Greif (1978) differentiated between autonomy and personal control. They defined personal control as the degree to which employees are able to influence condition in relation to their goals, needs and interests. Research confirmed that autonomy and personal control positively influence employee related criteria. For instance Ertel (1999) stated that more autonomy positively affected the perceived pleasure of the employee at work (fun), Langer and Rodin (1976) linked autonomy directly to psychological and physical health. Moreover, Greenberger and Strasser (1986) argued that organizational processes indeed can either decrease or increase the perception of employee control. They gave as an example, that denying an employee time off, may decrease perceived control, whereas the giving of the opportunity to occasionally work from home would increase the sense of control. In addition, Ala-Mursula et al. (2002) found in their research including 6442 municipal employees that control over work time in women was positively related to aspects of health such as self rated health status and negatively related to psychological distress.

Although the subject of trust, autonomy, responsibility and control gains more importance in the trust-based working time literature, to the author’s knowledge, no literature is published in respect to a differentiation of trust-based working time and other flexible work time schedule arrangements. Nevertheless, Wingen et al. (2004) and Hoff (2002) highlighted that, although even under TBWT-conditions, time autonomy is subject to restrictions (such as a general compulsory attendance and service times due to customer demands) employees experience more time autonomy under trust-based working time than under regular employment conditions. The omission of time registration in turn leads to more achievement motivation and job satisfaction (Wingen et al., 2004; IG Metall, 2000). Additional to time autonomy, Hoff (2002) reported freedom to the extend “when” tasks are fulfilled (individual leeway) under TBWT-conditions and emphasized that the TBWT is rather result- than time driven. Hapern (2005) found that one way to provide more control to the employees can be
achieved by offering flexibility of work hours, this way employees can take care for family members for instance, without missing time from work. Trust-based working time clearly has advantages over flextime work schedules because no time registration is obligated at all, which in turn allows for more freedom, autonomy and time control.

With regards to flexibility, Christensen (1990) emphasized the importance to consider the amount of flexibility a work time schedule offers. She suggested to differentiate between minimally flexible and maximally flexible work time schedules. According to Christensen, different levels of flexibility would lead to different impacts on the work-family balance of the employee, where maximally flexible work schedules would positively relate to positive work-home spillover. In this study the proposed distinction can be applied. Trust-based working time, offers maximal flexibility by allowing the employee to fully organize his/her own work time. Employees working under flextime conditions are bound to core-hours and only variation to the starting and ending times of a workday are permitted. In the distinction to trust-based working time, flextime would be rated as a minimally flexible work time schedule. A few authors differentiated flexibility in most commonly applied flexible work time schedules and reported TBWT as the most flexible schedule, whereas flextime came on fifth place (Friedrich, 2002; Wingen et al, 2004).

In conclusion, it is expected that employees working under trust-based working time arrangements experience more trust, autonomy, responsibility, control and flexibility than employees working under flextime conditions.

After the explanation of the necessary bases, for a closer examination and a holistic understanding of the topic, in the following the central topic of this study, possible effects of alternative work time schedules on the employee, is devised. More concretely, flextime and trust-based working time and their possible different relation to the employee’s commitment, job satisfaction, work-life interference, perceived job autonomy and the possible mediating effect of employee’s perceived autonomy are outlined.

4. The effects of flextime and trust-based working time on the employee

4.1 Job satisfaction

One of the first definitions of job satisfaction stems from Locke (1969). He stated that job satisfaction is the:”pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating one’s job values. Job dissatisfaction is the non-pleasurable emotional state resulting from the appraisal of one’s job as frustrating or blocking the attainment of
one’s values.” Spector (1996) offered a more simple explanation by pointing out that job satisfaction is “…the extent to which people like their jobs.” More recently Weiss (2002) described job satisfaction as an employee’s attitude, an evaluation or evaluative judgment towards the job. One purpose of this study is to analyze if flextime and trust-based working time differently relate to job satisfaction.

Earlier research on flexible work time schedules revealed that flextime positively relates to job satisfaction (Shinn, 1989; Thomas & Ganster, 1995; Glas & Finley, 2002; Kelliher & Anderson, 2010). Moreover, Baltes et al. (1999) found in a meta-analysis of 31 studies, including two different flexible work time schedules (flextime and compressed work week), that flextime positively affected job satisfaction and satisfaction with the work schedule.

Although research is done supporting the positive effects of flextime on job satisfaction, to the author’s knowledge, almost no empirical research is done on the effects of trust-based working time. Nevertheless, Janßen and Nachreiner (2004) suggested that employees who are allowed to determine their own working time are on average more satisfied with their job than employees who have to work under fixed work time conditions. As stated earlier in section three, Wingen et al. (2004) emphasized, that the increased freedom of action and decision making, as well as the trust given to employees, relate positively to the employees satisfaction with their job. Hoff (2002) delineated that it is mainly the feeling of maturity and showing trust to the employee which leads to enhanced job satisfaction.

In line with previous literature on TBWT and given the fact that trust-based working time allows for more flexibility, trust, autonomy, self-responsibility and control than the more conversant flextime schedule, it is expected that:

**Hypothesis 1** Employees working under trust-based working time conditions are on average more satisfied with their job than employees working under flextime conditions.

**Hypothesis 2** Employees working under trust-based working time conditions are on average more satisfied with their work time schedule than employees working under flextime conditions.

**Hypothesis 3** Employees working under flextime conditions on average would prefer working under trust-based working time conditions.
4.2 Affective organizational Commitment

Organizational commitment is the employee’s psychological attachment to the organization. Meyer and Allen (1991) distinguish three different types of organizational commitment with their three-component model of commitment:

- **Affective Commitment**: Is the employee's emotional attachment to the organization. An employee who is affectively committed identifies with the goals of the organization and desires to remain a part of the organization.
- **Continuance Commitment**: The employee commits to the organization because he/she perceives high costs of losing organizational membership, including economic costs and social costs (e.g. friendship with co-workers).
- **Normative Commitment**: The employee commits to the organization because of feelings of obligation (e.g. moral obligation).

To summarize, organizational commitment represents the employee’s identification with the organization, how much the membership in the organization is valued and the effort made to attain organizational goals (Mowday et al., 1979), as well as their intention to stay with the organization (Porter et al. 1974).

In addition to job satisfaction, this study aims to ascertain if flextime and trust-based working time differently relate to the employee’s organizational commitment. For the purpose of this study only the relation to affective organizational commitment is explored.

Previous research supported that flextime positively influences affective commitment. For instance, a study by Grover and Crooker (1995) showed that flextime had positive effects on affective organizational commitment. In addition, research revealed that job satisfaction positively correlates with affective organizational commitment (Mowday et al., 1979; Vandenberg & Lance, 1992), which leads to the expectation that affective organizational commitment, similar to job satisfaction, is influenced by flextime. Considering flextime and trust-based working time as so called family-friendly arrangements, Halpern (2005) found that these programs lead to higher levels of affective organizational commitment.

With reference to trust-based working time, less explicit conclusions can be drawn. Social exchange theory (Blau, 1964) suggests that regulations/obligations based on trust will lead to gestures of goodwill in return (i.e. subjective cost-benefit analysis). Applying social exchange theory, employees would be more likely to commit to an organization when they experience that the organization commits to them in return (Aube et al., 2007). In this case,
trust-based working time could be considered as the organizational support to the employees’ need of balancing work and private life. According to Speck and Ryba (2004), affective organizational commitment increases under trust-based working time conditions due to an increased feeling of personal responsibility. They stated that employees working under trust-based working time conditions feel more like co-entrepreneurs rather than employees and are therefore more committed to the organization. Hoff (2002) found that trust-based working time leads to an increase in the employee’s motivation which in turn adds to the organizational affective commitment.

Again, in expectation that trust-based working time, which disclaims any form of time recording, allows for more flexibility, trust, autonomy, self-responsibility and control than flextime schedules, the following hypothesis is formulated:

*Hypothesis 4* Employees working under trust-based working time conditions are on average more affectively committed to the organization than employees working under flextime conditions.

### 4.3 Work-home interference

In addition to job satisfaction and affective organizational commitment a further aim of this study is to analyze if flextime and trust-based working time differently relate to the employee work-home interference.

Work-home interference is a broad concept which refers to the balancing of "work" and "life" (i.e. leisure, family). Two concepts which are derived from work-home interference are: “work-family enrichment” and “work-family conflict”:

Work family enrichment refers to the process in which experience or participation in one domain enhances the quality or performance in the other. It can occur bi-directionally (i.e. work-family enrichment or family-work enrichment). For instance, family-work enrichment occurs when involvement within the family results in the creation of a positive mood, feeling of support, or feeling of success which can help to cope better, more efficient or more confident at work (Greenhaus & Powell, 2006). On the contrary, work-family conflict is a conflict in which the role pressures from the work and family domain become incompatible. It occurs when experience in one domain interferes with experience in the other domain (Greenhaus & Beutell, 1985). Both concepts work-family enrichment and work-family conflict can be ascribed to the role stress theory which states that stress experienced in one life domain may spill over to another life domain (Kahn et al., 1964). Positive spillover
work-family enrichment) refers to situations in which positive experiences, feelings (e.g. satisfaction) derived from one domain transfers to another. Negative spillover (i.e. work family conflict) occurs when negative experiences (e.g. stress) made in one domain transfers to the other. For instance, a positive home-work spillover would occur when experiences and role performances in the family manifest themselves through enhanced emotions, attitudes, or behaviors at work (Googins, 1991).

Meyer and Allen (1997) found that organizations offering family-friendly policies can reduce absenteeism and turnover. Moreover, they suggested that a possible approach to support work-family enrichment would be to increase work flexibility, such as implementing flexible work time arrangements. In this way time-based conflicts between work and family could be reduced. In addition, Voydanoff (2004) analyzed that work demands, especially time-based work demands were positively related to work-family conflict. Moreover, Shockley and Allen (2010) found, by using a sample of university faculty (n = 238), that flextime arrangements facilitate greater role integration (i.e. less work family conflict) by widening the physical, as well as temporal boundaries of work. Jung Jang (2009) gave as results of his study regarding the relationships between flextime schedules, work life balance and workplace and supervisory support, that “…employees who viewed their work schedule as flexibly reported higher levels of work-life balance, which in turn was associated with positive paths to well-being.” Interestingly, Hapern (2005) did not find any gender differences in respect to work-home interference. Although it is still a higher percentage of women performing household and childcare tasks than men, she found, that applying flextime led to an increase in commitment and a decrease of stress symptoms for both, men and women.

Again, to the knowledge of the author, so far almost no empirical research regarding the relationship between trust-based working time and work-home interference is published. Therefore one has to examine the relationship between main concepts of trust-based working time and work-home interference. For instance, Ashforth et al. (2000) stated that physical, temporal as well as the psychological boundaries affect the work and non-work roles. Schieman and Glavin (2008) concretized that flexibility is one of the main influences affecting the work-life balance by stating that: “Flexibility is the degree to which work duties are allowed to be performed outside of the usual spatial and temporal arrangements of the workplace.” According to the authors, flexibility would ease the transition between roles.

In Addition, the level of employee control is an important concept regarding the work-home interference in the way that greater sense of employee control leads to less work-home and home-work conflict. Grzywacsz and Mark (2000) conducted a national survey in the USA
with 1986 subjects. Results showed that work factors such as decision latitude and work control were associated with less negative and more positive spillover between work and family. Moreover, Thomas and Ganster (1995) found in their study that flexible work policies had positive effects on feelings of control over work and family, which in turn was associated with a decrease of work-family conflict and job dissatisfaction. Schieman and Glavin (2008) found similar results in their research, namely that schedule control and job autonomy are associated negatively with work-home conflicts.

As elaborated on in section three, employee control and autonomy are more present in trust-based working time than flextime arrangements. Furthermore, the abandonment of time registration in TBWT-arrangements offers the employee greater flexibility to balance work and family activities. Therefore it is hypothesized that:

**Hypothesis 5.1** Employees working under trust-based working time conditions experience on average more positive work-home spillover than employees working under flextime conditions.

**Hypothesis 5.2** Employees working under trust-based working time conditions experience on average more positive home-work spillover than employees working under flextime conditions.

**Hypothesis 5.3** Employees working under trust-based working time conditions experience on average less negative work-home spillover than employees working under flextime conditions.

**Hypothesis 5.4** Employees working under trust-based working time conditions experience on average less negative home-work spillover than employees working under flextime conditions.

As stated earlier, working under trust-based working time arrangements bares the risk of working longer work days. Therefore, it is analyzed if employees in the TBWT-condition indeed report more overtime hours. To test for a possible moderating effect of overtime hours between the flexible work time schedule and work-home/home-work spillover, overtime hours are included in the preliminary analyses of this study. It is suspected, that:
Hypothesis 6 Employees working under trust-based working time conditions report on average a higher amount of overtime hours than employees working under flextime conditions.

4.4 Perceived job autonomy

The importance of job autonomy regarding trust-based working time was already detailed in section three. As outlined, job autonomy is defined as the degree of freedom or independence employees have with the scheduling and execution of their own work (Hackman & Oldham, 1976). Furthermore, it refers to the control employees are given to decide how and when work activities are fulfilled (Daniels et al., 2007). One aim of this study is to analyze if flextime and trust-based working time differently relate to the employees perceived job autonomy.

Earlier research supported a positive relationship between flextime and job autonomy. For instance, Kauffeld, Jonas and Frey (2004) conducted research by introducing flextime as a new work time model to an organization. They found that employees in the flextime condition experienced more autonomy, which led to more learning activities, personal responsibility and motivation than employees working under the regular work time schedule condition.

To the author’s knowledge, until now almost no empirical research data has been published in respect to trust-based working time and perceived job autonomy. Summing up the findings of section three, Halpern (2005) found that working under more flexible work time schedules increases the employee’s job autonomy. Wingen et al. (2004) emphasized that especially the employees time-autonomy increases under trust-based working time conditions and Hoff (2002) reported more freedom to the extend “when” tasks are fulfilled (i.e. individual leeway, task-autonomy) under TBWT-conditions. In keeping with the contemplated propositions, it is expected that:

Hypothesis 7 Employees working under trust-based working time conditions perceive on average more job autonomy than employees working under flextime conditions.
Moreover, in this section it is intended to investigate the black box of the relationship between trust-based working time and employee related criteria by taking a closer look at TBWT and perceived job autonomy and their relation to job satisfaction, affective organizational commitment and work-home interference.

Previous research revealed that job autonomy indeed influences the mentioned variables such as job satisfaction and affective commitment. For instance, Finn (2001) found in his study, including 178 nurses, that the reported perceived job autonomy was the most important predictor for job satisfaction. Likewise, Eby et al. (1999) found in their study, using meta-analytic correlations and structural equations modeling, strong relationships between job autonomy and job satisfaction and job autonomy and affective commitment. With regards to work-home interference, Thomas and Ganster (1995) studied healthcare professionals and found that higher job autonomy was linked to lower levels of work-home conflicts. In addition, Grzywacz and Marks (2000) found that autonomy on the job was strongly related to positive-work-home and home-work spillover.

Keeping the previous research results in mind, it is reasonable to propose that the flexible work time schedule (flextime or TBWT) may be directed through the mediator variable perceived job autonomy to affect job satisfaction, affective organizational commitment and the work-home spillover/home-work spillover variables. The mediating relationship is reflected in the following figure:

*Figure 1*: The possible mediating effect of perceived job autonomy

![Diagram](image-url)
This leads to the final hypotheses, that:

**Hypothesis 8** The relationship between the flexible work time schedule arrangement and job satisfaction (8.1), affective organizational commitment (8.2), positive and negative work-home and accordingly home-work spillover (8.3-8.6) is fully mediated by perceived job autonomy.
Figure 2: Research framework and hypotheses. The hypotheses referring to the mediating effect of perceived job autonomy (H8-H8.6) are marked in grey.
5. Method

5.1 Sample

Data for the study was gained from a paper questionnaire directed to all employees of a German organization, specialized in information technology and travel industry (n= 80). In this study, women being on maternity leave, as well as retired employees were not addressed. The organization has been applying flextime and trust-based working time schedule arrangements and the employees have been working in two different buildings in the same town. Due to anonymity reasons no distinctions were made to neither their functional nor workplace position. Of the 70 questionnaires sent out, respondents returned 55 usable surveys for a return rate of 78.6 percent. The final sample consisted of 55 subjects (24 males and 31 females). 40% of the sample were younger than 35 years, 60 % were older than 35 years (SD= .49). Furthermore, 38 employees were working under flextime and 17 employees under trust-based working time conditions (SD= .47).

5.2 Instruments

The survey paper questionnaire was used as the data-gathering instrument for this study. The questionnaire was divided into four sections. In the beginning of each section an explanation and a sample question were given. The first section contained demographic variables such as age and gender. Each section contained questions or statements which ought to be rated on a Likert scale. In this study, 4-, 5- and 6-point Likert scales were used. Further information about the concrete content and classification of the questionnaire is given in the “measures” section (5.4).

5.3 Procedure

Before handing out the surveys, a short presentation was given to the employees about the reason for the present study, how to fill in the questionnaire and sample questions. Subsequent to the presentation, the questionnaires were handed out personally to the employees. Each questionnaire consisted of a cover letter, in which employees were asked to answer every question and to choose only one answer possibility. Furthermore, they were asked to answer the questions honestly by following their first intuition. Anonymity was guaranteed as well as responsible handling of the information. The employees were informed that the completion of the questionnaire would take approximately 10-20 minutes. In both buildings two sealed boxes were positioned in a discrete and separate room. The employees

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4 The questionnaire can be found in the appendix
were asked to put the filled in questionnaires in the provided boxes within two weeks. After one week an e-mail reminder was sent out to each employee.5.

5.4. Measures

5.4.1 Dependent variables. Following the translation and back-translation procedure suggested by Brislin (1986), German versions of already developed scales for job satisfaction, affective organizational commitment, work-home interference and job autonomy were used. The scores on each subscale were obtained by taking the average of all scale items, with higher scores indicating a greater prevalence.

5.4.1.1 Job Satisfaction. It was measured with the English Minnesota Satisfaction Questionnaire (MSQ), originally developed by Weiss, Dawis, England and Lofquist (1967). For the purpose of this study, seven subscales of the original version were used (achievement, compensation, co-workers, creativity, responsibility, supervision and working conditions). After the back-translation procedure various interpretation-possibilities for the five working conditions items occurred, therefore it was decided to exclude the subscale. The participants were asked to decide how satisfied they felt about various aspects of their job. Sample items for the six remaining subscales are: “Being able to do something worthwhile (i.e. achievement)”; “The chance to make as much money as my friends (i.e. compensation)”; “The chance to develop close friendships with my co-workers (i.e. co-workers)”; “The chance to do new and original things on my own (i.e. creativity)”; “The chance to be responsible for planning my work (i.e. responsibility)” and “The way my boss handles his/her employees (i.e. supervision)”. The statements ought to be rated on a 5-point Likert scale ranging from 1 = very unsatisfied to 5 = very satisfied.

A principle-components factor analysis of the 30 items, using varimax rotation was conducted. In general the suggested six-factor solution was confirmed, with the six factors explaining 71.64 % of the variance. The factor labels proposed by Weiss, Dawis, England and Lofquist (1967) suited the extracted factors and were retained. All but two items had primary loadings over .35 (i.e. item 23 of responsibility = .195; item 4 of achievement = .282). With regards to satisfaction with achievement item 2 loaded more on the suggested factor for supervision than on achievement (respectively .472 and .365) and item 4 loaded more on the suggested factor for creativity (respectively .602 and .282). Likewise, item 13 for satisfaction with co-workers loaded more on achievement (.601) than on the factor for coworkers (.482). Regarding creativity, item 16 loaded more on the suggested factor for achievement than on

5 The e-mail reminder can be found in the appendix
creativity (respectively .667 and .429). Additionally, item 23 loaded more on the factor for creativity (.535) than on the suggested factor for responsibility (.195).  

Internal consistency for each of the scales was examined using Cronbach’s alpha. The analyses revealed a Cronbach’s alpha of .84 on achievement, .93 on compensation, .79 on co-workers, .86 on creativity, .83 on responsibility and .90 on supervision. Cronbach’s alpha for the total scale was .94. No substantial increases in alpha for any of the scales could have been achieved by eliminating more items.

5.4.1.2 Satisfaction with work time schedule and preference. To measure participants’ satisfaction with their work time schedule (flextime/TBWT) three items were developed. One item directly referred to the satisfaction with the schedule by asking: “How satisfied are you with your current work-time schedule?” The second and third item referred indirectly to the satisfaction with the schedule, by asking about the employee’s preference. Dependent on the working time condition, the employee ought to rate only one of the two statements: “I would prefer working under trust-based working time conditions (if currently working under flextime conditions)” or “I would prefer working under flextime conditions (if currently working under trust-based working time conditions)”. The statements ought to be rated on a 5-point Likert scale ranging from 1 = disagree very much to 5 = agree very much.

5.4.1.3 Affective organizational commitment. It was measured with the English “Three-Component Organizational Commitment Scale” by Allen and Meyer (1990). The original scale consisted of three subscales referring to affective, normative and continuance commitment. For the purpose of this study only the affective commitment subscale was used. The subscale consisted of five items. Sample items for affective commitment are: “I am emotional attached to the organization” and “This organization means a lot to me”. The statements ought to be rated on a 5-point Likert scale ranging from 1 = disagree very much to 5 = agree very much. Internal consistency for the scale was examined using Cronbach’s alpha. Reliability analysis revealed a Cronbach’s alpha of .84 on affective commitment. No item was deleted.

5.4.1.4 Work-home interference. It was measured with the Dutch SWING-scale (i.e. Survey Work-Home Interaction-Nijmegen) developed by Wagena and Geurts (2000). The four subscales of the survey were designed to measure both positive and negative work-home spillover and home-work spillover. In this study respectively four items were used for the four subscales. Participants were asked to answer how often they experience the stated situations.

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6 Table 8 with factor loadings can be found in the appendix.
Sample items are: “You find it difficult to fulfill your domestic obligations because you are constantly thinking about your work (i.e. negative work-home spillover)?”, “The situation at home makes you so irritable that you take your frustrations out on your colleagues (i.e. negative home-work spillover)?”, “You fulfill your domestic obligations better because of the things you have learned on your job (i.e. positive work-home spillover)?” and “You manage your time at work more efficiently because at home you have to do that as well (i.e. positive home-work spillover)?” The questions ought to be answered on a 4-point Likert scale ranging from 1 = never to 4 = always.

A principle-components factor analysis of the 16 items, using varimax rotation was conducted. In general the suggested four-factor solution was confirmed, with the four factors explaining 61.35% of the variance. The factor labels proposed by Wagena and Geurts (2000) suited the extracted factors and were retained. Item 13 loaded more on positive work-home spillover (.436) than the suggested factor of positive home-work spillover (.064) and is the only item, which did not have a primary loading over .35.7

Internal consistency for each of the scales was examined using Cronbach’s alpha. The analyses revealed a Cronbach’s alpha of .77 on negative work-home spillover, .77 on negative home-work spillover, .74 on positive work-home spillover and .74 on positive home-work spillover. No substantial increases in alpha for any of the scales could have been achieved by eliminating more items.

Additionally, to test for possible moderating effects, the overtime hours reported by the employee are included in the analysis. The question:” On average, how many overtime hours do you make a week?” ought to be rated on a 5-point Likert scale ranging from 1 = 0 overtime hours to 5 = more than 15 overtime hours.

5.4.2 Independent variable

5.4.2.1 Clocking (yes/no). The conditions: flextime and trust-based working time were operationalized into the dichotomous variable “clocking” and was measured with the item: “Do you have to clock your working time?” The question ought to be answered with either yes (1) or no (2). “Yes” signified that participants were working under flextime conditions and “no” implied that they were working under trust-based working time conditions.

7 Table 9 with factor loadings can be found in the appendix
5.4.3 Mediating variable

5.4.3.1 Perceived job autonomy. Perceived job autonomy was expected to have a mediating effect between the independent variable clocking and the dependent variables job satisfaction, affective organizational commitment as well as work-home interference.

It was measured with seven items of the Dutch Autonomy Scale developed by Calje, Schaufeli and Schreurs (1998), which was designed to measure the perceived job autonomy of the employees. Sample items are: “I decide how hard I work” and “I make my own decisions at work”. The seven statements ought to be rated on a 5-point Likert scale ranging from 1 = disagree very much to 5 = agree very much.

The results of the reliability analysis on the job autonomy scale revealed a Cronbach’s alpha of .77. An “if item was deleted”- follow-up analysis was conducted. The analysis revealed that if the item 6 (i.e. “I have got the feeling that I do not have any influence of things related to my job-reversed”) was deleted, Cronbach’s alpha would have had increased to .80. Consequently, item 6 was deleted.

5.4.4 Control variables.

To control for possible third variables affecting the relationship between the independent variable clocking and the aforementioned dependent variables, the influence of possible covariates was tested. The dummy coded demographic variables gender (1 = man, 2 = woman) and age (1 = < 35 years, 2 = > 35 years) were expected to be possible third variables. To analyze their possible effects, correlational analyses were conducted (s. Table 2). Results revealed a substantial, significant positive correlation between clocking (flextime/TBWT) and age (r = .305, p ≤ .05). No significant correlation between clocking and gender was found (p > .05). As a result, only the demographic variable age was included as a covariate.

6. Statistical analyses

6.1 Data screening

First, frequency tables were explored for “out of range data”. No unusualness was detected. Next, a missing value analysis was conducted. To do so, a new variable (Nmiss) was created, containing the items per participant, where no answer was given. Descriptive statistic of frequencies revealed a total number of 30 missing values. Next, a missing value analyses with EM estimation was done. No significant differences between subjects with and without missing values were found, which indicated that the missing values were random. A filter was
set to select participants who have 9, 8 or more missing values (i.e. 9,8 represented 10% of the 98 relevant items). One subject (S 20) with 14 missing values was excluded. Imputation was conducted to replace the remaining 16 missing values with the mean of the affected variables.

6.2 Preliminary analyses

In order to get an overview of all variables in the sample, descriptive statistics (i.e. means, standard deviations and correlations) were analyzed for the total sample (n=55).

6.3 Main statistical analyses

All of the in the following described Analyses of Covariance (ANCOVA) contained age (< 35 y, > 35 y) as covariate, unless otherwise specified.

To test hypotheses 1, 2 and 3 various univariate ANCOVAs were processed. In all of these analyses, clocking (yes/no) was included as the independent variable (i.e. fixed factor) and respectively job satisfaction, satisfaction with work time schedule and preference work time schedule as dependent variables.

Hypothesis 4 was tested by conducting an ANCOVA with clocking (yes/no) as the independent variable (fixed factor) and affective organizational commitment as dependent variable.

To test the hypotheses 5.1-5.4, clocking (yes/no) was included as the independent variable and the four different work-home interference variables (i.e. negative work-home spillover, negative home-work spillover, positive work-home spillover and positive home-work spillover) were added separately as dependent variables in the ANCOVA analyses.

Another univariate ANCOVA was processed to test hypothesis 6, where reported overtime hours was chosen as dependent variable. The same analysis was done with perceived job autonomy (H 7) as the dependent variable.

The mediating effect of Job autonomy (Hypotheses 8.1- 8.6) was tested by applying the method of Baron and Kenny (1986). They stated that a variable functions as a mediator when it meets the following four conditions:

1. The independent variable predicts the dependent variable
2. The independent variable predicts the mediator
3. The mediator predicts the dependent variable, while controlling for the independent variable
4. The independent variable does NOT predict the dependent variable, while controlling for the mediator
If all conditions are met, strong evidence is found for a single, dominant mediator. If the independent variable still has (reduced) effect on the dependent variable (i.e. if criterion four is not met), this indicates the occurrence of multiple mediating factors (partial mediation).

Separate linear regression analyses for the dependent variables were done to get the effect size (beta) of the variables. Step 1 of the regression analyses contained the control variable age (< 35y, > 35), step 2 the possible mediator job autonomy and step 3 job autonomy and clocking (yes/no).

The Sobel-SPSS macro developed by Preacher and Hayes (2004) was used to test for direct effects (Baron and Kenny method) and indirect effects (Sobel-test). All of the in this section described analyses were conducted by using the SPSS statistic-program.

7. Results

7.1 Preliminary analyses results.

The table embodying descriptive statistics, such as means, standard deviations and correlations of the main variables are displayed in Table 2.
Table 2
Descriptive statistics

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Note: Significant correlations equal to or greater than p. 0.05 are marked with (*) and those equal to or greater than p 0.01 with (**)
7.2 Main results

All of the described ANCOVA analyses contained age (< 35 y, > 35 y) as covariate, unless otherwise specified.

7.2.1 Job satisfaction, satisfaction with work time schedule and preference.
Hypothesis 1 conveyed that employees who do not have to clock their work time (TBWT-condition) were on average more satisfied with the job than employees who do have to clock their time (flextime condition). The univariate ANCOVA analysis revealed that clocking had a positive significant effect on job satisfaction, F(1, 54) = 4,336, p= .042, R² = .077. Employees in the TBWT-condition (M = 3.83, SD = .57) scored significantly higher on job satisfaction than employees in the flextime condition (M = 3.50; SD = .44). Hypothesis 1 was supported; employees in the TBWT-condition were on average more satisfied with their job than employees working under flextime conditions.

Hypothesis 2 maintained that employees in the flextime condition are less satisfied with their work time schedule and would prefer working under trust-based working time conditions (H3). The ANCOVA analyses revealed that both hypotheses were rejected. No significant different effects of trust-based working time and flextime on the satisfaction with the work time schedule (H 2) and the preference of the work time schedule (H 3) could be revealed (p >.05).

Table 3
Overview hypotheses job satisfaction

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>TBWT-condition</th>
<th>Flextime-condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>H 1</td>
<td>3.83</td>
<td>.57</td>
</tr>
<tr>
<td>H 2</td>
<td>3.66</td>
<td>.81</td>
</tr>
<tr>
<td>H 3</td>
<td>1.94</td>
<td>1.25</td>
</tr>
</tbody>
</table>

Note: H1= hypothesis job satisfaction, H 2= hypothesis satisfaction with work time schedule, H 3= hypothesis preference work time schedule, TBWT= trust-based working time, Flex= flextime, M= mean, SD= standard deviation


7.2.2 Affective organizational commitment. Hypothesis 4 states that employees in the TBWT-condition are on average more affective committed to the organization than employees in the flextime condition. The results of the ANCOVA analysis supported this hypothesis. Clocking (yes = flextime/no = TBWT) had a significant main effect on affective organizational commitment (F(1,54) = 4.233, p = .045, R² = .075). Employees working under TBWT-conditions (M = 3.55; SD = .87) scored on average higher on affective commitment than employees working under flextime conditions (M = 3.07; SD = .56).

7.2.3 Work-home interference. It was presumed that employees in the TBWT-condition have on average more positive work-home spillover (H 5.1) and more positive home-work spillover (H 5.2) than employees in the flextime condition. Furthermore, it was predicted that they have less negative work-home spillover (H 5.3) and less negative home-work spillover (H 5.4) than employees working under flextime conditions. The conducted ANCOVAs did not reveal any significant main effects of clocking (yes/no) on the dependent variables positive work-home spillover, positive home-work spillover and negative home-work spillover (p > .05). Therefore, hypotheses 5.1, 5.2 and 5.4 were rejected. No significant differences between employees working under TBWT-conditions and employees working under flex-conditions were discovered.

Referring to hypothesis 5.3, a significant main effect of clocking on negative work-home spillover was revealed, F(1,54) = 6.731, p = .012, R² = .115. Contrary to the prediction, however, employees in the TBWT-condition (M = 2.07, SD = .46) reported significantly more negative work-home spillover than employees working under flextime time-conditions (M = 1.76; SD = .55). Consequently, hypothesis 5.3 was rejected.

Because of the unexpected result, it was tested if employees working under trust-based working time conditions reported on average more overtime hours than employees working under flextime conditions (H 6). The hypothesis was supported (F(1, 54) = 14.3, p = .00; R² = .22). Employees working under trust-based working time conditions reported on average more overtime hours (M = 2.29, SD = .77) than employees working under flextime conditions (M = 1.65, SD = .53). Nevertheless, a follow-up ANCOVA analysis did not reveal a moderating effect of overtime hours, in the sense that employees working under trust-based working time conditions, reporting more overtime hours and likewise more negative work-home spillover (p > .05).
Table 4
Overview hypotheses work-home interference

<table>
<thead>
<tr>
<th>Hypothesis:</th>
<th>Work time schedule:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TBWT-condition</td>
<td>Flex-condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H 5.1</td>
<td>M 2.13 SD .54</td>
<td>M 1.98 SD .52</td>
<td>F 1.35</td>
<td>p .25</td>
<td>rejected</td>
<td></td>
</tr>
<tr>
<td>H 5.2</td>
<td>M 2.21 SD .49</td>
<td>M 2.37 SD .59</td>
<td>F 2.52</td>
<td>p .48</td>
<td>rejected</td>
<td></td>
</tr>
<tr>
<td>H 5.3</td>
<td>M 2.07 SD .46</td>
<td>M 1.76 SD .55</td>
<td>F 6.73</td>
<td>p .01</td>
<td>rejected</td>
<td></td>
</tr>
<tr>
<td>H 5.4</td>
<td>M 1.51 SD .39</td>
<td>M 1.38 SD .33</td>
<td>F 1.98</td>
<td>p .17</td>
<td>rejected</td>
<td></td>
</tr>
<tr>
<td>H 6</td>
<td>M 2.29 SD .77</td>
<td>M 1.65 SD .53</td>
<td>F 14.3</td>
<td>p .00</td>
<td>supported</td>
<td></td>
</tr>
</tbody>
</table>

Note: H 5.1 = hypothesis positive work-home spillover, H 5.2 = hypothesis positive home-work spillover, H 5.3 = hypothesis negative work-home spillover, H 5.4 = hypothesis negative home-work spillover, H 6 = overtime hours, TBWT = trust-based working time, Flex = flextime, M = mean, SD = standard deviation

7.2.4 Perceived Job Autonomy. A univariate ANCOVA analysis was done, which revealed that clocking had significant effects on perceived job autonomy (F(1,54) = 15.821, \( p = .000 \) R = .233). Hypotheses 7 was supported, employees in the trust-based working time condition (M= 3.98, SD= .54) perceived on average more autonomy than employees in the flextime condition (M= 3.42, SD= .46).

7.2.5 Mediating effect of Job Autonomy. It was predicted that job autonomy mediates the effect of clocking on job satisfaction (H 8.1), affective organizational commitment (H 8.2), positive work-home spillover (H 8.3), positive home-work spillover (H 8.4), negative work-home spillover (H 8.5) and negative home-work spillover (H 8.6). Analyses to test the predicted hypotheses were based on the method of Baron and Kenny explained in the methods main statistical analyses section (page 28-29). Note, that the analyses of Baron and Kenny’s first criterion (i.e. if clocking significantly predicted the dependent variables) were already conducted with the ANCOVA analyses in the previous sections. Based on the former conducted analyses, the dependent variables positive work-home-, positive home-work- and negative home-work spillover were excluded, because clocking did not significantly affect those variables (criterion 1 was not met). As a result, hypotheses 8.3, 8.4 and 8.6 were rejected.

Clocking (yes/no) significantly affected the dependent variables job satisfaction (H 1) and affective organizational commitment (H 4). Furthermore, the analysis of Baron and
Kenny’s second criterion (i.e. clocking significantly predicts job autonomy-H 7) was already done with the ANCOVA analyses in the previous section and revealed a significant effect of clocking on perceived job autonomy (criterion 2). Results for the remaining dependent variables are given in the following.

7.2.5.1 Mediating effect of Job Autonomy: Job satisfaction. The first analysis was done to test for a possible mediating effect of job autonomy between clocking and job satisfaction (H 8.1). Results of the linear regression analyses (s. section 6.3 for more information) revealed a significant initial relationship between clocking and job satisfaction ($\beta = .29, p = .27$), as well as for job autonomy and job satisfaction ($\beta = .53, p = .000$). The initial significant relationship between clocking and job satisfaction became non-significant after controlling for job autonomy ($\beta = .03, p = .826$). The Sobel-test also revealed that the mediation effect of job autonomy was significant ($z= 2.85, p=.008$).

Exploratory analyses for reversed mediation (i.e. mediator and dependent variable were switched) were conducted to test for alternative models. The alternative model showed no significant mediational relationship amongst the variables. Hypothesis 8.1 was supported. Because all of the four criteria were met, strong evidence was found for a single, dominant mediation effect of job autonomy between the relationship of clocking and job satisfaction.

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>s.e.</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Criterion 1 (YX)</strong></td>
<td>.323</td>
<td>.142</td>
<td>2.279</td>
<td>.027</td>
</tr>
<tr>
<td><strong>Criterion 2 (MX)</strong></td>
<td>.559</td>
<td>.143</td>
<td>3.890</td>
<td>.000</td>
</tr>
<tr>
<td><strong>Criterion 3 (YM.X)</strong></td>
<td>.453</td>
<td>.122</td>
<td>3.727</td>
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<tr>
<td><strong>Criterion 4 (YX.M)</strong></td>
<td>.069</td>
<td>.144</td>
<td>.484</td>
<td>.630</td>
</tr>
</tbody>
</table>

**Indirect effect (Sobel-test)**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>s.e.</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.253</td>
<td>.096</td>
<td>2.53</td>
<td>.008</td>
</tr>
</tbody>
</table>

Note: Y= Job satisfaction, X= clocking, M= job autonomy, YM.X and YX.M= respectively controlled for clocking (X) and job autonomy (M)
7.2.5.2 Mediating effect of job Autonomy: Affective organizational commitment. The second analysis was done for a possible mediating effect of job autonomy between clocking and affective organizational commitment (H 8.2). Results of the linear regression analyses (s. section 6.3 for more information) revealed a significant initial relationship between clocking and affective commitment ($\beta = .28$, $p = .045$), as well as for job autonomy and affective commitment ($\beta = .45$, $p = .000$). The initial significant relationships between clocking and affective commitment became non-significant after controlling for job autonomy ($\beta = .97$, $p = .633$). The Sobel-test also revealed that the mediation effect of job autonomy was significant ($z = 2.25$, $p = .024$).

Exploratory analyses for reversed mediation were conducted to test for alternative models. The alternative model showed no significant mediational relationship amongst the variables. Hypothesis 8.2 was supported. Because all of the four criteria were met, strong evidence was found for a single, dominant mediation effect of job autonomy between the relationship of clocking and affective commitment.

Table 6
Direct and indirect mediation effects of job autonomy with regards to affective organizational commitment

<table>
<thead>
<tr>
<th>Direct and total effects (Baron and Kenny Analysis)</th>
<th>Coefficient</th>
<th>s.e.</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion 1 (YX)</td>
<td>.479</td>
<td>.196</td>
<td>2.449</td>
<td>.018</td>
</tr>
<tr>
<td>Criterion 2 (MX)</td>
<td>.559</td>
<td>.144</td>
<td>3.890</td>
<td>.000</td>
</tr>
<tr>
<td>Criterion 3 (YM.X)</td>
<td>.500</td>
<td>.176</td>
<td>2.851</td>
<td>.006</td>
</tr>
<tr>
<td>Criterion 4 (YX.M)</td>
<td>.199</td>
<td>.208</td>
<td>.957</td>
<td>.343</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indirect effect (Sobel-test)</th>
<th>value</th>
<th>s.e.</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect</td>
<td>.279</td>
<td>.124</td>
<td>2.252</td>
<td>.024</td>
</tr>
</tbody>
</table>

Note: Y= affective commitment, X= clocking, M= job autonomy, YM.X and YX.M= respectively controlled for clocking (X) and job autonomy (M)
7.2.5.3 Mediating effect of Job Autonomy: Negative work-home spillover. The third analysis was conducted for a possible mediating effect of job autonomy between clocking and negative work-home spillover (H 8.5). The analysis did not reveal significant effects of job autonomy on negative work-home interference (p > .05). Criterion three was not met and hypothesis 8.5 was rejected. Job autonomy had no mediation effect between the relationship of clocking and negative work-home spillover.

8. Discussion

This study was designed to elaborate on flextime and trust-based working time and their relation to employee related criteria. An important gap in the flexible work time schedule literature was addressed by giving a closer examination of trust-based working time. As one of few empirically researched studies, the results of the current study revealed that employees working under trust-based working time conditions reported more job satisfaction, more affective organizational commitment and most important perceived more job autonomy than employees working under flextime conditions. Moreover, this study contributes to the trust-based working time literature by shedding light on the importance of the mediating effect of perceived job autonomy. The relevance of these findings is investigated in the following.

8.1 Job satisfaction and affective organizational commitment

First of all, it was hypothesized, that employees working under trust-based working time conditions experience more job satisfaction. Results supported the hypothesis. In line with Janßen and Nachreiner (2004) it was found that employees who are allowed to determinate their own working time are on average more satisfied with their job. This finding provides evidence for the importance of key criteria offered by trust-based working time. For instance, the increase of perceived employee control under TBWT-conditions may have led to more job satisfaction in the sense that determination of working time can be considered as a tool leading to more control. Furthermore, the findings support suggestions by Hoff (2002) and Wingen et al. (2004), that constituents of TBWT such as the feeling of maturity and the increased freedom of action and decision making, as well as the trust given to employees, increase employees’ job satisfaction.

Surprisingly, no significant differences between flextime and TBWT were found regarding the satisfaction with the work time schedule (H 2) and preference of the work time schedule (H 3). It was expected that employees under flextime conditions are less satisfied
with their work time schedule and would prefer working under trust-based working time conditions, which offers more employee control, trust and flexibility. Due to the fact that this is the first study including these variables no comparisons can be drawn to previously done research. One explanation of the unexpected findings regarding the preference of the work time schedule could be that employees have a natural resistance to organizational change and therefore do not prefer changes in their accustomed work time schedule. The phenomenon of employee resistance to change has been supported by previous research and its resulting difficulties of implementing organizational changes have been subject to many research studies. Another explanation could be that null findings are attributed to the methodical implementation of the variables. Both, satisfaction with work time schedule and preference work time schedule were included with respectively only one item. The two items were developed by the author and no conclusions can be drawn regarding reliability or validity of the items.

With regards to affective organizational commitment the findings of this study provide strong evidence for the relationship between work time schedule arrangements and affective commitment. The hypothesis was supported that employees working under trust-based working time conditions reported more affective organizational commitment than employees working under flextime conditions. These findings are in line with suggestions by Hoff (2002) that employees are more affectively committed to the organization under TBWT-conditions because of their increased motivation and personal responsibility. Speck and Ryba (2004) state that employees who are allowed to determine their own work time feel more like co-entrepreneurs rather than employees, which positively affects their commitment to the organization. Additionally, in line with Speck and Ryba (2004) and Aube (2007), results indicate that the organizational commitment to the employees, by allowing for personal responsibility and control, in turn leads to more affective commitment to the organization.

The importance of employee job satisfaction and affective organizational commitment is highly supported by previous research. For instance, Faragher et al. (2005) found a strong relation between dissatisfaction and burnout and that dissatisfied employees report decreased feelings of self-worth and more absenteeism.

In conclusion, the findings of this study show that applying trust-based working time arrangements can be a useful organizational strategy to enhance job satisfaction and affective

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8 Please refer for an overview of resistance to change to the literature study of del Val and Fuentes (2003).
organizational commitment and to prevent the mentioned negative consequences of employee dissatisfaction.

8.2 Work-home interference

The hypotheses included that employees working under trust-based working time arrangements experience more positive work-home and home-work spillover and vice versa less negative work-home and home-work spillover. Surprisingly, none of the hypotheses were supported. One possible explanation could be that, although the organization offers TBWT-conditions, the question arises whether employees working under TBWT-conditions actually use it. Under trust-based working time conditions no time recording is required, but still, employees could work under a regular work time schedule (e.g. from 9am to 5 pm). This is comparable to suggestions made by Hoff (2002) that after a reorganization of work time schedules from regular to TBWT schedules, some employees still organize their work time according to the former work-time schedule. Moreover, Galinsky and Stein (1990) suggested that cultural and organizational norms influence the likelihood for employees taking advantage of flexible work time schedule arrangements. In conclusion, it is important to differentiate between access and usage of flexible work time schedule arrangements.

Contrary to the prediction, employees working under trust-based working time conditions reported more negative work-home spillover than employees working under flextime condition. Because of the unexpected findings, it was tested for a moderating effect of overtime hours. Although, employees under TBWT reported more overtime hours, no moderating effect with negative work-home spillover was found. Therefore it is expected that other variables than overtime hours have moderating effects in the relationship between TBWT and negative work-home spillover. Research provides support for this idea.

For instance the family status/structure, family social support and the number/age of children might be important. It is suggested that employees who do not have children may experience less work-home/ home-work interferences because they may have less family demands. This is in line with previous research that suggests that family responsive policies will be more salient when children are present (Scandura & Lankau, 1997). Comparably, Dikkers et al. (2007) found that work-home interference, in general, is lower when children have left the house. Interestingly, Shockley and Allen (2010) found a positive relationship between work achievement and flexible work time scheduling for those with high family responsibilities and a negative relationship for employees with low family responsibilities. Shockley and Allen offer as an explanation that employees with little family responsibility and a high need for achievement may fulfill this need by increasing work hours.
Furthermore the position and function of the employee must be taken into account. For instance, Milliken and Dunn-Jensen (2005) suggested that flexible work time schedules may not help employees in higher position to manage work-home interference because they may compress their work into smaller spaces of time.

Other possible moderators for negative work-home interference are stress and work time. Meijman and Mulder (1998) suggested that high work load would lead to negative load reactions, which are likely to spill over to the home domain. Furthermore, they found that employees with high work time demands reported negative work-home interference more often because time of recovery decreased. This is in line with research done regarding to the Effort/Recovery Model. Geurts et al. (2008) found that ongoing high work demands negatively affect the work family demands by negatively affecting the quantity of recovery. The amount of stress experienced at work can also be ascribed to the role stress theory (Kahn et al., 1964), which states that stress experienced in one life domain (e.g. work) may spill over to another life domain (e.g. home), which in turn could have led to the increased negative work-home spillover in the TBWT-condition in this study.

As reported earlier, results may imply that TBWT indeed leads to open-ended working time limits and the discrepancy between hours contractually agreed on and the hours actually worked (IG Metall, 2000; Pickshaus et al., 2001). Therefore, one has to take actually worked hours into account as a possible moderator for work-home and home-work interference. Under TBWT-conditions the boarders between work and non work are blurring. In this sense, employees may not experience a clear cut from work (i.e. the end of workday at 5 pm) and are more likely to engage in a role conflict. According to Katz and Kahn (1966) a role conflict takes place when one is forced to take on two different and incompatible roles at the same time. In this case the roles performed at work and at home might be conflicting which in turn, could explain why in this study employees working under trust based working time conditions reported more negative work-home spillover than employees working under flextime conditions.

8.3 Perceived job autonomy

Results regarding autonomy supported the hypothesis that employees working under trust-based working time conditions indeed perceived more job autonomy than employees working under flextime conditions. These findings are in line with previous research and provide evidence for a significant relationship between trust-based working time and the employees’ perceived job autonomy. For instance, Wingen et al. (2004) and Hoff (2002) emphasized that the employee’s time as well as task autonomy increases under TBWT.
In addition, Hapern (2005) found that by offering more flexibility of work hours is one way to provide more control and autonomy to the employee. In line with study results by Greenberger and Strasser (1986) it is expected that the current study results are due to an increase in the perceived control under TBWT-conditions, because of the employee’s freedom to decide when to start and end the workday.

Moreover, study results also revealed that job autonomy played a mediating role in both the relationship between the flexible work time schedule (flextime or trust-based working time) and job satisfaction and the flexible work time schedule and affective organizational commitment. When job autonomy was added into the model, the path between flexible work time schedule and job satisfaction and accordingly affective commitment became nonsignificant. These results suggest that job autonomy indeed fully mediated the relationships.

The findings of this study provide strong evidence for the importance of job autonomy for employees. It was found that employees with higher levels of autonomy reported more job satisfaction and affective organizational commitment. These results are in line with Wingen et al.’s (2004) proposition that greater individual working time autonomy is viewed positively by employees and that autonomy also represents an acknowledgement of their commitment. In conclusion, if an organization wants to improve job satisfaction and employee affective commitment, the focus has to be directed to the employee’s job autonomy.

No mediating effect of job autonomy regarding to negative work-home interference was found. These findings did not support earlier research that perceived job autonomy is related to the employee’s work-home interference (Clark, 2001). But again, it is expected that the null findings with respect to work-home interference are due to the fact that no moderating variables such as work demands or actual time worked were included in this study.

9. Limitations

Despite the findings, there are also limitations to this study. First, the sample used in this study was taken from only one organization which might lead to a decrease of the external validity. Nevertheless, it is believed that the generalizibility of the results is still valid because the organizational circumstances in this study are comparable to other service orientated organizations, such as travel agencies, banks or other customer orientated companies. Second, the sample size of 55 subjects was rather small which led to poor
statistical power. On the other hand a small sample size reduces the likelihood to gain significant effects only due to a large sample size. Therefore, it is reasoned that the significant differences between flextime and trust-based working time are noteworthy. Third, no distinction was made between position and function, family status, hours actually worked or seniority. Because the organization with 80 employees was relatively small, these variables could not be included without violating the guaranteed anonymity. Fourth, due to the cross-sectional design of this study no conclusions can be formulated regarding causality. Finally, because the data was collected from the same source via self-report, the potential must be mentioned that the results might be influenced by common method variance and response consistency effects.

10. Future research

So far, most of the published literature regarding to trust-based working time is of governmental or managerial kind without empirical proof. Therefore, in general, more empirical research should be done in respect to trust-based working time. With regards to the limitations of this study, future research including larger samples in different organizations is worthwhile. In addition, potential moderators of the relationship between flexible work time schedules and respectively job satisfaction, affective organizational commitment and work-home interference should be included in future studies. It is suggested to include variables such as perceived stress, family status, actual hours worked (in relation to work-home interference) and seniority (in relation to job satisfaction and commitment). The position of the employee might be of great interest with regards to their autonomy in the sense that flexible work time schedules might not be beneficial for managers who most often already experience a high degree of autonomy. Furthermore, future research should collect data from different sources (e.g. supervisor ratings or existing administrative data) or use different measurement techniques (e.g. questionnaires and interviews) to prevent single source data issues. In addition, longitudinal research is needed to gain more information about the causal relationship of trust-based working time and the employee related variables, such as job satisfaction.

With regards to the mediating effect of perceived job autonomy found in this study, future research should focus on which interventions can increase perceived employee control to positively affect their job satisfaction and affective commitment. In this study, no significant hypothesized differences were found in respect to work-home interference. These
findings were unexpected and might partly be due to the used questionnaire. The SWING-survey does not differentiate between different aspects of work demands. In line with Carlson et al. (2000), it is recommended that future research should make a distinction between time-based, strain-based and behavior-based interference.

Furthermore, in this research the Minnesota Satisfaction Questionnaire was used, developed by Weiss et al. (1967). One item with regards to satisfaction with work time schedule was added. Nowadays, working under flexible work time schedules is common, and most often organizations are applying multiple work time schedule arrangements. Therefore, future research should focus on developing new, more adapted questionnaires for job satisfaction, which should include questions on employee satisfaction with their work time schedule arrangement.

Moreover, in this study research findings are based on the average ratings of employees. Future research should focus on a more individual approach and consider the employee type in their study. As suggested by Scarpello and Campbell (1983), the fit between person and work environment plays an important role with regards to job satisfaction. For instance, it is proposed that employees with more need for structure and guidance do not gain advantages under flexible work time schedules and more job autonomy. Therefore, more research is needed regarding the relationship between trust-based working time, perceived job autonomy and the employee’s personality traits, such as coping style and need for structure.

Finally the present study might be replicated by including a regular work time schedule as a third group to gain even more knowledge of the effects of flexible work time schedules and to contrast trust-based working time more clearly to regular work time schedules.

11. Theoretical and practical implications

With regards to theoretical implications, the mediating effect of job autonomy found in this study supports the importance of job autonomy given in Karasek’s (1979) “Job Demand-Control Model” and Hackmann and Oldham’s (1975) “Job Characteristics Model”. In a less direct way, the study results also highlight the effectiveness of democratic/transformational leadership style. Organizations offering trust-based working time arrangements contribute to democratic leadership style by having confidence and trust in subordinates and allow subordinates to make decisions for themselves. Comparable to the
results of this study, employees who perceive their supervisors as democratic, experience more job satisfaction and organizational commitment (Pillai, Schriesheim & Williams, 1999).

With regards to practical implications this study supports the importance of autonomous time management for employees. Findings of this study suggest that employee time control as a key aspect of trust-based working time positively relates to job satisfaction, affective commitment and perceived job autonomy. The mediation effect of job autonomy found in this study, suggests that organizations should give special attention to the employees perceived job autonomy. For instance, in line with Ahuja et al. (2007), it is recommended to offer trainings for employees to impart more knowledge on how to work more autonomously. As Ahuja and his colleagues suggested, possible trainings could include training in project management and problem-solving training to get more confidence in managing their own work. Similarly, it is possible to provide greater job autonomy to employees by taking a closer look at the job design (Hackman & Oldham, 1980). More precisely, one has to evaluate if the job in question offers enough autonomy and if not, how to redesign the job. In addition, implementing an empowerment program may be useful to increase employee’s job autonomy (Ahearne et al., 2005).

But not only employees should be trained, it seems even more important to take a closer look at managerial practices. The findings of this study suggest that managers, especially human resource managers, should focus on providing job autonomy and flexibility to their employees in order to enhance their job satisfaction and affective commitment. Managers are often used to control work processes, therefore it is recommended that managers should be educated on the benefits of trust-based working time schedules and trained in possible strategies to implement TBWT. If managers become aware that trust-based working time positively affects job satisfaction and organizational commitment, they may be more willing to support employee self-responsibility and work time control. Furthermore, it is expected that trust plays a major role to enhance organizational commitment (Tan, 2009). Therefore it would be reasonable for organizations to cultivate an organizational culture of trust. Moreover, trust-based working time is a result-driven arrangement, rather than time-driven. Therefore managers should communicate expectations and goals but let the employees decide, how to meet these goals. A useful tool may be the implementation of work-and project groups.

It is important to remember, that the results of this study are based on the average employee and that the individual employee must not be disregarded. Some employees may
need more structure and guidance than other and increasing the autonomy would lead to harmful consequences.

Furthermore, organizations should have in mind that not only employees benefit from trust-based working time. For instance, Halpern (2005) found that control also influences employee health and job performance and previous research revealed that affective commitment and job satisfaction negatively relate to absenteeism and turnover (Baltes et al, 1999). Turnover and absenteeism are among the largest costs for organizations and are often ignored by organizational strategies to reduce operational costs. The findings of this study suggest that one way to reduce costs is to give employees more autonomy, control, responsibility and flexibility, by implementing trust-based working time as a supportive work policy.

In addition, it is advised to keep possible unwanted negative consequences of TBWT in mind. TBWT on the one hand offers freedom to the employee to design his/her own work day. On the other hand, this freedom and the absence of time structure bare the risk of blurring the lines between work and non-work time. Therefore, in line with Hoff (2002) it is recommended that management should encourage employees to keep track of their work time administration to prevent overtime hours and negative work-home spillover. Hoff (2002) for example developed a simple tool for employees to retain their work time hours, which can be downloaded on his website.

This study’s results did not support Thomas and Gansters (1995) findings in the sense that TBWT, as a supportive work policy, positively relates to feelings of control over work and family, which in turn are related to lower levels of negative work-home spillover. The null findings of this study regarding work-home interference should be used to guide organizations development of work-family initiatives. That is, offering trust-based working time arrangements alone is not enough. It is recommended to keep possible moderators such as high work demands, stress and the hours actually worked in mind. In line with Ryan and Kossek (2008) it is also recommended to offer a wide variety of work-family policies such as flexible parental leave, affordable high-quality childcare, and reduced working hours for parents with young children. By offering a wide range of benefits, employees are more likely to find some policy that matches their own needs.

In closing, consistent with research findings by Halpern (2005) no effects of gender were found in this study. Therefore, in the changing work-and family life, gender neutral approaches to work-home interference and organizational work-life policies should be considered.
12. Conclusion

It is important to note that both flextime and trust-based working time have primarily positive effects on the employee. But the positive relationship between trust-based working time and job satisfaction, affective organizational commitment and perceived job autonomy revealed that the principles of personal responsibility and personal control also have to be embodied in the working environment. Therefore trust-based working time becomes more than a new flexible work time model: Trust-based working time can be seen as the organizational response to the new economy. Environmental, demographic and social changes are faced by adjusting the nature of employment towards maximum flexibility and encouraging autonomy and employee control. Because the development and implementation of trust-based working time arrangements is relatively recent, it is assumed that promising advancements towards a reorganization of the workplace are still to come.


**Websites**

1. Survey DIHK, 2004:  


3. [www.hfx.co.uk](http://www.hfx.co.uk)

4. [www.wikipedia.de](http://www.wikipedia.de)

5. [http://www.arbeitszeitberatung.de/](http://www.arbeitszeitberatung.de/)

6. [www.d-nb.de](http://www.d-nb.de)

7. [www.ru.nl/ub](http://www.ru.nl/ub)


Cover-picture: Dieter Otten adopted by Dr. Werner Gitt (1999): “Time and eternity”
Appendix

Appendix 1: Factor loadings job satisfaction scales
Table 7
Factor loadings and communalities based on a principle components analysis with varimax rotation for 30 items from the Minnesota Satisfaction Questionnaire (MSQ) (n = 55). The participants were asked to decide how satisfied they felt about different aspects of their job.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Being able to see the results of the work I do</td>
<td>.253</td>
</tr>
<tr>
<td>2. Being able to take pride in a job well done</td>
<td>.348</td>
</tr>
<tr>
<td>3. Being able to do something worthwhile</td>
<td>.271</td>
</tr>
<tr>
<td>4. The chance to do my best at all times</td>
<td>.335</td>
</tr>
<tr>
<td>5. The feeling of accomplishment I get from the job</td>
<td>.294</td>
</tr>
<tr>
<td>6. The amount of pay for the work I do</td>
<td>.907</td>
</tr>
<tr>
<td>7. The chance to make as much money as my friends</td>
<td>.749</td>
</tr>
<tr>
<td>8. How my pay compares with that for similar jobs in other companies</td>
<td>.879</td>
</tr>
<tr>
<td>9. My pay and the amount of work I do</td>
<td>.886</td>
</tr>
<tr>
<td>10. How my pay compares with that of other workers</td>
<td>.834</td>
</tr>
<tr>
<td>11. The spirit of cooperation among my co-workers</td>
<td></td>
</tr>
<tr>
<td>12. The chance to develop close friendships with my co-workers</td>
<td></td>
</tr>
</tbody>
</table>

*continued on next page*
<table>
<thead>
<tr>
<th>Item</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. The friendliness of my co-workers</td>
<td>Pay.</td>
</tr>
<tr>
<td>14. The way my co-workers are easy to make friends with</td>
<td></td>
</tr>
<tr>
<td>15. The way my co-workers get along with each other</td>
<td></td>
</tr>
<tr>
<td>16. The chance to try out some of my own Ideas</td>
<td>.217</td>
</tr>
<tr>
<td>17. The chance to do new and original things on my own</td>
<td></td>
</tr>
<tr>
<td>18. The chance to try something different.</td>
<td>.204</td>
</tr>
<tr>
<td>19. The chance to develop new and better ways to do the job</td>
<td>.225</td>
</tr>
<tr>
<td>20. The chance to try my own methods of doing the job</td>
<td>.267</td>
</tr>
<tr>
<td>21. The chance to be responsible for planning my work</td>
<td></td>
</tr>
<tr>
<td>22. The chance to make decisions on my own</td>
<td></td>
</tr>
<tr>
<td>23. The chance to be responsible for the work of others</td>
<td></td>
</tr>
<tr>
<td>24. The freedom to use my own judgment</td>
<td>.247</td>
</tr>
<tr>
<td>25. The responsibility of my job</td>
<td>.230</td>
</tr>
</tbody>
</table>

*continued on next page*
<table>
<thead>
<tr>
<th>Item</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. The way my supervisor and I understand each other</td>
<td>0.330</td>
</tr>
<tr>
<td>27. The way my boss handles his/her employees</td>
<td>0.372</td>
</tr>
<tr>
<td>28. The way my boss backs up his/her employees (with top management)</td>
<td>0.696</td>
</tr>
<tr>
<td>29. The way my boss takes care of the complaints of his/her employees</td>
<td>0.560</td>
</tr>
<tr>
<td>30. The personal relationship between my boss and his/her employees</td>
<td>0.652</td>
</tr>
</tbody>
</table>

Appendix 2: Factor loadings work-home interference scales
Table 8
Factor loadings and communalities based on a principle components analysis with varimax rotation for 16 items from the Survey Work-Home Interaction-Nijmegen (SWING) (n = 55). Participants were asked to answer how often they experience the stated situations.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor</th>
<th>NWHS</th>
<th>PWHS</th>
<th>NHWS</th>
<th>PHWS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You find it difficult to fulfill your domestic obligations because you are constantly thinking about your work?</td>
<td></td>
<td>.767</td>
<td>.314</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Your work schedule makes it difficult for you to fulfill your domestic obligations?</td>
<td></td>
<td>.728</td>
<td>-.274</td>
<td>-.225</td>
<td></td>
</tr>
<tr>
<td>3. You have to work so hard that you do not have time for any of your hobbies?</td>
<td></td>
<td>.818</td>
<td>.245</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Your work obligations make it difficult for you to feel relaxed at home?</td>
<td></td>
<td>.668</td>
<td>.355</td>
<td>-.291</td>
<td></td>
</tr>
<tr>
<td>5. The situation at home makes you so irritable that you take your frustrations out on your colleagues?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.731</td>
</tr>
<tr>
<td>6. You do not fully enjoy your work because you worry about your home situation?</td>
<td></td>
<td>.252</td>
<td></td>
<td></td>
<td>.716</td>
</tr>
<tr>
<td>7. You have difficulty concentrating on your work because you are preoccupied with domestic matters?</td>
<td></td>
<td>.425</td>
<td></td>
<td></td>
<td>.710</td>
</tr>
<tr>
<td>8. Problems with your spouse/family/friends affect your job performance?</td>
<td></td>
<td>-.122</td>
<td>.213</td>
<td></td>
<td>.675</td>
</tr>
<tr>
<td>9. You come home cheerfully after a successful day at work, positively affecting the atmosphere at home?</td>
<td></td>
<td>.494</td>
<td></td>
<td></td>
<td>.261</td>
</tr>
<tr>
<td>10. You fulfill your domestic obligations better because of the things you have learned on your job?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.826</td>
</tr>
<tr>
<td>11. You manage your time at home more efficiently as a result of the way you do your job?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.782</td>
</tr>
<tr>
<td>12. You are better able to interact with your spouse/family/friends as a result of the thing you have learned at work?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.744</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Item</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. After spending time with your spouse/family/friends, you go to</td>
<td></td>
</tr>
<tr>
<td>work in a good mood, positively affecting the atmosphere at work?</td>
<td>NWHS</td>
</tr>
<tr>
<td>14. You take your responsibilities at work more seriously because</td>
<td></td>
</tr>
<tr>
<td>you are required to do the same at home?</td>
<td>PWHS</td>
</tr>
<tr>
<td>15. You manage your time at work more efficiently because at home</td>
<td></td>
</tr>
<tr>
<td>you have to do that as well?</td>
<td>NHWS</td>
</tr>
<tr>
<td>16. You have greater self-confidence at work because you have your</td>
<td></td>
</tr>
<tr>
<td>home life well organized?</td>
<td>PHWS</td>
</tr>
</tbody>
</table>

Note. Factor loadings < .2 are suppressed. NWHS = negative work-home spillover, NHWS = negative home-work spillover, PWHS = positive work-home spillover, PHWS = positive home-work spillover.
Appendix 3: Questionnaire
Liebe Kolleginnen und liebe Kollegen,
Um mein Studium der Arbeits- und Organisationspsychologie abzurunden, schreibe ich meine Masterarbeit bei der und erforsche die Themen Arbeitszeit und Arbeitszufriedenheit. Hierzu bin ich auf Ihre Mithilfe angewiesen und möchte Sie hiermit herzlichst bitten, folgenden anonymen Fragebogen wahrheitsgetreu auszufüllen.
Die Resultate der Forschungsarbeit verarbeite ich in meiner Masterarbeit, die Durchschnittswerte angibt, die jedoch nicht auf individuelle Antworten der Mitarbeiter zurückzuführen sind. Die Untersuchung wird lediglich zu Forschungszwecken ausgeführt und dient einer gruppenstatistischen Auswertung. Das Unternehmen wird in der Masterarbeit nicht namentlich genannt.
Ziel ist es, im April/Mai 2010 der und Ihnen die Ergebnisse meiner Masterarbeit zu präsentieren.
Das Ausfüllen der Fragenlisten beansprucht ca. 10-20 Minuten Ihrer Zeit, und ich möchte Sie bitten den ausgefüllten Bogen bis spätestens **24.02.2010** in die dafür vorgesehene Box in der IBIZA-Bar zu hinterlegen.
Ich bedanke mich herzlichst für Ihre Mitarbeit und die schöne Zeit bei der!

Liebe Grüße

Sarah Wulfert