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Working time autonomy and time adequacy: What if performance is all that counts?

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Diskussionspapier 188

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Working Time Autonomy and Time Adequacy

What if performance is all that counts?

Abstract

To be able to combine work with activities and duties outside the workplace successfully, employees need time adequacy. Time adequacy is the fit between working time and all other time demands and can be achieved through working time flexibility and autonomy. However, past research has shown that working time flexibility and autonomy do not necessarily foster employees' time sovereignty. Studies suggest that the benefits of working time arrangements depend on work organization. Analyzing performance-related pay, target setting and self-directed teamwork as moderators for working time arrangements and time adequacy is therefore the main interest of the study. The data used is taken from the European Survey of Working Conditions in 2010. Multilevel analyses show that working time flexibility and autonomy, as well as self-directed teamwork, are positively associated with time adequacy. However, employees experience time squeeze with performance-related pay and target setting. Moreover, performance-related pay undermines the positive effect of working time autonomy. The study indicates that management practices have distinct connotations for time adequacy. Moreover, wage flexibility limits employees' benefits from working time autonomy.

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Inhalt

1 Introduction 1

2 Background 2

2.1 Working time arrangements and time adequacy 2

2.2 Management practices and time adequacy 3

2.3 Working time flexibility and autonomy in the context of employer-centered flexibility 4

3 Data, variables and method 4

4 Results 7

4.1 Descriptive analysis 7

4.2 Results from multivariate analysis 8

5 Conclusion and discussion 10

6 References 14

1 Introduction

Throughout the past decades, the integration of work and activities outside work has become crucial for employees and their families. The rise of female employment and the emergence of multidirectional career paths (Baruch, 2004) are two main developments which make time adequacy necessary. Time adequacy (or time fit) is the fit between working time and time demands outside the workplace (Moen, 2010). Employees increasingly need time adequacy for educational activities during the work phase. They also need time fit in order to combine family and paid work – an issue affecting not only women, but also more and more men, as shifting work preferences suggest. Whereas women wish to invest more time in the labor market, men want to invest more time in the family (Hobson, 2013; van Doorne-Huiskes, den Dulk, & Peper, 2005).

Research indicates that time adequacy is supposed to be achieved with working time flexibility and autonomy. Some contributors, for example, found that employees with flexible and autonomous working schedules have a better work-life balance (Dex, 2002; Russell, O'Connell, & McGinnity, 2009). It is argued that working time flexibility and autonomy support decision-making and time control and thus enable employees to manage their lives more efficiently (Perrons, 1998, p. 5). However, working time flexibility and autonomy have "ambivalent connotations" (Peper, van Doorne-Huiskes, & Dulk, 2005, p. 5), since they can be instruments either of employee-centered flexibility or employer-centered flexibility (Chung & Tijdens, 2013). While employee-centered flexibility focuses on employees' interests, employer-centered flexibility is market-driven (Hildebrandt, 2006) and flexible working time arrangements are implemented by employers in order to keep up with global competition. In this case, flexible and autonomous working time often leads to overtime and work intensification for employees (Gambles, Lewis, & Rapoport, 2006).

These findings suggest that the benefits of working time flexibility and autonomy for employees are shaped by the broader work organization. It can be assumed that when combined with management practices which are generally used for employer-centered flexibility, working time flexibility and autonomy are related to time squeeze. However, only few studies based on representative data have analyzed the role of management practices for flexible and autonomous working schedules. Moen, Kelly and Huang (2008), for instance, studied employees' control over working time as a moderator for their job control and life-course fit without considering management practices. Gallie, Zhou, Felstead and Green (2012) examined the association between teamwork and work pressure as well as job satisfaction, but did not take working time arrangements into account. White, Hill, McGovern, Mil and Smeaton (2003) analyzed the organization of work together with working time and work-life balance. Even though the authors focused on organizational issues, they only controlled for flexible working time arrangements. Neither was the relationship between management practices and time adequacy investigated, nor were management practices tested as moderators for working time arrangements and time adequacy. As Chung and Tijdens (2013) point out, not many studies look at the combination of flexible arrangements simultaneously. Even though the authors mainly referred to the combination of various working time arrangements, the same applies to the combination of flexible and autonomous working time arrangements and flexible management practices.

In order to fill this research gap, the present study analyzes the role of flexible management practices for working time arrangements and time adequacy using the 5th European Survey on Working Conditions in 2010. Random-intercept logistic regression models complement the descriptive findings. Since they are major instruments of employer-centered flexibility, target setting, self-directed teamwork and performance-related pay were taken into account. However, as with working time flexibility and autonomy, researchers discuss employees' benefits with these practices critically (Gallie et al., 2012). The present study therefore reveals how target setting, self-directed teamwork and performance-related pay are related to time adequacy. If negative associations prevail, do these practices undermine the positive relationship between flexible and autonomous working time and time adequacy? The next section discusses employees' benefits of working time flexibility and autonomy as well as their gains with management practices and hypotheses are formulated on the basis of previous findings and theoretical assumptions. After the empirical strategy has been described, the results are presented. The study concludes with a discussion of the findings and their implications for management strategies.

2 Background

2.1 Working time arrangements and time adequacy

Working time flexibility and autonomy have the potential for employees to better combine paid work and other life roles such as education, family, care or social commitment. Employees with flexible working time arrangements can generally decide when to start and stop working. Employees with working time autonomy are completely free to organize their working schedules. Various studies show that flexible and autonomous working time arrangements have positive effects on work-life balance (Dex, 2002; Glass & Estes, 1997; Hill, Hawkins, Ferris, & Weitzman, 2001; Russell et al., 2009; Tausing & Fenwick, 2001), lead to job satisfaction, and improve employees' health (Gregory & Milner, 2009, p. 3). The degree to which workers have control over their schedules also effects their perception of work-life balance (Tausing & Fenwick, 2001, p. 103) and buffers the effects of longer working hours on work-family balance (Barton 1991; Hugh 2007).

In contrast to previous studies which analyze employees' assessments of working time control or their perceptions of job control (Barnett, Gareis, & Brennan, 1999; Duxbury, Higgins, & Lee, 1994; Fenwick & Tausig, 2001; Moen et al., 2008), the present study focuses on the working time arrangements employees actually have. Flexible working hours and time autonomy imply control over when to work (Pocock, 2005) and "how to make use of the available hours" (Hofäcker & König, 2012, p. 615). When they are flexible or even autonomous in organizing working time, employees are able to better combine paid work and other life roles. It can therefore be assumed that working time flexibility and autonomy are positively related to time adequacy (Hypothesis 1).

2.2 Management practices and time adequacy

A positive effect on employees' lives is also often attributed to management practices (Gambles et al., 2006, p. 50) which are assumed to foster employees' participation and decision-making (White et al., 2003, p. 178). Employees in self-directed teams, for example, often report higher motivation, stronger commitment to their organization (Gallie et al., 2012), and greater job satisfaction (Cohen & Ledford, 1994). This is explained by teamwork offering employees "an alternative to repetitive Tayloristic work routines through the processes of job enrichment and self-management" (Dandorf 1998, S. 409). Self-directed teamwork may increase employees' empowerment, control (Gallie et al., 2012; Harley, 1999), and time sovereignty (Brannen, 2005, p. 373). Self-management gives employees the potential to be flexible in their working time. Besides self-directed teamwork, target setting may also facilitate self-management. With target setting, priority is given to the achievement of defined targets. When these targets are achieved is of less importance. Thus, target setting may offer time sovereignty to employees who can decide about their work schedules and the pace of work. Self-directed teamwork and target setting are therefore assumed to be associated with time adequacy (Hypothesis 2).

Research on the effects of management practices on work-life balance, however, questions the positive effects of these practices. Whereas Bloom, Kretschmer and van Reenan (2009) observed a positive relationship between Anglo-Saxon management practices and work-life balance, Danford (1998), Godard (2001) and Barker (1993) found a negative effect of high-performance management practices on work-life balance. In a quantitative study for the UK, White et al. (2003) showed that teamwork and target setting reduce work-life balance, and Gallie et al. (2012) found that self-managed teamwork is related to higher work pressure and work tension. Moreover, White et al. (2003) also found performance-related pay to undermine formal work-life balance policies implemented by employers (Gregory & Milner, 2009, p. 4). It should be noted, however, that unlike other practices, performance-related pay does not offer time flexibility, but is a form of wage flexibility (Wilthagen, Tros, & van Lieshout, 2004).

One reason for the negative effects of management practices is seen in the hidden control which is exercised through these practices. As Brannen (2005, p. 127) puts it, they only "bring a semblance of autonomy to employees – about where and when to work – that is designed to increase productivity". Work autonomy is then no more than an illusion. External control can be exercised through colleagues who become "agents of social control" for ensuring maximum effort (Gambles et al., 2006, p. 50). Especially self-directed teamwork risks increasing dependency among colleagues and control through several team members and may therefore "cause more rigidity in working hours" (Peper et al., 2005, p. 47). The idea of acting autonomously also masks the fact that employees are controlled by their employer (Brannen, 2005, p. 116) who uses one-way flexibilization (Peper et al., 2005, p. 5) in order to react to business fluctuations. Thus, employer-centered flexibility may lead to a 24/7 economy with flexible production processes, longer work hours and higher work pressure (Gregory & Milner, 2009, p. 4). Employees' overinvestment in work is one result of this process.

The internalization of corporate norms and identification with the company are further reasons for employees' overinvestment in work. Target setting, self-directed teamwork and performance-related pay are implemented by employers in order to increase employees' motivation (Gallie et al., 2012). Employees' intrinsic motivations, for example, are the maximization of their

salary or the attainment of recognition from colleagues or their boss. This often leads to an internalization of corporate norms and employers' goals (Moldaschl & Voss, 2002; Sauer, 2005). Moreover, Cushen and Thompson (2012) highlight the role of employees' identity regulation through "employer branding", where "the identity of the firm as an employer is linked with its policies on attracting, motivating and retaining employees". By identifying with the company and making employers' needs and interests their own, employees invest more energy and time in work. Especially wage flexibility, such as performance-related pay, is a strong incentive for employees who aim at enhancing their performance in order to gain financial rewards. The alternative hypothesis to Hypothesis 2 therefore is that employees in self-directed teams, with target setting or with performance-related pay experience time squeeze (Hypothesis 3).

2.3 Working time flexibility and autonomy in the context of employer-centered flexibility

Similarly to the above-mentioned management practices, working time flexibility and autonomy have "ambivalent connotations" (Peper et al., 2005, p. 5). In market-driven flexibilization modes, working time flexibility and autonomy are further instruments of employer-centered flexibility (Hildebrandt, 2006). Klammer (2008), for example, showed that, as a means of employer-centered flexibility, employees use or have to use their flexible working hours to meet the company's needs, which leads to longer work hours and work intensification. In their qualitative study, Gambles et al. (2006) found autonomous working hours to be often used to increase the volume of work, resulting in a general feeling of time and energy pressure among their participants – not only in the workplace, but also outside of work. Burchell (2006, p. 21) assumes that the intensification of work may even be a greater problem in terms of stress and tension than long working hours. The feeling of not having enough time and that working hours do not fit in with duties and activities outside the workplace may be as problematic as the actual number of hours worked.

Thus, the broader work organization has to be considered when assessing the benefits of flexible and autonomous working time (Guest, 2002, p. 270). Working time flexibility and autonomy often involve disadvantages for employees when implemented in the context of employer-centered flexibility. Target setting, performance-related pay and teamwork may therefore jeopardize the benefits of working time flexibility and autonomy. I assume that flexible and autonomous working time can be positive for employees' time adequacy, but may turn into time squeeze if combined with those practices (Hypothesis 5).

3 Data, variables and method

The analysis is based on the 5th European Working Conditions Survey (EWCS) in 2010 which was commissioned by The European Foundation for the Improvement of Living and Working Conditions. The EWCS covers 27 EU Member States, Norway and three candidate countries, Former Yugoslav Republic of Macedonia (FYROM), Croatia and Turkey, as well as Albania, Ko-

sovo and Montenegro (Eurofound, 2010, p. 3). It is representative for each country's residents aged 15 or older (16 and over in Spain, the UK and Norway) who were in employment[1] during the reference period (Eurofound, 2010, p. 11). The data contains approximately 43,800 observations in total. Since employees' working time flexibility and autonomy are the focus of the study, self-employed individuals were not considered. The sample was also restricted to employees aged 18 to 67.

The dependent variable is time adequacy. Time adequacy was measured with the survey question "In general, do your working hours fit in with your family or social commitments outside work very well, well, not very well or not at all well?" In other words, the indicator captures employees' assessments of the fit of their working time arrangements with family and other social commitments. For the purpose of facilitating interpretation of the results, 'very well' and 'well' have been combined to the category 'time adequacy' and 'not very well' and 'not at all well' to the category 'time squeeze'.[2]

The explanatory variables include working time arrangements. In the survey, respondents were asked "How are your working time arrangements set?". The items are 1 = set by company with no possibility of changes, 2 = choosing between fixed working schedules set by the company, 3 = adapting own work hours within certain limits (e.g. flexitime) and 4 = hours entirely determined by employees. In the following, answer category (3) is referred to as indicating working time flexibility and answer category (4) as indicating working time autonomy. Since the focus is on these two indicators, the first and second categories are combined to the category 'fixed'. In the multivariate regression models, this category was used as the reference category.

Performance-related pay, self-directed teamwork and target setting are explanatory variables as well as moderator variables for working time arrangements and time adequacy. Performance-related pay was measured with the information as to whether employees' salaries included piece rates or productivity payments. Self-directed teamwork was captured with the question of whether employees worked in a group or team that had common tasks and could plan its work. Target setting was measured with the question of whether employees worked with numerical or productivity targets.

The average number of working hours per week was used to measure time squeeze due to work intensification. Because working with deadlines could increase employees' stress and thus contribute to time squeeze, the analysis controlled for whether employees worked to tight deadlines. The variable has seven categories ranging from 1 = always to 7 = never and was included as a continuous variable. Furthermore, employees' positions within the company may be crucial for their time adequacy. Especially employees in higher positions have flexible working hours (Wotschack, 2010). Two controls were therefore included measuring whether the person occupies a position as a manager or professional and whether the person is a supervisor. In addition,

1 "A person was considered as being in employment if he or she did any work for pay or profit during the reference week for at least one hour. The reference week was the week that preceded the beginning of the interview." Eurofound (2010, p. 11)

2 Because the dependent variable has the four items 1 = very well, 2 = well, 3 = not very well and 4 = not at all well, generalized ordered logit models were estimated first of all. However, the results of the generalized ordered logit models do not provide additional information compared to estimates of binary logit regression models, where the dependent variable is coded with 0 = bad and 1 = good.

employees' educational levels (1 = (pre-) primary education, 2 = secondary education and 3 = tertiary education) were taken into account.[3] It may also be crucial whether employees have a temporary contract and therefore experience higher job insecurity. Job insecurity has been shown to be typically associated with longer working hours (White et al., 2003). A dummy variable controlled for indefinite working contracts. Finally, flexible working arrangements are more common in the public than in the private sector (Russell et al., 2009). This was controlled by including a dummy for "public sector", with all other sectors as a reference group. Finally, time adequacy is influenced by employees' duties and activities outside work. Therefore the questions also controlled for single-person household and the number of children (0 = no child, 1 = one child, 2 = two children and 3 = three and more children)[4]. In cohabitations, employees' time adequacy may also depend on whether they are the main breadwinners. Therefore, this variable was also included. Table 1 presents descriptive data of all variables.

Table 1: Variables (N=32,330)

Variable	Mean/ percent	Std.Dev.	Min	Max
Time adequacy	82%		0	1
Fixed hours	79%		0	1
Flexible hours	16%		0	1
Autonomous hours	5%		0	1
Performance-related pay	12%		0	1
Self-directed teamwork	46%		0	1
Target setting	36%		0	1
Deadline	4.38	2.07	1	7
Working hours	38.13	10.76	1	105
Indefinite contract	77%		0	1
Supervisor position	15%		0	1
Manager/Professional	38%		0	1
Public sector	31%		0	1
Women	51%		0	1
Age	40.99	11.49	18	67
Primary education	5%		0	1
Secondary education	64%		0	1
Tertiary education	31%		0	1
Breadwinner	63%		0	1
Single	13%		0	1
No child	47%		0	1
One child	23%		0	1
Two children	22%		0	1
Three or more children	8%		0	1

Data source: EWCS 2010

Multivariate regression models, i.e. binary logistic regression models, were estimated to test the relationship between working time arrangements, management practices and time adequacy.

3 The individual monthly net income has not been used in the regression models, because of a very high number of missing values. In addition, interviewees were given the possibility to assign themselves to an income group. In order to avoid a sample bias and the use of an inexact measure, income was only tentatively introduced in previous models. The main effects in these models are comparable to those in the final models presented here.

4 Age of the youngest child in the household may also influence work-life balance. But since effects were not significant, nor did they alter the effects of the explanatory variable and interaction effects, it is not included in the models.

Binary logistic models are favored over generalized ordered logit models, since the interpretation of the binary logistic regression model is less complex and results of both models are similar. Random-intercept models were estimated to account for the within-group correlation of observations (Twisk, 2006, p. 9).[5] In the random-intercept model, the intercept is a random variable which varies across groups (Hox, 2010, p. 12). The model controls for the variation of average values of the dependent variable, i.e. time adequacy, across countries. Furthermore, random-intercept models take different group sizes into account (David A. Kenny, Deborah A. Kashy, & William L. Cook, 2006, p. 86). The "30/30 rule" is met for an accurate estimation of parameters and their standard errors (Hox, 2010, p. 235). This rule is sufficient for the present study, since only the fixed parameters are of interest here. The sample contains 34 groups with a minimum of 236 observations and a maximum of 1,540 observations per group. Model 1 was estimated for the whole sample without performance-related pay, teamwork and target setting. In Model 2, these variables were introduced. Model 3 provides the combined effects of time arrangements and management practices. In order to disentangle the effect of working time arrangements due to overtime and work intensification, there was no control for working hours in Model 4. Since odds are confounded with the residual variation (Allison, 1999, p. 186), the interpretation of coefficients focuses on the direction and significance of effects. These can always be compared between groups (Mood, 2010, p. 72). For the interpretation of the combined effects, probabilities are predicted based on averaged marginal effects which experience only little influence from unobserved heterogeneity and can be compared across models (Mood, 2010, p. 78).

4 Results

4.1 Descriptive analysis

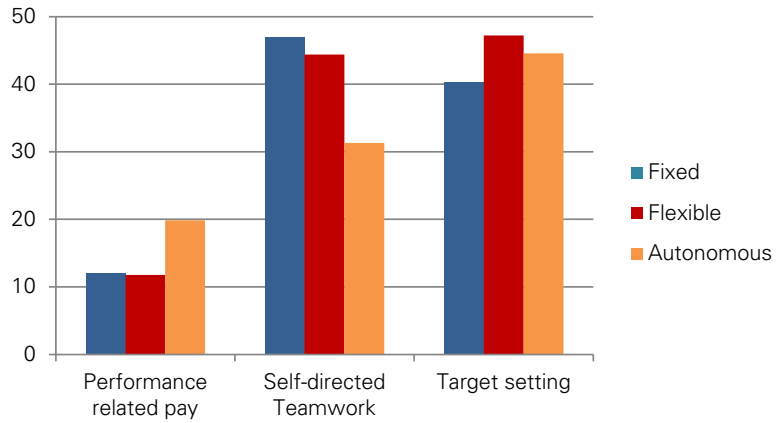
Before discussing the multivariate findings, it is helpful to take a look at the distribution of working time arrangements and management practices in the countries. The majority of employees have fixed schedules, while working time autonomy is far less frequent (Table 1). More than two thirds of all employees – 79 % – have fixed working time schedules. 16 % have flexible working time arrangements and 5 % work with autonomous working hours. Besides the fact that women have flexible working schedules slightly more often than men, the allocation of different working time arrangements is very similar for men and women. As regards management practices, performance-related pay is far less common than teamwork and target setting (Table 1). Only 12 % of employees receive bonus payments, but almost half of employees work in self-directed teams. More than one third works with target setting.

One interest of the present study is to investigate the impact of management practices on working time arrangements. The descriptive findings suggest that working time arrangements may be differently related to management practices (Figure 1). Employees receiving performance-

5 According to the likelihood-ratio test, random-coefficient models with random slopes for working time arrangements have to be rejected in favor of random-intercept models (Rabe-Hesketh & Skrondal, 2008, p. 159)

related pay most often have working time autonomy. 20 % of employees with working time autonomy receive extra payments. Self-directed teamwork, however, is rather mixed with regard to working time arrangements. Employees with fixed and flexible hours mostly work in self-directed teams. Target setting ís mainly used in combination with flexible and autonomous work hours, but is also common with fixed working time arrangements. Thus, self-directed teamwork and, to a lesser extent, target setting are often combined with all three practices, whereas performance-related pay is primarily related to working time autonomy. But how are working time arrangements and management practices related to time adequacy? And do these practices undermine the effect of time arrangements on time fit? The multivariate results can provide answers to these questions.

Figure 1: Distribution of working time arrangements with performance-related pay, self-directed teamwork and target setting in %



Note: Weighted percentages, Data source: EWCS 2010

4.2 Results from multivariate analysis

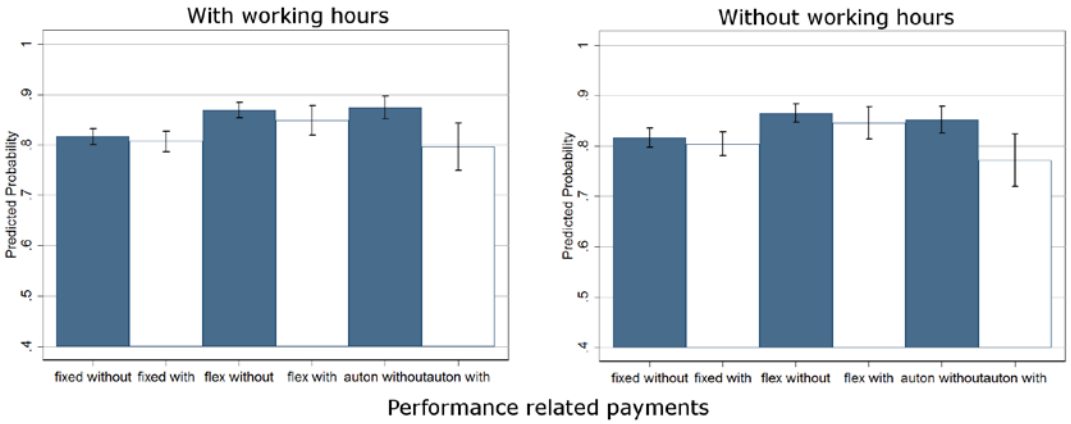
Table 2 indicates that working time flexibility and autonomy are strongly associated with time adequacy for employees in all models. The positive and highly significant associations between flexible and autonomous working hours and time adequacy in Model 1 remain positive and highly significant when management practices are controlled for in Model 2. The chance that employees have time adequacy is higher with flexible and autonomous working time than with fixed schedules. Hypothesis 1 is confirmed. Working time flexibility and autonomy is positively related to employees' time adequacy.

The coefficients for performance related pay, target setting and teamwork are also highly significant (Model 2), but the directions of the effects differ. Performance-related pay and target setting are negatively related to time adequacy, whereas self-directed teamwork is positively associated with time adequacy. This finding supports the descriptive analysis indicating that management practices are differently related to working time arrangements. They also have different connotations for employees' time adequacy. Hypothesis 2 is confirmed for self-directed teamwork. In self-directed teams, employees have higher chances of having time fit. Self-directed teamwork seems to provide a certain degree of time control. Hypothesis 3 is confirmed

for performance-related pay and target setting. These management practices are related to time squeeze. They undermine work autonomy and lead to work pressure.

As regards the combined effects on time adequacy, only performance-related pay interacting with working time autonomy is significant. Figure 2 shows the predicted probabilities for time adequacy in Model 3 with control for working hours (left figure). The probability of time adequacy is low with fixed schedules, regardless of whether performance-related pay is received or not. Moreover, the probability for time adequacy is significantly higher with flexible hours than with fixed schedules. It is less probable, however, that employees experience time adequacy thanks to working time autonomy, if this is combined with performance-related pay. The probability of time adequacy is around 88 percent for employees with working time autonomy and without performance pay. But when employees receive this extra pay, the probability declines to 80 percent. It should also be noted that the effect of working time autonomy combined with performance-related pay is not significantly different from the probabilities found for fixed schedules. Thus, performance-related pay undermines the positive effect of working time autonomy. The result indicates that working time autonomy is related to work intensification when combined with performance-related pay. In order to capture the role of overtime, working hours were excluded from Model 4. When working hours are not taken into account, the probability of time adequacy with working time autonomy is still lower than with the other time arrangements, but lowest (around 78 %) when combined with performance-related pay. Thus, working time autonomy is also related to longer working hours, especially when combined with performance-related pay. Hypothesis 4 is confirmed only for performance-related pay. While this pay undermines the benefit from working time autonomy, target setting and teamwork do not significantly alter the relationship between working time arrangements and time adequacy. Performance-related pay together with working time autonomy is associated with work pressure and with longer work hours.

Figure 2: Combined effect of working time arrangements and performance-related pay with and without control for working hours



Note: Predicted probabilities for combined effect of working time arrangements and performance-related pay;

Data source: EWCS 2010

Thus, mainly employees with working time autonomy and performance-related pay experience time squeeze. It can be assumed that these employees belong to a rather special group of employees. Where in the labor market do these employees work? Most of them work in the private sector. 73 % of employees with autonomous working time and 77 % of employees with bonus payments work in private companies. The dominant sectors are manufacturing, wholesale and retail trade and real estate activities. For instance, 17 % of employees with bonus payments work in the wholesale and retail trade and as much as 26 percent of employees with performance-related pay have jobs in manufacturing. Employees with time autonomy *and* bonus payments mostly work in the wholesale and retail trade (21 %), manufacturing (19 %) and real estate (13 %). Half of the employees with both working conditions are managers or professionals (54 %) and one third has supervisory positions (33 %). Only 37 % of these employees are women. Even though we mainly deal with high performing men in the private sector working in manufacturing, wholesale and retail, and real estate, half of the employees in this group do not occupy a position as a manager or professional and two thirds do not have a supervisor position. Therefore, we are dealing with a rather heterogeneous group of employees with distinct occupational characteristics.

5 Conclusion and discussion

The main interest of the present study was to examine the role of target setting, performance-related pay and self-directed teamwork for time adequacy and their effects on the relationship between working time flexibility and autonomy and time adequacy. A limitation of this study is the restricted number of observations especially for working time autonomy and performance-related pay. Extended data is needed to further investigate the role of management practices for the efficacy of working time arrangements. Moreover, employees' self-selection into jobs could not be taken into account. Employees choosing jobs with working time autonomy and performance-related pay may, however, have specific personality characteristics or preferences which influence their time adequacy. Furthermore, jobs with performance-related pay and working time autonomy may be more time demanding than jobs without these conditions. Surveys with more detailed information about different types of jobs would provide a remedy here, especially longitudinal surveys which allow for causal inference. Furthermore, the measurement of management practices may be imprecise. Almost 50 % of employees in the sample say that they work in self-directed teams – a share which seems to be rather high. In addition, the indicator for target setting measures numerical as well as productivity targets, whereas the indicator for performance-related pay does not provide information about the amount of extra pay. More detailed surveys and qualitative research could provide further insights regarding these management practices.

Nevertheless, the study suggests that management practices have a distinct impact on time adequacy. Whereas self-directed teamwork seems to provide time control and decision-making to employees, performance-related pay and target setting are associated with time squeeze. Moreover, the above regressions showed that working time flexibility and autonomy have strong and positive relationships with time adequacy, but that performance-related pay alters the relationship between time autonomy and time adequacy. Wage flexibility undermines em-

ployees' benefits of working time autonomy. When employees with working time autonomy receive performance-related pay, they are likely to experience time squeeze. Target setting, however, does not alter the association between working time arrangements and time adequacy.

Thus performance-related pay has a strong negative impact on employees' benefits from working time autonomy. In line with Gambles et al. (2006), who point to the risk of workplace practices undermining government and workplace policies, we saw that work organization is important for employees' time adequacy and for the efficacy of working time autonomy. Target setting and performance-related pay are related to time squeeze, and wage flexibility even undermines the positive effect of working time autonomy. In order to ensure employees' "real" work autonomy, performance-related pay should be avoided. Not only is performance-related pay an instrument of employer-centered flexibility, but an expression of a work culture where individual achievements are stressed and high personal involvement in work is required. To ensure employees' time adequacy it is therefore not sufficient simply to abolish companies' reward systems. The work culture with the norm of the ideal worker (Kelly, Ammons, Chermack, & Moen, 2010), who dedicates his or her life to the interests and wishes of the employer, has to change. A first step in this direction could be to disclose the hidden control exercised through employer-centered flexibility. When employees are able to make a distinction between their needs and interests and those of their employer, they may have less reason to overinvest in work. Communication between colleagues at the workplace which might be encouraged through works councils, or union representatives could start such a process. Talking about the current work situation and discussing work-related problems may also reduce the pressure felt at the workplace. Research indicates that social support at the workplace buffers occupational stress and burnout (Lu, 1999; van Dierendonck, Schaufeli, & Buunk, 1998). Learning that colleagues struggle with similar problems may reduce the fear of failure or of being unable to handle the work situation. Building up such a work culture might be beneficial not only for employees' time adequacy, but for their health and mental well-being.

Of course, the question remains as to how employers should control employees' work outcomes. Instead of target setting and performance-related pay, a means which is efficient for employee motivation, but puts less work pressure on employees is feedback that managers give to employees on a regular basis. Social support by supervisors not only reduces health problems and contributes to job satisfaction (van Dierendonck et al., 1998), but is related to a higher commitment to work and the organization (Mathieu & Zajac, 1990). Thus, employees, as well as employers, profit from this form of motivational increase. Social support from colleagues and employers through regular feedback makes practices unnecessary which put too much pressure on employees and therefore result in negative outcomes for employees as well as employers.

Table 2: Random-intercept logistic regression models for time adequacy

	Time adequacy			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Time arrangements				
Fixed	ref	ref	ref	ref
Flexible	0.403***	0.413***	0.340***	0.322***
	(0.05)	(0.05)	(0.08)	(0.08)
Self-directed	0.330***	0.351***	0.512***	0.398***
	(0.08)	(0.08)	(0.13)	(0.13)
Performance pay		-0.115***	-0.069	-0.082*
		(0.04)	(0.05)	(0.05)
Pay*flexible			-0.108	-0.082
			(0.13)	(0.13)
Pay*self-directed			-0.548***	-0.472***
			(0.18)	(0.17)
Teamwork		0.086***	0.073**	0.069**
		(0.03)	(0.03)	(0.03)
Teamwork*flexible			0.128	0.117
			(0.10)	(0.10)
Teamwork*self-directed			-0.057	-0.105
			(0.17)	(0.16)
Target setting		-0.111***	-0.123***	-0.120***
		(0.03)	(0.04)	(0.04)
Target*flexible			0.083	0.019
			(0.10)	(0.10)
Target*self-directed			-0.014	-0.183
			(0.16)	(0.15)
Working hours	-0.052***	-0.052***	-0.052***	
	(0.00)	(0.00)	(0.00)	
Deadline	0.148***	0.141***	0.140***	0.160***
	(0.01)	(0.01)	(0.01)	(0.01)
Indefinite contract	0.144***	0.144***	0.143***	0.087**
	(0.04)	(0.04)	(0.04)	(0.04)
Supervisor	0.049	0.048	0.049	-0.074*
	(0.04)	(0.04)	(0.04)	(0.04)
Professional/Manager	0.283***	0.284***	0.285***	0.298***
	(0.04)	(0.04)	(0.04)	(0.04)
Public sector	0.125***	0.102***	0.101***	0.214***
	(0.04)	(0.04)	(0.04)	(0.04)
Sex	-0.084**	-0.094***	-0.096***	0.062*
	(0.03)	(0.03)	(0.03)	(0.03)
Age	0.009***	0.009***	0.009***	0.010***
	(0.00)	(0.00)	(0.00)	(0.00)
Education				
Primary				
Secondary	0.000	0.005	0.004	0.042
	(0.07)	(0.07)	(0.07)	(0.07)
Tertiary	0.047	0.049	0.046	0.099
	(0.08)	(0.08)	(0.08)	(0.08)
Breadwinner	-0.085**	-0.082**	-0.082**	-0.162***
	(0.04)	(0.04)	(0.04)	(0.04)
Single	0.118**	0.116**	0.117**	0.141**
	(0.06)	(0.06)	(0.06)	(0.06)
Number of children				
No child	ref	ref	ref	ref
One child	-0.267***	-0.267***	-0.267***	-0.251***
	(0.04)	(0.04)	(0.04)	(0.04)
Two children	-0.347***	-0.348***	-0.349***	-0.336***
	(0.04)	(0.04)	(0.04)	(0.04)
Three or more children	-0.449***	-0.452***	-0.451***	-0.433***
	(0.06)	(0.06)	(0.06)	(0.06)

(Table 2 continued)

	Time adequacy			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Constant	2.602***	2.655***	2.667***	0.408***
	(0.14)	(0.14)	(0.14)	(0.12)
N (individuals)	32330	32330	32330	32330
N (groups)	34	34	34	34
Random-effects parameters				
std(cons) Estimate	0.320	0.319	0.318	0.373
	(0.04)	(0.04)	(0.04)	(0.04)
Log-Likelihood	-13.997.245	-13.984.028	-13.978.002	-14.480.722
LR Test vs. Logistic regression	***	***	***	***

Note: Random-intercept logistic regression models; Log-coefficients and standard deviation in parentheses; dependent variable time fit (0=bad, 1=good); Results not weighted;
*p<.05 **p<.01 ***p<.001*p<.05 **p<.01 ***p<.001

Data source: EWCS 2010

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