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1

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Abstract

This study examines the impact of team characteristics on the supervisor's attitude towards telework through a mixed-method approach. First, in the quantitative part, we test hypotheses drawing on disruption and dependency theory, using data of 205 supervisors from four Belgian organizations. The data confirm the hypothesized negative correlation between task interdependence and supervisors' supportive attitude towards telework, as well as the moderating role of supervisor's dependency on his or her team on this relation. We found no impact of team heterogeneity and lack of team effort and low performance. Second, we use qualitative data collected through 39 semi-structured face-to-face interviews with supervisors to gain a better understanding of supervisors' reasoning behind their attitude towards telework. These data provide insight into how task interdependence, team heterogeneity and lack of team effort and low performance affect it. Our team-centered conceptualization of the antecedents of supervisors' attitude towards telework enables to highlight the key role of structural aspects in shaping supervisors' attitudes towards telework. This is particularly important for policy, as organizations are better placed to remediate aspects at the team level that contribute to supervisors' negative attitude towards telework, rather than those at the inter-individual one.

Key words: telework; work disruption theory; dependency theory; supervisor's attitude; task interdependence

Introduction

In recent years, telework has become a popular tool for organizations to attract and retain employees (Ryan & Kossek, 2008). Telework, defined as "an alternative work arrangement in which employees, for at least some portion of their work schedule, perform tasks elsewhere that are normally done in a primary or central workplace, using electronic media to interact with

others" (Gajendran & Harrison, 2007: 1525), is expected to increase employees' job satisfaction and performance and to decrease their work-life conflict and turnover intentions (Baruch & Nicholson, 1997; Gajendran & Harrison, 2007; Perez, Sanchez, & de Luis Carnicer, 2002). Contrary to expectations, however, research has repeatedly shown that, similar to other work-life policies, telework not only remains underutilized in many organizations (Pyöriä, 2011) but also, when used, it does not always have the expected positive outcomes. Whereas some empirical studies on the impact of teleworking found positive outcomes such as reduced work-family conflict and increased job satisfaction, other studies found no relationship or even a negative one (for a review, see Bailey & Kurland, 2002; Golden et al., 2006). This suggests that employees' use of the possibility to telework does not automatically lead to these positive effects.

Whereas some studies have related the unexpected negative outcomes of telework to co-workers' negative reaction, the lack of practical support from the organization and the lack of good working environment at home (Jaakson & Kallaste, 2010), most have pointed to the key role of supervisors' attitude towards telework (Lim & Teo, 2000; Perez et al., 2002; Peters & den Dulk, 2003). Supervisors are important because they are responsible for first-line implementation of HRM policies. They may be reluctant to support telework for many reasons, among other because they find that teleworkers escape from their direct control or because of the possible additional responsibilities non-teleworking employees might get due to their colleagues' absence from work during telework (Baruch, 2000; Gajendran & Harrison, 2007, Reinsch, 1997). This research has consistently shown that supervisor's lack of support does not only have a negative impact on team members' access to telework policy (Allen, 2001; Kirby & Krone, 2002; Thompson, Beauvais, & Lyness, 1999; Peters & Heusinkveld, 2010), but also that it negatively affects employees' outcomes when they make use of telework (Haines et al., 2002). In particular, when employees perceive that supervisors react negatively to telework and/or associate telework with career penalties (Peters & Heusinkveld, 2010), they might experience *lower* job satisfaction and feel *less* committed. In those cases, the use of telework may thus be associated with negative outcomes, opposed to those envisaged by the organization with its telework policy (Haines et al., 2002).

Given supervisors' key role in the implementation and success of telework, it is warranted to understand what affects their attitude towards telework. Research on this issue to date has mainly examined which characteristics of the *supervisor* are related to his/her attitude towards telework. These studies focused, among other, on supervisors' social and demographic traits, such as gender and family composition (Parker & Allen, 2002). The underlying idea was that

their attitude towards teleworking is determined by their own individual experience of work-life conflict and work-life balance. For instance, female supervisors and supervisor with parental responsibilities were believed to be more supportive towards work-life policies than their male colleagues and colleagues without children (Parker & Allen, 2002).

More recently, a few studies have turned to characteristics of the *team members*, including team members' educational profile, supervisory responsibilities, and specialized knowledge and skills, which shape team members' relation to the supervisor (den Dulk & de Ruijter 2008; Peters, den Dulk, & de Ruijter, 2010). This is an important shift in perspective, as in this case supervisors' attitude towards telework is rather understood as emerging from the effects they believe telework may have on their team members' and their own performance. Two main theories feature in this literature: work disruption theory and dependency theory.

Work disruption theory (Powell & Mainiero, 1999) posits that, as supervisors are primarily evaluated and rewarded for the results they achieve, their attitude reflects the disruption they anticipate telework arrangements will cause to the team members' work processes. The anticipated disruption depends among others on the nature of the user's tasks, skills and responsibilities. For instance, supervisors of teams with more low educated employees are less in favor of telework because they anticipate more disruption as they feel less confident that their employees will deliver the expected results without supervision (den Dulk & de Ruijter, 2008). Similarly, supervisors' attitude towards telework has been found to be significantly more negative if the potential user has supervisory responsibilities, which generally require more interaction than other responsibilities, increasing the likelihood of disruption (den Dulk & de Ruijter, 2008).

Dependency theory rather explains supervisors' attitude in terms of the supervisors' dependency on their team members. When employees are difficult to replace -- for instance because of their specialized knowledge/skills --, supervisors depend more on them for achieving their goals and are therefore likely to grant them benefits to keep them in the organization. Among these benefits are work-life benefits such as telework (Bailey & Kurland, 2002). Telework is indeed often considered as a benefit for employees since it gives employees more autonomy and may help them to attain a better work-life balance (den Dulk & De Ruijter, 2008). Employees who are given more benefits by their supervisor tend to be willing to reciprocate, for instance in terms of commitment and performance, as a positive exchange between the employee and the supervisor (Muse et al., 2008). Therefore, we expect that supervisors of difficult-to-replace employees are likely to be more supportive of telework, since they depend more on their subordinates and are therefore more willing to provide them benefits like telework

(den Dulk & De Ruijter, 2008). This could in turn stimulate commitment from these highly valued employees and ensure their "positive contribution to the performance of the department" (Peters et al., 2010:526). In line with this idea, Peters and her colleagues (2010) found that supervisors are more inclined to grant telework requests from employees with specialized knowledge/skills, on whom they depend more.

The research based on disruption and dependency theory has contributed to developing a more work-related understanding of supervisors' attitude towards telework, which highlights the key role of supervisors' work objectives in their attitude towards telework. This perspective better accounts for the trade-offs they face in implementing telework due to their simultaneous responsibility to achieve work results and to implement work-life balance HR practices in their teams (Powell & Mainiero, 1999). However, this research has to date conceptualized and operationalized the relations between supervisors and their team at the inter-individual level, as one-to-one relationships between the supervisor and each team member.

In this study, we rather posit that the characteristics of the team as a collective entity affect supervisors' attitude towards telework. There are a number of reasons to expect supervisors' attitude towards telework to emerge from their anticipation of its effects on the team's functioning and performance as a whole. First, work processes in contemporary organizations are often structured in a team-based manner: in many cases employees depend on their co-workers for their work and/or are collectively responsible for a specific output (Campion, Medsker, & Higgs, 1993; Davidson, 2005; Kozlowski & Bell, 2001). Furthermore, while supervisors might take specific telework allocation decisions based on individual employee characteristics, they arguably develop *one* attitude towards telework. A coherent vision on telework is also needed to justify their implementation decisions vis-à-vis individual team members, if they want to avoid perceptions of injustice with adverse effects on motivation and performance (Colquitt, 2004; Poelmans & Beham, 2008; Ryan & Kossek, 2008). For these reasons, following recents calls to pay more attention to the context characteristics in which attitudes and behavior towards work-life policies emerge (Kossek, Lewis, & Hammer, 2010; Poelmans & Beham, 2008; Straub, 2012), we examine how supervisors form their attitude towards telework based on their relationship with their team as a collective entity.

This study investigates the influence of team characteristics on the supervisor's attitude towards telework through a mixed-method approach. First, we draw on disruption and dependency theory to develop hypotheses based on team characteristics, which we test using data of 205 supervisors from four Belgian organizations. Second, we use qualitative data collected through 39 semi-structured face-to-face interviews with supervisors to gain a better

5

understanding into their reasoning behind their attitude towards telework. Empirically, we limit our investigation to home-based telework or homeworking, which refers to 'working at home on a regular basis, though not necessarily (and, in fact, rarely) every day' (Perez et al., 2002, p. 775), excluding other types of telework, such as working from a satellite office.

Theoretical approach

In this study we combine work disruption theory and dependency theory to model how supervisors form their attitude towards telework. These theories posit that supervisors' attitudes towards telework are related to the potential disruptiveness of telework for the organization of work (work disruption theory, Powell & Mainiero, 1999) and their dependency on their team to achieve their goals (dependency theory, Bartol & Martin, 1988). Taken together, they offer a useful framework to explain supervisors' attitude as an effect of their simultaneous responsibility for possibly conflicting outcomes in terms of productivity and telework implementation (Todd & Binns, 2013).

Work disruption theory states that, in forming their attitude about work-life balance arrangements, supervisors are mainly concerned about the short-term productivity of their team, for which they are generally held responsible by the organization (McConville & Holden, 1999; Purcell & Hutchinson, 2007). Striving for work continuity to ensure productivity, they try to avoid the disruption of their team's work activities. Accordingly, they are less likely to have a supportive attitude towards telework when team characteristics are such that telework might undermine the team's work continuity and thus productivity. Thus, disruption theory assumes that supervisors' attitudes towards work-life policies are based on the potential disruptiveness of these policies for the organization of work in their team (Powell & Mainiero, 1999). A number of studies have indeed empirically demonstrated that supervisors who consider work-life policies disruptive for their team members' performance have a less supportive attitude towards work-life policies (den Dulk & de Ruijter, 2005; Powell & Mainiero, 1999; den Dulk, Peper, Sadar, Lewis, Smithson, & Van Doorne-Huiskes, 2011). This all suggests that supervisors' attitude towards telework is mainly determined by their concern for short-term productivity goals rather that by possible long-term advantages of work-life policies, such as reduction of turnover and increased job satisfaction (den Dulk & de Ruijter, 2008).

Dependency theory rather posits that, in forming their attitude about work-life balance arrangements, supervisors take into account their dependency on their team members. The more supervisors depend on their team members, the more they will try to retain them in the longer run (Klein, Berman, & Dickson, 2000; Poelmans & Beham, 2008). In this perspective,

6

supervisors consider work-life arrangements as a means to reward, motivate and retain the team members on which they depend (Bartol & Martin, 1988; Poelmans & Beham, 2008). In these cases, long-terms advantages of work-life policies prevail over the short-term disruption that might be caused by their utilization.

Although these two theories are often portrayed as contradicting each other, a few studies have argued that they should rather be considered as complementary, and that research should investigate under which conditions dependency versus disruption arguments dominate (den Dulk & de Ruijter, 2008; Poelmans & Beham, 2008). Den Dulk and de Ruijter (2008) empirically examined whether the relevance of disruption and dependency depends on the type of work-life policy. They found that disruption arguments usually dominate, but that dependency arguments prevail when team members ask to make use of less disruptive work-life policies, such as short-term leaves.

In this study, we also conceptualize disruption and dependency arguments as complementary. We however posit that they are mobilized simultaneously, with disruption arguments moderated by the supervisor's degree of dependency on his or her team. Specifically, we hypothesize that supervisors' attitude is fundamentally shaped by the concern to avoid work disruption, given supervisor's structural responsibility for work outcomes (Powell & Mainiero, 1999), yet that such relationship is additionally affected by the relation between the supervisor and his or her team captured by dependency (cf. Dambrin, 2004; Valsecchi, 2006). While the former relationship highlights the supervisor's deployment of teams as productive means to achieve work goals, the latter acknowledges that teams themselves retain some degree of control over their work. Work-life balance arrangements, such as telework, make thus the object of negotiation between supervisors and their teams. Accordingly, team characteristics based on which the supervisor estimates that teleworking is disruptive for the team's work are likely to negatively influence the supervisor's attitude towards telework, but this negative influence might be less pronounced, or even disappear, when the supervisor is highly dependent on the team for achieving his or her own work goals.

Figure 1 represents the hypothesized model. The three independent variables (i.e., team member taks interdependence, team heterogeneity and lack of effort/low performance) are team characteristics derived from work disruption theory, while the moderator, i.e. the supervisor's dependency on his/her team, is derived from dependency theory.

INSERT FIGURE 1 HERE

Disruptive team characteristics

Based on work disruption theory, we examine three team characteristics which may affect the potentially disruptive nature of telework: task interdependence, team heterogeneity and the team's performance/effort level. Team characteristics refer to characteristics of the team in the broader sense, both in terms of job/team design and as characteristics of the team members as a collective entity. According to our definition, a team is more than just the sum of its parts (i.e.: the employees making part of it). This is in line with other literature on team characteristics (e.g. Campion et al., 1993; Hertel et al., 2004).

First, the literature identifies *task interdependence* as an important feature of the team which is possibly related to the supervisor's attitude towards telework. Task interdependence refers to "a task structure in which team members work closely with each other, must coordinate their activities frequently, and within which the way one member accomplishes her or his task has strong implications on the work process of other team members" (Hertel, Konradt, & Orlikowski, 2004, p. 6). Task interdependence is generally seen as a preferable team characteristic because it could increase the team members' motivation and effectiveness, e.g. because the team members feel responsible for each other's work (Campion et al., 1993). However, in teams with high task interdependence, telework is likely to have a more disruptive impact on work (Perez et al., 2002; Reinsch, 1997), as space distance hampers the communication and coordination between teleworkers and other team members (Gajendran & Harrison, 2007; Van Dyne, Kossek, & Lobel, 2007). Because of the more disruptive impact of telework in highly task interdependent teams, supervisors of such teams are inclined to have a more negative attitude towards telework. Indeed, empirical research demonstrated that supervisors fear for instance that the lack of face-to-face contact is detrimental to teamwork (Baruch, 2000; Peters & Heusinkveld, 2010; Peters et al., 2010). In line with this reasoning, earlier research has found that supervisors of teams with high task interdependence less frequently allow telework (Poelmans & Beham, 2008). We therefore expect a negative impact of task interdependence on the supervisor's supportive attitude towards telework.

Hypothesis 1:   Team members' task interdependence is related negatively to supervisor's supportive attitude towards telework.

Second, telework may also be experienced as more disruptive when team *heterogeneity* is high and thus the possibilities of internal replaceability in the team are poor (Campion et al., 1993; den Dulk & de Ruijter, 2008). Heterogeneity, or the diversity in team members' experience,

expertise, skills and abilities, is in generally believed to be a positive team characteristic because of its potential positive effects on productivity (Campion et al., 1993). However, the more diverse the team members' profiles, the more difficult it is to replace one team member with another (Campion et al., 1993). If team members are not able to take over their colleagues' responsibilities, the work processes are more likely to get interrupted when a team member is teleworking. Therefore, we expect higher heterogeneity among the team members to relate to a less supportive attitude towards telework of the supervisor.

Hypothesis 2: *Team members' heterogeneity is related negatively to supervisor's supportive attitude towards telework.*

Thirdly, we expect that supervisors will experience telework to be more disruptive – and therefore have a less supportive attitude – when the team performs suboptimally. Since teleworkers escape from their supervisor's direct control, it has been suggested that supervisors' attitude towards telework strongly depends on their trust in their team members (Peters et al., 2010). Team members thus have to prove that they 'deserve' to telework, that they can function without direct control and that them teleworking will not disrupt their own and the team's functioning (Baruch, 2000; Peters & den Dulk, 2003). Team members can prove that they deserve to telework by putting in *effort* and *performing* well. Indeed, past effort and performance are typically considered as indications of the likely future effort and performance independent of direct control (Peters et al., 2010). Accordingly, supervisors of good performing teams are less likely to fear the disruptive nature of telework since they are convinced that their team members are able to function without direct control and therefore, these supervisors may have a more supportive attitude towards telework (Peters et al., 2010). Conversely, supervisors of teams which do not put in much effort and perform badly are more likely to experience teleworking as disruptive and thus to be less in favour of telework.

Hypothesis 3: *Lack of team members' effort and low performance is related negatively to supervisor's supportive attitude towards telework.*

Supervisors' dependency on their team
At the same time, we expect that the supervisors' attitude towards telework is not only determined by team characteristics but also by the extent to which the supervisor depends on his or her team. The literature distinguishes between at least two ways in which supervisors can

depend on their team: dependency in terms of goals and dependency in terms of feedback (Campion et al., 1993; Hertel et al., 2004; Kiggundu, 1983). The former refers to the way in which the supervisor's goals are determined by the team's goals, while the latter refers to the way in which the supervisor's evaluation and rewards are determined by the team's performance.

We hypothesize that the negative impact of the three team characteristics (task interdependence, heterogeneity and lack of effort/low performance) is moderated by supervisors' dependency on their team. This hypothesis is based on the expectation that disruptiveness is the supervisor's primary concern (Powell & Mainiero, 1999), but that this concern is moderated by the nature of the supervisor-team relationship in terms of dependency (cf. Dambrin, 2004; Valsecchi, 2006). More precisely, disruptive team characteristics are likely to negatively influence the supervisor's supportive attitude towards telework, but this negative influence might be less pronounced when the supervisor is highly dependent on the team for achieving his or her own work goals and obtaining rewards. Indeed, supervisors who are more dependent on their team are expected to attach more importance to the potential advantages of telework (e.g. more committed team members) than supervisors who depend less on their team. They might more easily accept the potentially disruptive impact of telework on work in the short term in view of retaining their team in the longer run. Indeed, for supervisors who depend highly on their team, turnover of team members might have an even higher negative effect on their team's performance and, in turn, their own than short-term disruptions by telework would have. Conversely, supervisors who depend less on their team members are less likely to accept the potentially disruptive impact of telework – and because of that be less positive towards teleworking - since their own performance would be less adversely affected by team members leaving. In other words, we expect that when supervisors experience high levels of dependency on their team, the adverse effects of disruptive team characteristics on their supportive attitude towards telework will be weakened or even dissappear.

Hypothesis 4:   *Supervisors' dependency on their team mitigates the negative relation between a) task interdependence; b) heterogeneity and c) lack of effort/low performance and supervisor's supportive attitude towards telework, in the sense that the influence is less strong when the supervisors are more dependent on their team.*

10

Hereunder, we test these hypotheses based on a survey study. We then complement the quantitative results with an in-depth qualitative study based on face-to-face interviews.

Survey study

Procedure

We first tested our hypotheses using survey data collected with 205 supervisors from four organizations. We contacted eight large Belgian organizations employing a considerable number of supervisors and with an official work-life policy and offering a variety of work-life arrangements to their employees, including telework. Four organizations agreed to participate in the study. These organizations were in four different sectors: telecom (private sector, 1800 employees), fast moving consumer goods (private sector, 200 employees), local social policy organization (public sector, 1800 employees) and research and higher education (public sector, 1000 employees). In the first organization, 57.5% of the employees teleworks at least occasionally, in the second organization 58.8% and in the third organization 23.6%. For the fourth organization, no information on the proportion of teleworkers was available.

We received complete lists of the supervisors' work e-mail addresses from the HR departments. The researchers personally sent a link to the web survey to all 579 supervisors of the participating organizations, guaranteeing their anonymity and confidentiality. Two hundred seventy three supervisors at least partially completed the questionnaire. We excluded respondents with a missing value on any of the study's variables, leading to a final sample size of N=205, which equals a response rate of 35.4%. The majority of the respondents were men (57.6%). Respondents' mean age was 45.5 years (SD=7.9), 87.3% had a partner. Twenty six percent worked in the telecom organization, 12.7% in the fast moving consumer goods organization, 39% in the local social policy organization and 22.4% in the research and higher education organization.

Measures

We measured supervisor's attitude directly at the level of the supervisors, as suggested by some authors (Poelmans & Beham, 2008; Ryan & Kossek, 2008; Straub, 2012), and not at the level of the individual team members as is usually the case (e.g. Allen, 2001; Hammer, Kossek, Yragui, Bodner, & Hanson, 2009; Major, Fletcher, Davis, & Germano, 2008; Thompson et al., 1999; Todd & Binns, 2013). This allows gaining a more accurate view on the attitude of the supervisors themselves, instead of on the attitude as perceived by their team members.

11

Supervisor's supportive attitude towards telework was measured by 3 items based on Thompson et al. (1999). To the best of our knowledge, no scale exists that captures supervisors' own attitude towards telework. This is because most studies focus on how employees perceive their supervisor's attitude and thus measure how employees perceive their supervisors' support in general, or their supervisor's family support in particular (e.g. Clark, 2001; Hammer et al., 2009; Thompson et al., 1999). We therefore adapted the validated scale of Thompson et al. (1999), in line with other studies measuring the supervisor's attitude towards work-life practices and policies (e.g. Behson, 2005). The three items are: 'I don't care if a team member occasionally works at home, as long as the work is done', 'In my view, it is a problem when one of my team members wants to work at home on a regular basis' and 'For most of the jobs of my team members, it is difficult to work at home'. The respondents rated the items on a scale between 1 (strongly disagree) and 5 (strongly agree). The scale measuring supervisor's supportive attitude towards telework (Cronbach's Alpha=0.72) was found to be reliable.

Team members' *task interdependence* was measured using a 3-item scale, based on Pearce and Gregersen (1999), also used by Liden, Sparrowe, and Wayne (1997). A sample item is: 'The way individual members perform their jobs has a significant impact upon others in the group'. The respondents rated each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The internal consistency (Cronbach's Alpha=0.68) was rather low but acceptable (Lance, Butts, & Michells, 2006). Liden et al. (1997) reported a Cronbach's Alpha of 0.74 for this scale.

Heterogeneity was measured using the 3-items scale developed by Campion et al. (1993). A sample item is: 'The members of my team vary widely in their areas of expertise'. The respondents rated each item on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). We found the scale to be reliable (Cronbach's Alpha=0.82).

Team effort and performance were measured using a 4-item scale developed by McClean and Collins (2011) and Hertel et al. (2004). The respondents rated the items on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item is: '*My team goes above and beyond the job requirements*' (Cronbach's Alpha was 0.75).

Supervisor's dependency on team members was measured using the 6-item scale developed by Campion et al. (1993), including 3 items measuring supervisor's dependency on team members

in terms of goals and 3 items measuring supervisor's dependency on team members in terms of feedback. A sample item for goal dependency is: '*My work activities on any given day are determined by my team's goals for that day'.* A sample item for feedback dependency is: 'Feedback about how well I am doing my job comes primarily from information about how well the entire team is doing'. The respondents rated each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale was found to be reliable (Cronbach's Alpha=0.82).

We included *gender* (0:man, 1:woman), *age* (continuous), *partnership* (0:no, 1:yes) and a dummy per organization as control variables , as these variables had been found to account for different levels of supervisor support for telework (Lim & Theo 2000).

Data analyses

We first conducted a confirmatory factor analysis to test the distinctiveness of the 5 scales. Model fit was assessed by the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square Residual (SRMR) the Comparative Fit Index (CFI) and the Non-Normed Fit Index (NNFI). For RMSEA and SRMR values $\leq .08$ indicate acceptable fit, and values $\leq .05$ good fit; for CFI and NNFI values $\geq .90$ signify acceptable fit and values $\geq .95$ good fit (Bentler & Bonet, 1980; Hu & Bentler, 1998; Marsh, Hau, & Wen, 2004). The analysis yielded a satisfactory fit (RMSEA = .06; SRMR = .06; CFI = .92, and NNFI = .90). All observed variables had significant loadings on their corresponding latent factor (between .46 and .89; $p < .01$).

Next, we checked for the presence and influence of common method variance using the latent marker method of Williams, Hartman, and Cavazotte (2010). To apply this method, a latent marker, i.e., a latent variable which is theoretically unrelated to any of the key variables in the study, should be included in the CFA model. We chose for the variable family-to-work, measured with the six-item scale of Greenhaus and Beutell (1985), because family-to-work conflict has been shown to be mostly influenced by family factors and less by work-related factors (Frone, Russell, & Cooper, 1992; Weer & Greenhaus, 2014). Following the recommendations of Williams and colleagues (2010), we first estimated a 6-factor CFA model, consisting of the basic 5-factor CFA model mentioned above and the marker variable. Second, we fitted baseline model, in which the correlations between the latent marker variable and the other latent variables were fixed at zero, and the factor loadings and error terms of the marker variable indicators are fixed at the values obtained in the CFA model with marker variable.

Third, we tested a constrained model (Method-C) in which all indicators of the model loaded on the latent marker variable and all factor loadings were constrained to be equal. If this model has a significant better fit than the baseline model, common method variance is likely to be present and to have an equal effect on all indicators. Table 1 shows that this was the case in our study (see Table 1). Fourth, we tested an unconstrained model (Method-U) in which all indicators of the model loaded freely on the latent marker. If this model fits the data better than the constrained model, common method variance is likely to be present but to have an unequal effect on the different indicators. Table 1 shows that this was not the case in our study. Finally, we estimated a model in which the correlations between the substantive latent variables were constrained to the values obtained in the baseline model (Method-R). If this model has a significantly worse fit than the constrained or unconstrained model, common method variance is likely to bias the correlations between the latent variables. Table 1 shows that this was not the case in our study. These analyses indicate that it is unlikely that common method bias has affected the relationships between our key variables (Williams et al., 2010).

INSERT TABLE 1 HERE

Table 2 contains means, standard deviations and correlation for all variables. Next, we conducted moderated hierarchical regression analyses to test the hypotheses. Following the recommendations of Baron and Kenny (1986), we entered the control variables in the first step, the main effects in the second step, and the interaction terms in the final step. Before computing the interaction terms, all variables were standardized in order to remove non-essential multicollinearity (Cohen, Cohen, West, & Aiken 2002).

INSERT TABLE 2 HERE

Results

Table 3 shows the results of the moderated regression analysis. Hypothesis 1 predicted a negative relationship between task interdependence and the supervisor's supportive attitude towards telework. In line with this hypothesis, task interdependence was found to have a significant negative impact on supervisors' supportive attitude towards telework ($\beta = -0.185$; p

≤ 0.05). So, when the tasks of the members in a team are strongly interdependent, supervisors tend to have a less supportive attitude towards telework. Hypothesis 2 expected a negative impact of team heterogeneity on the supervisor's supportive attitude towards telework. However, we found this relationship to be not statistically significant ($\beta = 0.029$; p = n.s.). Also hypothesis 3, which expected a negative relationship between lack of team effort and low performance on the one hand and the supervisor's supportive attitude towards telework on the other hand, was not supported. Indeed, this relationship was found to be not statistically significant ($\beta = -0.121$; p = n.s.).

Finally, hypothesis 4 concerned the interaction between disruption and dependency theory. In particular, we expected that the supervisor's dependency on his or her team members would mitigate the negative impact of disruptive team characterics (a: task interdependence; b: heterogeneity; c: lack of effort/low performance) on the supervisor's supportive attitude. In line with hypothesis 4a, we found a statistically significant interaction between task interdependence and the dependency of the supervisor on his/her team ($\beta = 0.152$; $p \leq 0.05$). To interpret this interaction, we plotted it in Figure 2. As the figure shows, the negative impact of task interdependence on the supervisor's supportive attitude towards telework is most pronounced when the supervisor's dependency on the team is low and less so when the supervisor's dependency on the team is high. Simple slopes analyses, calculated using the web tool developed by Schubert and Jacoby (2004), further showed that the former relationship was statistically significant while the latter one was not (Table 4). Thus, when the supervisor's dependency on the team is low, more task interdependency among the team members is associated with a less supportive attitude towards telework of the supervisor; however, when the supervisor is highly dependent on his or her team, task interdependency among team members has no effect on the supervisor's supportive attitude towards telework. This is in line with hypothesis 4a. Hypothesis 4b ($\beta = -0.015$; p = n.s.) and 4c ($\beta = -0.009$; p = n.s.) could not be confirmed.

We also found statistically significant results for the control variable organization. More precisely, supervisors working in organization 3 (local social policy organization) ($\beta = -0.299$; $p \leq 0.05$) and 4 (research and higher education) ($\beta = -0.175$; $p \leq 0.05$) have a significantly less supportive attitude towards teleworking than supervisor from organization 1 (telecom), while no significant difference was found between the attitude towards teleworking of these latter and of supervisors' from organization 2 (fast moving consumer goods).

15

INSERT TABLE 3 HERE

INSERT FIGURE 2 HERE

INSERT TABLE 4 HERE

Qualitative study

Through the mixed-method approach we first generated accurate and statistically generalizable quantitative evidence of the relation between supervisors' attitudes and team-related antecedents. To interpret the quantitative findings more in depth, we collected and analyzed complementary qualitative data through semi-structured interviews with supervisors. Semi-structured interviews allow to capture descriptions of supervisors' meaning making processes underlying such relation (cf. Poelmans & Beham, 2008) to gain insight in their rationales of, vision on and attitude towards telework. As qualitative data allows accessing an organizational phenomenon from the specific point of view of the respondents (Denzin & Lincoln, 2005), it enables capturing additional complexity to more accurately understand the relationship between team characteristics, supervisors' dependency on their team and their vision on and attitude towards telework, leading to a more complete answer to the research question (Cameron & Molina-Azorin, 2011; Kelle, 2006).

Method

In each organization, we first interviewed the HR manager and collected policy documents and other data about the organization's and employees' profile to prepare the quantitative and qualitative study. The qualitative study is based on 39 semi-structured, face-to-face interviews with supervisors in three of the four organizations. We could not collect qualitative data in the public sector organization. Each organization selected a list of potential interviewees and transmitted their name, company e-mail addresses and background information (department, length of service…) to us. From this list, we made a selection of supervisors in such a way that we maximized heterogeneity of department and length of service in the organization and obtained a gender balanced sample. As these factors have been related to supervisors' attitude towards telework, we wanted to avoid skewed samples along them.

The questionnaire included questions on the following topics: the supervisor's background (e.g. 'Could you describe a typical work day?'), team characteristics (e.g. 'How

would you describe your team's composition?'), formal work-life policies (e.g. 'Have you been involved in the development of work-life policies in your organization? How?'), implementation of work-life practices (e.g. 'Could you describe the procedure through which team members can access work-life arrangements? What is your role in the procedure?'), allowance decisions (e.g. 'Based on which criteria do you decide if a team member is allowed to telework?'), evaluation of work-life policies (e.g. 'How do you evaluate the current work-life policies in your organization?'), and personal experiences as work-life policy user (e.g. 'Do you make use of work-life arrangements yourself? Can you tell more about your use?'). Questions were first formulated in general terms and then more specifically concerning telework and other work-life arrangements offered by the employing organization.

The interviews lasted between 45 minutes and one hour. Each interview was recorded with permission of the interviewee and fully transcribed. This process produced 653 pages of of single-spaced text. In a next step, we identified all excerpts in the text in which supervisors expressed their considerations surrounding work-life arrangements. We first conducted a content analysis coding the excerpts about their vision of telework relative to maintaining productivity, which underlies hypotheses 1, 2 and 3. Doing so, we looked for evidence pointing to team characteristics, and more broadly to additional organizational context-related aspects. Second, we looked for references to work disruption and dependency aspects in their explanations of their attitude towards teleworking. To advance our understanding of how their attitude emerges, we then looked for additional aspects which are not included in disruption or dependency theory.

Results

Following the structure of our theoretical model, we first examine supervisors' reasoning concerning telework in function of avoiding disruption and preserving team productivity. We specifically analyse their reasoning concerning teams' task interdependence, team members' heterogeneity and substitutability, and effort and past performance. We then analyse how the supervisors' considerations about their dependency on their team additionally intervenes in the formation of their attitude towards telework.

The role of team characteristics on work disruption in supervisors' attitude towards telework
In their interviews with us, supervisors anticipated the more or less adverse effect of telework on their team's functioning and productivity, taking into consideration the team's task

interdependence. The following quotes by supervisors of highly interdependent teams are illustrative:

> 'They are allowed to work from home in some cases. It's not common [in this company] to work at home for a long time. […] I try to avoid that they are absent for a long time, because collaborating in the workplace stimulates creativity. We are looking for a balanced approach [to telework].' (supervisor of a highly interdependent research team)

> 'My personal vision on telework… I think that is OK one day a week, but that should be the maximum. […] Especially when people are part of a team, I find it important to have a swift interaction.' (supervisor of a highly interdependent marketing team)

Many of our respondents stressed the necessity of face-to-face interaction to argue for limiting telework to a small fraction of the total working time, often one day a week. The relevance of the degree of interdependency of work for supervisor's more or less favorable attitude was clear also in the following respondent:

> 'Yes, they work from home. Not systematically, but because PhD students share a landscape office with several persons, where it is always busy. For some activities, such as writing articles, they work from home. Or especially when writing a PhD, which is almost unfeasible in such a big group. [...] It is experimental science and they have to work in the lab. And they have to be available for each other. So that they can ask for help, for input. So that there is enough opportunity for communication'. (supervisor of a highly task interdependent research team)

This fragment shows how supervisors, in forming their attitude, might evaluate the effects of telework on specific tasks (rather than jobs) depending on their levels of interdependency, adding complexity into their evaluation of potential disruption due to telework.

When talking about the desirability of telework, interviewees further frequently spontaneously referred to technology (e.g. e-mail, office communicator software, mobile telephone, and video conferencing) as reducing work disruption by enabling communication and control over team members' output:

> 'We have some tools we can use. If someone works at home, we can call him [sic], we can e-mail, we can use messenger... So, I believe there's is enough technology.' (supervisor of a highly task interdependent research team)

'Yes, for the employees that are homeworking ... When I notice ... when I send them an e-mail when they are homeworking, than I notice rather quickly if they are actually working or not.' (supervisor of a slightly task interdependent legal compliance team)

Taken together, the qualitative data well illustrates the reasoning behind the relationship between teams' task interdependency and supervisors' attitude towards telework. At the same time, they add complexity to that relationship by pointing to the heterogeneity of tasks within jobs and to technology as key organizational context factor affecting, respectively, the degree of team interdependency and of the disruptive effects of telework on teams' work.

The second team characteristic supervisors referred to during the interviews was the internal replacebility of the team members. Despite the distinct nature of the work carried out by the teams in the studied organizations, most supervisors indicated that their team members could not easily (even temporarily) replace each other. They often mentioned that individual team members' tasks required specific knowledge or involved interactions with other parties that rested on long-lasting interpersonal relationships:

'In my team, I have two junior account managers, who are responsible for two of each of the segments, so one is responsible for quick service restaurants and catering, and the other for hotels and transport, mainly. And me, I'm responsible for [name of companies]. (supervisor of a slightly task interdependent sales team)

Occasionally, they did point to the (partial) substitutability of team members, anticipating lower disruption on work processes:

'As for the administrative team, since they all have their [homeworking] day, we guarantee a continuous permanence. Because not everyone works at home on the same day. Sometimes they change their homeworking day, for instance in the winter, some team members don't dare to drive when it snows. And suddenly no one is at the office. But then there are also not many sales representatives, so in fact, it doesn't matter very much. But we alway try to garantee permanence at the office.' (supervisor of a slightly task interdependent marketing team)

Sometimes respondents further referred to work intensity and the team's small size as additional constraints for substitutability. The qualitative data therefore suggests the relevance of

19

members' substitutability for supervisor's attitude towards telework, although this relationship could not be confirmed in a statistically significant way in our quantitative study.

Finally, respondents often referred to their team's effort and performance when talking about the desirability of telework. Most of our respondents were adamant:

> 'Almost everybody here works like hell. Very few people are working nine to five [...] So I think that, when your people say that they are working from home, they don't have to send me an e-mail to prove that they are actually working. So... I think it's mainly a matter of trust. Also if you stop working earlier, go to the dentist first, it's all possible. Because we know that everybody works very hard.' (supervisor of a highly interdependent supply chain team)

> 'When a team member is homeworking for instance, I will not necessarily call him. But when I send him an e-mail, he typically answers very quickly … These people are busy, they are working, I'm not worried about that.' (supervisor of a slightly task interdependent legal compliance team)

These fragments suggest that supervisors' supportive attitude towards telework is subject to an important condition: trust in their team. When supervisors trust their team members to put in effort and perform well at home despite the absence of direct surveillance, they are likely to be more in favor of telework. So, though we could not confirm the role of past performance and effort in general in the quantitative study, the qualitative findings show that past performance and effort during telework does affect supervisors' attitude towards teleworking.

The role of supervisors' dependency on their team in their attitude towards telework
During the interviews, many respondents elaborated on their dependency on their teams' performance for achieving their own work goals. They often mentioned how overall unit goals were split up into team goals and individual goals, and how their job was to monitor both in order to achieve their own goals. Analysing the qualitative data through a dependency lens allows to highlight how telework is part of the exchange relation between the supervisor and the team. Whereas supervisors' considerations about disruption focus on the potential impact of telework on work processes and output, considerations about dependency are centered on supervisors' attempts to motivate teams to remain performant in the future:

'I think that, if you give your people something ... you will probably get it back partially one way or another. But it cannot be measured.' (supervisor of a slightly task interdependent legal compliance team)

'For instance when it has been very busy here, when we have worked here very long hours, then I will also say: 'tomorrow, start a bit later, or work from home.' (supervisor of a slightly task interdependent marketing team)

'And that [teleworking] is great, you are at ease and it's really true that you perform better, because of two reasons actually: at home, you're at ease, you're less distracted but you also don't want to lose that benefit, so you do the best you can to do as much as possible. You will prove yourself so that they can't say: "It's not good, we won't allow you to telework any longer".' (supervisor of a slightly task interdependent customer care team)

Although they stress different aspects, these fragments all show how supervisors consider telework as a currency in the give-and-take relation to their teams, one which they can proactively deploy to steer team's behaviour. The reasoning is clearly centered on reciprocity: the team's telework is given in exchange for enhanced performance, in a logic of longer-term mutual gain.

Also in a long-term perspective, yet reflecting on the need to preserve team members as productive human resources, one respondent told us:

'I think that [with telework] they want to obtain or should obtain that people do not over-strain themselves on the short- or on the middle-long term. The point is: we are located [...] in the middle of Belgium, that is so difficult to reach [due to traffic jams]. [...] It may help that you don't have to do it every day, that you can skip one day a week.' (supervisor of a slightly task interdependent sales team)

In other cases, supervisors rather talked about telework as a win-win arrangement allowing mutual flexibility, so that both employees' and the organizational needs can be met:

'I do [give flexibility] as long as I know that I can count on them. If I see that when I ask them something they do not help out, then I stop, as simple as that. Till now it has been working fine, so I think that I either have been lucky with my team, or it has to do with give and take, that they realize that they also get something in return... (supervisor of a highly interdependent finance team)

These excerpts all point to a mutual dependency and exchange between supervisors and their teams. Respondents stress the positive effects that can be achieved by allowing teams to telework. However, at the same time, they also highlight the boundary conditions for teamwork. For instance, interviewees pointed to the need for telework to be planned in function of the team's joint activities, such as meetings. In order to expend telework in the exchange with their teams, they further stress that they need to retain control over their team's access to it:

'Homeworking, in our department, *that's not a right but a privilege*. A privilege that people get, a reward because they are mature and perform well at the office. [...] The contract doesn't state that people have a right to homeworking'. (supervisor of a slightly task interdependent customer care team)

'I don't want people [with a contractual right to telework] in my team. I can understand that *some can abuse it*. So, new hires in my team do not get structural telework. They can work from home if they ask, I've never said no when somebody asked, so…' (supervisor of a slightly task interdependent human resource team)

Only if telework is a 'privilege', a reward that needs to be deserved, are supervisors in a position to use it to reward (or punish) their team, enhancing their control over their team and diminishing the likelihood of disruption. This suggests that supervisors' attitude towards telework depends on their ability to control its implementation, in line with our conceptualization of dependency as moderating the relation between team's characteristics and anticipated disruption.

Discussion and conclusions

This study investigated team antecedents of supervisors' attitude towards telework. Drawing on disruption and dependency theory and relying on a mixed method approach, we investigated supervisors' attitude towards telework in relation to team characteristics and the supervisor's dependency on the team. Our team-centred approach to the antecedents differs from extant studies which conceptualize the relations between supervisors and their team at the inter-individual level and better reflects, we argue, the process of supervisor's attitude formation (Colquitt, 2004; Poelmans & Beham, 2008; Ryan & Kossek, 2008).

Commented [MV1]: Is dat niet te sterk?

22

As a whole, our study empirically confirmed the centrality of considerations of the impact of telework on teams' work processes and productivity in supervisors' more or less supportive attitude towards telework. Our quantitative findings confirm the hypothesized negative correlation between task interdependence and supervisors' supportive attitude towards telework (hp 1) as well as the moderating role of supervisor's dependency on his or her team on this relation (hp 4a). That is, we found supervisors of teams with high task interdependence to have a significantly less supportive attitude towards telework, but this negative relationship was less pronounced – and even disappeared – for supervisors who felt highly dependent on their team. This is well illustrated by our qualitative findings which show how supervisors were concerned about the preservation of their team's productivity in terms of avoiding work disruption, yet also evaluated telework in terms of the goodwill it could generate from their team to ensure their future performance. Even supervisors who are opposed to telework due to high team interdependence might be inclined to allow their team to telework in order to retain their precious and scarce employees on whose performance they depend for their own. We interpret this double reasoning as reflecting the double nature of telework. On the one hand, telework is a specific type of work arrangement with potential disruptive effects on highly interdependent work processes. On the other, it represents an element in the exchange relation between supervisors and their teams, who are mutually dependent on each other to achieve work goals (Dambrin, 2004; Valsecchi, 2006). Supervisors are clearly aware of this second dimension and often proactively utilize telework to retain and motivate their personnel and stimulate performance over the longer run, to the benefit of their own work results (Kelly & Kalev, 2006; Reinsch, 2007).

At the same time, our quantitative results could not reveal a statistically significant relation between supervisor's supportive attitude towards telework and the team's heterogeneity (hp 2) and lack of effort and low performance (hp 3), although this finding is nuanced by our qualitative data. In this latter, team members' (lack of) replaceability commonly features in their narratives as a reason justifying their vision towards telework. The discrepancy between quantitative and qualitative results might be due to an inadequate measurement of team members' substitutability through items on team members' heterogeneity in terms of expertise. Indeed, talking to us, respondents did not indicate expertise differences as the cause of low replaceability of team members, but rather the importance of specific relational and/or content knowledge for carrying out specific tasks, knowledge at the core of their job, which individuals build over time and that is thus not shared with other team members. Future research might consider adopting more accurate measurements of team members' substitutability than

23

heterogeneity in functional expertise. Substitutability should be measured in ways that also capture the role of individuals' unique knowledge on specific tasks and their personal relations with clients which are often necessary to avoid work disruption in real situations.

Although in the quantitative study we found no link between the lack of performance/low effort and supervisor's supportive attitude towards telework, interviewees also often mentioned their team's performance when talking about the desirability of telework. This could be due to the fact that most supervisors perceived their team as very highly performing; so we simply might have too few cases of low performance/effort to discover this effect. This result is not so surprising, as organizations are likely to take action to improve the performance of teams which underperform. Alternatively, it could be that the high productivity of a team has a double, opposite effect on supervisors' attitude towards telework. The hypothesized positive effect based on supervisor's trust in his or her team might be counterbalanced by the perception of the risk that the team's performance might decline due to telework, for instance for reasons that are independent of team members' effort. Our qualitative findings suggest that the impact of team effort and performance on supervisors' attitude might be better conceptualized as one of (mutual) exchange leaning as much towards disruption as towards dependency, and based on (mutual) trust. Indeed, in line with dependency theory, supervisors referred to telework as a reward for the team's *past* effort and performance and to motivate *future* performance beyond immediate productivity considerations.

Finally, our quantitative analyses do not support the moderating role of supervisor's dependency on the team in the relationships between team heterogeneity (hp 4b) and lack of team effort and performance (hp 4c) on supervisor's supportive attitude towards telework. These moderation hypotheses were based on the assumption of a significant direct effect of team heterogeneity and lack of effort and low performance on the supervisor's attitude towards telework. Since no significant direct effect of both variables was found, the absence of a significant moderation effect is not so surprising. This result does, however, stimulate questions as to which extent the moderating role of supervisor's dependency is generalizable to all disruptive team characteristics. Perhaps, some disruptive characteristics (e.g., extreme lack of team effort) are less prone to mitigation by supervisor's dependency on the team because, for instance, they too fundamentally undermine productivity, the supervisor's primary concern.

Theoretical contribution to the extant research and implications for further research
Theoretically, our study advances the current literature in a number of ways. First, by showing that dependency and disruption arguments intervene at once in the formation of the supervisor's

attitude towards telework. Whereas the extant literature theorizes that disruption and dependency theory differ in terms of their temporal horizon – disruption focusing on short-term productivity and dependency on long-term productivity – (den Dulk & de Ruijter, 2008), we point to simultaneous dimensions of the relation between supervisors and their teams which are both relevant to understand supervisors' attitudes towards telework. Our argument is rather that disruption theory captures 'structural' aspects of work organization of teams, whereas dependency theory captures the 'political' aspects of the relation between supervisors and their teams. Dependency refers more specifically to the relation of (hierarchical, mutual) dependency within which supervisors conceive telework as a tool to proactively regulate team's work behaviour within the broader set of fixed, work arrangements characterizing the employment relation. In this sense, telework, as other work-life balance arrangements, should be understood an additional instrument through which supervisors can, at their own discretion, reward employees (with work flexibility). Indeed, in line with this logic of reciprocity, supervisors stress that telework should not become a right for employees, as losing control over telework allocation would entail the impossibility of expending it in the relationship. These reflections are in line with Kelly and Kalev's (2006) findings that in many companies, work-life balance policies institutionalize managerial discretion rather than creating outright rights for employees. They argue that this discretionality explains the underutilization of work-life policies despite the fact that many companies offer them. The formal existence of policies hides the high levels of discretionality line managers retain in their allocation, explaining employees' widespread underutilization of policies. Future research might benefit from conceptualizing and operationalizing access to work-life balance policies as a specific type of reward among a broader variety offered to employees.

Second, by conceptualizing antecedents of supervisors' attitudes towards telework away from supervisors' individual characteristics (Parker & Allen, 2002) or inter-individual relations with team members (Peters et al., 2010), this study pointed to the key role of more structural aspects at the team level in our understanding of supervisors' attitude. Such shift in perspective is important as it highlights how organizations themselves might play a role in shaping supervisors' attitudes through the way they organize the workforce, support work processes, and assess teams' and supervisors' performance. At the same time, the modest R^2 of our model also indicates that other elements than those we measured intervene in shaping the supervisor's attitude towards telework. Future research should explore the impact of other antecedents affecting the supervisor's (lack of) support for telework than the ones included in this study. For instance, the supervisor's experience of his or her own telework as a disruptive work-life

25

arrangement could be included in the model. Also, a longitudinal research design would allow to measure the consistency of supervisors' attitude towards telework across time and teams, to gain a better understanding of the relative effect of a team's characteristics at present time versus the supervisor's past experience of the impact of telework on the functioning of previous teams on the current attitude towards telework. Understanding the role of this antecedent is important for policy, as this mights limit organizations' ability to influence supervisors' attitudes towards telework.

Moreover, future research should look at the organizations' role, next to the team's, in shaping supervisors' attitudes towards telework. We found that supervisors working in the local social policy organization and in the research and higher education organization had a significantly less supportive attitude towards teleworking than supervisors in the telecom organization. This may suggest that supervisors in commercial organizations are more supportive towards telework than in public ones. Possibly, private organizations have a less pronounced face time culture, perhaps because they apply other methods to evaluate work performance (e.g., output evaluation) than public organizations do.

Finally, our qualitative findings clearly suggest that (dis)trust possibly mediates the relationship between disruption and the supervisor's attitude towards telework. The role of trust is as such not new: studies which use disruption or dependency theory to understand supervisors' attitude towards telework often build on the idea of trust to explain how this attitude is formed. Strikingly, however, trust has not yet been measured empirically (e.g. den Dulk & de Ruijter, 2008). Given the findings of our qualitive study and the implicit prominence of trust in this literature, researchers should explicitly include this variable in their models, exploring its importance quantitatively.

Implications for practice

Gaining insight in how team characteristics are related to the supervisor's attitude is further particularly important for policy, as organizations are better placed to remediate aspects at the team level that contribute to supervisors' negative attitude towards telework, rather than those at the inter-individual one (Straub, 2012). Our research indicates that, if organizations want to reap the advantages promised by telework, they should ensure that gatekeepers such as supervisors develop supportive attitudes towards it by creating suitable boundary conditions for its implementation. On the one hand, as suggested by both our quantitative and qualitative data, organizations can carefully examine possible optimal combinations of technology enabling coordination and control and alternative organization of work/tasks which reduce disruption

risks to a minimum. This type of interventions ensures the 'objective' conditions for supervisors to develop supportive attitudes towards telework. On the other hand, as suggested by our qualitative data, organization can monitor supervisors' telework allocation decisions, their own as well as their team performance, and other team outcomes (e.g. satisfaction, turnover, etc.) in order to gain insight in how they manage the give-and-take relation with their teams. In this way, organizations can assess the extent to which individual supervisors are able to leverage telework in function of the achievement of organizational goals, reward decisions that are in line with (longer-term) organizational HR policies and intervene when they are in conflict with them.

Limitations

Our study also presents some limitations. First, the cross-sectional approach of our quantitative study does not allow to draw conclusions in terms of causal relationships between the examined variables, disruption and dependency elements on the one hand and supervisor's attitude towards telework on the other hand. This implies the possibility that not only disruption and dependency elements influence the supervisors's attitude towards telework, but also that the supervisor's attitude towards telework influences disruption and dependency elements. Still, because of the cross-sectional nature of our data, we were unable to test the direction of this relation. Future research should be based on a longitudinal design to assess causal relationships.

Second, we measured team characteristics at the supervisor level. Nonetheless, certain team characteristics, like task interdependence, may be better measured at the employee level since it concerns these employees' interdependence of each other's. Future research may therefore want to consider multilevel designs.

Third, we refer to limitations of generalizability. The findings cannot uncautiously be generalized to other settings and populations. For instance, our sample consisted of 4 rather large organizations, in which work processes and supervisor-team dynamics are deemed to differ from those in smaller organizations. In addition, our study was conducted in Belgium. As there may be cross-national differences in how work-family work arrangement such as telework are implemented in organizations (den Dulk, 2001), our results cannot without caution be extrapolated to other countries. Moreover, as we only interviewed middle managers and front line managers, our findings cannot be generalized to top managers (cf. Gilbert, 2012).

Fourth, we could only gather qualitative material in three of the four organizations for which we have quantitative findings. The organization for which no qualitative results are

27

available is one of the two public sector organizations in our sample. The quantitative analysis revealed that the public sector organization for which no interviews are available does not differ significantly from the other public sector organization in the sample. Based on this finding, and given that the qualitative data is in no sense statistically representative and the adopted level of analysis are individual supervisors, we concluded that the absence of qualitative data from the fourth organization did not represent a fundamental sampling problem.

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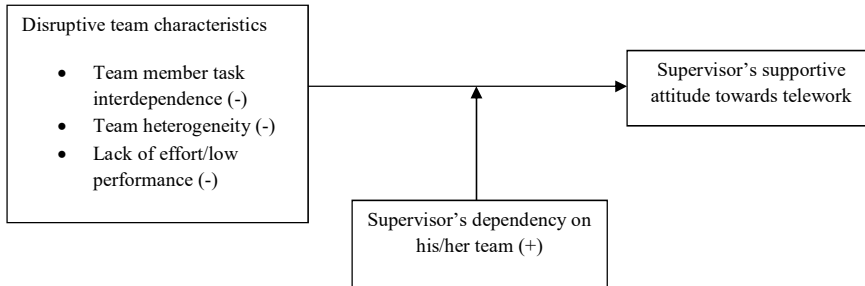
FIGURES

Figure 1. Hypothesized model of moderation of disruption theory effect on the supervisor's supportive attitude towards telework by dependency.
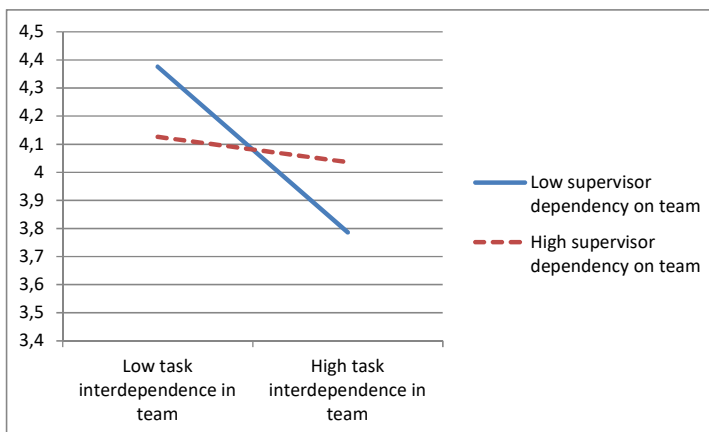

Figure 2. Two-way interaction of supervisor dependency on team members and task interdependence in team on supervisor's supportive attitude towards telework.

Table 1. Model Comparisons for CFA Models With Marker Variable.

Model	χ^2 (df)	CFI	TLI	RMSEA	χ^2 difference	Model comparison
CFA with marker variable	476.69 (260)	.88	.86	.06		
Baseline model	483.60 (276)	.89	.88	.06		
Method-C	483.57 (275)	.89	.88	.06	0.03 (1) ns	vs. baseline
Method-U	471.72 (257)	.88	.86	.06	11.85 (18) ns	vs. Method-C
Method-R	471.81 (267)	.89	.87	.06	0.09 (10) ns	vs. Method-U

Note. CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation.
ns = not significant. *$p < .05$. **$p < .01$.

Table 2. Means, standard deviations and correlations

	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Supportive attitude towards telework	3.66	0.96	/										
2. Female[i]	0.59	0.49	0.117	/									
3. Age	45.49	7.9	-0.194**	-0.004	/								
4. Partner [ii]	0.89	0.32	0.107	0.110	-0.102	/							
5. Organisation 2 [iii]	0.15	0.36	0.181**	0.105	-0.179**	-0.023	/						
6. Organisation 3 [iv]	0.38	0.49	-0.230**	-0.303**	0.188**	-0.036	-0.337**	/					
7. Organisation 4 [v]	0.22	0.41	-0.097	0.084	0.119	0.086	-0.224**	-0.415**	/				
8. Task interdependence	3.47	0.53	-0.125	0.049	0.178	-0.041	0.053	-0.053	0.087	/			
9. Heterogeneity	3.57	0.79	0.031	0.112	0.136*	0.07	-0.001	-0.235**	0.237**	0.285**	/		
10. Lack of effort/low performance	4.16	0.53	-0.052	0.064	-0.151*	-0.019	-0.072	-0.064	0.021	-0.300**	-0.216**	/	
11. Supervisors' dependency on team	3.39	0.67	0.100	0.072	0.056	0.011	0.055	-0.179**	-0.092	0.103	0.201**	-0.091	/

Note: i Reference = male; ii Reference = partner; iii Reference = organisation 1; iv Reference = organisation 1;
v   Reference = organisation 1

** $p \leq 0.01$; *$p \leq 0.05$.

Table 3. Regression models of independent variables on supervisor's supportive attitude towards telework (N=205)

	Supervisor's supportive attitude towards telework		
	Control model	Main effects model	Moderation model
Gender	0.030	0.035	0.045
Age	-0.065	-0.073	-0.070
Partnership	0.102	0.087	0.092
Organisation 2	-0.034	-0.036	-0.046
Organisation 3	-0.292***	-0.280**	-0.299**
Organisation 4	-0.202*	-0.175*	-0.175*
Team member task interdependence		-0.167*	-0.185*
Team heterogeneity		0.034	0.029
Lack of effort/low performance		-0.123	-0.121
Supervisor dependency on team		0.047	0.063
Team member task interdependence*supervisor dependency			0.152*
Team heterogeneity*supervisor dependency			-0.015
Lack of effort/low performance*supervisor dependency			-0.009
R² change	0.096**	0.031**	0.022**
Total R²	0.096	0.127	0.149
Adjusted R²	0.069	0.082	0.091
Total F statistic	3.524**	2.811**	2.579**

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$. Estimates represent standardized regression coefficients.