

THE LINK BETWEEN FLEXIBLE WORK ARRANGEMENTS AND EMPLOYEE
WORK OUTCOMES: A MULTILEVEL MODEL

By

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A Thesis submitted to the

Graduate School-New Brunswick

Rutgers, The State University of New Jersey

In partial fulfillment of the requirements

for the degree of

Master of Science

Graduate Program in Industrial Relations and Human Resources

written under the direction of

Ingrid S. Fulmer

and approved by

New Brunswick, New Jersey

January, 2015

ABSTRACT OF THE THESIS
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This study uses the multilevel perspective to explore the effects of organizational-level flexible work arrangements (FWA) and employee perceived availability and actual use of FWA on job satisfaction and organizational commitment. Using data from the 2011 Workplace Employment Relations Study (WERS), I found that when FWA were offered by an organization, employee-perceived availability of FWA were positively associated with their job satisfaction and organizational commitment. However, employee actual use of FWA did not predict job satisfaction or organizational commitment. Moreover, the number of FWA adopted by the organizations moderated the relationships between perceived availability and both job satisfaction and organizational commitment. Comparing contexts in which organizations offered few FWA with those in which organizations offered many FWA, I found that the relationships between employee perceived availability and employee work outcomes were stronger when organizations offer few FWA practices. The theoretical and practical contributions are discussed.

Acknowledgement

I would like to extend my sincere appreciation to my thesis committee: Professor Ingrid S. Fulmer, my thesis advisor, for her helpful suggestions and warm support without which this thesis would not have been possible; Professor Patrick F. McKay and Professor Dave P. Lepak for their commitment to my thesis committee and their insightful comments.

I also acknowledge the Department for Business, Innovation and Skills, the Advisory, Conciliation and Arbitration Service, the Economic and Social Research Council, the UK Commission for Employment and Skills, and the National Institute of Economic and Social Research as the co-sponsors of the 2011 Workplace Employee Relations Survey (WERS) data. The WERS 2011 data set is publicly available from UK Data Service (<http://discover.ukdataservice.ac.uk>). None of these organizations bear any responsibility for the author's analysis and interpretation of the data.

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INTRODUCTION

There have been dramatic changes in workforce demographics over the past few decades. Women comprise nearly half of the labor force, more employees are from “dual-earner” families, and adults are more likely to pursue further education. These changes have increased employee demands for more flexibility in the workplace so that they can better balance work and life. Flex-time, compressed workweek, working from home, job sharing, and reduced work hours have been increasingly implemented by employers as responses to the conflicts between employees’ work and personal life. According to 2012 National Study of Employers (Matos & Galinsky, 2012), the majority of employers have adopted flexible work arrangements (FWA) that allow employees to better manage their working hours and locations. For example, 77 percent of employers reported that they have offered flexible work time, and 63 percent reported flexible work location.

Scholars from different disciplines, including human resource management, organizational behavior, psychology, economics, and sociology, have contributed to the theoretical development of our understanding of workplace flexibility. Despite the increasing attention given to workplace flexibility, previous studies examining the effects of FWA have produced inconsistent results. Some studies found that FWA relate to fewer work-life conflicts, higher job satisfaction, higher commitment, and higher productivity (Eaton, 2003; Edward, Clifton, & Kruse, 1996; Halpern, 2005; Hammer, Neal, Newsom, Brockwood, & Colton, 2005; Lambert, 2000; McNall, Masuda, & Nicklin, 2009; Scandura & Lankau, 1997), while other studies found that FWA can have unintended negative effects, such as more work-family conflicts and potential career penalties (Glass,

2004; Judiesch & Lyness, 1999; Leslie, Manchester, Park, & Mehng, 2012; Weeden, 2005). Moreover, reviews and meta-analytic studies have reported different effect sizes of FWA, which suggest a great deal of variation in the effects of FWA (Baltes, Briggs, Huff, Wright, & Neuman, 1999; Gajendran, & Harrison, 2007; Kelly et al., 2008).

Several reasons may explain these inconsistent findings. One main reason is that although this body of work is expansive, the preponderance of research has examined FWA as a purely single level phenomenon, focusing on either individual or organizational level only. However, to better understand the effects of FWA, scholars need to look at FWA from both individual and organizational levels, given the potential discrepancies between formal policies and individual experience with them. For example, employees within the same organization that offers formal FWA policies may have very different experiences with FWA: some may have used FWA, some may choose not to use them even when they are available, while others may not have access to FWA. These different experiences are likely to have distinct effects on important employee outcomes, such as job satisfaction and organizational commitment.

The mixed results from the previous studies may also point to the existence of moderators at the organizational level that need to be identified to better understand the relationships between FWA and important employee outcomes. At the organizational level, organizations vary in terms of how many flexibility practices they offer, which may serve as situational opportunities and constraints, affecting the occurrence and meaning of the relationships between employee experiences with FWAs and their work outcomes at the individual level. However, there has been very little research that investigates the effects of the number of FWA offered by organization. In light of the growing popularity

of FWA and the associated costs, it seems imperative that researchers provide the organizations with information needed to determine whether and when FWA would be beneficial. Thus, a thorough and integrated understanding of FWA requires consideration of multilevel analysis. Studies addressing these issues will advance our understanding on workplace flexibility, and provide a practical guide for organizations to effectively implement FWA.

The purpose of this study is to explore the multilevel nature of FWA and their effects on employee work outcomes, including job satisfaction and organizational commitment. First, I will clarify the construct of FWA. Second, I will develop the hypotheses about the effects of employee perceived availability and actual use of FWA on job satisfaction and organizational commitment. Finally, I will examine the moderating effects of organizational-level factors in these relationships, providing a test of competing hypotheses. Using data from the 2011 Workplace Employment Relations Study (WERS), this paper aims to contribute to the theoretical development of previous studies on the issues of FWA and provide some empirical evidence.

LITERATURE REVIEW AND HYPOTHESES

Flexible Work Arrangements

There is no universal definition of what constitute FWA. FWA can be defined in terms of flexibility about when one works, where one works, or how much one works. Using FWA, employees are able to have some controls over the choices of time or location in which they work. It is different from some work arrangements that refer to employers' ability to change work schedules and lay off employees (Edward et al., 1996).

For example, in the situation where employees are asked to work during the non-standard hours in order to meet the needs of clients, it is not considered as FWA for the purpose of this paper. FWA are designed to help employees balance their work and non-work responsibilities. Another construct that serves a similar purpose is family friendly policies, which has received significant attention from scholars over the past few decades (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Kelly, et al., 2008). Compared to family friendly policies, FWA can be relevant and helpful to a broad spectrum of employees, including not only those who have family responsibilities such as taking care of children or elders, but also those who have other non-work concerns such as continuing education or volunteer activities.

There are three major forms of FWA: flexibility in the scheduling of hours, the place of work, and the numbers of work hours. Flexibility in the scheduling of hours usually includes flexi-time, compressed workweek, and scheduling of breaks and overtime. Flexi-time means that employees work a certain number of core hours, but they can vary their start and stop times as long as they work the equivalent of a full work week. Compressed workweek means working longer hours each day to reduce the number of days in a workweek. Flexibility in the place of work allows employees to perform tasks at places other than their primary workplace during their work schedule. Working from home is the most common example. In a meta-analysis of telecommuting conducted by Gajendran and Harrison (2007), home was the primary location in nearly all the studies included. A third way to provide workplace flexibility is changing the number of work hours, which usually includes reduced work hours and job sharing. Unlike employees who use flexi-time, compressed workweek, or working from home, employees who use

reduced work hours and job sharing often change their employment status from full time to part time.

The Divergence between Formal Policies and Employee Experiences with FWA

Empirical research on FWA generally relies on two information sources: management and employees. Some studies use information collected from management. These studies usually ask management to report whether or not FWA are present in their organizations (Halpern, 2005). Other studies use information collected from employees. In these studies, employees are asked to report whether or not FWA are available to them (Budd & Mumford, 2006), or they have ever used FWA (Kossek, Barber & Winters, 1999; Leslie et al., 2012). These two approaches capture the FWA from different levels, which reveal important information about the effects of presence of formal practices and employee experiences, such as perceived availability and actual use of FWA, respectively. It is important for scholars to align the levels of constructs, measures, and analyses.

Recently, researchers have acknowledged that there might be divergence between the presence of formal practices and employee experiences with them (Budd & Mumford, 2006; Eaton, 2003; Nishii & Wright, 2008; Sánchez-Vidal, Cegarra-Leiva, & Cegarra-Navarro, 2012; Yanadori & van Jaarsveld, 2014). When FWA are offered by the organization, it does not necessarily mean that all employees have equal access to FWA. In fact, the difference between the percent of employers that provide flexibility to “all” employees versus “some” employees is striking. For example, 2012 National Study of Employers (Matos & Galinsky, 2012) reported that 63 percent of employers allowed some employees to work at home occasionally; only 6 percent of employers allowed most or all of their employees to do so. Moreover, not all employees with access to FWA

use them (Kirby & Krone, 2002). Among the employees who are the intended recipients, they may choose to use FWA or not depending on their needs and other factors. As a result, employees within the same organization may have vastly different experiences with FWA. Moreover, the presence of formal FWA policies at the organizational level may serve as a contextual factor, influencing the occurrence and meaning of relationships at the individual level. Failing to distinguish between organizational and individual level FWA may explain the inconsistent findings from previous studies investigating the effects of FWA. Studies that incorporate both individual level employee experiences with FWA and organizational level FWA would contribute to our understanding on this topic.

Thus, this study focuses on organizations that do offer FWA and test whether and how individual experiences with FWA within these firms, including perceived availability and actual use, relate to two employee work-related outcomes, namely job satisfaction and organizational commitment. Job satisfaction and organizational commitment have been associated with many important organizational outcomes, including reduced absenteeism and turnover, as well as increased productivity and organizational citizenship behaviors (Judge, Thoresen, Bono, & Patton, 2001; Mathieu & Zajac, 1990; Tett & Meyer, 1993). The theoretical model is presented in Figure 1.

Perceived Availability of FWA

Employee perception of availability of FWA is an important construct that has not received adequate attention in the previous literature on FWA. FWA offered by organization is insufficient as an indicator of FWA available to the employee for several reasons. First, organizations might offer certain FWA only to specific employee groups. Organizations often develop distinct HR practices for different employee groups (Lepak

& Snell, 1999). Considering the costs and returns, the beneficiaries of FWA are more likely to be core employees who have strategic importance to the organization. Also, the nature of some work is incompatible with FWA, for example, it is difficult for assembly line workers to fulfill their job tasks from an off-site location. Second, employees might not be fully aware of the benefits to which they are entitled, because of the visibility and/or relevance of FWA to them (Bowen & Ostroff, 2004; Prottas, Thompson, Kopelman, & Jahn, 2007). When employees are interested in using FWA or consider FWA to be highly variable, they are more likely to seek out information regarding the availability of FWA. Third, employees might feel that FWA is not available to them because of various barriers, such as financial constraints, fear of negative impacts on wages and promotions, or lack of support from coworkers and supervisors (Blair-Loy & Wharton, 2002; Kirby & Krone, 2002; Kossek et al., 1999; Leslie et al., 2012). Yet even FWA fully and consistently implemented may not be perceived as intended by the organization. In fact, employees' concerns are not without warrant. Leslie and her colleagues (2012) found that FWA use may result in career premiums or penalties, depending on the attributions managers make: when managers make personal life attributions, FEWA use do result in career penalties.

Recently, some scholars have looked at individual level factors and suggested that individual experiences with FWA have stronger impacts on employee work outcomes than the presence of FWA at the organizational level (Allen, Johnson, Kiburz, & Shockley, 2013; Eaton, 2003). Kossek and Ozeki stated that "individual employees must experience a policy as enabling enhanced role integration before job performance and attitudes are favorably affected" (1999:25). Similarly, researchers in the human resources

management field have also suggested that employee perspectives of HR practices significantly influence their attitudes and behaviors (Liao, Toya, Lepak & Hong, 2009; Nishii, Lepak & Schneider, 2008). The effects of FWA are likely not dependent on whether FWA are offered by organization for at least some employees; rather, what seems important is whether employees feel they are actually able to benefit from FWA. Social exchange theory (Blau, 1964) can be used to explain the mechanisms through which perceived availability of FWA promote the desired work outcomes from the employees. When the organization offers FWA to certain employee groups, the organization demonstrates that it values these employees' contributions and cares about their well-being. In return, employees who perceive FWA to be available and receive these signals from the organization feel obligated to reciprocate and care about the organization's success, which leads to increased job satisfaction and organizational commitment.

On the contrary, employees in organizations offering FWA but who do not perceive FWA to be available to them may not have the same level of job satisfaction and organizational commitment as other employees. Employees who believe they do not have access to FWA are not able to take advantages of FWA. Moreover, according to equity theory (Adam, 1965), employees measure equity by comparing the ratio of their inputs to outputs with the ratio of the perceived inputs and outcomes of others. When employees are aware that FWA are available to other employees but not to themselves, they may feel unfairly treated. As a result, employees experience dissatisfaction and are motivated to alleviate that condition by reducing the inequality. The most commonly studied responses to inequity are behavioral ones, including decreasing their organizational commitment.

The reduction of commitment may be manifested in various ways, such as unlikely to carry out tasks that are not required by the job or feel loyal to the organization. Based on the above reviews and reasoning, I hypothesized:

Hypothesis 1a: Employee perceived availability of FWA will be positively associated with their job satisfaction.

Hypothesis 1b: Employee perceived availability of FWA will be positively associated with their organizational commitment.

Actual Use of FWA

FWA provide employees with the choices of when, where, or how much they work. When employees are able to use flexible work schedules and locations to fulfill their work and non-work responsibilities, they will experience a higher level of job autonomy. Based on Hackman and Oldham's (1976) job characteristics theory, increased autonomy leads to increased job satisfaction and motivation and can generate higher organizational commitment. Indeed, previous research has found that increased job autonomy is positively linked to job satisfaction and organizational commitment (Loher, Noe, Moeller, & Fitzgerald, 1985; Mathieu & Zajac, 1990). Moreover, employees who choose to use FWA to help themselves personally and professionally will value these benefits more. The more employees value FWA, the more likely they reciprocate with positive job satisfaction and organizational commitment. Those employees who have access to FWA but choose not to use them may still perceive the commitment from the employers, and feel obligated to exchange with desired attitudes and behaviors; while at the same time, they may not benefit from FWA as much as the employees who use them. Based on the above reviews and reasoning, I hypothesized:

Hypothesis 2a: Employee actual use of FWA will be positively associated with their job satisfaction.

Hypothesis 2b: Employee actual use of FWA will be positively associated with their organizational commitment.

The Number of FWA Offered by Organization as a Moderator

The popularity of FWA is not surprising given their potential benefits (Baltes et al., 1999; Gajendran & Harrison, 2007). As a result, a growing number of organizations have provided FWA, and the majority of them have offered more than one flexibility practice. However, little has been known about how the number of FWA offered at the organizational level may influence the individual relationships. The number of FWA offered at the organizational level may serve as situational opportunities and constraint that affect the occurrence and meaning of organizational behavior as well as the relationships between variables (Johns, 2006). Considering the growing popularity of FWA and the associated costs, it seems imperative that researchers explore this question and provide the organizations with information needed. Below, I present two competing hypotheses concerning how the number of FWA offered by organization exerts cross-level influence on the relationships between employee experiences with FWA and employee work outcomes.

Drawing on perceived organizational support theory (Eisenberger, Huntington, Hutchison, & Sowa, 1986; Rhoades & Eisenberger, 2002) and social exchange theory (Blau, 1964), some scholars argued that the number of FWA policies present at the organizational level is positively related to employee outcomes (Allen, 2001; Lambert, 2000; Kopelman, Protas, Thompson, & Jahn, 2006). The underlying logic is that when

the organization offers FWA, it sends the signal to its employees that the organization invests in and cares about them. As the number of FWA present at the organizational level increases, the strength of this signal sent by the organization is also likely to increase, which leads to perceived organizational support among the employees (Bowen & Ostroff, 2004). It may even create a supportive climate at the organizational level (Thompson, Jahn, Kopelman, & Prottas, 2004). When employees perceive a high level of organizational support for FWA, their perceived availability of FWA and actual use of FWA lead to a greater job satisfaction, because employees are less concerned about the negative outcomes of using FWA, such as lower wages and fewer promotions. The interaction between perceived organizational support and employee experiences with FWA is also likely to increase employees' affective commitment to the organization. Employees tend to share the culture of the organization, and become loyal to it. Thus, the effects of perceived availability and actual use of FWA on employee work outcomes are likely to be stronger when the number of FWA present at the organizational level increases. Based on the above discussion, I hypothesized:

Hypothesis 3a: The number of FWA offered by organization moderates the relationship between employee perceived availability of FWA and job satisfaction in such a way that the relationship between perceived availability and job satisfaction is stronger when organizations offer many FWA than when organizations offer few FWA.

Hypothesis 3b: The number of FWA offered by organization moderates the relationship between employee perceived availability of FWA and organizational commitment in such a way that the relationship between perceived availability and

organizational commitment is stronger when organizations offer many FWA than when organizations offer few FWA.

Hypothesis 3c: The number of FWA offered by organization moderates the relationship between employee actual use of FWA and job satisfaction in such a way that the relationship between actual use and job satisfaction is stronger when organizations offer many FWA than when organizations offer few FWA.

Hypothesis 3d: The number of FWA offered by organization moderates the relationship between employee actual use of FWA and organizational commitment in such a way that the relationship between actual use and organizational commitment is stronger when organizations offer many FWA than when organizations offer few FWA.

On the other hand, i-deals theory may suggest a different story (Rousseau, Ho, & Greenberg, 2006). Often, i-deals occur in employment relationships that provide some employment terms that are standard to all employees (e.g. organization-wide benefits), but others that are specific to certain employees. When limited FWA are present at the organizational level, having access to FWA, or even using FWA, is a sign of one's potential or acceptance as a valued contributor - someone worthy of special treatment. Moreover, according to social cognition theory (Fiske & Taylor, 1991), things that are novel or unexpected in the context are more likely to capture people's attention. When there are only few FWA present at the organizational level, employees pay more attention to whether they have access to these flexibility benefits. Together, when the number of FWA policies present at the organizational level is limited, employees pay more attention to these benefits, and view the opportunity of experiencing them as rare. Having access to or use of FW increases their relative feeling of being valued, which leads to a higher level

of job satisfaction. As the relative feelings of being valued increases, employees are also more likely to respond a higher level of organizational commitment (Baltes et al., 1999; Eaton, 2003).

Following the preceding rationale, when the organization provides many FWA, employees may perceive FWA as standardized benefits, and treat them more as a right than a privilege. In this situation, employees may not pay attention to FWA nor see them as rare resources. The distinctiveness attached to having access to FWA, or using FWA is discounted. As the number of FWA offered by the organization increases, individual-level perceived availability and actual use of FWA is likely to lose its distinctiveness and thus, may have a relatively weaker contribution to job satisfaction and organizational commitment. Similar arguments about distinctiveness effects have also been found in other research, such as organizational citizenship behaviors (Bommer, Dierdorff, & Rubin, 2007) and selection interviews (Morgeson & Campion, 1997). Based on the above discussion, I hypothesized:

Hypothesis 4a: The number of FWA offered by organization moderates the relationship between employee perceived availability of FWA and job satisfaction in such a way that the relationship between perceived availability and job satisfaction is stronger when organizations offer few FWA than when organizations offer many FWA.

Hypothesis 4b: The number of FWA offered by organization moderates the relationship between employee perceived availability of FWA and organizational commitment in such a way that the relationship between perceived availability and organizational commitment is stronger when organizations offer few FWA than when organizations offer many FWA.

Hypothesis 4c: The number of FWA offered by organization moderates the relationship between employee actual use of FWA and job satisfaction in such a way that the relationship between actual use and job satisfaction is stronger when organizations offer few FWA than when organizations offer many FWA.

Hypothesis 4d: The number of FWA offered by organization moderates the relationship between employee actual use of FWA and organizational commitment in such a way that the relationship between actual use and organizational commitment is stronger when organizations offer few FWA than when organizations offer many FWA.

METHODS

Sample and Data Collection

The data used for this study are drawn from the 2011 Workplace Employment Relations Study (WERS), which was developed and administrated by Department for Business, Innovation and Skills. The 2011 WERS is the sixth survey of employment relations in Britain. It collected data from a representative sample of 2680 British workplaces. At each workplace, an interview was conducted with the most senior manager responsible for human resources or employment relations. With the manager's consent, self-completion questionnaires were distributed to a randomly selected representative sample of up to 25 employees. A total of 21,981 employees completed the survey, with a response rate of 54.3%.

Since this study is interested in organizations that provide FWA, 346 organizations that did not provide any of six FWA were eliminated from the final sample. Besides, employee surveys with large amount of missing data were deleted. As a result, I

obtained a final sample, including 18,639 employees within 1,708 organizations. Most employees were “Female” (57%), “With a partner” (70%), and “Don’t have dependent children” (62%), and “Non-managerial” (67%).

Measures

Independent variables. The independent variables tracked whether employee perceived FWA to be available, or used FWA, when FWA were offered by the organizations. I constructed an index of FWA, which contained six flexibility practices that were asked to both employees and employers by WERS. The specific FWA are flex-time, compressed work hours, working from home, reduced work hours, job sharing, and working only during school term times. WERS employee questionnaire asked employees “In the past 12 months, have you made use of any of the following arrangements, and if not, are they available to you if you needed them?” Concerning each item, employees responded “I have used this arrangement,” “Available to me but I do not use,” “Not available to me,” or “Don’t know.” Employees who answered “Don’t know” to all six FWA questions were not included in the final sample. The rest of employees can be grouped into 3 groups, which did not have overlaps. The first group was employees who used any of six FWA practices. The second group was employees who perceived FWA available but did not use any FWA. And the third group was employees who did not have the access to any FWA, although FWA were offered by the organizations.

To create the independent variables, contrast coding was used to facilitate planned comparison. The first comparison was to test the effects of perceived availability, which compared employees who perceived at least one of the six FWA available to them to employees who did not. A value of $\frac{1}{2}$ was assigned to group 1 and 2, and a value of -1

was assigned to group 3. The second comparison was to test the effects of actual use, which compared employees who used at least one FWA to employees who perceived FWA available but did not use any. A value of 1 was assigned to group 1, a value of -1 was assigned to group 2, and a value of 0 was assigned to group 3. Overall, among the total of 18,639 employees whose employers offered FWA, 13,025 employees (70%) reported that they perceived at least one FWA available to them. Moreover, among these 13,025 employees, 9,656 employees (74%) reported that they used at least one FWA.

Dependent variables. Employee outcomes examined in this study are job satisfaction and organizational commitment. Job satisfaction reflects “the extent to which people like or dislike their jobs (global satisfaction) or aspects of their jobs (facet satisfaction)” and “commitment concerns the employee’s attachment to the organization” (Spector, 1997:236).

In the employee survey, employees were asked to evaluate their job satisfaction using a 5-point Likert scale, with 1 = very dissatisfied and 5 = very satisfied. WERS asked employees “how satisfied are you with the following aspects of your job”: the sense of achievement, the scope for using initiative, the amount of influence over the job, the training received, the opportunity to develop skills, the amount of pay, job security, and the work itself. These eight items were selected by WERS to cover core elements of job related to extrinsic, intrinsic, and relational motivation, and were comparable with those used in other major surveys. Job satisfaction was measured by the mean scores on all eight items. Internal consistency reliability (alpha) for job satisfaction was 0.86.

Another dependent variable is organizational commitment. Meyer and Allen (1991) articulated three forms of organizational commitment. Affective commitment is the relative strength of an individual's identification with and involvement in a particular organization (Mowday, Steers, & Porter, 1979), continuance commitment reflects the costs associated with leaving the organization, and normative commitment denotes the feelings of obligation to remain with the organization. Later, Meyer and Herscovitch (2001) suggested that affective commitment correlated more strongly with outcome measures than did continuance commitment or normative commitment. My investigation in this study is limited to affective commitment due to the availability of data. In WERS, organizational commitment was measured using a four-item scale. Employees were asked "to what extent do you agree or disagree with the following statements": using initiative to carry out tasks that are not required as part of the job, sharing the values of the organization, feeling loyal to the organization, and being proud to tell people the organization. End-points were 1 = strongly disagree to 5 = strongly agree. Internal consistency reliability (alpha) was 0.78.

Moderators. The moderators tracked the number of FWA offered at the organizational level. As noted, organizational-level FWA measures were collected from the most senior managers responsible for human resources in the organizations. WERS asked each organization: "Do you have any of the following working time arrangements for any employees at this workplace?" The most senior managers in the organization responded "Yes" or "No" to the index of six FWA. Thus, each organization was associated with a score on organizational-level FWA from 0 to 6. Since organizations that did not offer any of six FWA and that had large amount of employee missing data were

removed from the final sample, the final sample included 1708 organizations scoring from 1 to 6. The mean score on the number of FWA offered by the organizations was 3.48 (SD 1.63).

Control variables. Because of the multilevel data structure, this study featured two types of control variables. At the individual level, this study controlled for gender, marital status, dependent children, and job level, because previous research suggested that these demographic variables might be related to employee work outcomes and/or to perceived availability and actual use of FWA (Budd & Mumford, 2006; Leslie et al., 2012; Weeden, 2005). Dummy variables were created for gender (*0=male, 1=female*), marital status (*0=no partner, 1=with a partner*), dependent children (*0=no dependent children, 1=having dependent children*), and job level (*0=no supervising others, 1=supervising others*). At the organizational level, this study controlled for organization size, since previous research suggested that organization size might influence employee attitudes and behaviors (Talacchi, 1960). Dummy variables were created to identify organizations as having 5 to 49 employees, 50 to 249 employees, or more than 250 employees.

Analytic Strategy

Given the nested nature of the data, the hypotheses were tested using hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002). HLM is a statistical procedure which allows for the simultaneous analysis of both individual and group level variance in individual outcomes. Model testing followed sequential steps and standard HLM practices (Hofmann, Griffin, & Gavin, 2000). First, I tested the null models, examining the variances in job satisfaction and organizational commitment. These models

partitioned dependent variables variances and calculated the amount of variances that resided between organizations versus within organizations.

Assuming significant between-organization variances in job satisfaction and organizational commitment, in the second step, I introduced individual-level independent variables in random-coefficient regression models (level 1 analysis). These models consisted of analyses within each organization, thus generating separate regression lines for each organization. It also allowed both a significant test of the pooled level 1 slopes and testing for significant variance in the pooled level 1 intercepts and slopes. Specifically, results of this model allowed assessment of whether the relationships between level-1 predictors (perceived availability and actual use) and individual outcomes (job satisfaction and organizational commitment) were significant and assessment of whether these relationships varied across organizations. Importantly, the significance test of the pooled level 1 slopes provided information with which to test Hypothesis 1(a) and (b), and 2(a) and (b).

Assuming significant between-organization variance existed in the slopes for perceived availability and actual use predicting job satisfaction and organizational commitment, in the third analytic step I posited slopes-as-outcomes models in which slopes estimates derived from the level 1 analyses regressed on the organizational factor. The purpose of these models was to test whether the number of FWA offered at the organizational level could account for the between-organization variance in the pooled level 1 slopes from the previous random-coefficient regression models. More specifically, these models tested for cross-level effects that would reveal whether and how the number of FWA moderated the relationship between individual-level predictors (perceived

availability and actual use of FWA) and employee work outcomes (job satisfaction and organizational commitment) (Hypothesis 3 and 4).

RESULTS

Table 1 shows means, standard deviations, and correlations for the individual-level variables used in the study.

A prerequisite for running HLM models is significant between-organization variance in the dependent variables of interest (Hofmann et al., 2000). To assess this precondition, I conducted unconditional means models that included job satisfaction and organizational commitment as the dependent variables separately and organizational membership as the independent variable. Results provided evidence of significant between-organization variance in job satisfaction ($\tau_{00}=0.07$, $\chi^2(1707)=4567.45$, $p<0.001$) and organizational commitment ($\tau_{00}=0.08$, $\chi^2(1707)=5097.12$, $p<0.001$), thus justifying further analyses. Estimating such null models produces information that allows for the estimation of the intraclass correlation coefficient (ICC). The ICC indicates the proportion of between-organization variance relative to total variance in job satisfaction and organizational commitment, and represents the amount of variance potentially explainable by level 2 variables. The results indicated that 13.38 percent of the variance in job satisfaction and 15.38 percent of the variance in organizational commitment existed between organizations.

Because significant between-organization variance existed, I proceeded with further analyses. I estimated random-coefficient regression models to test Hypothesis 1 (a) (b), and assessed whether there was significant between-organization variance in level 1

intercepts and slopes. Results showed that several control variables were significantly related to job satisfaction and organizational commitment. Specifically, employees who are female ($\gamma_{10}=0.06$, $p<0.001$), have a partner ($\gamma_{20}=0.04$, $p<0.01$), and have managerial-level jobs ($\gamma_{40}=0.21$, $p<0.001$) have higher job satisfaction. Entering perceived availability and actual use of FWA in the level-1 model significantly improved the model fit for job satisfaction ($\chi^2(7) = 312.55$, $p<0.001$). Similarly, employees who are female ($\gamma_{10}=0.09$, $p<0.001$), have a partner ($\gamma_{20}=0.04$, $p<0.01$), have dependent children ($\gamma_{30}=0.03$, $p<0.01$), and have managerial-level jobs ($\gamma_{40}=0.25$, $p<0.001$) have higher organizational commitment. Entering availability and use in the level-1 model significantly improved the model fit for organizational commitment ($\chi^2(7) = 268.75$, $p<0.001$). Overall, the results provided supportive evidence for Hypotheses 1a and 1b: employees who perceive FWA available to them have higher job satisfaction ($\gamma_{50}=0.13$, $p<0.001$) and organizational commitment ($\gamma_{50}=0.11$, $p<0.001$). However, I did not find any evidence for Hypotheses 2a or 2b. Among the employees who have access to FWA, actual use of FWA did not predict either job satisfaction ($\gamma_{60}=-0.01$, ns) or organizational commitment ($\gamma_{60}=-0.00$, ns). Table 2 displays parameter estimates for these individual-level predictors.

Moreover, the results showed significant between-organization variance in intercepts ($\tau_{00}=0.06$, $\chi^2(1033) = 1939.38$, $p<0.001$) and availability slope ($\tau_{11}=0.01$, $\chi^2(1035) = 1115.55$, $p<0.05$) for job satisfaction. Similarly, there was significant between-organization variance in intercepts ($\tau_{00}=0.06$, $\chi^2(1033) = 2129.25$, $p<0.001$) and availability slope ($\tau_{11}=0.02$, $\chi^2(1035) = 1181.45$, $p<0.01$) for organizational commitment.

However, there was no supportive evidence for significant variance in actual use of FWA slopes for job satisfaction or organizational commitment. Thus, hypotheses 3(c), 3(d), 4(c), and 4(d) were not supported.

Because I found significant variance in perceived availability slopes for both job satisfaction and organizational commitment, I conducted slopes-as-outcomes models to test the hypotheses regarding the moderation effects of the number of FWA on the relationships between perceived availability and job satisfaction and organizational commitment separately. Model 3 in the Table 2 presents the results for slope-as-outcomes models. Although not used to test hypotheses, also shown in Model 3 are results from intercepts-as-outcomes models. The results from slopes-as-outcomes models support Hypotheses 4(a) and 4(b), in that the number of FWA adopted at the organizational level had a significant inverse relationship to the level 1 slopes in the job satisfaction model ($\gamma = -0.02$, $p < 0.001$) and in the organizational commitment model ($\gamma = -0.02$, $p < 0.001$). Thus, the competing hypotheses 3(a) and 3(b) were not supported. I also re-estimated the final model by specifying group-mean centering for the level 1 predictors and adding in the group mean of the level 1 predictors in the level 2 intercept model (Hofman, Griffin, & Gavin, 2000). The parameters across these two final models are virtually identical, ensuring that the results for cross-level interactions were not spurious¹. The results indicate that the number of FWA explained a significant portion of the variance in the relationship between perceived availability and employee work outcomes. When the number of FWA adopted by the organizations is lower, the relationships between

¹ To be consistent with the investigation of all other hypotheses, I reported the raw metric results.

perceived availability of FWA and employee work outcomes, such as job satisfaction and organizational commitment, are stronger.

To delineate the nature of the observed moderating effects, I plotted the relationships between perceived availability and organizational commitment at roughly one standard deviation above (5) and below (2) the mean for the number of FWA offered at the organizational level (Cohen, Cohen, West, & Aiken, 2003). Figure 2 graphically depicts the relationships between perceived availability and job satisfaction in organizations with few FWA practices and those with many FWA practices. Figure 3 shows a similar moderating effect on the relationship between perceived availability and organizational commitment.

DISCUSSION

There has been a call for research on exploring multi-level issues in FWA theory and research (Kelly et al., 2008). This study uses the multilevel perspective to explore the effects of organizational-level FWA and employee experiences with FWA on job satisfaction and organizational commitment. In particular, the research sought to determine whether employee perceived availability and actual use of FWA are significantly related to employee job satisfaction and organizational commitment, and how the number of FWA adopted by the organizations influences these relationships. Utilizing data from the 2011 WERS, I found that employee perceived availability of FWA was positively associated with their job satisfaction and organizational commitment. Moreover, the number of FWA adopted by the organizations showed significantly negative cross-level effects. Comparing organizations offered few FWA with those

offered many FWA, I found that the relationships between employee perceived availability and employee work outcomes were stronger when organizations offer few FWA practices.

Limitations

This study has several limitations. First, all the hypotheses are examined by using cross-sectional data, which cannot demonstrate causality or direction of the impacts of FWA. For example, it might be that organizations care about the well-being of employees with higher level of job satisfaction and organizational commitment, and are more likely to offer them FWA. Thus, studies using longitudinal data are needed to establish a more clearly causal relationship between employee perceived availability and important employee work outcomes.

A second limitation is that the data used in this study was from the 2011 WERS. Considering that the British government provides a relatively high level of benefits, such as pregnancy leave and paid leave (Budd & Mumford, 2006), workplace flexibility provided by UK employers in terms of types and intensity may be different from that in other countries. For example, in countries where very few organizations adopt FWA, the number of FWA offered by organization may have positive rather than negative moderating effects on the relationship between perceived availability of FWA and employee outcomes. Thus, national norm may act as the highest level contextual factor influencing these relationships. Further research is called for to examine this topic in other countries.

Contributions and Future Directions

The present study contributes much-needed cross-level data to the FWA literature and represents one of few empirical investigations of FWA at multiple levels of analysis. Nested data structures are common throughout many areas of research because employees tend to exist within organizational structures. However, until recently, studies in the field of FWA ignored nested data structures. This study recognized the multilevel nature of organizations and used hierarchical linear modeling to develop and test the model.

One key finding of this study is that employee perceptions about FWA availability matter. Previous studies using organizational level measures might undermine the positive work outcomes of FWA due to a lack of perceived availability of these among employees. The results revealed that employees who perceived FWA available had higher level job satisfaction and organizational commitment. The potential benefits of FWA depend on employee perceived availability, not merely on organizational-level FWA availability. Simply implementing FWA in the organizations is not enough to achieve the desired outcomes from the employees. Organizations need to consider different strategies to increase employee experiences with FWA. For example, previous studies have found that perceived organizational support and perceived supervisor support would encourage employees to feel free to use FWA when needed (Thompson, Beauvais, & Lyness, 1999).

This study demonstrated that whether employees perceive at least one FWA to be available to them matters. However, I did not distinguish between employees who perceive many FWA available and those who perceive few FWA available. Apparently,

the number of FWA offered by organization sets the range limits for the number of FWA employees may perceive available. Future studies are encouraged to carefully detangle these two, and test whether the number of FWA which employees perceive available matters. Moreover, it is possible that some FWA practices matter more than others. Employees may pay attention to whether certain FWA present at the organizational level, rather than the total number of FWA. For example, if employees value working from home the most, they may not care whether the organization offers other FWA. Future studies are encouraged to explore whether there is one best flexibility practice.

Perhaps surprisingly, there were no statistically significant differences between employees who used FWA and those who did not on job satisfaction and organizational commitment. It is likely that among employees who have access to FWA, those who choose to use FWA also have higher work-life conflicts, which may diminish their job satisfaction and organizational commitment. Some previous studies also suggested that supervisory attribution and peer use of FWA may influence the effects of using FWA (Blair-Loy & Wharton, 2002; Leslie et al., 2012). Future studies are encouraged to collect data relevant to work-life conflicts and investigate the potential moderators to rule out these possibilities.

A second key finding of this study is that the number of FWA at the organizational level influences the relationship between perceived availability and both job satisfaction and organizational commitment. Comparing contexts in which organizations offer few FWA with those in which organizations offer many FWA, I found that the relationships between perceived availability and job satisfaction and organizational commitment were stronger when organizations offer few FWA. These

findings contradicted the conventional thinking that “more is better” (Kopelman et al., 2006). In fact, simply adding the number of FWA may attenuate the positive relationships between perceived availability and desired employee outcomes. Considering the costs associated with implementing a large number of FWA, organizations and HR practitioners may need to be cautious about what really determine the effects of FWA. Even after accounting for the effects of the number of FWA offered, there are still unexplained slope variances in this model. Further research that explores other organizational contextual factors, that may influence the effects of individual experiences with FWA, would have both theoretical and practical contributions to our understanding of FWA.

Despite the plethora of possible questions and the potential payoffs, it seems that researchers have been slow to examine FWA at multiple levels of analysis and measurement. Employing a meso-level approach, my examinations bridge the contextual interactions between organizational-level FWA and individual experiences with FWA. The current results suggest that a cross-level approach may provide new possibilities from both theoretical and empirical perspectives. To address these questions, researchers must conceptualize FWA as more than simply an organizational-level construct and fully explicate the complexity and richness embedded in the construct. In summary, much work remains, and future FWA researchers would be well advised to more thoroughly consider the effects of multilevel and contextual influences.

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TABLE 1
Means, Standard Deviations, and Correlations for Individual-Level Variables

Variables	Means	s.d.	1	2	3	4	5	6	7	8
1. Gender	0.57	0.50	--							
2. Marital Status	0.70	0.46	-0.04**	--						
3. Dependent Children	0.38	0.49	-0.03**	0.25**	--					
4. Managerial Jobs	0.33	0.47	-0.07**	0.09**	0.07**	--				
5. Perceived Availability	0.05	0.69	0.14**	0.03**	0.07**	0.06**	--			
6. Actual Use	0.34	0.76	0.11**	0.05**	0.08**	0.00	0.29**	--		
7. Job Satisfaction	3.55	0.72	0.06**	0.03**	0.01	0.15**	0.12**	0.02*	(0.86)	
8. Organizational Commitment	3.81	0.71	0.08**	0.05**	0.05**	0.18**	0.13**	0.04**	0.59**	(0.78)

n=18639 for individual-level data. Coefficient alphas are presented in parentheses.

*p<0.05

** p<0.01.

TABLE 2
Results of Hierarchical Linear Modeling (HLM) Analyses Predicting Job Satisfaction and Organizational Commitment

Predictor Variables	Dependent Variables					
	Job Satisfaction			Organizational Commitment		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Level-1						
Gender	0.06**	0.04**	0.04**	0.09**	0.07**	0.07**
Marital Status	0.04**	0.03**	0.04**	0.04**	0.04**	0.04**
Dependent children	-0.02	-0.03**	-0.03**	0.03**	0.02*	0.02*
Managerial	0.21**	0.20**	0.20**	0.25**	0.24**	0.24**
Perceived availability		0.13**	0.21**		0.11**	0.18**
Actual use		-0.01	-0.00		0.00	0.00
Level-2						
Organization Size						
Dummy variable 1 (small)	0.16**	0.17**	0.12**	0.16**	0.17**	0.15**
Dummy variable 2 (medium)	0.05*	0.05**	0.02	0.06**	0.07**	0.06**
The number of FWA			-0.03**			-0.01
Cross-level interaction						
Perceived availability * The number of FWA			-0.02**			-0.02**
Deviance	39019.90	38707.35	38676.56	37985.40	37717.64	37707.80
Decrease in deviance		312.55(7)**	30.78(1)**		268.75(7)**	8.84(1)**

Level-1 n=18639; Level-2 n= 1708. Entries are estimated of the fixed effects with robust standard errors.

* p<0.05

** p<0.01

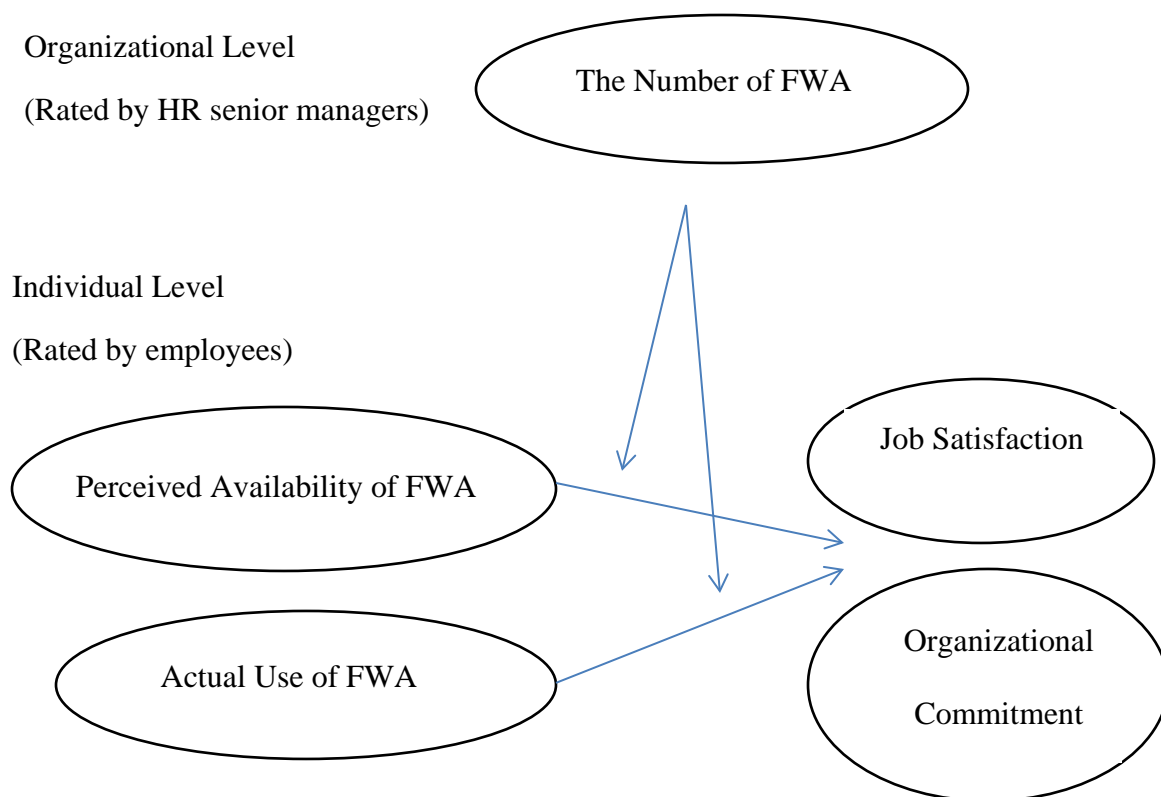
FIGURE 1**Cross-Level Moderation on Job Satisfaction and Organizational Commitment**

FIGURE 2

**Moderating Effects of the Number of FWA on the Relationship between Employee
Perceived Availability and Job Satisfaction**

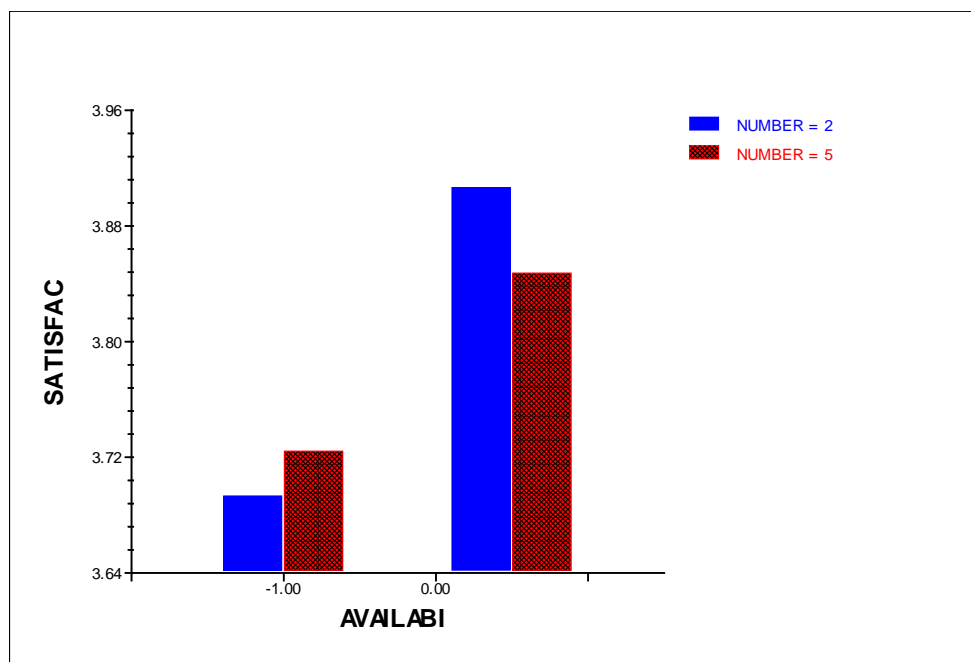


FIGURE 3

**Moderating Effects of the Number of FWA on the Relationship between Employee
Perceived Availability and Organizational Commitment**

