

## **Flexible Working, Individual Performance and Employee Attitudes: Comparing Formal and Informal Arrangements**

### **Introduction**

This paper examines the relationship between flexible working arrangements designed to accommodate employees' needs (e.g. remote working, flexitime, compressed working) and individual performance. Drawing on a range of theories, it addresses potential indirect effects on employee performance via job satisfaction and organizational commitment and analyses whether the associations vary according to whether the arrangement was set up via a formal organizational policy on flexible working or negotiated informally between the employee and their line manager.

Flexible working has become increasingly common in many countries in recent years, with many employers offering some form of flexible working to their employees and significant numbers of employees taking advantage of these opportunities (see for example CIPD 2012; Matos & Galinsky, 2012; Matos & Galinsky, 2014; Tipping, Chanfreau, Perry & Tait, 2012; Skinner, Hutchinson & Pocock, 2012). In some countries, greater availability of flexible working arrangements has been encouraged by governments. The European Union policy on job quality advocates that employees should be able to exercise some control over their working arrangements (European Commission, 2012) and in the UK recent legislation has extended the legal 'right to request' flexible working to all employees. Likewise, Australian legislation gives several employee groups the right to request flexible working.

Flexible working has attracted significant research attention. Studies have analysed the associations with organizational and individual performance, employee attitudes, health and

well-being. Whilst it has been observed that flexible working arrangements have been introduced in Europe due to managers' concern with performance, implying a positive association with performance (Ortega, 2009), a systematic review of the literature (de Menezes & Kelliher, 2011) concluded that a 'business case' for offering flexible working arrangements had not been demonstrated. Others have argued that, despite no evident direct link with performance, flexible working arrangements are inexpensive for employers and popular with employees, so may foster positive employee outcomes that could enhance performance (Bloom and Van Reenen, 2006). This view is consistent with findings from meta-analyses suggesting positive associations between certain types of flexible working arrangements and employee attitudes (e.g. Baltes, Briggs, Huff, Wright & Neumann, 1999; Gajendran & Harrison, 2007) and between forms of work-family support and employee attitudes (Butts, Casper & Yang, 2013).

Although, several existing studies have examined the associations between flexible working, employee attitudes and performance, in many cases they are based on the existence of a flexible working policy, rather than actual flexible working (e.g. Budd & Mumford, 2006; Wood, de Menezes & Lasasoa, 2003) and few studies have considered actual individual performance. This paper, in contrast, analyses the association between having a flexible working arrangement and actual employee performance, as measured by individual performance ratings. Indirect and direct associations with performance, via organizational commitment and job satisfaction are hypothesised using competing theories and tested on data from a large sample of mostly professional workers in organizations with well-established flexible working policies. Importantly, this paper also examines whether these associations differ according to how the flexible working arrangement was established: through the organization's formal process, or negotiated informally between the employee and their line manager.

Examining informal arrangements is important because evidence shows that formal policies are not the only means for employees to access flexible working arrangements and that, in practice, informally negotiated changes to working arrangements are widespread (Kelly & Kalev, 2006; Kossek, Lautsch & Eaton 2005; Lambert & Waxman, 2005). Indeed, it has been claimed that most flexible working arrangements are informal (Healy 2004, Gregory & Millner, 2009, Troup & Rose, 2012). Yet, to date, knowledge about them remains very limited (Kossek et al., 2005; Rapoport, Bailyn, Fletcher & Pruitt, 2002), since most authors have restricted their analysis to the outcomes of formal flexible working arrangements as observed by de Menezes & Kelliher (2011) in their systematic review of this literature. In some senses this is not surprising, since policy and legislative developments are largely directed towards formalised arrangements and processes via which employees can access flexible working. It is also likely that, by their very nature, formal arrangements are easier to identify and therefore study. The small literature that examined informal arrangements has confirmed their widespread nature and identified a varied range of potential outcomes (see for example Anderson, Coffey & Byerly, 2002; Richman, Civian, Shannon, Hill & Brennan, 2008; Troup & Rose, 2012). As such, from the limited evidence available, no clear picture of how they may differ from formal arrangements emerges. Hence, this study examines flexible working in organizations where formal flexible working policies were well-established, but where informal arrangements were also made outside of formal processes.

The link between different forms of flexible working arrangement and employee performance and the role that employee attitudes may play is of interest to researchers, managers and policy makers. This paper builds on extant research in a number of ways. First, it explores the relationship between having a flexible working arrangement (specifically remote working

and flexibility over working hours) and employee performance, using individual performance ratings. Second, the mediating roles of organizational commitment and job satisfaction in this relationship are examined. Third, whether there are differences in these relationships according to whether the flexible working arrangement was established formally or informally is examined. Remote working and flexibility over working hours were chosen for further analysis since they are types of flexible working that lend themselves to being established either by formal or informal means, since such arrangements do not involve changes to the contract of employment. Furthermore, the focus here is on flexible working arrangements that are available to all employees, not just those with parenting and caring responsibilities. This is in line with recent calls in the work-life literature for the adoption of a perspective on ‘life’, which goes beyond caring and domestic activities (de Janasz, Forret, Haack & Jonsen, 2013; Ozbilgin, Beauregard, Tatli & Bell, 2011).

## **Background and Hypotheses**

### *Flexible Working Arrangements: Informal and Formal*

Flexible working arrangements in this paper are taken to be arrangements which allow employees to vary the amount, timing and/or location of their work (de Menezes & Kelliher, 2011) and which are designed to enable them to balance the demands of their work and non-work lives more effectively. These include, for example, remote working, flexibility over working hours and reduced hours.

In a review of the literature de Menezes and Kelliher (2011) observed that few studies distinguished between formal and informal arrangements. The small number of studies that have specifically examined informal arrangements have not however defined these arrangements in a

consistent way. For example, Richman et al (2008) identify informal arrangements simply as those that are occasionally used, while Troup and Rose (2012) describe them as those that ‘were negotiated in a need-based way with supervisors or management’ (p. 474). For Hall and Atkinson (2006), the immediacy and responsiveness to employee needs are key, since they define informal arrangements as the ability to alter planned working time on an ad hoc basis at short notice. Eaton (2003) goes further and refers to informal arrangements as covert arrangements outside the scope of formal policies: ‘supervisors can permit more flexibility than is formally allowed, encouraging employees to take time off unofficially, so that flexibility becomes invisible to higher-level managers’ (Eaton, 2003: 147).

Here a distinction is made between formal and informal flexible working in the following way. Formal arrangements are those which have been made via the organization’s flexible working policy, which normally involves a written request from the employee to be considered by their manager in conjunction with the HR department.<sup>1</sup> Informal arrangements are those which have not gone through this process, but rather emerge from a discussion or negotiation between employee and line manager. These informal arrangements tend to relate to flexibility over working hours and/or remote working, which do not require changes to the official contract of employment. Both forms of arrangements may be seen as similar to i-deals (Rousseau, 2005), or more specifically flexibility i-deals (Hornung, Rousseau & Glaser, 2008) and represent an individualisation of the employment relationship (Rousseau, 2005). I-deals are defined as being individually negotiated, heterogeneous, of benefit to both the employee and the employer, vary in scope and are initiated by employees (Rousseau, Ho & Greenberg, 2006), however, the literature is less clear about who the arrangement is made with. Some studies suggest that it is

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<sup>1</sup> In countries where the right to request is enshrined in law, there is normally an obligation on the employer to respond in a particular way and in a designated timeframe.

made with the organization or employer (Bal, Jong, Jansen & Bakker, 2012; Rousseau, 2005) suggesting a formal arrangement, whereas others suggest they are made between the supervisor and the employee (Rosen, Slater, Chang & Johnson, 2013), which could be either formal or informal. The focus of the present study is on arrangements initiated by the employee, (although access is controlled by the employer, (Beck, 2013)), that are specific to the individual, but we distinguish between those that are made via the formal process and those that are made informally.

### *Flexible Working Arrangements and Performance*

Several extant studies have examined the link between giving employees some choice over their working arrangements and performance. Using Social Exchange theory (Blau, 1964), it has been argued that enhanced employee performance may be an act of reciprocation between the employee and the employer (Golden, 2001, 2009; Kelliher & Anderson, 2010), thus where an employee exercises a flexible working option, a feeling of obligation is generated towards the employer. Taking a different but related perspective, Konrad and Mangel (2000) use Akerlof's (1982) Gift Exchange theory to propose a positive association between the provision of work-life programmes and productivity. The basis of Gift Exchange is that if the employer provides a 'gift' to the employee by paying wages or other benefits above what is required by the market, the employee will in turn respond with a 'gift' of performance above the norm. Thus, employers may offer a gift in the form of choice over working arrangements, expecting the employee to respond with enhanced effort and/or performance. In the case of informal flexible working arrangements, Atkinson and Hall (2009) observe that having an informal arrangement creates a sense of obligation on the part of employee and a consequent need for reciprocation,

likely to result in behaviours which are seen to be valued by the manager who has granted the arrangement and might involve additional effort. To date, however, there has been little examination of this relationship for any form of arrangement with reference to independent, comparable data on individual employee performance.

### *The Relationship with Organizational Commitment*

By offering employees the opportunity to work flexibly, organizations may also foster a perception of organizational support in helping them manage the interface between their work and non-work lives. In line with the norm of reciprocity (Gouldner, 1960), this may stimulate behaviours such as loyalty, attendance and punctuality (Settoon, Bennett & Liden, 1996) and may therefore imply an indirect link between flexible working arrangements and performance via organizational commitment. A number of studies have found a relationship between flexible working and organizational commitment (see for example, Chow & Keng-Howe, 2006; Gajendran & Harrison, 2007; Kelly & Moen, 2007). Notwithstanding the problems with definitions discussed above, a study of how formal and informal approaches to flexibility relate to organizational commitment, showed little difference between the forms (Eaton, 2003). Looking at engagement and expectations to remain with the organization, Richman et al. (2008) found positive associations for both forms of arrangement, but that this was higher for those with a formal arrangement.

Affective organizational commitment has been described as a mediating path through which job design or redesign initiatives can be channelled to facilitate pro-activeness and performance (Jafri, 2010; Thomas, Whitman & Viswesvaran, 2010; Yee, Yeung & Cheng, 2010). In the wider human resource management literature, the High Involvement, High

Performance and High Commitment systems models predict that cultivating organizational commitment will translate into performance (Lawler, 1986, Osterman 1995, Wood & de Menezes, 1998). In essence, the opportunity to customise working arrangements, through both formal and informal processes may foster positive sentiments towards the organization, resulting in enhanced individual performance. We therefore hypothesise:

*H1a: There is a positive association between informal flexible working arrangements and individual performance, mediated by organizational commitment.*

*H1b: There is a positive association between formal flexible working arrangements and individual performance, mediated by organizational commitment.*

### *The Relationship with Job Satisfaction*

Hackman and Oldham's (1975) job characteristics model implies that the basic characteristics of a job (e.g. skill variety, task identity, task significance, autonomy) influence psychological well-being, which can affect individual performance. Allowing employees some autonomy over their working arrangements may give them a sense of independence (Tietze, Musson & Scurry, 2009) that could be linked to enhanced job satisfaction and in turn higher performance (Dodd & Ganster 1996; Scandura & Lankau, 1997). Employees with informal flexible working arrangements have been found to place high value on their arrangements and also have a perception of control which might suggest a positive influence on job satisfaction (Hall & Atkinson, 2006). Karasek's (1979, 1989) model further proposes that higher job discretion enables workers to cope better with higher job demands and may buffer associated adverse effects. Spector (1986) examining the relationship between perceived control and employee

outcome variables, drawing on 101 studies, predicted that higher perceived control would be associated with greater motivation and job satisfaction. Furthermore, job control and enrichment have been found to be associated with job satisfaction (Hammer, Neal, Newson, Brockwood & Colton, 2005; Kelliher & Anderson, 2008, 2010; de Menezes, 2011), which can in turn be linked to performance (Wood, van Veldhoven, Croon & de Menezes 2012). In the human resource management literature, an organization's ability to motivate and retain its human capital has often been associated with its adoption of high performance work systems (Becker & Huselid, 1998; Boxall & Purcell, 2003; Capelli, 2000; Pfeffer, 1994; Wright, Gardner & Moynihan, 2003) and job satisfaction has been identified as a potential mediator in the link between organizational policies and performance (Purcell & Kinnie, 2007). Thus, if employee choice over their working arrangements (either through a formal or informal process) is indicative of job autonomy, drawing on the job characteristic model and high performance work systems theory, we hypothesise:

*H2a: There is a positive association between informal flexible working arrangements and individual performance, mediated by job satisfaction.*

*H2b: There is a positive association between formal flexible working arrangements and individual performance, mediated by job satisfaction.*

#### *Differences between Informal and Formal Flexible Working Arrangements*

The small number of studies that have attempted to examine differences in formal and informal flexible working arrangements produced mixed results and failed to clarify differences in the way in which they may relate to performance. This may in part be related to the definitions used,

as discussed earlier. Nevertheless, conceptually, it is reasonable to propose that there might be distinctions in outcomes between formal and informal arrangements. In the case of a formal arrangement, the employee has taken advantage of a benefit offered to them by their employer. Under these circumstances, it could be argued that there may be little perceived need to give back something in return. In other words, formal arrangements accessed through an organizational policy are more likely to generate a sense of entitlement to change working arrangements (den Dulk, Peters & Poutsma, 2012; Lewis & Smithson, 2001; Stavrou & Ierodiakonou, 2015). Likewise, in the context of much discussion, both in the management press and inside organizations about the business benefits of flexible working (such as enhanced ability to recruit and retain high calibre staff, reduced sickness absence and a reduced need for workspace where staff work remotely) employees may not feel under obligation to yield anything additional, such as increased effort, in return. Furthermore, if the employee believes that they would be able to access a similar arrangement with another employer, then this is less likely to influence their attitudes in a positive way, since no special favours are seen to have been done.

In the case of informal arrangements made between the employee and their line manager, managers exercise discretion in allowing changes to be made to the working arrangement. Whilst managers decision latitude may be constrained by the practicality of redesigning work to accommodate employees' needs (Furunes, Mykletun & Solem, 2011) and by their competence to manage the work arrangement (Earl & Taylor, 2015), the employee may nonetheless feel that the manager has personally made efforts to accommodate their needs, hence there may a belief that something is owed in return (Gouldner, 1960). The belief that through an informal arrangement their specific needs have been accommodated may also foster feelings of organizational

commitment, or at least commitment to the manager, but as Coyle Shapiro & Shore (2007) observed for many employees the line manager in effect represents the organization. With job satisfaction, informal flexible working arrangements may be seen to offer greater discretion than formal arrangements and to be aligned more closely with individual circumstances, unlike for example, a formal flexitime scheme which may only offer predesignated windows of flexibility.

Hall and Atkinson (2006) observe that informal arrangements may be characterised by ongoing negotiations between the employee and their manager to the benefit of both parties, but note that this is unlikely to be evident with formal arrangements. However, other studies whilst reporting that formal schemes are seen to have greater legitimacy, suggest that informal arrangements may question equity and managerial control (Fogarty, Scott & Williams, 2011) and could result in counter-productive workplace behaviours (Beauregard 2014)

An important further difference between formal and informal approaches is the potential security of the arrangement. In the case of formal flexible working arrangements, once it has been made, it is likely to be harder, although not impossible, for the employer to withdraw from the arrangement, which itself is likely to involve a formal process. With informal arrangements, it is likely to be easier for a manager to change their mind and require the employee to return to a standard working arrangement. Faced with a lack of security of the arrangement, the employee may attempt to deliver a high level of performance in order to 'protect' their arrangement (Kelliher & Anderson, 2010, Hutchinson, 2012). Informal arrangements may also be at risk, if either the line manager or the employee moves to a new role. A new line manager may or may not be willing to honour an existing informal arrangement. As such any positive influence on organizational commitment and job satisfaction may be mitigated by the potential insecurity of an informal arrangement.

Despite variations in the approaches and definitions adopted, it would seem reasonable to argue that, there are likely to be differences between formal and informal arrangements, based on variations in perceived legitimacy and security of the arrangement and a sense of entitlement and/or obligation. Therefore, we hypothesise:

*H3: Formal and informal flexible working arrangements differ in their associations with performance.*

*H4a: The association with organizational commitment differs depending on whether the flexible working arrangement was established via formal or informal means.*

*H4b: The association with job satisfaction differs depending on whether the flexible working arrangement was established via formal or informal means.*

In other words, indirect and total effects on performance may vary with the form of arrangement. For example, if formalised arrangements lead to a sense of entitlement, (as especially might be the case in countries where there legal provisions in relation to the right to request to flexible working, as in the UK), and there is no perceived need to reciprocate, outcomes from formal flexible working arrangements, such as organizational commitment, could be weaker than with an informal arrangement.

In a similar vein, if flexible working arrangements become the norm, Akerlof's Gift Exchange theory would imply that they will no longer be perceived as a gift or an incentive for enhanced effort. Consequently, any positive association between flexible working arrangements and performance would weaken over time. Along similar lines it has been observed that the positive association with employee outcomes is weaker in organizations where flexible working policies had been in place for longer than where they had been introduced more recently

(Kelliher & Anderson, 2010). Given the lack of literature and empirical evidence on flexible working arrangements and the effect of time, it would be difficult to formalise a hypothesis, we therefore propose:

*The associations between flexible working arrangements and performance are moderated by the length of time the individual works flexibly.*

Nonetheless, if flexible working is essentially perceived as an element of job control, neither its length of use, nor its prevalence in the organization, should influence the association with job satisfaction and performance.

In this paper, the outcomes of formal and informal flexible working arrangements will be considered. The analysis will first examine a number of types of flexible working which offer employees some choice over their working arrangements together (including flexibility over working hours, staggered hours, remote working and part-time working) and then examine remote working and flexibility over working hours separately, since these are types which are amenable to both formal and informal arrangements.

## **Method**

The paper draws on survey data from 2617 respondents in four organizations in the UK, all of which were large, multi-national companies drawn from the pharmaceutical, utilities, banking and consulting sectors. Each company had offered a range of flexible working arrangements to employees for several years and had been identified as active promoters of flexible working by campaigning organizations and the media.

Data were collected by a questionnaire distributed by email, as a hypertext link, to all employees in the division(s) being researched in each company, who in practice were mainly

professional workers. By focusing on professionals, the element of choice over working arrangements can be better captured, because professionals are more likely to be able to exercise discretion over their working hours, location and effort (Felstead, Jewson, Phizacklea & Walters, 2002; Golden, 2012; Ibarra, 1999).

In comparison to previous studies, the dataset offers several advantages. First, it includes responses from both those with and those without a flexible working arrangement. It further distinguishes between those with formal and informal arrangements. This allows for direct comparisons to be made between three separate groups: no-flexible working arrangement, formal flexible working arrangement, and informal flexible working arrangement. Second, like a small number of other studies (e.g. Allen, 2001; Hammer et al., 2005; Lapierre & Allen, 2006), it includes responses from actual flexible workers, not just those who have access to, or perceived access to flexible working arrangements (e.g. WERS2004, CIPD, 2012, National Study of Employers, 2012). Third, the proportion of male respondents in the sample is large, both with formal and informal flexible working arrangements and may therefore allow for more general observations to be made, than with analyses largely based on female respondents (Casper, Eby, Bordeaux & Lockwood, 2007; Eby, Casper, Lockwood, Bordeaux & Brinley, 2005). It is important to note that this study includes all employees with flexible working arrangements and is not limited to parents and carers.

Overall, a response rate of 24% was achieved, which is significantly higher than both the estimated participation of adults in US surveys (18.1% by Bickart and Schmittlein (1999)) and that reported by Wright and Schwager (2008) in their study of the effectiveness of online surveys. Considering the reported distributions of response rates for data collected from individuals reported by Baruch and Holtom (2008), a response of 24% is not statistically

significantly below the average (5% significance level, in one-tailed test based on the means and standard deviations of response rates in their study). Response was encouraged by including a cover letter from a senior manager in each organization and ensuring the language used was meaningful for the organization. One possible reason for non-response is that the employees targeted mainly work in high pressure environments and therefore may not have taken the time to respond, which is a common problem in data collection. As described below, preliminary analysis of the data does not indicate non-response biases; the distributions of job satisfaction and commitment, though based on different scales, are consistent with those obtained from a larger survey of employees in the UK (van Wanrooy, Bewley, Forth, Freeth, Stokes & Wood, 2011). After removing inconsistent cases, the analysis was based on 2617 respondents, Respondents were asked if they worked flexibly, with three possible answers: No; Yes, informally; Yes, formally. If yes they were then asked to indicate the type of flexible working, which included among several options: “Is this remote working?” and “Is this flexitime?” By using these three questions, respondents who had any flexible arrangement or a combination of arrangements were included in the category flexible working. Formality or informality was assessed by the answers to the second part of the first question. Out of flexible workers, remote working and flexibility over working hours were inferred by a positive response to the question concerning the specific arrangement. As shown in Table 1, 59.8% of respondents (1565) had a flexible working arrangement and most arrangements were informal. As might be expected, there is significant overlap between remote working and flexibility over working hours, since most remote workers (68.36%) also reported having flexibility over working hours.

**Insert Table 1 about here**

The sample is nearly evenly split by gender (49.2% female), 97% of the respondents are approximately equally distributed across 3 companies, with the remaining 3% working in the bank. The gender distribution of flexible workers is shown in Table 2. Out of formal flexible workers, 35% were male and out of those who described themselves as informal flexible workers, 58% were male.

**Insert Table 2 about here**

As shown in Table 3, most flexible workers were aged between 30 and 49. Overall, Chi-square tests (5% significance level) indicate that the use flexible working varies with age and gender, except in the case of remote working.

**Insert Table 3 about here**

The *length of flexible working* was established by the question: “How long have you been working flexibly?”, Answers were coded as: less than one year, between 1 and 2 years, between 2 and 4 years and greater than 4 years, and the distribution is nearly evenly split between the four groups. The median respondent had been working flexibly between 1 and 2 years, and 26.2% of respondents had been working flexibly for over four years.

Respondents were asked to report their *last performance rating*, which is taken as a proxy measure of performance. There were some minor variations made to the wording of the questions to fit with the terms used in each organization. Whilst this is a self-reported measure of performance, it does not rely on the respondents own judgement about their performance. Responses were then coded into four general categories: 1- improvement required or expectations not met (5.8%); 2- good or expectations met (26.3%); 3- high, significantly meeting or exceeding expectations (48.6%); 4 – excellent or outstanding (18.9%). Out of the 2617 respondents, 195 did not answer this question, but non-response was found to be random. The

average (median) respondent had significantly met or exceeded expectations, which is to be expected from the assessment of performance of employees in post.

*Job satisfaction* was measured by a 10-point additive scale based on two items (Schneider, Hanges, Brent Smith & Salvaggio, 2003): Considering everything how satisfied are you with your job? Considering everything, how would you rate your overall satisfaction with your company at the present time? The correlation between the items is equal to 0.8 and the measure is reliable (Spearman Brown coefficient = 0.89).

*Organizational commitment* was measured using Cook and Wall's (1980) British Organizational Commitment Scale. This has 9 items and uses a 7-point Likert scale (see Appendix I for details). A one-factor model explains 52% of the variance in the data, loadings vary between 0.5 and 0.8. Although there were some residual correlation between items, the additive scale was judged to be reliable (Cronbach's Alpha = 0.81) and therefore items were not deleted in order to improve the fit of the factor model.

The distributions of the outcome variables show few outliers and no significant gender differences were found. The average individual in the sample is satisfied with their job (mean = 7.21, standard deviation = 1.86) and committed to the organization (mean = 27.82, standard deviation = 6.84). Since flexible working arrangements may vary between organizations and as Tables 1-3 suggest associations with individual characteristics, control variables were indicator dummy variables for the employees' age (reference category: less than 30) and gender (reference category: male), as well as organization.

Table 4 summarises the two-way associations in the data. Employees have either an informal or formal working arrangement, hence the negative correlations between forms. Rows 7 and 8 illustrate positive associations between flexible working arrangements and employee

outcomes, which vary in significance. Row 11, however, indicates no association between gender and performance ratings. Taken together rows 7, 8 and 11 suggest differences in outcomes from different flexible working arrangements, which are examined below.

Missing values were found to be random and treated as such. The distribution of performance ratings is skewed, as indicated above.

**Insert Table 4 about here**

### ***Analysis Procedure***

The mediation model, where an independent variable is directly associated with an employee attitude that is linked to their performance rating, is the basis of the analysis. Since different flexible working arrangements are to be compared, the independent variable in the model is a binary indicator of group membership that is equal to zero for those in the benchmark group (i.e. not a flexible worker, while testing hypotheses 1 and 2) and to one for those in the other group (e.g. flexible worker with a formal arrangement). The analysis of different subsamples enables an assessment of the sensitivity of the results obtained from the larger samples where outcomes from any flexible working arrangement (flexible working) are examined. Using MPlus (Muthén & Muthén, 1998-2010), standardized coefficients and estimates of direct and indirect effects on employee performance are obtained.

Job satisfaction and organizational commitment are often correlated, for example as shown in meta-analyses (e.g. Thomas et al., 2010; Kaifeng, Lepack, Jia & Baer, 2012). This is also observed here, since the correlation between the employee attitudes is high ( $r = 0.72$ ) and could have allowed for the estimation of a common attitudinal factor. However, the hypotheses in this study are based on different theories of associations with specific dimensions of employee attitude, and may unveil distinct effects of forms of flexible working on each dimension of

employee attitude. Consequently, the paths to employee attitudes are tested separately, by estimating models where the mediator is either organizational commitment (H1) or job satisfaction (H2).

For each type of flexible working arrangement and employee attitude (organizational commitment, job satisfaction), the mediation model with performance as the final outcome is estimated three times, by selecting a subsample of the data that corresponds to those to be compared, while testing hypotheses 1 and 2: not working flexibly and working flexibly with an informal arrangement; not working flexibly and working flexibly with a formal arrangement; and to test hypothesis 3, working flexibly with an informal arrangement and working flexibly with a formal arrangement. The significance of standardized estimated indirect (via job satisfaction or organizational commitment) and estimated direct effects on performance is then assessed, by comparing the respective probability values (p-values) with the threshold. If significant at the 5% level, these estimates indicate differences relative to the benchmark working arrangement.

Having identified significant links, the potential moderation of the length of time working flexibly is then considered. This variable and its interactions with the indicator variable are then included in the specific paths of the models that were found to be significant. The new models and estimates are then assessed using the same criterion.

Goodness of fit of each model is judged by several criteria (Chi-square tests, information criteria and root mean square error measures).

## Results

### *Flexible Versus Non-Flexible Workers: The Added Value of Flexible Working Arrangements*

Table 5 summarises the results from testing hypotheses 1 and 2 using mediation models where flexible workers are benchmarked by non-flexible workers. It shows standardized estimates of direct and indirect effects of informal and formal flexible working arrangements, their standard errors and significance (P-values), the subsample sizes (n) and the variance in performance that is explained by each model (RSq). Generally, about 30% of the variance in performance ratings is explained; indirect effects of flexible working arrangements via organizational commitment and job satisfaction are significant, except when focusing on informal flexibility over working hours. As previously observed, gender is independent of performance, however respondents aged between 30 and 49 were more likely to have reported higher performance when compared to the reference category (less than 29) and this was common to all models (5% significance level). Below, the associations with each outcome are examined in detail.

#### *Hypothesis 1a: Informal Flexible Working, Organizational Commitment and Performance*

Considering flexible working in general, the model fits the sample (standardized root mean square error (SRMSE) = 0.023, which is less than the threshold of 0.05). Positive direct associations between informal flexible working and organizational commitment (standardized coefficient = 0.08, p-value = 0.00) and between organizational commitment and performance (standardized coefficient = 0.013, p-value = 0.00) are supported. However, there is no direct association between informal flexible working and performance (standardized coefficient = 0.03, p-value = 0.18). As shown in Table 5, the estimated effects from informal flexible working are indirect via organizational commitment (estimate = 0.02, p-value = 0.00) and total effects are not significant at the 5% level, hence hypothesis 1a is only partially supported.

Similarly, when benchmarking informal flexibility over working hours against not working flexibly, the model fits the sample (SRMSE =0.026) and confirms a positive association with organizational commitment (standardized coefficient=0.04, p-value=0.04), which is linked to performance (standardized coefficient=0.12, p-value= 0.00). As above, there is no direct association between informal flexibility over working hours and performance (standardized coefficient=0.002, p-value=0.93). As shown in Table 5, P-values of estimated effects on performance are greater than 0.05, so that indirect and direct effects are insignificant. Consequently, this subsample rejects hypothesis 1a.

Examining informal remote working, the model fit is satisfactory (SRMSE =0.023). A positive association with organizational commitment is observed (standardized coefficient=0.094, p-value=0.00), the direct association with performance is insignificant at the 5% level (standardized coefficient=0.03, p-value=0.07). Organizational commitment is positively associated with performance (standardized coefficient= 0.12, p-value=0.00). As highlighted in Table 5, the indirect effects on performance via organizational commitment (estimate = 0.007) and the total effect (estimate = 0.045) are positive. Consequently, the subsample that works remotely supports hypothesis 1a.

*Hypothesis 1b: Formal Flexible Working, Organizational Commitment and Performance*

Considering formal flexible working, the model fit is satisfactory (SRMSE=0.024). There is a positive association between formal flexible working and organizational commitment (standardized coefficient=0.11, p-value=0.00) and between organizational commitment and performance (standardized coefficient=0.12, p-value=0.00). Yet, the direct association with performance is negative (standardized coefficient= -0.05, p-value=0.04). Consequently, positive indirect effects via organizational commitment (estimate=0.016, p-value=0.00) and negative

direct effects (estimate=-0.04, p-value=0.04) are found, with the total effect that is shown in Table 5 being insignificant (p-value = 0.121).

Benchmarking formal flexibility over working hours by not working flexibly, the model fits the sample (SMRMSE=0.02) and shows a positive association with organizational commitment (standardized coefficient=0.05, p-value=0.03), which is positively associated with performance (standardized coefficient=0.13, p-value=0.00). However, the direct association between flexibility over working hours and performance is also negative (standardized coefficient= -0.05, p-value=0.03). Estimated effects are positive indirect (estimate= 0.01, p-value=0.04) and negative direct (estimate =-0.07, p-value=0.03), resulting in the total effect that is shown in Table 5 (estimate = -0.04, p-value=0.066), which is insignificant at the 5% level. As above, the positive indirect effects of formal flexibility over working hours via organizational commitment are diluted.

Similarly, when formal remote working is examined, the model (SRMSE=0.024) shows positive association with organizational commitment (standardized coefficient=0.08, p-value=0.00), but no direct association with performance (standardized coefficient= -0.02, p-value=0.3). Indirect positive effects via organizational commitment are positive (estimate=0.01, p-value=0.00), but the estimated total effect is insignificant (p-value=0.56).

In summary, positive indirect effects, as highlighted in Table 5, are observed thus supporting Hypothesis 1b. Formal flexible working arrangements can lead to greater organizational commitment, but do not result in higher performance.

#### *Hypothesis 2a: Informal Flexible Working, Job Satisfaction and Performance*

For job satisfaction as the mediator, when informal flexible working is benchmarked by no flexible working the model fit is satisfactory (SRMSE= 0.027). There is a positive association

with job satisfaction (standardized coefficient= 0.1, p-value=0.00), but no direct association with performance (standardized coefficient = 0.02, p-value= 0.33). Job satisfaction, however, is positively associated with performance (standardized coefficient= 0.16, p-value=0.00). Direct effects of informal flexible working on performance are insignificant (estimate=0.03, p-value=0.078). As shown in Table5, indirect effects via job satisfaction are positive (0.016, p-value=0.00) and support hypothesis 2a, but the total effect on performance is insignificant.

Comparing informal flexibility over working hours with no flexible working leads to a model that fits the data (SRMSE=0.027). Job satisfaction (standardized coefficient=0.04, p-value=0.09) and performance (standardized coefficient=-0.001, p-value=0.94) are independent of having an informal arrangement over working hours. Job satisfaction is positively associated with performance (standardized coefficient=0.13, p-value=0.00). Neither direct nor indirect effects are significant (p-values >0.1) and thus this subsample rejects hypothesis 2a.

The model that compares informal remote working against no flexible working arrangements (SRMSE=0.025) supports a positive association between remote working and job satisfaction (standardized coefficient=0.09, p-value=0.00), which is positively associated with performance (standardized coefficient=0.15, p-value=0.00); yet, it shows no significant direct association between informal remote working and performance (standardized coefficient=0.03, p-value=0.10). As highlighted in table 5, the effects of informal remote working on performance are positive. In contrast to the above, the data on informal remote workers support hypothesis 2a.

*Hypothesis 2b: Formal Flexible Working, Job Satisfaction and Performance*

Comparing formal flexible working to no flexible working, the model fit is satisfactory (SRMSE=0.03). The associations flexible working with job satisfaction (standardized coefficient=0.11, p-value=0.00) and job satisfaction with performance (standardized coefficient=0.14, p-value=0.00) are positive. However, formal flexible working is negatively associated with performance (standardized coefficient=-0.05, p-value=0.02). As highlighted in Table 5, indirect effects of formal flexible working through job satisfaction are positive (estimate = 0.02, p-value =0.00), thus supporting hypothesis 2b. Nonetheless, there is negative direct association with performance (-0.05, p-value=0.02) and the total effect is insignificant (p-value=0.10).

The model of having formal flexibility over working hours versus no flexible working fits the subsample (SRMSE=0.026, n=1638) and shows positive association with job satisfaction (standardized coefficient=0.07, p-value=0.01), which is linked to higher performance (standardized coefficient=0.15, p-value=0.00). However, having formal flexibility over working hours is negatively associated with performance (standardized coefficient=-0.05, p-value=0.02). There are positive indirect effects (estimate=0.01, p-value=0.01), which support hypothesis 2b, but negative direct effects (estimate=-0.05, p-value=0.02) lead to a total effect that is insignificant (p-value=0.066).

When formal remote working is benchmarked against no flexible working arrangements (SRMSE=0.02), formal remote working is positively linked to job satisfaction (standardized coefficient=0.08, p-value=0.00), which is positively correlated with performance (standardized coefficient=0.14, p-value=0.00), but there is no direct association between formal remote working and performance (standardized coefficient=-0.02, p-value=0.26). As above, the positive

effect of formal remote working is indirect via job satisfaction (estimate=0.01, p-value=0.01) in line with hypothesis 2b, but the total effect is insignificant (p-value=0.51).

Thus, as observed with organizational commitment, there are positive indirect effects of formal flexible working via job satisfaction, but the overall association between formal flexible working and performance is not significant. Hence, the impact of formal flexible working on performance is via the employee attitude. As a whole, results from formal arrangements do not vary significantly with the type of flexible working arrangement.

### *Comparing Informal and Formal Flexible Working Arrangements*

The results thus far suggest that there are differences in outcomes from formal and informal arrangements. Formal flexible working arrangements have been found to be negatively associated with employee performance. Formal flexibility over working hours may lead to positive employee attitudes, while there is no evidence in regards to informal flexibility over working hours. Hence, the 12 models that were summarised above generally support Hypothesis 3.

Table 6 focuses on the mediation models of formal flexible working arrangements benchmarked by informal arrangements, thus giving insights into the added value of having formal arrangements as well as the differences between pairs of arrangements. It shows the standardized estimates of the effects (direct, indirect via an employee attitude, and total), their standard errors (SE) and probability values (P-value) based on which significance is assessed, subsample size (n) and estimated R-square (RSq). Significant estimates are highlighted in bold and support Hypothesis 3 that there are differences in outcome between formal and informal arrangements. However, the evidence is insignificant with regards to indirect effects via

organizational commitment, and mostly the formalization of the arrangement is linked to a decrease in reported employee performance (negative direct effect).

**Insert Table 6 about here**

*Hypothesis 4a: The Associations with Organizational Commitment and Performance*

Comparing formal and informal working arrangements, the model fits the data well (SRMSE=0.024) and shows no increase in organizational commitment from a formal work arrangement (standardized coefficient=0.04, p-value=0.14). Organizational commitment is positively associated with performance (standardized coefficient=0.13, p-value=0.00) but the impact of formal flexible working on performance is lower than where the arrangement is informal (standardized coefficient= -0.08, p-value=0.00). As summarised in Table 6, there is no significant difference in indirect effects via organizational commitment (estimate=0.003, p-value=0.33). Estimates of both direct and total effects are negative, meaning that direct and indirect effects via organizational commitment from formal flexible working arrangements are lower than those that could be obtained from informal flexible working arrangement.

When flexibility over working hours is examined, the model fits the sample (SRMSE=0.026). There is no difference in the association with organizational commitment (standardized coefficient=0.04, p-value=0.20), which is positively related to performance (standardized coefficient=0.13, p-value=0.00). As highlighted in Table 6, those with formal flexibility over working hours reported lower performance than those with an informal arrangement for working hours, since the direct effect is negative.

By contrast, the model that evaluates the impact of formal remote working (SRMSE= 0.02) shows no difference in the associations via organizational commitment. Overall, hypothesis 4a is rejected.

*Hypothesis 4b: The Associations with Job Satisfaction and Performance*

When formal is compared to informal flexible working, the model that accounts for indirect effects via job satisfaction fits well (SRMSE=0.02). The link between the indicator variable and job satisfaction is insignificant (standardized coefficient=0.02, p-value=0.40), thus the association with job satisfaction does not vary according to whether the arrangement is formal or informal. Consequently, effects via job satisfaction are the same, thus rejecting hypothesis 4b. Nonetheless, the association with performance differs: direct and total effects of formal flexible working are negative (Table 6). When the two forms are compared, formal arrangements have a potentially lower impact on performance than informal flexible working. By contrast, benchmarking formal flexibility over working hours with informal flexibility over working hours (SRMSE= 0.028) shows a positive association with job satisfaction (standardized coefficient=0.17, p-value=0.04) that counterbalances a negative association with performance (standardized coefficient=-0.15, p-value=0.02). The overall total effect, as shown in Table 6, is not significant (p-value=0.065) and there is no difference in the association with performance. Nevertheless, having formal flexibility over working hours leads to greater effects via job satisfaction (estimate = 0.013), which support hypothesis 4b.

Considering, remote working, the findings confirm what was observed with regard to organizational commitment. The model also fitted the data well (SRMSE=0.02) and showed lower performance than those with a formal remote working arrangement, but no differences in the direct or the indirect association via job satisfaction.

Taking together the different types of arrangements, Hypothesis 4b is rejected by flexible and remote working, but is supported by flexibility over working hours.

### ***Time as a Moderator***

The proposition that the length of time the individual had been working flexibly would moderate the association with employee attitudes was examined. Table 4 showed associations between the length of time and organizational commitment (positive) and job satisfaction (negative).

Nonetheless, the duration of the flexible working arrangement was unrelated to both job satisfaction and organizational commitment ( $p$ -values $>0.05$ ) in all models. Furthermore, the interactions with different types of flexible working arrangements were also insignificant.

### **Discussion and Conclusion**

In this paper the relationships between having a flexible working arrangement, (specifically remote working and flexibility over working hours) and employee performance have been examined. Furthermore, the mediating roles of organizational commitment and job satisfaction in this relationship, largely neglected in extant studies, have also been assessed. In addition, whether there are differences in these associations depending on how the working arrangement was established, either formally or informally, was examined for flexible working arrangements combined and specifically for remote working and flexibility over working hours. These two types of arrangement were investigated separately because they lend themselves to being established formally or informally, without involving changes to the contract of employment.

Positive association between having a flexible working arrangement and organizational commitment and job satisfaction are consistent in the findings and in line with the findings of several previous studies (e.g. Almer & Kaplan, 2002; Cotti, Haley & Miller, 2014; Hooker, Neathey, Casebourne & Munro, 2007; Harris & Foster, 2005; Maxwell, Rankine, Bell & MacVicar, 2007). Beyond this corroboration, this study has furthered understanding of the

relationship between flexible working and performance. It has shown, irrespective of the mediator, or the form of the arrangement (formal or informal), that flexible working arrangements can lead to positive employee attitudes which may contribute indirectly to employee performance.

As hypothesised, the mediating role of organizational commitment may be explained by reference to social and gift and exchange theories (Akerlof, 1982; Blau, 1964) as discussed earlier. This is based on the notion that the employee reciprocates support in managing the interface between their work and non-work lives with increased commitment to the organization. The mediating role of job satisfaction is explained by reference to the autonomy open to employees over their working arrangements (Hackman & Oldman, 1975; Karasek, 1979; 1989). Essentially, the discretion given to employees over when and where they work is likely to foster enhanced job satisfaction.

While investigating differences in performance ratings between forms of arrangement, in the first instance, mean and variance of performance scores were examined. The variances in the distribution of performance ratings were the same, irrespective of the arrangement form (non-flexible, formal flexible, informal flexible). However, there were differences in means ( $p$ -value = 0) between flexible workers with an informal arrangement (mean = 2.87), flexible workers with a formal arrangement (mean = 2.67) and those who did not work flexibly (mean = 2.79). Thus, having a flexible working arrangement established through an informal process appears to enhance performance. By contrast, the formal process may have a negative effect on performance, as indicated by the negative direct effects of formal arrangements on performance that were reported above. There are several possible plausible explanations for these findings.

First, those with informal arrangements may have received higher performance scores due to increased effort exercised in return for the flexibility extended to them, in line with social or gift exchange theories, discussed above. It could be that an informal arrangement is more likely to engender a social exchange relationship because it will have resulted from negotiation directly between the employee and their line manager (Atkinson & Hall, 2009). As such, it may be possible to accommodate personal circumstances to a greater degree than where the arrangement is set up through a formal mechanism (Eaton, 2003; Hall & Atkinson, 2006). The employee may feel it is their line manager who has offered them the benefit and therefore reciprocates with exercising greater effort. Specifically, in line with gift exchange, line managers may offer a greater degree of customisation in the anticipation that this will enhance performance. In addition, with an informal flexible working arrangement the employee may take greater steps to protect the security of this arrangement (Kelliher & Anderson, 2010), such as increasing effort. However, no direct positive association between informal flexible working and performance rating was established, but rather indirect links via employee attitudes. Previous studies have suggested that flexible working can enhance effort (Golden, 2001, 2009; Kelliher & Anderson, 2010), but it may be that effort, or employees' perception of enhanced effort, do not necessarily translate into higher performance ratings.

Since the relationships between having informal and formal flexible working arrangements and performance were also mediated by job satisfaction, a sense of independence enabled by having flexibility (Tietze et al., 2009) may be enhanced by exercising some choice over working arrangements. However, this is not the case with having informal flexibility over working hours, since the results indicate that this type of arrangement may lead to greater job satisfaction when formalised.

Formal flexible working arrangements were found to be negatively associated with performance. It is possible that those with a formal flexible working arrangement simply perform more poorly compared to other groups. Reduced face time with their managers and co-workers may have a detrimental effect on performance. Less close supervision, or fewer opportunities for training for example may contribute to lower performance. Equally, where employees' performance is dependent on co-ordination with co-workers, this may be hampered by some forms of flexible working.

However, the process itself may also have a role to play. When making a formal request to change working arrangements, employees may be more likely to see themselves as taking advantage of a benefit that they are entitled to and consequently see no need to reciprocate in relation to performance (Lewis & Smithson, 2001). In addition, the extent to which an employee believes that the formal process operates fairly could be important here. Beauregard (2014) argues that perceived unfairness in the allocation of work-life initiatives can lead to counterproductive work behaviours, which could then result in lower performance ratings. A formal process may be more susceptible to perceptions of unfairness, partially because it is likely to be more readily observable and may involve a more bureaucratic and lengthy process. However, other studies have suggested the reverse, that the existence of informal arrangements may be seen to be less equitable (Fogarty et al., 2011; Golden, 2009).

Several studies have highlighted the importance of line manager support for flexible working (see for example Bagger & Li, 2014; Ryan & Kossek, 2008). With a formal arrangement, the extent to which the line manager is supportive of the arrangement is less clear. Unlike an informal arrangement, which is only likely to be established if the line manager is supportive, the decision whether or not to grant a formal arrangement is unlikely to be made by

the line manager alone and therefore the existence of such an arrangement is less of an indicator of their support. A line manager who is not completely supportive of flexible working arrangement may find their assessment of the flexible worker's performance, consciously or otherwise, influenced by their beliefs about the arrangement. In addition, managers, who have not received adequate training in managing flexible workers, may find it more difficult to manage and assess the performance of employees that are mostly away from the workplace and/or present at different times, thus resulting in lower ratings. Likewise, several studies have suggested that employees who request flexible working arrangements are perceived as being less serious about their careers by managers (Leslie, Manchester, Park & Mehng, 2012), which may impact on the way in which their performance is rated. However, analysis of the variance in performance ratings in this sample did not show that their distribution varied between informal, formal and non-flexible workers, therefore it cannot be concluded that line managers' ratings of performance were biased. In line with the call by Allen, Johnson, Kiburz & Shockley, (2013) these findings suggest a need to understand the role of informal workplace and supervisor support more fully.

When the two types of flexible working were examined separately, there was no difference in the mediation via organizational commitment. Yet, having a formal arrangement for flexibility over working hours may lead to greater job satisfaction than having an informal arrangement. Formal mechanisms for flexibility over working hours tend to be based around total hours worked, which may be counter to the nature of managerial and professional work (Kalleberg & Epstein, 2001; Perlow & Porter, 2009), where employees are often expected to put in the hours required to get the job done. Formal flexi-time schemes often have a pre-defined window of choice over working time, together with prescribed 'core time' and an agreement on

the total number of hours to be worked. In practice, this may mean that employees actually work less under such a scheme, which in turn influences performance ratings negatively and therefore the positive association with organizational commitment does not translate into performance. Formal flexibility over working hours supports mediation via job satisfaction, consistent with the job characteristics model. The ability to adjust working hours according to the employees' preferences and importantly to feel that the arrangement is secure, protected by the formal system (Hutchinson, 2012), can increase job satisfaction. Furthermore, where employees are required to work additional time, due to business demands, they are also likely to be able to recoup this later at a time of their choosing. These differences underscore the importance of examining different forms of flexibility separately (Allen, et al., 2013, Butts et al., 2013).

Since the positive outcomes from having a flexible working arrangement were not subject to the duration of the flexible working arrangement, it appears that autonomy is important in understanding the link with employee attitudes and performance is less likely to dilute over time. This finding adds further support to the job characteristics model (Hackman & Oldham, 1975) as a means to explain the outcomes of flexible working arrangements.

Given that the data included a higher proportion of males than most extant studies, additional analyses investigated whether the findings could be moderated by gender, but found no evidence. Nonetheless, future studies should examine how individual characteristics may impact the associations between forms of flexible working arrangements and employee outcomes, including, for example, health and wellbeing.

## **Limitations**

This is a cross-sectional study, with assessments of causality relying on the theories underlying the models tested, however reverse direction of causality cannot be ruled out. A longitudinal study of flexible workers with more general measures of performance from different sources would enable a clearer assessment of potential outcomes from different arrangements to be made. In this study, performance has been measured by performance ratings reported by the respondent, which are subject to accurate recall and reporting. Furthermore, factors such as work climate, or the fit between working patterns and business activity, which may influence individual performance have not been addressed. Moreover, a limited number of flexible working types were considered and some were subject to overlap. Butts et al. (2013) suggest that in relation to work-family support the positive effect on attitudes increases with the number of policies. This study was based on professional employees in organizations where flexible working policies were well-established. It is possible that by examining other types of employees and/or in organizations where flexible working arrangements were less well-established, different results might have emerged. Although no effect for the length of time the arrangement had been in place was observed, it is noteworthy that most arrangements had been in place for less than four years. Management practices may take several years to impact performance (Powell, 1995) and therefore studies examining flexible working arrangements over a longer period of time may reveal more insight into the effect of time.

## **Implications**

An important message for managers is the role flexible working arrangements may have in generating positive organizational outcomes. Allowing employees choice over their working

arrangements may have a marked influence on how they view their employment relationship, which may translate into greater organizational commitment and job satisfaction, that are then associated with performance gains.

The differences observed in formal and informal arrangements are also important for managers and policymakers. These findings highlight a tension between promoting fairness and equity through formalising processes and an apparent detrimental impact on performance. However, as discussed above, the processes themselves may also influence results. In order not to disadvantage those with formal arrangements, it is important to examine the implementation of flexible working and to provide support for managers who manage flexible workers and for flexible workers themselves. Whilst maintaining a fair and equitable process, there may be scope to encourage greater dialogue between the employee and their line manager within a formal process and thereby customise the arrangement to a greater degree, which may in turn facilitate reciprocal behaviours of benefit to the organization.

More generally, these findings raise questions about the formalisation of HRM processes and practices in organizations. Research by Storey, Saridakis, Sen-Gupta, Edwards and Blackburn, (2010) found that formalisation of HRM influences employee perceptions of job quality in a negative way and argue that it is because they impinge on autonomy and discretion. For large organizations offering flexible working arrangements such as those in this study, it is important to examine how line managers can be afforded greater autonomy in the implementation of HR practices, in order to yield the potential benefits from informal and more personalised arrangements.

This study adds to knowledge and understanding about the consequences of individualising the employment relationship. In the context of flexible working arrangements customised to

meet the needs of employees, the positive association with employee attitudes was confirmed. In addition, performance outcomes were found to vary according to the way in which the arrangement was established, adding to knowledge about the outcomes of informalisation of the employment relationship. This finding is important in a context, where informal flexible working arrangements are prevalent, even where the right to request flexible working arrangements exists.

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Table 1: Distribution of Flexible Workers

	Formal	Informal	Total
Flexible Working	490	1075	1565
Flexibility over Working Hours	134	902	1036
Remote Working	239	779	1018

Table 2: Gender and Flexible Working

	Male	Female	Total
<b>Flexible Working</b>			
Informal	619	454	1073
Formal	172	318	490
<b>Flexibility over Working Hours</b>			
Informal	495	406	901
Formal	57	77	134
<b>Remote Working</b>			
Informal	456	322	778
Formal	126	113	239

Table 3: Age and Flexible Working

	up to 29	30-39	40-49	>=50	Total
<b>General (Any) Flexible Working</b>					
Informal	237	459	284	91	1071
Formal	65	259	126	39	489
<b>Flexible Working Hours</b>					
Informal	155	414	258	72	899
Formal	33	61	24	16	134
<b>Remote Working</b>					
Informal	137	360	215	65	777
Formal	29	106	77	25	237

Table 4: Correlations

	1	2	3	4	5	6	7	8	9	10	11	12
1. Informal flexible working												
2. Formal flexible working	-0.40**											
3. Informal flexibility over working hours	0.76**	-0.30**										
4. Formal flexibility over working hours	-0.30**	0.72**	-0.22**									
5. Informal remote working	0.77**	-0.31**	0.57**	-0.22**								
6. Formal remote working	-0.27**	0.67**	-0.20**	0.58**	-0.21**							
7. Organizational commitment	0.05*	0.06**	0.04	0.04	0.09**	0.06**						
8. Job satisfaction	0.06**	0.06**	0.03	0.05**	0.08**	0.05**	0.72**					
9. Gender	-0.12**	0.15**	-0.06*	0.09**	-0.10**	-0.01	-0.02	0.04*				
10. Age	0.06**	0.07**	0.10**	0.04*	0.08**	0.09**	-0.05**	0.06**	-0.09**			
11. Performance rating	0.07**	-0.08**	-0.04	-0.07**	0.12**	-0.02	0.18**	0.23**	0.02	-0.16**		
12. Length time	0.00	0.00	0.09**	0.03	-0.05	-0.04	0.07*	-0.10*	-0.05*	0.25**	-0.05**	

Note: Forms of flexible working arrangements above are binary variables that are equal to 1 if used and 0 otherwise (N=2617).

Phi Coefficients are reported for binary variables; otherwise Spearman correlation coefficients are reported. \*: 5% significance level \*\*: 1%significance level

Table 5: Assessing the Effect of Flexible Working - Standardized Estimates

	Estimate	SE	P-Value	N	RSq
<b>Informal Flexible Working</b>					
Via Organizational Commitment	<b>0.02</b>	0.003	0.001		
Total (direct + via OC)	0.036	0.019	0.064	2109	0.31
Via Job Satisfaction	<b>0.016</b>	0.004	0		
Total (direct + via JS)	0.034	0.019	0.078	2109	0.31
<b>Informal Flexibility over Working Hours</b>					
Via Organizational Commitment	0.005	0.003	0.054		
Total (direct + via OC)	0.006	0.018	0.721	2403	0.31
Via Job Satisfaction	0.005	0.003	0.096		
Total (direct + via JS)	0.004	0.018	0.827	2403	0.31
<b>Informal Remote Working</b>					
Via Organizational Commitment	<b>0.011</b>	0.003	0		
Total (direct + via OC)	<b>0.045</b>	0.019	0.018	2312	0.31
Via Job Satisfaction	<b>0.014</b>	0.004	0		
Total (direct + via JS)	<b>0.044</b>	0.019	0.02	2312	0.32
<b>Formal Flexible Working</b>					
Via Organizational Commitment	<b>0.013</b>	0.004	0.001		
Total (direct + via OC)	-0.036	0.023	0.121		0.31
Via Job Satisfaction	<b>0.016</b>	0.004	0		
Total (direct + via JS)	-0.039	0.023	0.1	1527	0.31
<b>Formal Flexibility over Working Hours</b>					
Via Organizational Commitment	<b>0.007</b>	0.003	0.044		
Total (direct + via OC)	-0.04	0.022	0.066	1638	0.32
Via Job Satisfaction	<b>0.01</b>	0.004	0.01		
Total (direct + via JS)	-0.04	0.022	0.066	1638	0.32
<b>Formal Remote Working</b>					
Via Organizational Commitment	<b>0.009</b>	0.003	0.003		
Total (direct + via OC)	-0.012	0.0219	0.557	1772	0.3
Via Job Satisfaction	<b>0.01</b>	0.004	0.005		
Total (direct + via JS)	-0.014	0.021	0.514	1772	0.3

Note: Independent variable is a binary indicator equal to 1 when the employee has the arrangement and 0 when the employee does not work flexibly. Significant estimates at 5% level are highlighted in bold.

Table 6: Added Value of Formal in Relation to Informal Arrangements

	Estimate	SE	P-Value	n	RSq
<b>Flexible Working</b>					
Direct	<b>-0.083</b>	0.023	0		
Via Organizational Commitment	0.005	0.003	0.156		
Total	<b>-0.078</b>	0.023	0.001		0.3
-----					
Direct	<b>-0.083</b>	0.023	0		
Via Job Satisfaction	0.004	0.005	0.403		
Total	<b>-0.079</b>	0.023	0.001	1560	0.3
<b>Flexibility over Working Hours</b>					
Direct	<b>-0.058</b>	0.028	0.034		
Via Organizational Commitment	0.005	0.004	0.22		
Total	-0.053	0.028	0.057	1033	0.29
-----					
Direct	<b>-0.065</b>	0.027	0.019		
Via Job Satisfaction	<b>0.013</b>	0.006	0.046		
Total	-0.052	0.028	0.065	1033	0.3
<b>Remote Working</b>					
Direct	-0.054	0.029	0.064		
Via Organizational Commitment	0.003	0.005	0.512		
Total	-0.051	0.03	0.085	1014	0.28
-----					
Direct	<b>-0.057</b>	0.029	0.049		
Via Job Satisfaction	0.003	0.006	0.64		
Total	-0.054	0.03	0.068	1014	0.29

Estimated Effects from a mediation model estimated via Mplus6. Independent Variable=1 if formal arrangement and 0 if informal arrangement. Control variables: gender (ref. category=male), age (ref. category= less than 29), company.

Significant (5% significance level) standardized coefficients are in bold.

Gender coefficients were not significant in all models. Age (30-39, 40-50) and company coefficients significant.

## Appendix I

### *British Organisational Commitment Scale (Cook & Wall, 1980)*

I am quite proud to be able to tell people who it is I work for

I sometimes feel like leaving this employment for good

I'm not willing to put myself out just to help the organisation

Even if the firm were not doing too well financially, I would be reluctant to change to another employer

I feel myself to be part of the organisation

In my work I like to feel I am making some effort, not just for myself, but for the organization as well.

The offer of a bit more money with another employer would not seriously make me think of changing my job

I would not recommend a close friend to join our staff.

To know my own work had made a contribution to the good of the organization would please me

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The endpoints for this 7 point Likert scale were Strongly Agree – Strongly Disagree