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## Satisfaction and Perceived Productivity when Professionals Work From Home

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### ABSTRACT

Despite increased interest in work from home (WFH) options, WFH is relatively rare. To understand how employers can better assist professional employees to WFH, this study examined the influence of four factors on WFH outcomes for experienced WFH employees from 20 Australian organisations. Questionnaires assessed organisational, job, individual and household factors as well as satisfaction and perceived productivity. The study results indicate that organisational and job related factors are more likely to affect WFH employees' satisfaction and perceived productivity than work styles and household characteristics. Wide variability in the latter two variables leads to suggestions for customised assistance. Implications for human resource management are discussed.

### INTRODUCTION

Several recent trends have focussed renewed attention on working from home (WFH). First, there is the growing trend towards achieving a better work life balance (e.g., Perry-Smith & Blum 2000, Kerlake 2002). Overall, the prospects for improving work life balance in Australia and the Asia Pacific region are still considered to be dim (Pocock 2005). Second, evidence is accumulating that providing home based work and teleworking options relates to improved organisational performance and reduced absenteeism (Stavrou 2005). WFH arrangements may also help with Australia's growing labour shortage by attracting more women with young children back into the workforce, which is an attractive argument that is consistent with findings that women are more likely to WFH than men (Lindorff 2000). Also, WFH may be attractive to workers with elder care responsibilities, and to men seeking to engage in home carer activities. However, despite clear benefits of WFH for both individual and employer, many problems arise (Crandall & Longge 2005) as the effective installation of WFH initiatives presents significant HRM challenges (Hall & Liddicoat 2005). This study investigates ways in which WFH initiatives can be better supported.

Strong interest in WFH towards the end of last century was not accompanied by widespread adoption of this practice. Reported proportions of remote workers generally remain under 10 per cent (Scott & Timmeran 1999, *European Teleworking Online* 2000, *Flexibility Ltd* 2002, Barr 2005). Yet, surveys indicate that many more employees are interested in WFH than actually engage the work arrangement (e.g., Eiszele 1998, EcaTT 1999, Morgan 1999, *Australian Bureau of Statistics* 2002, Peters & den Dulk 2003). This raises the question of why this is so. Lack of opportunity provides part of the answer (Brocklehurst 1996), but some employees who, for instance, start teleworking discontinue this method of working as demonstrated by returning to more traditional office hours or just stop working altogether.

Many inhibiting factors have been identified within the large body of literature on teleworking. Early research drew attention to managerial resistance (Olson 1982, Zuboff 1982) that led to the use of management-by-results (Konradt, Schmook & Mälecke 2001), and more effective control strategies (Snell 1992, Kurland & Cooper 2002). The importance was also established of personal characteristics (Katz 1987, Belanger 1999, Raghuram, Wiesenfeld & Garud 2003), individual coping strategies (Konradt, et al. 2001) and job factors (Raghuram, Garud, Wiesenfeld & Gupta 2001). A lack of technical support and the costs incurred were mentioned as contributors to the stress that some teleworkers reported (Deeprise 1999, Mann, Varey & Button 2000, Tan-Solano & Kleiner 2001). It is also now recognised that teleworking is constrained by the availability of suitable space in the home (Green, Strange & Trache 2000), and the characteristics of the person's household (Baruch 2000). However, comparing the results of

existing WFH studies directly is difficult. Reasons include that remote working has been studied under various names (e.g., teleworking, telecommuting, working from home), with no generally accepted definitions (Duxbury, Higgins & Neufeld 1998, Sullivan 2003); terms are used differently and interchangeably from study to study (McCloskey & Igarria 1998, Depickere 1999, Hill, Ferris & Martinson 2003); and data gathering methods and definitions vary (Lindorff 2000, Bailey & Kurland 2002). This paper uses WFH to refer to the present study, but adopts the terminology of previous writers when referring to the literature.

Often research designs are fairly simplistic, seeking to isolate the effects of single variables on WFH. Increasingly, the literature reflects the recognition that a broader, multi factor approach is more appropriate for understanding teleworking than the study of single factors, because of the complexity of the WFH situation (Depickere 1999, Baruch 2000, Pearlson & Saunders 2001, Raghuram, et al. 2001, Bailey & Kurland 2002). Typical of this broader approach to WFH is Baruch's (2000) summary of research related to the slow growth of teleworking. Baruch concluded that the appropriate variants for each of four factors (the teleworking interface, job, individual and organisation) need to be present *simultaneously*, and that the absence of the appropriate variants for any **one** of these components undermines effective teleworking. This multi factor approach is consistent with the recent emphasis on more complex approaches to the study of organisations (e.g., Eisenhardt 2000, Lewis 2000, Boal & Hooijberg 2001). Studying isolated variables simplifies research, but ignores the dynamic effects multiple variables create. Dynamic systems often involve paradoxes, as well as contradictory behaviours and roles (Hart & Quinn 1993).

The foregoing discussion highlights that WFH does not appear to bring all the promised benefits. This can be attributed to various factors, including that many researchers study the effects of influences in isolation. The objective of the present study is to improve understanding of how employers can assist employees who wish to WFH by evaluating the effect of multiple influences – influences stemming from the organisation, job, individual and household spheres – within a single group of professional employees. The specific variables included under these headings were selected from the previous literature suggesting that they were likely to be related to WFH outcomes. To avoid the confusion within the literature due to different operational definitions of teleworking, the sample in this study was restricted to full time professional employees with considerable WFH experience. The aim is to understand the contribution of these four sets of influences to WFH employees' outcomes, especially their satisfaction and perceived productivity while WFH.

In this paper, four groups of research variables (organisational, job characteristics, individual work styles and household characteristics) are discussed and 12 sets of hypotheses tested in relation to two outcome measures, namely satisfaction and perceived productivity when WFH. The sampling and questionnaire design and administration are described, and then the results are presented and discussed. Finally, the paper concludes with implications for HRM practice and policies.

## **RESEARCH VARIABLES AND HYPOTHESES**

### **Organisational Factors**

Six organisational factor variables that the literature frequently suggests influence WFH are included in this study, ranging from broad organisation wide variables such as management culture to specific ones like training for WFH. In the hypotheses tested in this study, the term 'positive outcome' refers to positive from the perspective of the employee who works from home.

#### **Management Culture**

There is suggestion that characteristics of employing organisations influence how WFH is carried out and integrated with office based activities. More generally the debate is along the lines of whether the management culture of an organisation is traditional (that is rule bound, bureaucratic and hierarchical), or more supportive (open and power sharing), and how these broad classifications effect performance. Management cultures that enable organisations to anticipate and adapt to environmental change tend to be associated with higher levels of performance over time (e.g., Kotter & Heskett 1992), as do cultures where managers share information and delegate decisions. Performance tends to increase in environments where managers provide better guidance (Lowe, Kroeck & Sivasubramaniam 1996). Laissez-faire leadership, under which there is little support for or supervision of employees, is associated with lower staff performance, reduced effort and less favourable attitudes towards the employer (e.g., Bass & Avolio 1994, Lowe, et al. 1996, Judge & Bono 2000, Hetland & Sandal 2003). And rigid structures can contribute to work alienation, a sense of employee powerlessness and meaninglessness, and reduce intrinsic interest in the job (Sarros, Tanewski, Winter, Santora & Densten 2002). Taken together, the evidence suggests that WFH employees would be better satisfied and more productive in supportive management cultures than in traditional organisations that are controlling and less receptive to new ways. From this theoretical underpinning the following hypothesis is generated.

H1: A non traditional management culture will be associated with more positive WFH outcomes than a traditional culture.

### **Technical Support**

The practitioner literature and commonsense lead to expectations that the more technical support provided for WFH the more likely there will be a positive outcome. However, there is little direct empirical evidence for this proposition apart from a pioneering study by Hartman, Stoner and Arora (1991). When these researchers studied the 'technical and emotional support' (measured as a single variable) provided by the 'telecommuting supervisor' they found that supervisor support increased satisfaction, but not productivity. This study examines technical support as a separate factor that can come from various sources including managers, peers and IT helpdesk staff. Additional evidence suggests that a lack of technical support contributes to reported teleworker stress (Deeprise 1999, Mann, et al. 2000), leading to the hypothesis that more technical support will improve WFH outcomes.

H2: More technical support related to WFH will be associated with more positive WFH outcomes.

### **Manager's Trust**

Trust is difficult to define (Bhattacharya, Devinney & Pillutla 1998, Strong & Weber 1998, Kramer 1999, Wicks, Berman & Jones 1999, Parkhe & Miller 2000), but basically it refers to the willingness to make oneself vulnerable under conditions of risk and interdependence (Mayer, Davis & Schoorman 1995). Trust is a complicated concept that involves both the person trusting and the person being trusted, but this study assesses only manager's trust of the WFH employee. Employees feeling that they are 'trusted by their manager' when they are working from home and not able to be observed directly by the manager has been found to be facilitative in WFH (Davenport & Pearlson 1998, Depickere 1999, Konradt, et al. 2001). In their analysis of telework, Daniels, Lamond and Standen (2001) argue that teleworking is more likely to be adopted in organisations where employees have already demonstrated to employers that they can be trusted, and in which managers exhibit a high degree of trust in workers. These imperatives provide foundation for the following hypothesis.

H3: More trust from the WFH employee's manager related to WFH will be associated with more positive WFH outcomes.

### **Human Resource Support**

Support from the human resource (HR) department for WFH employees was examined for two reasons. First, HR plays an important role in socialising new employees into the organisational culture, and there is evidence that the specific culture related to WFH can dramatically alter the outcomes for these employees. For example, at IBM, WFH employees consider their home as their primary work site (Hill, et al. 2003), which is unusual. WFH has been used so extensively at IBM that these arrangements have become normalised, and IBM thus provides a different WFH culture to most other organisations. Second, HR can also play a specific role for WFH employees, and HR support has been reported to be facilitative (Alford 1999, Deeprise 1999). In an instructive example, America's largest wireless network operator, Alltel, adopted a 'thorough' approach to implementing remote working (Deeprise 1999), and a major reason given for its success was the preparation. This included anticipating HR issues that could act as impediments, establishing policies and procedures for dealing with them and assigning responsibility for WFH issues to a particular person within the HR department. In the absence of being able to undertake a culture analysis of the organisations involved in this study, questions were restricted to general HR support. This leads to the rational statement.

H4: More human resource support related to WFH will be associated with more positive WFH outcomes.

### **Financial Support for WFH**

Reduction of personal costs may encourage employers to introduce or extend WFH, but this typically shifts costs (e.g., for use of space and for utilities), from employer to employee (Baruch 2000). Incurred costs were frequently mentioned as a problem by employees who WFH (Mann, et al. 2000). Therefore, better WFH outcomes are expected where employers provide some financial support (Hawkins 2000). These concepts are expressed in the following hypothesis.

H5: More employer financial support provided for WFH costs will be associated with more positive WFH outcomes.

## **Training for WFH**

Training for WFH employees generally involves instruction in technology use, but may also include topics such as running a home office, occupational health and safety (OHS), and even organisational communication (Deeprouse 1999). In addition, some evidence suggests that training managers, co-workers and household members for WFH can be facilitative (Davenport & Pearlson 1998), although this is not a consistent finding (Felstead, Jewson, Phizacklea & Walters 2002). Therefore, employee training for WFH and training of others (managers, co-workers and household members) were included in this study when the following two relationships were evaluated.

H6a: More training related to WFH given to the employee will be associated with more positive WFH outcomes.

H6b: More training related to WFH given to others (the employee's manager, coworkers, household) will be associated with more positive WFH outcomes.

In addition to contextual features, task content dimensions also attract attention in the job design of WFH.

## **Job Characteristics**

General characteristics of the job, such as whether the employee is a clerical or a professional worker, appear to affect suitability for WFH (Belanger 1999, Konradt, et al. 2001). However, there is little evidence about the relationship between WFH and specific job characteristics. Overall, content job characteristics would be expected to provide more of the motivation when employees WFH, because of their relative social isolation. In their classic analysis, Hackman and Oldham (1975) identified some specific characteristics for distinguishing most jobs. Four task characteristics were applied to WFH in this study. For instance, task identity refers to whether a job consists of an entire piece of work. Because jobs that are completed in their entirety are more motivating, it was expected that roles high in task identity would be more suited to WFH than tasks with low identity. Also, feedback from the job refers to whether the task itself provides information about how well the person is performing that job, and it was expected that jobs high in this characteristic would also better suit WFH. And feedback from agents refers to whether supervisors and co-workers let the person know how well they are performing in the job. This may also be motivating, so jobs high in this characteristic were predicted to better suit WFH. Moreover, dealing with others refers to how much jobs involve cooperative work, such as teamwork. Given the findings of Hill, Miller, Weiner and Colihan (1998) that WFH has a negative influence on teamwork, it was predicted that jobs high in this characteristic would be less suited to WFH. These expectations are linked in the following four hypotheses.

H7: Higher task identity will be associated with more positive WFH outcomes.

H8: Higher feedback from the job itself will be associated with more positive WFH outcomes.

H9: Higher feedback from agents will be associated with more positive WFH outcomes.

H10: Lower dealing with others will be associated with more positive WFH outcomes.

## **Individual Work Style**

The motivations for WFH include achieving a better work life balance, and/or exercising a carer role. However, the impacts of WFH on a household can be far reaching and unexpected (Avery & Baker 2002). Boundaries between home and work blur (Darrah, English-Lueck & Saveri 1997). How WFH employees manage these blurred boundaries may lead to different work styles. Three hypotheses relating to WFH work styles were proposed, based on widely reported disadvantages of WFH, such as WFH turning into overworking (from home) because the employee finds it difficult to quit working each day (Johansen & Swigart 1994). First, better WFH outcomes are expected from those who plan their day more when they WFH than when in the office, because WFH employees do not have the structure and supports for work activities that they would have in the office environment. Second, better WFH outcomes are anticipated from those who find it easier to quit working when they WFH, because they avoid overworking, a problem that can lead to termination of WFH. Third, better WFH outcomes are predicted from those who perform different tasks when working from home than in the office, because they are segmenting their work to provide a better match to home and office. For example, they do tasks involving prolonged concentration at home, but schedule meetings and social interaction with colleagues at the office, as suggested by Kraut (1988). In addition, a fourth hypothesis was generated based on the advice generally given to WFH novices that they should compartmentalise their activities, such as isolating themselves in a separate room and avoiding interference from family members during their work periods. The alternative to this is to muddle up various activities (i.e., fitting in non work chores, accommodating the needs of other family members who are at home, or using the work computer for emailing or messaging friends). Based on the advice provided, those who compartmentalise their activities are expected to have more positive WFH outcomes, a contention expressed in the

following hypothesis.

H11a–d: More planning of the day, less difficulty quitting work for the day, doing different rather than similar activities when WFH and compartmentalising rather than muddling activities will be associated with more positive WFH outcomes.

## Household Characteristics

The fourth type of factor, the characteristics of the employee's household, has been given less attention in the literature (Avery & Baker 2002). Nevertheless, there is some evidence that household characteristics are a barrier for some WFH employees (Baruch 2000, Konradt, et al. 2001). Motivations for WFH include the need for extended periods of concentration and avoiding the interruptions that prevent people from being productive in the office (Perlow 1999). Therefore, the presence of others at home might distract the WFH person from their tasks. Five characteristics of the household that could act as barriers were examined. These features were whether other people are also present when the employee is WFH, the size of the household, the number of children in the household, with details of the number under age five years and the number of children of school age. All of these factors are predicted to form potential barriers to WFH. Thus, having fewer household impediments should result in better outcomes, which is predicted in the accompanying hypothesis.

H12a–e: Fewer others present, fewer in the household, fewer children in the household, fewer children under age five, and fewer school age children will be associated with more positive WFH outcomes.

## METHODOLOGY

### Site and Respondents

A purposive and judgment sampling process was employed when choosing the participants. Organisations were selected from Business Review Weekly's 25 largest employers in Australia, the 25 'Best Employers to Work For in Australia' ('best employers') identified in 2000 (Hewitt & Associates 2001), major public sector organisations, and smaller organisations from both the private and public sector not on these lists. In total, the HR departments of 101 organisations in Australia were approached, of which 20 organisations identified WFH employees. Those participating ranged in size from organisations in the SME sector up to organisations with more than 3,000 employees, and came from various industries. These manufacturing industries included, electricity, gas and water supply, finance and insurance, property and business services, government administration and defence, as well as cultural and recreational services. The study respondents (N = 50) were full time employees who regularly work from home and had done so for three months. Table 1 shows a profile of the study organisations and the respondents.

### Procedure

The methodology for this study involved a self administered, anonymous, mail out questionnaire survey. Questionnaire items relating to each variable were selected from the literature when available, or else developed for this study. For instance, WFH was defined on the questionnaire, 'working at your home for your organisation. It does NOT mean working at a client's site or at any location other than your home'. Demographic and WFH information included age, gender, tenure with this organisation, who initiated the decision to WFH, how long respondents had been WFH for this organisation and whether they wished to spend about the same amount of time WFH. Respondents returned the completed questionnaires directly to the researchers to protect participants' identity within the employing organisation, which is a procedure that is endorsed by ethical guidelines.

An involved sampling procedure was employed. Organisations were selected by asking each of their HR departments to identify full time, professional employees who WFH. The researchers mailed the questionnaire to each of the identified WFH employees. Sampling involved requirements at both the employer and respondent levels. The first requirement was for employers to be diverse on the organisational variables being investigated. To achieve this, a wide range of organisations was contacted given that the selection could not be random because of the difficulty locating organisations that have employees who WFH (Lindorff 2000).

In an endeavour to ensure that participants were reasonably experienced with WFH two conditions were applied. First, was that respondents must have worked regularly for at least three months as full time employees who WFH. The criterion of WFH for at least three months from Igarria and Tan (1998) was adopted, and the official

Australian definition for separating part time from full time employees was used, which classifies full time workers as being employed for 20 hours or more per week. The European Teleworking Online's (2000) relatively stringent criterion concerning the regularity of WFH was applied namely, that employees WFH at least one day per week, on average. Second, respondents were further restricted to those in professional roles because of evidence suggesting that professionals and operatives should be studied, separately (Felstead, et al. 2002, McCloskey & Igarria 2003). The requirements were set out on the front of the questionnaire. If a potential respondent did not meet these criteria, s/he was asked to pass the questionnaire on to a colleague who did fulfill the criteria. This action thereby continued the purposive and judgment described sampling procedure. Within the 20 participating organisations, 130 questionnaires were distributed over a six month period, yielding 50 usable questionnaires.

## **Measures**

The components of four influence factors and the outcome measures are described, starting with the influence factors. On all of these variables a higher score represents a greater degree of the relevant concept. The names and basic descriptive statistics for multi item scales, including their Cronbach alpha reliability coefficients, are shown in Table 5. Organisational factors include management culture, technical support, manager's trust, human resource and financial support, and training variables. Each one of the study constructs is discussed sequentially.

### **Management Culture**

This measure assessed the extent to which the management culture is 'non traditional' or 'new' based on an instrument developed by Ashkenas, Ulrich, Jick and Kerr (1995: 342–45). The six, seven point bipolar objective sets assessed decision making, information sharing, recognition and reward system, leadership style, work specification and risk taking. However, the item (objective set) on work specification was later removed from the scale to improve the value of the Cronbach reliability coefficient. The resulting five-item scale was labelled 'non traditional culture'.

### **Technical Support, Human Resource Support and Manager's Trust**

Items for these three variables are shown in Appendix 1. Responses to each of the items comprising these scales ranged from strongly agree to strongly disagree, measured on a five point scale. The three scales formed from these items were labelled 'technical support', 'human resource support' and 'manager's trust', as shown in Table 5.

### **Financial Support for WFH**

A separate scale was constructed to measure the perceived extent of employer financial support for WFH costs. Items were based on whether the employee, the organisation, or both paid for various costs. A scale, 'organisation-pays', was formed from the arithmetic mean of the responses to the four items listed in Table 3 in the section C. Responses to these items were coded as 'I do' = 1; 'some me, some org' = 2; and 'my organisation' = 3.

### **Training for WFH**

Questions about employer provided WFH related training were grouped together. Respondents reported on training for using the technology, other WFH training they had received, and on whether their manager, co-workers or people in their household had received any training related to their WFH. Two scales were constructed. One for the training received by the employee, and the second was for training received by others. The scale for training employee was formed by calculating the arithmetic mean of the responses to four items listed in Table 3 in the section A (The item 'managing others in the household' was excluded, as no respondents indicated that this type of training was provided). For each item, a 'yes' was coded '1' and a 'no' was coded with a zero. For the scale training others, responses to the three items shown in Table 3 in the section B were assessed as an arithmetic mean, coded; Extensive = 4, Moderate = 3, Minimal = 2, and No training = 1. No items needed to be removed from the training or organisation-pays scales as the reliability assessments were satisfactory.

### **Job Characteristics**

The tasks dimensions were measured for the person's overall job, not just for WFH. Items from the Job Diagnostic Survey (Hackman & Oldham, 1975) were employed. The chosen task dimensions were 'task identity', 'feedback from the job', 'feedback from agents', and 'dealing with others'. Responses to individual items were with a seven point scale (responses ranged from 1 = very accurate to 7 = very inaccurate). There are two items for each of the job

dimensions, one of them was reverse scored. Although five job description scales were initially evaluated autonomy was deleted from the analysis because the responses to this item attracted a low Cronbach alpha score (.31).

### **Individual Work Style**

Hypothesis 11 dealt with more planning of the day, less difficulty quitting work for the day, differing tasks when WFH, and compartmentalising activities. The first three work style characteristics were each based on one question. A compartmentalising scale, 'compartmentalisation', evaluated the extent to which respondents' work practices when WFH were compartmentalised and regular, rather than muddled up and irregular. Seven items were employed. These items specifically targeted 1) using the same or separate locations for work and non work activities, 2) same or different computers, 3) whether or not they keep in contact with other members of the household during work times, 4) how frequently their work is interrupted by other people for either work or non work reasons, 5) whether their work timetable is regular or varied, 6) whether or not they tend to 'fit in' non work activities during work times, and 7) whether they work at any time or at specified hours. Responses to each item were measured on a seven point bipolar scale.

Household characteristics comprised the fourth factor. Hypothesis 12 dealt with others being present in the home while WFH, how many people are in the household, number of children in the household, the number of children under five years of age, and the number of children who were of school age. These were all based on single questions, which is shown in Table 4.

### **Satisfaction with WFH and Perceived Productivity when WFH**

Employee satisfaction is frequently regarded as an important indicator of organisational performance (Anderson 1984, Anderson, Fornell & Lehman 1994, Barbin & Boles 1996, Yeung & Berman 1997). This construct was assessed by extending a definition that was given by Shadur, Kienzle and Rodwell (1999), that satisfaction is an affective, evaluative response towards WFH. Supporting the importance of satisfaction for the organisation are findings that irrespective of whether it directly affects performance, enhanced employee satisfaction may increase business outcomes, including profit, at the business unit level (Harter, Schmidt & Hayes 2002). Other research has shown that employee satisfaction and happiness can heighten overall organisational effectiveness, compared with organisations that alienate their employees (Ostroff 1992).

Satisfaction is also a commonly used outcome measure in studies of remote work (Hartman, et al. 1991, Staples, Hulland & Higgins 1999, Baruch 2000). Therefore, consistent with earlier telework researchers, employee satisfaction when WFH was measured instead of overall job satisfaction. The outcome measures of satisfaction and perceived productivity were measured with five point Likert scales that were adapted for Staples, et al. (1999). Two items on the satisfaction scale, 'satisfaction WFH', evaluated employees' satisfaction with how they were managed. One item measured satisfaction with hours of work, and a further item measured variety in the job. A fifth item was added to the Staples, et al. (1999) scale that asked directly how satisfied respondents were with working from home.

### **Productivity when WFH**

Remote working is frequently claimed to enhance productivity (e.g., Davenport & Pearlson 1998, McInerney 1999, Cascio 2000), and teleworkers commonly report increases in their own perceived productivity (e.g., Duxbury, et al. 1998, Baruch 2000). Although perceived productivity may not measure actual productivity because people who WFH may be biased in this judgment (Bailey & Kurland 2002), it can be a reliable and valid source of information on performance (Baruch 1996), and is commonly used in remote work studies. The perceived productivity scale, 'productivity WFH', consisted of four items that dealt with effectiveness, efficiency, productiveness and quality. Both outcome measures used five point Likert scales.

## **RESULTS**

Table 1 shows, that of the 20 participating organisations, 'best employers' accounted for 28 per cent of respondents, approximating their proportion in the sample, and that overall 84 per cent came from the private sector. Table 1 also gives the demographic characteristics for the sample. Noteworthy is that females comprised 82 per cent of this sample, consistent with other studies reporting that women are more likely to WFH (Belanger 1999, Lindorff 2000). Furthermore, 66 per cent of the sample was in the 30 years of age category. The results confirm that the respondents WFH on a regular basis and are experienced with this mode of work. Indeed, 68 per cent worked from home more than one day per week and 68 per cent worked between one to three days weekly from home. Only 18 per cent worked from home five days or more each week. A finding that 70 per cent of the respondents had worked for their organisation for four or more years is consistent with Barnes' (1994) report that WFH employees tend to

be long serving job holders.

Table 1 Description of WFH Respondents % (N = 50)

<b>Employer Satisfaction</b>	<b>WFH (days per week)</b>		
Best Employers	28	1	32
Largest Private	10	2	26
Other Private	46	3	10
Public Sector	16	4	14

**Gender**

Male	18
Female	82

**Employee Age (years)                      Tenure (years)**

< 30	4	< 1	6
30-39	66	1-3	24
40-49	18	4-10	40
50-59	10	> 10	30
> 59	2		

Notes: a. Number of organisations = 20. b. WFH = working from home.

Table 2 summarises the respondents' working arrangements. Most respondents had initiated the decision to WFH themselves (84 per cent), and 60 per cent prefer to continue spending about the same amount of time WFH. About 47 per cent of respondents reported having a formal contract relating to WFH, with a further 51 per cent having an agreement under development. Over one third (38 per cent) had staff reporting to them, and spent about 31 per cent of their time on managerial duties. A high proportion was involved in teamwork (80 per cent). This is consistent with today's tendency for work to be conducted in teams, but is surprising given earlier findings that WFH tends to have a negative influence on teamwork (Hill, et al. 1998).

Table 2 Description of the Respondent Work Arrangements % (N = 50)

<b>Questionnaire Item</b>	<b>Category</b>				
Who initiated the decision for you to work from home? I initiated it	84	Someone in the organisation	14	Other	2
How long have you been working from home for this organisation?	30	<1 year	62	1-5 years	8
Would you prefer to increase or decrease the amount of time you spend working from home?	0	Decrease it a lot	8	Continue about the same	60
		Increase it a little	30	Increase it a lot	2
Do you have a formal written agreement or contract with	47	Yes Agreement being	51	No	0
				Not sure	2



Questionnaire Item	Category	
your organisation, regarding your working from home arrangements?	developed	
Do any staff report directly to you? If so, % of working time on managerial duties.	Yes 38 No 62	Mean % time spent on managerial work 31
Are you involved with teamwork?	Yes 80 No 20	

Results for training are shown in Table 3 (see section A and B). Some form of employee training was provided to half of the sample, mostly for using technology (42 per cent), sometimes for Organisational Health Safety (30 per cent), but for very little else. It was rare for training to be provided to others. Table 3 (section C) indicates considerable employer financial support for WFH expenses. Except for costs associated with job related home modifications, fewer than 13 per cent of respondents bore all their WFH costs. Even for WFH home modifications, only about 30 per cent of respondents reported bearing the entire cost themselves, but for another 30 per cent of the respondents the employer paid for work related home alterations.

Table 3 Employer Financial Support for WFH Costs and Training Related to WFH % (N = 50)

Questionnaire Item	Category				
	Using the technology	42			
	Managing others in household	0			
A. Has your organisation provided you with training in any of the following areas related to working from home?	Running a home office	4			
	Occupational health and safety	30			
	Organisational communication	6			
B. To what extent has your organisation provided training that is relevant to your working from home to the following people?	Extensive	Moderate	Minimal	No training	
	Your manager	0	11	6	83
	Your co-workers	0	8	10	82
	People in your home	0	3	5	92
C. Who pays for your various costs incurred in working from home?		I do	Some me/ some organisation	My organisation	
	Who pays running costs?	12	46	42	
	Who owns (leases or finances) the technology?	6	40	54	
	Who pays for repairs?	8	30	62	

**Questionnaire Item**

**Category**

Who paid for home modifications? (Not applicable 18). 22 30

Table 4 (section A) provides results for individual work styles. With respect to planning their day, 50 per cent of the respondents claim to plan their work similarly in the two locations (i.e., home or office), but 38 per cent plan their day more when WFH than working in the office. A total of 56 per cent of the study participants stated that they find it more difficult to quit when WFH compared with at the office, although it was claimed by 32 per cent of the respondents it makes no difference to them in terms of working content (home or office) how to terminate the work day. For 58 per cent of the respondents, work related activities carried out at home are much the same as those done in the office, but 32 per cent of the respondents engaged in different work arrangements. And the results shown in section B of Table 4 reveal the household characteristics were linked somewhat predictably with the respondent lifestyle. For instance, when WFH, 36 per cent were generally alone, but 44 per cent mostly had other people present. Also, a total of 20 per cent live alone or with one other person, while 20 per cent live with four or more other people. Questions about children yielded more consistency with the notion of the 'nuclear family'. For example, most respondents (80 per cent) had children in the household, and 64 per cent of those responding to the question about children under the age of five years had one child in this category. Pertinently, 50 per cent of the sample as a whole had one child under five years of age. Overall, of those respondents with children, 74 per cent had children under five years of age, while 55 per cent had school age children.

Table 4 Individual Work Style and Household Characteristics %  
**A. Individual Work Style**

	<b>Much more/ more</b>	<b>Neither</b>	<b>Less/ much less</b>
How much do you plan you day when you're working from home, compared with when you're working in the office? 38	50	12	
How difficult is it to decide that it is time to quit for the day when you are working from home, compared with when you're working in the office? 56	32	12	
How different are the work-related activities you carry out when you're working at home, compared with the activities you carry out when you're working in the office? 14	<b>Completely/ most different</b>	<b>Somewhat different</b>	<b>Slightly or not at all different</b>
	14	18	58

**B. Household Characteristics**

	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Much of the time</b>	<b>Always</b>
When you are working from home, how often are there other people also present in your home? 6	30	20	20	24	
	<b>None</b>	<b>One</b>	<b>Two</b>	<b>Three</b>	<b>4 or more</b>
How many people, besides yourself, live in your household (including 2 children)?	18	30	30	20	
How many children live in your household? 20	41	27	10	2	
How many of these children are under 26	64	10	0	0	

5 years? (n = 39)

How many are school-age children? (n = 38)      45                      34                      18                      3                      0

Note: Percentages are based on n = 50 respondents except where indicated.

Table 5 shows the descriptive statistics for all scales. Most yielded Cronbach alpha coefficients that are adequate, above the generally accepted value of .70, and six coefficients were marginally below this value. The means for satisfaction (4.07) and productivity (4.60), both measured on five point scales, indicate positive outcomes for these respondents. On the seven point compartmentalising scale, the mean (4.04) indicates that, contrary to common assumptions about WFH, compartmentalising was not a typical work style of the study respondents.

Table 5 Study Scale Descriptives

<b>Scales</b>	<b># items</b>	<b>Alpha</b>	<b>Mean</b>	<b>S.D.</b>
Non traditional culture	5	.81	4.28	1.39
Technical support	3	.74	4.34	0.64
Human resource support	3	.63	3.68	0.93
Manager's trust	3	.64	4.40	0.67
Organisation pays	4	.79	2.36	0.56
Training employee	4	.62	0.20	0.26
Training others	3	.86	1.23	0.55
Task identity	2	.75	5.55	1.51
Feedback from the job	2	.69	5.12	1.42
Feedback from agents	2	.78	4.70	1.64
Dealing with others	2	.63	5.02	1.71
Compartmentalisation	7	.68	4.04	1.37
Satisfaction	5	.73	4.07	0.68
Productivity	4	.87	4.60	0.49

Note: S.D. = Standard deviation of the means.

Table 6 reports correlations between the investigated variables and WFH outcome measures. It is shown in Table 6 there are a number of significant correlations with the dependent constructs of job satisfaction and productivity, with the organisational constructs and the job characteristics variables. Most of the organisational variables were non significantly linked with productivity, and surprisingly the two job content dimensions of task identity and dealing with others were non significantly related to job satisfaction. A finding that none of the work style constructs or the household characteristics were substantially correlated with job satisfaction or productivity suggests these constructs are not good predictors of the two dependent variables. Regarding the organisational variables, it was expected that a non traditional management culture would be associated with more positive WFH outcomes than a traditional culture (Hypothesis 1). A non traditional management culture was significantly correlated with satisfaction, but not with productivity. More technical support (Hypothesis 2), more human resource support (Hypothesis 4), more trust from the WFH employee's manager (Hypothesis 3), more employer financial support (Hypothesis 5), more training of the employee (Hypothesis 6a), and more training of others (Hypothesis 6b) were all expected to be associated with more positive WFH outcomes. Indeed, technical support, human resource support, manager's trust, and training of others were significantly correlated with satisfaction, but

not with productivity. However, employer financial support was significantly correlated with productivity, but not with satisfaction. Surprisingly, more training of the employee was not related to either of the outcome measures. Training in using technology, which was measured as a separate component, was non significantly related to either outcome measures. Consequently, there is a lack of support for hypothesis 11 and hypothesis 12.

Table 6 Correlations Between Influence Variables and WFH Outcomes

<b>Scales</b>	<b>Satisfaction WFH</b>	<b>Productivity WFH</b>
<b>Organisational variables</b>		
Technical support	.356**	.031
Human resource support	.304*	.213
Manager's trust	.374**	.192
Organisation pays	-.128	.291*
Training employee	.187	.107
Training others	.421**	.052
Non traditional culture	.267*	.230
<b>Job characteristics</b>		
Task identity	.090	.337**
Feedback from the job	.277*	.245*
Feedback from agents	.345**	.269*
Dealing with others	-.141	-.076
<b>Individual work style</b>		
Planning the day	.153	.123
Difficulty deciding to stop	.073	.230
Different activities	-.097	-.066
Compartmentalisation	.141	.063
<b>Household characteristics</b>		
Other people present	-.039	-.073
Number living in household	.227	.126
# Children in household	.060	.210
# Children under five	-.174	.041
# School age children	.181	.219

Notes: a. WFH = working from home. b. \*  $p < .05$ , and \*\*  $p < .01$ , 1-tailed.

Table 6 reveals there were some significant associations with the task content predictor variables and satisfaction, and productivity. Higher task identity (Hypothesis 7), higher feedback from the job itself (Hypothesis 8), higher feedback from agents (Hypothesis 9) and lower dealing with others (Hypothesis 10) were expected to be associated with more positive WFH outcomes for employees who WFH. Higher feedback from the job, and from agents was significantly correlated with both outcome measures. Higher task identity was significantly correlated only with productivity, but dealing with others was non significantly related to either outcome measure.

## DISCUSSION

This study evaluated the effect on WHF of multiple influences from the organisation, job, individual and household spheres within a single group of experienced WFH professionals. The specific variables included under these headings were selected from previous literature suggesting that they were likely to be related to WFH outcomes. Nine of the eleven variables from the organisational and job characteristics factors were substantially related to at least one of the outcome measures. From the organisational side, these were technical support, human resource support, manager's trust, and training of others that were significantly correlated with satisfaction, but not with productivity. Employer financial support significantly correlated with productivity, but not with satisfaction.

Within the job characteristic variables, the two characteristics concerned with providing feedback to the WFH employee had the most consistent impact, both being significantly related to each of the two outcome measures. Task identity, a job consisting of entire pieces of work, is also helpful. All three task dimensions are thus important aspects of job design for WFH employees. Although jobs that involve dealing with others were predicted to interfere with effective teleworking, the correlations presented in Table 6 were non significant. As 80 per cent of respondents reported being involved in teamwork, it appears that in contemporary team based organisations techniques exist to deal with the disadvantages of WFH for teamwork that was found in earlier studies. Further research to assess, for example, how much of the teamwork within an organisation is exercised such as, by using mediated rather than face-to-face communication may add to this stream of the literature.

Interestingly, none of the work style and household factors related to either of the outcome measures. This was surprising. A possible explanation for these low correlations is that the variables within these two factors may be important for some WFH employees, but not for others. For each of the work style questions about home/office comparisons, around half the respondents reported one style, while a sizeable minority reported a different style of working. Some of the answers about household characteristics were also diverse. For example, 36 per cent of the respondents were generally alone when WFH, but 44 per cent nearly always had other people present. The presence of others could have distracted some respondents to the point of outweighing any satisfaction and productivity gains from WFH. Despite the advice being provided to WFH employees that compartmentalising is the correct approach, collectively respondents in this study could not be characterized by either compartmentalising or muddling. Overall, this pattern of results indicates that WFH employees may consist of divergent subgroups. Thus, for example, compartmentalising might be important for those with distractions around them when they WFH, but might not be important to others.

A pertinent finding was that training for WFH employees was non significantly correlated with WFH outcomes. Training in using technology, measured as a separate component, was non significantly related to either outcome measure. The low influence of training might be attributable to the fact that relatively few respondents received training specifically related to WFH. The training that was provided had a narrow focus on using technology or on OHS, rather than on WFH, communicating with the office or managing householders. Kurland and Cooper (2002) also reported finding that teleworking training was sparse, despite HRM personnel of the study having a contrary belief. Results from the present study indicate that training of others is substantially related to WFH satisfaction, having the highest correlation with satisfaction of any of the influence variables. This implies that when training of others does occur it has a considerable effect, which reinforces the advice from some of the practitioner literature (Davenport & Pearlson 1998). However, this finding needs further investigation because only a small proportion of respondents reported training for others.

Manager's trust is an important variable for satisfaction, but not for perceived productivity. Trust and control are usually contrasted. Trust is regarded as more flexible, adaptive and widely applicable than control enforced by formal policies and procedures (McLain & Hackman 1999, Gallivan 2001). Furthermore, lack of trust can create problems because research shows that trustworthy followers are likely to respond unfavourably to overly controlling leaders (Gouldner 1958, Maclagan 1983, Dose & Klimoski 1995, Ferris, Mitchell, Canavan, Frink & Hopper 1995). In a trusting environment, fewer controls are needed, which is consistent with WFH, where fewer controls are available. However, the nature of a manager's trust for employees who WFH should be examined in future studies using typologies such as that proposed by Sako (1992). For example, investigating whether trust is based on contracts and agreements or on the employees' competence and commitment to get the job done when WFH, could elaborate on important aspects of a manager's trust level.

The work and home environments are not the only external influences on WFH employees. Ashforth, Kreiner and Fugate (2000) suggest considering not only whether a person's roles are segmented or integrated and whether the role boundaries are rigid or flexible, but also the characteristics of the culture in which the person is living. Research suggests that an appropriate management culture to support WFH may be quite difficult to achieve in certain regions. For example, traditional Chinese management cultures of high power distance and distrust of employees would make WFH less likely to occur in that culture (Wang & Clegg 2002). It has been reported, for example, that national cultures may play a role in determining the manager's response when employees request to WFH because the response depends on the manager's willingness to delegate power and trust to WFH employees (Peters & den Dulk 2003). Further research is needed into the influence of national culture on WFH.

It may be useful to conceptualise WFH as a form of virtual work when providing support to WFH employees. Most of the respondents in this study were long serving employees who can be assumed to have absorbed specific expertise related to their job and to technology use as well as many aspects of their organisation's culture. Some organisations require a minimum number of years of working with the company before an employee is allowed to WFH (Barnes 1994). Apparently, tenure substitutes for some of the technical, peer and management support that is more readily available in the office. This substitution effect, the overcoming of the usual negative consequences of a 'discontinuity' by factors from a different level within a complex situation, has been identified by Watson-Manheim, Chudoba and Crowstow (2002) in other virtual work environments.

## **Future Directions**

The small number of respondents in this study can be attributed to the difficulty of locating full time employees who WFH on a regular basis. Although this difficulty is likely to remain, alternative approaches to sampling such as locating WFH employees via corporate IT departments should be considered, as this strategy may eliminate a possible artefact in this study. Specifically, the study sample had a relatively large subgroup of women in their 30s with one child under five years of age. The HR departments involved in locating the WFH study respondents may have been more aware of the working mothers among the WFH employees because of other human resource interventions, such as processing maternity leave applications. A different approach to sampling would clarify whether the bias towards mothers was due to a sampling artefact or an under representation of males in WFH. In fact, further research is needed into the potential role of WFH in enabling more males to care for their children while engaging in full time employment.

The purpose of this study was to contrast the WFH outcomes for four factors, but only a selection of relevant variables was included under each factor. Clearly, different variables could be studied in the future to determine whether the organisational and job related variables still produce more consistent and positive results for employees who WFH than those in the work style and household factors.

## **CONCLUSION**

This study examined the effects of four types of factors on the satisfaction and perceived productivity of a sample of experienced WFH professional employees. Most organisational and job characteristic variables were significantly correlated with the outcome measures, while individual and household variables were less strongly related. For practitioners, this is fortuitous because organisational and job related factors are more easily influenced by HR policies and procedures than individual work style and home factors.

Based on the results of this study, suggestions are given for organisations seeking to support WFH. For instance, companies are encouraged to focus on those influence variables whose effects are relatively predictable, namely organisational factors and job characteristics. Prescriptions and policies with respect to work style and household variables that assume that WFH employees are homogeneous with respect to these two factors should be avoided. It appears that there is no 'one size fits all' form of assistance related to work style and household variables. As work styles and household characteristics vary widely, the form of assistance that specific employees would value will also vary. Advice and policies aimed at supporting WFH need to be reexamined to take account of these differences, and further research should suggest how best to support WFH employees with different work styles or different household contexts. The boundary crossing perspective proposed by Ashforth, et al. (2000) would be useful to apply to this question.

The present study results indicate that HRM practitioners can play key roles in assisting WFH employees by intervening at various levels. Direct support provided by the HR and IT departments and financial support for WFH costs were found to be helpful. At the organisational level, HRM may be able to create a more welcoming context for WFH. These results indicate that encouraging a non traditional management culture within the organisation is important, as would facilitating the development of trust by Australian managers in their WFH employees. Indeed, HR departments may be able to contribute to the development of a specific internal culture that is highly supportive of WFH. Apparently this has occurred at IBM (Hill, et al. 2003). The IBM employees studied were even optimistic about their career advancement opportunities (Hill, et al. 2003), which is contrary to most

other telecommuting studies that generally report negative expectations regarding career advancement (McCloskey & Igbaria 2003). Concerns about their careers and their visibility are quite common amongst WFH employees. Embedding WFH arrangements within an organisation's culture can overcome some of these potential disadvantages of WFH. This may include establishing policies and procedures for dealing with potential problems and assigning responsibility for WFH issues to a particular person. It may also involve ensuring that the management culture is one of trust and support.

That a manager's trust is related to the satisfaction of people who WFH has implications for HRM in other cultures, where national culture may affect WFH. For example, some scholars regard the People's Republic of China as a low trust society (Littrell 2002, Wang & Clegg 2002), combined with an emphasis on high power distance (Hofstede & Hofstede 2005). There is reluctance for Chinese managers to trust people who are not part of the family and under full control of the father, and acquaintances are likely to be trusted only in varying degrees, depending on the extent of 'face' invested in the relationship with them (Littrell 2002). This suggests that longer tenured employees are more likely to be trusted to WFH rather than newcomers, consistent with the present Australian findings. However, these observations about trust in Chinese society imply that there may be even fewer opportunities for WFH employees in Chinese influenced parts of the Asia Pacific region. Further research is needed in those nations especially on HRM interventions that have the potential to directly encourage sensitivity to national differences when WFH is being implemented. Baruch and Yuen (2000) suggest that, when implementing WFH in countries with high power distance, collectivism and Confucian dynamism, the needs of the organisation, rather than the needs of the individual, should be emphasised.

From the limited amount of training that respondents reported, current training programmes for WFH do not appear to be effective in influencing satisfaction and perceived productivity of professional employees who WFH. It was rare for training to be provided to anyone other than the WFH employee and then not directly about WFH itself. However, practitioner reports suggest that companies that have successful WFH programmes train both the potential WFH employees and their managers to deal with the changes WFH brings to working conditions and relationships (Deeproose 1999). The present findings suggest that providing training for others associated with WFH employees can enhance the latter's satisfaction.

WFH may be offered as a practice to attract employees with young children in particular. A large subgroup of respondents consisted of women in their 30s with one child under five years of age. The existence of this subgroup in the sample suggests that WFH may currently form part of the solution for professional men and women with preschool children who want to continue their careers. Recent United States research (Madsen 2003) has found that people who WFH report lower levels of work family conflict, which would be consistent with this type of solution. A future study could examine the use of WFH arrangements for those with elder care responsibilities as well. In view of the reducing participation rates in the Australian workforce due to an ageing population (Productivity Commission of Australia 2005), measures that increase the ability of parents and other carers to participate in the labour market are of strategic importance to the economic development of the nation and its businesses. Providing appropriate support for WFH should enable more people to participate in the workforce, thereby benefiting Australia's economy over the coming decades.

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## REFERENCES

- Alford, R.J. (1999). Going virtual, getting real. *Training and Development*, 53(1), 34–45.
- Anderson, C.H. (1984). Job design: Employee satisfaction and performance in retail stores. *Journal of Small Business Management*, 22(4), 9–16.
- Anderson, E.W., Fornell, C., & Lehman, D.R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *Journal of Marketing*, 58(3), 53–66.
- Ashforth, B.E., Kreiner, G.E., & Fugate, M. (2000). All in a day's work: Boundaries and micro role transitions. *Academy of Management Review*, 25(3), 472–491.
- Ashkenas, R., Ulrich, D., Jick, T., & Kerr, S. (1995). *The boundaryless organization: Breaking the chains of organizational structure*. San Francisco: Jossey-Bass.
- Australian Bureau of Statistics. (2002). *Teleworking New South Wales*. Australian Bureau of Statistics Report 1373.1.
- Avery, G.C., & Baker, E. (2002). Reframing the informed household workplace. *Information and Organization*, 12(2), 109–134.
- Bailey, D., & Kurland, N.B. (2002). A review of telework research: Findings, new directions, and lessons for the study of modern work. *Journal of Organizational Behavior*, 23(4), 383–400.
- Barbin, B.J., & Boles, J.S. (1996). The effects of perceived co-worker involvement and supervisor support on service provider role stress, performance and job satisfaction. *Journal of Retailing*, 72(1), 57–75.
- Barnes, K. (1994). Tips for managing telecommuters. *HR Focus*, 71(11), 9–10.
- Barr, S. (December, 2005). *A growing number of employees are staying away from the office*. [On-line]. washingtonpost.com. Available: <http://www.washingtonpost.com/wp-dyn/content/article/2005/12/11/AR2005121101168.html> [2006, June 27th].
- Baruch, Y. (1996). Self performance appraisal – a case of congruency. *Journal of Managerial Psychology*, 11(6), 50–65.
- Baruch, Y. (2000). Teleworking: Benefits and pitfalls as perceived by professionals and managers. *New Technology, Work and Employment*, 15(1), 34–49.
- Baruch, Y., & Yuen, Y.K.J. (2000). Inclination to opt for teleworking: A comparative analysis of United Kingdom versus Hong Kong employees. *International Journal of Manpower*, 21(7), 521–539.
- Bass, B.M., & Avolio, B.J. (Eds.). (1994). *Improving organizational effectiveness through transformational leadership*. Thousand Oaks: Sage.
- Belanger, F. (1999). Workers' propensity to telecommute: An empirical study. *Information and Management*, 35(3), 139–53.



- Bhattacharya, R., Devinney, T.M., & Pillutla, M.M. (1998). A formal model of trust based on outcomes. *Academy of Management Review*, 23(3), 459–472.
- Boal, K.B., & Hooijberg, R. (2001). Strategic leadership research: Moving on. *Leadership Quarterly*, 11(4), 515–549.
- Brocklehurst, M. (1996). From concealment to magnification: The changing social and economic agenda behind homeworking. In G. Palmer & S.R. Clegg (Eds.), *Constituting management* (97–112). Berlin: de Gruyter.
- Cascio, W.F. (2000). Managing a virtual workplace. *Academy of Management Executive*, 14(3), 81–90.
- Crandall, W., & Longge, G. (2005). An update on telecommuting: Review and prospects for emerging issues. *S.A.M. Advanced Management Journal*, 70(3), 30–38.
- Daniels, K., Lamond, D., & Standen, P. (2001). Teleworking: Frameworks for organizational research. *Journal of Management Studies*, 38(8), 1151–1185.
- Davenport, T.H., & Pearlson, K. (1998). Two cheers for the virtual office. *Sloan Management Review*, 39(4), 51–65.
- Darrah, C.N., English-Lueck, J.A., & Saveri, A. (1997). The infomated households project. *Practicing Anthropology*, 19(4), 18–22.
- Deeprise, D. (1999). When implementing telecommuting leave nothing to chance. *HR Focus*, 76(10), 13–16.
- Depickere, A. (1999). Managing virtual working: Between commitment and control? In P. Jackson (Ed.), *Virtual working: Social and organizational dynamics* (99–120). New York: Routledge.
- Dose, J.J., & Klimoski, R.J. (1995). Doing the right thing in the workplace: Responsibility in the face of accountability. *Employee Responsibilities and Rights Journal*, 8(1), 35–36.
- Duxbury, L., Higgins, C., & Neufeld, D. (1998). Telework and the balance between work and family: Is telework part of the problem or part of the solution? In M. Igarria & M.Tan (Eds.), *The virtual workplace* (218–255). Hershey, Pennsylvania: IDEA Group Publishing.
- EcaTT. (1999). *Electronic commerce and telework trends survey*. [On-line]. Available <http://www.ecatt.com/ecatt/> [2000, March].
- Eisenhardt, K. (2000). Paradox, spirals, ambivalence: The new language of change and pluralism. *Academy of Management Review*, 25(4), 703–706.
- Eiszele H. (1998, October 20th). Telework: Nice in theory. *Australian Financial Review*, 27–28.
- European Teleworking Online. (2000) *How many teleworkers?* [On-line] Available: <http://www.eto.org.uk> [2000, May 24th].
- Felstead, A., Jewson, N., Phizacklea, A., & Walters, S. (2002). Opportunities to work at home in the context of work-life balances. *Human Resource Management Journal*, 12(1), 54–76.
- Ferris, G.R., Mitchell, T.R., Canavan, P.J., Frink, D.D., & Hopper, H. (1995). Accountability in human resources systems. In G.R. Ferris, S.D. Rosen & D.T. Basman (Eds.), *Handbook of human resource management* (175–196). Oxford: Blackwell Business.
- Flexibility Ltd. (2002). *Telework in the UK: Who's doing it?* [On-line]. Available: <http://www.flexibility.co.uk/flexwork/location/telework-2002.htm> [2004, April 8th].
- Gallivan, M.J. (2001). Striking a balance between trust and control in a virtual organization: A content analysis of open source software case studies. *Information Systems Journal*, 11(4), 277–304.
- Gouldner, A.W. (1954). *Patterns of industrial bureaucracy*. Glencoe, Illinois: Free Press.
- Green, H., Strange, A., & Trache, H. (2000). The homeworking revolution: Considering the property dimension. *Regional Studies*, 34(3), 303–307.

- Hackman, J.R., & Oldham, G.R. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology*, 60(2), 159–170.
- Hall, L., & Liddicoat, L. (2005). Challenges to developing effective family friendly work practices: Findings from New Zealand. *Research and Practice in Human Resource Management*, 13(1), 1–17.
- Hart, S.L., & Quinn, R.E. (1993). Roles executives play: CEOs, behavioral complexity, and firm performance. *Human Relations*, 46(5), 543–575.
- Harter, J.K., Schmidt, F.L., & Hayes, T.L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87(2), 268–279.
- Hartman, R.I., Stoner, C.R., & Arora, R. (1991). An investigation of selected variables affecting telecommuting productivity and satisfaction. *Journal of Business and Psychology*, 6(2), 207–225.
- Hawkins, C. (2000). Settle out of court. *Home Office Computing*, 18(3), 96–98.
- Hetland, H., & Sandal, G.M. (2003). Transformational leadership in Norway: Outcomes and personality correlates. *European Journal of Work and Organizational Psychology*, 12(2), 147–170.
- Hewitt & Associates (2001). *Best employers to work for in Australia study 2000 – Summary of findings*. Sydney: Hewitt & Associates.
- Hill, E.J., Ferris, M., & Martinson, V. (2003). Does it matter where you work? A comparison of how three work venues (traditional office, virtual office, and home office) influence aspects of work and personal/family life. *Journal of Vocational Behavior*, 63(2), 220–241.
- Hill, E.J., Miller, B.C., Weiner, S.P., & Colihan, J. (1998). Influences of the virtual office on aspects of work and work/life balance. *Personnel Psychology*, 51(3), 667–683.
- Hofstede, G., & Hofstede, G.J. (2005). *Cultures and organizations: Software of the mind*. New York: McGraw-Hill.
- Igbaria, M., & Tan, M. (Eds.). (1998). *The virtual workplace*. Hershey, Pennsylvania: Idea Group.
- Johansen, R., & R. Swigart (1994). *Upsizing the individual in the downsized organization*. Menlo Park, California: Addison-Wesley.
- Judge, T.A., & Bono, J. (2000). Five-factor model of personality and transformational leadership. *Journal of Applied Psychology*, 85(5), 751–765.
- Katz, A. (1987). The management, control, and evaluation of a telecommuting project: A case study. *Information & Management*, 13(4), 179–90.
- Kerslake, P. (2002) The work/life balance pay-back. *New Zealand Management*, 49(5), 28–31.
- Konradt, U., Schmook, R., & Mälecke, M. (2001). Impacts of telework on individuals, organizations and families – A critical review. In C.L. Cooper & I.T. Robertson (Eds.), *Organisational psychology and development: A reader for students and practitioners* (339–375). Chichester: Wiley.
- Kotter, J.P., & Heskett, J.L. (1992). *Corporate culture and performance*. New York: Free Press.
- Kramer, R.M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology*, 50(1), 569–598.
- Kraut, R.E. (1988). Telework as a work-style innovation. In B.D. Ruben (Ed.), *Information and behavior*, (Vol. 2, 116–146). New Brunswick, New Jersey: Transaction Books.
- Kurland, N.B., & Cooper, C.D. (2002). Manager control and employee isolation in telecommuting environments. *The Journal of High Technology Management Research*, 13(1), 107–26.
- Lewis, M.W. (2000). Exploring paradox: Toward a more comprehensive guide. *Academy of Management Review*, 25(4), 760–776.

- Lindorff, M. (2000). Home-based telework and telecommuting in Australia: More myth than modern work form. *Asia Pacific Journal of Human Resources*, 38(3), 1–11.
- Littrell, R.F. (2002). Desirable leadership behaviours of multi-cultural managers in China. *Journal of Management Development*, 21(1), 5–74.
- Lowe, K.B., Galen Kroeck, K., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quarterly*, 7(3), 385–425.
- McCloskey, D.W., & Igarria, M. (1998). A review of the empirical research on telecommuting and directions for future research. In M. Igarria & M. Tan (Eds.), *The virtual workplace*. 338–358, Hershey, Pennsylvania: IDEA Group Publishing.
- McCloskey, D.W., & Igarria, M. (2003). Does 'out of sight' mean 'out of mind'? An empirical investigation of the career advancement prospects of telecommuters. *Information Resources Management Journal*, 16(2), 19–34.
- McInerney, C.R. (1999). Working in the virtual office: Providing information and knowledge to remote workers. *Library & Information Science Research*, 21(1), 69–89.
- Maclagan, P.W. (1983). The concept of responsibility: Some implications for organizational behaviour and development. *Journal of Management Studies*, 20(4), 411–423.
- McLain, D.L., & Hackman, K. (1999) Trust, risk and decision making in organization change. *Public Administration Quarterly*, 23(2), 152–176.
- Madsen, S.R. (2003). The effects of home-based teleworking on work-family conflict. *Human Resource Development Quarterly*, 14(1), 35–58.
- Mann, S., Varey, R., & Button, W. (2000). An exploration of the emotional impact of tele-working via computer-mediated communication. *Journal of Managerial Psychology*, 15(7), 668–691.
- Mayer, R.C., Davis, J.H., & Schoorman, F.D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734.
- Morgan, C. (1999). Survey: Telecommuting accelerates. *Computerworld*, 33(44), 74.
- Olson, M.H. (1982). New information technology and organizational culture. *MIS Quarterly*, 6(4 – Special Issue), 71–92.
- Ostroff, C. (1992). The relationship between satisfaction, attitudes, and performance: An organizational level analysis. *Journal of Applied Psychology*, 77(6), 963–974.
- Parkhe, A., & Miller, S.R. (2000). The structure of optimal trust: A comment and some extensions. *Academy of Management Review*, 25(1), 10–11.
- Pearlson, K.E., & Saunders, C.S. (2001). There's no place like home: Managing telecommuting paradoxes. *The Academy of Management Executive*, 15(2), 117–128.
- Perry-Smith, J.E., & Blum, T.C. (2000). Work-family human resource bundles and perceived organizational performance. *Academy of Management Journal*, 43(6), 1107–19.
- Pocock, B. (2005). Work-life 'balance' in Australia: Limited progress, dim prospects. *Asia Pacific Journal of Human Resources*, 43(2), 198–209.
- Perlow, L.A. (1999). The time famine: Toward a sociology of work time. *Administrative Science Quarterly*, 44(1), 57–82.
- Peters, P., & den Dulk, L. (2003). Cross cultural differences in managers' support for home-based telework. *International Journal of Cross Cultural Management*, 3(3), 329–346.
- Productivity Commission Research (2005) *Economic implications of an ageing Australia*. Melbourne: Commonwealth of Australia.

- Raghuram, S., Garud, R., Wiesenfeld, B., & Gupta, V. (2001). Factors contributing to virtual work adjustment. *Journal of Management*, 27(3), 383–405.
- Raghuram, S., Wiesenfeld, B., & Garud, R. (2003). Technology enabled work: The role of self-efficacy in determining telecommuter adjustment and structuring behaviour. *Journal of Vocational Behavior*, 63(2), 180–198.
- Sako, M. (1992). *Prices, quality and trust: Inter-firm relations in Britain and Japan*. Cambridge: Cambridge University Press.
- Sarros, J.C., Tanewski, G.A., Winter, R.P., Santora, J.C., & Densten, I.L. (2002). Work alienation and organizational leadership. *British Journal of Management*, 13(4), 285–304.
- Scott, C.R., & Timmeran, C.E. (1999). Communication technology use and multiple workplace identifications among organizational teleworkers with varied degrees of virtuality. *IEEE Transactions on Professional Communication*, 42(4), 240–60.
- Shadur, M.A., Kienzle, R., & Rodwell, J.J. (1999) The relationship between organizational climate and employee perceptions of involvement. *Group and Organisation Management*, 24(4), 479–503.
- Snell, S.A. (1992). Control theory in strategic human resource management: The mediating effect of administrative information. *Academy of Management Journal*, 35(2), 292–327.
- Staples, D.D., Hulland, J.S., & Higgins, C.A. (1999). A self-efficacy theory explanation for the management of remote workers in virtual organizations. *Organization Science*, 10(6), 758–776.
- Stavrou, E.T. (2005). Flexible work bundles and organizational competitiveness: A cross-national study of the European work context. *Journal of Organizational Behavior*, 26(8), 923–947.
- Strong, K., & Weber, J. (1998). The myth of trusting culture. *Business and Society*, 37(2), 157–183.
- Sullivan, C. (2003). What's in a name? Definitions and conceptualizations of teleworking and homeworking. *New Technology, Work & Employment*, 18(3), 158–165.
- Tan-Solano, M., & Kleiner, B.H. (2001). Effects of telecommuting on organizational behaviour. *Management Research News*, 24(3/4), 123–26.
- Wang, K.Y., & Clegg, S. (2002). Trust and decision making: Are managers different in the People's Republic of China and in Australia? *Cross Cultural Management*, 9(1), 30–45.
- Yeung, A., & Berman, B. (1997). Adding value through human resources: Reorienting human resource measurement to drive business performance. *Human Resource Management*, 36(3), 321–335.
- Watson-Manheim, M. B., Chudoba, K.M., & Crowstow, K. (2002). Discontinuities and continuities: A new way to understand virtual work. *Information, Technology and People*, 15(3), 191–209.
- Wicks, A.C., Berman, S.L., & Jones, T.M. (1999). The structure of optimal trust: Moral and strategic implications. *Academy of Management Review*, 24(1), 99–116.
- Zuboff, S. (1982). New worlds of computer-mediated work. *Harvard Business Review*, 60(5), 142–52.

## **APPENDICES**

### **APPENDIX 1 Organisational Support Scales**

Items for three scales were presented to respondents in a single section of the questionnaire.

### **Technical Support**

I receive as much technological support as I need when working from home. The quality of the technological support I receive when working from home is not high. (Rev) When I have a technology-related query from home, someone in the organisation is always accessible.

### **Human Resource Support**

No specific person in my organisation is responsible for the people side of working from home. (Rev) The quality of the support for the people side of working from home that I receive is not high. (Rev) I receive as much support as I need to resolve issues related to working from home when they arise.

### **Manager's Trust**

My manager doesn't think I slacken or goof off when I'm working from home. My manager worries that I am not getting on with the job when I work from home. (Rev) My manager is trusting me more and more as I continue to work from home.

Note. Rev = item was reverse scored.