
Assessing the work-environment fit for accountants: implications for the international talent shortage

Jeanne H. Yamamura*

University of Nevada Reno, Department of Accounting
and IS/026, Reno, Nevada, 89557-0205, USA

E-mail: yamamura@unr.edu

*Corresponding author

James W. Westerman

Appalachian State University, Department of Management,
Boone, North Carolina 28608–2089, USA

E-mail: westermanjw@appstate.edu

Abstract: A growing and global ‘talent crunch’ currently exists and is expected to grow ‘more acute and more widespread’ over the next ten years, affecting global development throughout the world. This ‘talent shortage’ has already affected the accounting profession as it is listed among the top ten jobs experiencing difficulty recruiting. Prior research in the management discipline indicates a potential tool in enhancing employee recruitment, satisfaction and retention: the perceived ‘fit’ between an individual and the work environment. This research examines the relevance of work-environment fit in the accounting industry, using the USA as an illustrative example. This study examines the importance of fit with one’s work environment to the job satisfaction of accountants using Moos’ Work Environment Scale. Results indicate that fit on the dimensions of goal orientation and systems maintenance is significantly related to the job satisfaction of accountants.

Keywords: accountants; international talent shortage; job satisfaction; retention; USA; work-environment fit.

Reference to this paper should be made as follows: Yamamura, J.H. and Westerman, J.W. (2007) ‘Assessing the work-environment fit for accountants: implications for the international talent shortage’, *Int. J. Accounting, Auditing and Performance Evaluation*, Vol. 4, No. 2, pp.127–141.

Biographical notes: Jeanne Yamamura is an Associate Professor of Accounting whose research areas include international accounting and auditing, management of professionals and ethics. Her published work appears in the *International Journal of Accounting*, the *Journal of Business Ethics* and the *International Journal of Human Resource Management*. She has also published on a variety of topics in the *Journal of Accountancy*, the *CPA Journal* and the *Internal Auditor*.

James Westerman is an Associate Professor of Management. He received his PhD in Management from the University of Colorado at Boulder. His research interests include person-organisation fit, compensation and employee ethics. His work has appeared in the *Journal of Organizational Behavior*, *Journal of Business Ethics*, *Academy of Management Learning and Education*, *Group and Organization Management* and the *Journal of Business and Psychology*, among others.

1 Introduction

Manpower, Inc., a leading international employment services provider, reported a growing and global 'talent crunch' expected to grow 'more acute and more widespread' over the next ten years (Manpower, 2006a). Kuptsch and Pang (2006) note that the importance of human capital to today's knowledge-based economies has created a 'global quest for talent' with countries competing for the 'best trained and most skilled' workers. A result of demographic shifts, technological advances and globalisation, as well as inadequate educational programmes, the 'talent shortage' is expected to affect global development throughout the world (Bloom and Canning, 2006; Manpower, 2006a).

Competition for qualified employees has already become fierce and will likely represent an increasing challenge for employers (Patel, 2002). In the accounting profession the competition has already heated up. An international survey of 33,000 employers in 23 countries by Manpower cited accountants as among the top ten jobs that employers are having difficulty filling (Manpower, 2006b). PricewaterhouseCoopers, an international public accounting firm, reported 'we beg, we borrow, we steal, we grovel, we scour the world' to find personnel (McGee, 2005). To cope with what is expected to be a long-term shortage of accounting talent, Grant Thornton is experimenting with recruiting in Singapore and bringing in international English-speaking employees using H-1B and L visas (Hansen, 2006). In the UK, a severe shortage of qualified accountants has resulted in higher salaries and companies "having 'to go the extra mile' to secure talent" (Shortage, 2007). The Bureau of Labor Statistics (2007) projects that accounting shortages will continue, as growth in accounting employment will increase 'faster than average' at a rate estimated between 18% and 26% through 2014. Being able to successfully recruit and retain skilled accounting profession employees will be critical to firms' success in the future.

Successful recruitment and retention of talent requires identification and consideration of work environment preferences and 'fit.' Research on social identity (Tajfel and Turner, 1979) and social exchange theory (Adams, 1965) in the management discipline indicates that the process of self-categorisation and the in-group effects which result from fit perceptions causes positive attributions among group members (co-workers) and leads to more cooperative work behaviours and lower levels of turnover (Brewer and Miller, 1984; Westerman, 2001). In addition, employees who identify with their employers tend to engage in behaviours that benefit the employing organisations (Organ, 1988). Research has consistently indicated that people who are positioned in work environments that 'fit' are more likely to intrinsically enjoy their work and have day-to-day work experiences which provide positive outcomes and satisfaction (Chatman, 1991).

The reverse is true for those placed in work environments that do not 'fit'. For these employees, normal daily work occurrences may be unpleasant and interpreted more negatively, thus resulting in damaging outcomes such as boredom, poor work performance and lack of job satisfaction (Chatman, 1989, 1991). Sub-par employee performance is also a result of psychological problems characteristic of a mismatch between an individual and his/her environment (Lubinsky, 2000). Although recruiters in the employee selection process recognise the importance of 'fit' for employee success in the organisation, they are frequently inaccurate in their assessments (Cable and Judge, 1997), resulting in higher levels of employee dissatisfaction and turnover.

This research examines the importance of fit with one's work environment to the job satisfaction of accountants in the hope of providing guidance for firms on the potential of work environments as a tool in addressing the global talent shortage. It utilises Moos' Work Environment Scale (WES) (Moos, 1994), a person-organisation fit measure addressing the social climate of work environments. The Moos' instrument consists of three work environment dimensions – goal orientation, relationship and system maintenance – and the 'fit' on each. The importance of fit on the Moos' work environment dimensions to accountants' job satisfaction has not been empirically tested.

2 Background

2.1 The importance of work environments

We have known for some time that variables in the work environment impact employee behaviour (Blumberg and Pringle, 1982; Niles and Harris-Bowlsbey, 2002; Olson and Borman, 1989; Peters et al., 1985). Early research on needs-pressure theory (Murray, 1938), field theory (Lewin, 1943), occupational choice (Holland, 1966) and the theory of work adjustment (Dawis, 1994) revealed the belief that employee behaviours do not occur in a vacuum but in a specific and unique work environment. Thus, the assertion that behaviour is a function of a person's interactions with his/her environment is supported by multiple theoretical approaches.

Previous studies of person-organisation (P-O) fit among accountants have demonstrated significant relationships between P-O fit on the organisational values dimension and job satisfaction, organisational commitment and turnover (e.g. Chatman, 1991; O'Reilly et al., 1991; Sheridan, 1992). Although prior research has validated the impact of person-organisation fit on the dimension of values congruence, the utility of the broader and, arguably, more relevant fit measure of social climate has not been determined in the accounting literature.

2.2 Dimensions of work environment settings

Social climates represent a conglomerate of attitudes, feelings and behaviours which characterise life in an organisation and the idea that the way one perceives the environment tends to influence the way one will behave in that environment (Moos, 1987; Walsh, 1987). The Work Environment Scale (WES) (Moos, 1994) measures fit between employees and their respective work environments by examining employee preferences for three dimensions of work environment settings: goal orientation, relationship and system maintenance. The first dimension, goal orientation, refers to the degree to which an environment encourages or stifles growth through providing for participation in decision-making and autonomy, maintaining a task orientation and providing job challenge and expectations for success and accomplishment. The second dimension, relationship, refers to the degree of interpersonal factors in a work environment, such as the social interaction and cohesion among workers and the friendship and support provided by co-workers and management. The third component of work environments is system maintenance. This dimension refers to how orderly and organised the work setting is, how clear it is in its expectations and how much control it maintains. Fit or congruence between

an individual's preferences for and the reality of his/her current work environment as measured by the WES has been demonstrated as a significant predictor of employee outcomes including job satisfaction and intention to remain with an organisation in the person-organisation fit literature (Westerman and Cyr, 2004). This research examines the utility of the WES as a predictor of employee satisfaction in the accounting profession.

2.3 Management of professionals

An additional factor to be considered is the management of accountants as professionals. The successful management of 'knowledge workers' or professionals is a critical requirement for public and private entities and demands an understanding of the nature of professional work and the unique qualities of professionals (e.g. Drucker, 1974; Quinn et al., 1996; Shapero, 1985). Shapero (1985, p.xvi) notes that professional work is 'unspecifiable, . . . dependent on situation and problem and requires the judgment, ingenuity and creativity of an individual possessing a particular body of knowledge.' Those who successfully perform such work take initiative and operate independently, are highly technically competent and continually seek to improve their knowledge and experience. As a result, they cannot be managed successfully by the same methods applied to those who perform routine and specifiable functions.

Quinn et al. (1996) included the following among the 'best practices' for managing knowledge workers (professionals): on-the job training, mentoring, stretch goals, frequent performance appraisal and feedback, effective knowledge capture in systems and software and information-sharing. Shapero (1985) added that the physical and social environment in which the professional is located affected both motivation and performance. Included as environmental factors were the physical location and organisation of work areas, support for information sharing, nature and timing of feedback, evaluations, established expectations and diversity of assignments. It is clear, therefore, that appropriate design and functioning of work environments impact professionals' performance, although it remains to be examined within the accounting profession.

3 Development of research questions

This study examines the impact of employee work environment preferences for the dimensions of goal orientation, relationship and system maintenance with the job satisfaction of accountants. It hypothesises that these dimensions will be of particular importance to accountants because of their role as 'professionals.' Existing research on the management of professionals implies that these employees may have unique work-related needs and preferences (e.g. Raelin, 1986; Shapero, 1985). Further evidence for specific work-related needs of accounting professionals is provided by other studies addressing job satisfaction and informational requirements (e.g. Stedham et al., 2002; Taylor et al., 1999; Taylor et al., 2001). While it is known that P-O fit in the form of value congruence is important to accountants (Chatman, 1991), the relevance of the goal orientation, relationship and system maintenance dimensions of work environments to job satisfaction has not been examined in the research literature.

Maister (1993) and Shapero (1985) describe successful professional work environments as those with clearly identified goals, frequent and prompt feedback, quick rewards for

performance including non-salary incentives, work autonomy, involvement in decision making, accountability for results and diverse and challenging work opportunities. These factors relate directly to an employee's goal orientation, i.e. his/her desire for a work environment providing job challenge, participation and strong expectations for accomplishment. Goal-orientated environments have been described as strong situations that can attenuate the effect of personality variables, as they provide cues to guide behaviour and performance expectations. The impact of specific goals on individual performance has been empirically indicated in over 500 studies (Latham et al., 2002; Locke and Latham, 2002; Seijts et al., 2004).

Our first hypothesis is thus:

H1: Work-environment fit on the dimension of goal orientation is significant to the job satisfaction of accountants.

We also anticipate that providing relationship-orientated work environments will be significant to accountants' job satisfaction. Social integration resulting from interpersonal interaction and shared experience is a primary precursor to social category memberships (Tsui et al., 1992). Recent research indicates social identification with one's work group enhances individual performance (Randel and Jaussi, 2003), which can have a reciprocal effect on employee attitudes. When person-organisation fit is minimal, self-categorisation into an organisation is reduced and psychological and physical withdrawal reactions are potential outcomes (Schneider, 1987). Sheridan (1992) found lower turnover rates in accounting firms with organisational cultures that stressed interpersonal relationships. Chatman (1991) determined that certain socially-related activities, specifically pre-entry time spent with members before hire, attendance at firm related social events and a mentor relationship, were significant predictors of P-O fit.

Our second hypothesis follows:

H2: Work-environment fit on the dimension of relationship orientation is significant to the job satisfaction of accountants.

The system maintenance dimension of person-environment fit addresses the organisation and management of the work setting and the degree of control maintained. Shapero (1985) describes 'information-communication abilities' as central to professional work. Such work, particularly for accountants and other 'knowledge' professionals, largely involves the transformation of information from one state to another. As a result, the management of information and the clarity of the systems created to manage information are critical to the successful professional work environment. Work environment structures that keep an employee informed and encourage the investment of the self into the organisation in the process of completing work-related activities give rise to feelings of ownership concerning the job and the organisation (O'Driscoll et al., 2006; Pierce et al., 2001). The professional's need for an efficient, effective work environment that manages and controls necessary information flows appears directly related to the system maintenance dimension.

Our third hypothesis is thus:

H3: Work-environment fit on the dimension of system maintenance is significant to the job satisfaction of accountants.

4 Methodology

4.1 Sample

The sample for this study consisted of the membership of a state society of CPAs in a western US state. Survey questionnaires were mailed to current members located throughout the state and employed as accountants in public accounting, private industry, government and education. Out of 1222 questionnaires distributed, 267 responses were received for a response rate of 21.8%. Incomplete and invalid responses were discarded, leaving 259 valid responses.

Respondents ranged in age from 22 to 75. The sample was 57% male and 43% female. The majority were married (approximately 76%) and 24% held a master's degree. On average, respondents had 9.35 years of experience.

4.2 Measures

The study variables and their measures appear in Table 1.

4.2.1 *Dependent and independent variables*

Two measures of job satisfaction were used in this study. The first measure, SATISFACTION, developed by Agho et al. (1992), incorporates six questions relating to appreciation for work including enthusiasm, satisfaction and enjoyment. In prior research, the measure correlated positively with a composite job facet measure, autonomy, supervisory support, task significance, employee perceptions of support and job involvement and negatively with work routinisation, role ambiguity and role conflict (e.g. Agho et al., 1993; Judge et al., 1998; O'Neill and Mone, 1998). Evaluation of acceptability for the SATISFACTION measure resulted in a Cronbach alpha of 0.87 (Cronbach, 1951).

The second measure, INTENT TO REMAIN, measured intention to remain with the organisation in accordance with the O'Reilly et al. (1991) scale, used in prior person-organisation fit research. The measure incorporates responses to four questions regarding plans to leave or remain. Evaluation of acceptability for the INTENT TO REMAIN measure resulted in a Cronbach alpha of 0.83 (Cronbach, 1951).

The Work Environment Scale (Moos, 1994) was used to measure salient characteristics of the work environment. The WES measures subjects' perceptions of their ideal and current work environments. Selected sets of WES questions address each of the three dimensions of the work environment: system maintenance, goal orientation and relationship. 'Fit' on each dimension is measured by calculating the correlation between the actual work environment and the ideal or preferred work environment (SYSTEM FIT, GOAL FIT, RELATIONSHIP FIT).

4.2.2 *Control variables*

AGE, EXPERIENCE and GENDER were included as control variables. Prior research has found these to be factors related to job satisfaction among accountants (e.g. Greenhaus et al., 1997; Gregson, 1990; Harrell, 1990; Reed et al., 1994). The measurement of these variables is described in Table 1.

Table 1 Variables

<i>Variable</i>	<i>Variable name</i>	<i>Measure</i>
<i>Dependent variables</i>		
Job satisfaction	SATISFACTION	Measure developed by Agho et al. (1992); five items pertaining to boredom, satisfaction, enthusiasm and enjoyment associated with work.
Intent to remain	INTENT TO REMAIN	Measure developed by O'Reilly et al. (1991); four items pertaining to plans to remain in or change jobs.
<i>Independent variables</i>		
Fit between actual and ideal goal orientation	GOAL FIT	Work Environment Scale (Moos, 1994); correlation between actual and ideal on 27 goal orientation items (three place, decimal point not shown)
Fit between actual and ideal relationship	RELATIONSHIP FIT	Work Environment Scale (Moos, 1994); correlation between actual and ideal on 27 relationship items (three place, decimal point not shown)
Fit between actual and ideal system maintenance	SYSTEM FIT	Work Environment Scale (Moos, 1994); correlation between actual and ideal on 36 items pertaining to degree of organisation, order and control maintained (three place, decimal point not shown)
<i>Control variables</i>		
Age	AGE	nn
Number of years employed by current employer	EXPERIENCE	nn
Gender	GENDER	0=Male; 1=Female

4.3 Analytical methods

The data were evaluated by means of Pearson correlations and multivariate regression. Pearson correlational analysis was used to evaluate the bivariate relationships between the two job satisfaction measures and the other study variables. Multivariate regression analysis was used to test hypotheses about the relationships between job satisfaction and the variables of interest while controlling for the effects of other factors known to be related.

5 Results

The descriptive statistics and bivariate correlations are presented in Tables 2 and 3.

Table 2 Descriptive statistics

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Range</i>
SATISFACTION	254	24.33	4.28	11 to 30
INTENT TO REMAIN	252	20.79	6.30	4 to 28
GOAL FIT	238	421.84	388.32	−971 to 1000
RELATIONSHIP FIT	238	391.66	370.44	−1000 to 1000
SYSTEM FIT	239	523.13	314.81	−357 to 1000
AGE	258	43.51	11.90	22 to 75
EXPERIENCE	246	9.35	8.81	0.30 to 50.0

Note: Totals differ as complete information was not always provided.

Table 3 Pearson correlations

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Dependent variables</i>							
1 SATISFACTION							
2 INTENT TO REMAIN	0.687**						
<i>Independent variables</i>							
3 GOAL FIT	0.385**	0.410**					
4 RELATIONSHIP FIT	0.335**	0.294**	0.544*				
5 SYSTEM FIT	0.341**	0.415**	0.654**	0.561**			
<i>Control variables</i>							
6 AGE	0.259**	0.233**	0.082	0.083	0.072		
7 EXPERIENCE	0.194**	0.201**	0.053	−0.005	0.026	0.616**	
8 GENDER	−0.003	−0.058	0.013	0.054	0.047	−0.150*	−0.275**

Note: * = Significant at $p < 0.05$; ** = Significant at $p < 0.01$.

Correlational analysis indicated that all ‘fit’ measures are strongly and significantly related to SATISFACTION and INTENT TO REMAIN, providing initial support for hypotheses 1, 2 and 3. The ‘fit’ measures were also significantly related to each other raising a concern regarding multi-collinearity which was addressed by means of the examination of the variance inflation factors. Among the control variables, both AGE and EXPERIENCE were significantly related to both job satisfaction measures. Similar relationships were not found for GENDER.

Multivariate regression analysis was employed to investigate whether a significant relationship existed between the three work environment dimensions and job satisfaction while controlling for age, experience and gender. The multivariate results are presented in Table 4.

Table 4 Regression analysis – results of work environment fit on employee outcomes

Variable	Satisfaction		Intent to remain	
	Std. beta	Significance	Std. beta	Significance
<i>Independent variables</i>				
GOAL FIT	0.271	<i>0.002</i>	0.260	<i>0.002</i>
RELATIONSHIP FIT	0.086	0.284	0.022	0.778
SYSTEM FIT	0.078	0.386	0.199	<i>0.025</i>
<i>Control variables</i>				
AGE	0.127	0.099	0.096	0.204
EXPERIENCE	0.092	0.249	0.095	0.223
GENDER	0.044	0.492	-0.011	0.859
Adj. R-sq.	0.175		0.206	
F	8.80	<i>0.000</i>	10.482	<i>0.000</i>

Note: Numbers in italics indicate $p < 0.05$.

The results provided strong support for hypothesis 1 and partial support for hypothesis 3. GOAL FIT was significantly related to both job satisfaction measures and a significant relationship to INTENT TO REMAIN was found for SYSTEM FIT. The other work environment factor, RELATIONSHIP FIT, was not significant to either job satisfaction measure (failing to support hypothesis 2). None of the control variables was significantly related to the job satisfaction measures. The overall models employing SATISFACTION and INTENT TO REMAIN, respectively, as dependent variables were significant with adjusted R^2 s of 0.175 and 0.206. Examination of the variance inflation factors (VIF) (which fell between 1.1 and 2.1) revealed the presence of multi-collinearity which, likely, affected the ability of the variables of interest to achieve statistical significance. However, multi-collinearity does not impede the use of the models for predictive purposes (Neter et al., 1985).

6 Discussion and conclusions

The ability to attract, keep and motivate high-performing accountants is becoming increasingly important internationally in today's competitive organisational environments. This study examined the potential of work environments as a tool to improve the satisfaction and retention of accountants. In examining the work environment dimensions and their importance to job satisfaction, this study found that fit on the dimension of goal congruence was significantly related to accountants' job satisfaction and intention to remain with an organisation. Fit on the systems dimension of the work environment was also significantly predictive of accountants' intention to remain.

The results of this study indicate that paying close attention to the development of goal-orientated work environments with clear and efficient systems may be a particularly effective means of improving employee satisfaction and increasing the retention of accountants. These findings may be particularly relevant in public accounting settings where new accountants are pressed into service in unfamiliar settings (the clients'

workplaces) and perform unfamiliar tasks early in their careers, creating a high degree of uncertainty. Research by Strickland and Galimba (2001) found that goals provide structure in ambiguous situations, reducing the effects of cognitive interference on task performance.

Further, work environments provide social cues to employees on how to act appropriately and employees conform to receive social approval from peers (Salancik and Pfeffer, 1978; Schneider, 1975). Thus, work environments that possess clarity and are adept at communicating goals and provide well-organised work settings may aid employees in aligning their individual goal orientations with the work environment norms to maintain harmony with their surroundings (Neal et al., 2000). As climate scholars generally identify managers as the primary architects of group member climate perceptions (Naumann and Bennett, 2000), this research indicates the potential importance of leaders in focussing on the development of goal-orientated work environments with clear and efficient systems to achieve enhanced employee outcomes.

The results of this study also indicate that employers may consider placing additional efforts to proactively structure organisational environments in a positive way so that accounting work is a more satisfying and rewarding experience. As many managers do not have much flexibility in their staffing patterns in the short-term and must 'deal with the hand they are dealt', controlling and changing the work environment is often the most feasible short-term option. This may be particularly relevant for multinational accounting firms who may be struggling with the degree to which they should standardise or customise their work environments across various cultural settings.

Such prescriptive work environment content changes represent one potential use of the Work Environment Scale, particularly when there is widespread agreement among employees on the specific environmental changes required. However, the Work Environment Scale also provides a process for managers to diagnose and determine where gaps exist that are unique to their organisation between the employee perceptions of their ideal work environments and the current perceived work environment, in an effort to improve employee satisfaction and increase retention rates. The Work Environment Scale Manual (Moos, 1994) provides details on the process by which the instrument can be used diagnostically within a specific employment environment.

Further, an alternative or complementary approach would be to use the Work Environment Scale as an employee selection tool, whereby the current organisational climate would be measured and the fit between job applicants and the existing work environment would be used as a portion of the employee selection process. There also exists the potential use of the WES to improve the selection processes and organisational outcomes for expatriates, who frequently experience difficulties adjusting to unfamiliar foreign work environments. It is possible that a work environment assessment also may be used as an educational or diagnostic tool to help expatriates understand 'gaps' between their expectations for and the realities of work environments before they are sent abroad.

The Work Environment Scale may also have the potential to select employees for work teams. Werbel and Johnson (2001) proposed the use of person-group fit in selecting employees for teams to ensure the necessary combination of 'soft' skills such as cooperativeness, ability to work independently, appreciation of collectivistic efforts and willingness to assume responsibility for results. As the use of team-based work expands, appropriate and careful team member selection may be critical to the success and effective functioning of each team. Future research should examine the utility of such an approach on employee selection outcomes in the accounting profession.

An additional (and often unrecognised) element of an accountant's job is the need for creativity. Technology has eliminated much of the manual processing previously linked to an accountant's job. As a result, accountants now perform higher level analysis and problem resolution, both of which require a higher degree of creativity. Factors related to work environments have been found to influence employee creativity, including the level of autonomy, perceptions of the significance of the work, whether the tasks are considered challenging and urgent, whether supervisor support was received and the degree of organisational control maintained (e.g. Amabile et al., 1996; Shalley et al., 2000; Woodman et al., 1993). The systems maintenance dimension addresses the organisation of the work setting including the degree of control maintained and the level of support given. It also includes the manner in which jobs are structured. If creativity is desired of accountants, a match between work environments and the creative requirements of jobs would, likely, be beneficial. The degree of match (or mismatch) can significantly affect employees' affective outcomes, including satisfaction and intention to remain. Organisations have an opportunity and perhaps a requirement given the competition for talent, to structure and monitor jobs to ensure an optimal match for creativity in the workplace.

The lack of significant results for the dimension of relationship fit is interesting as it provides potential support for the existence of a strong occupational (professional) culture for accountants. Hofstede (2001) placed occupational culture between national culture and organisational culture, noting that when occupational culture is strong, employees may be more influenced by their occupational culture than by the organisational culture. As a result, an occupational community may result, described by Van Maanen and Barley (1984, p.295) as "a group of people who consider themselves to be engaged in the same sort of work; who identify (more or less positively) with their work; who share with one another a set of values, norms and perspectives that apply to, but extend beyond, work related matters; and whose social relationships merge the realms of work and leisure." Raelin (1986) proposed that professionals, such as accountants, had a distinct occupational culture that could conflict with management's (and thus the organisation's) culture. Recall that relationship fit addressed interpersonal 'fit' in a work environment including relationships with co-workers and management. Our results indicate that relationship fit was not significant to accountants' job satisfaction and intention to remain with the organisation. If accountants identify more strongly with their profession than with their individual employers, they may not need a high degree of social interaction and support from the workplace. As a result, relationship fit would not be as important to an accountant's job outcomes as other dimensions of work-environment congruence.

The results of this research introduce the importance of work-environment fit to the accounting workplace. As suggested in this discussion, further research is necessary to further understand its many potential uses, including:

- examining the utility of the WES instrument in diagnosing and developing creative work environments
- determining the potential use of the WES on the selection and provision of 'realistic job previews' to reduce the negative outcomes experienced by many expatriates
- use of the WES as a diagnostic and analytical tool to customise work environments and work teams through directed use in an attraction, selection and attrition process.

7 Limitations and implications for future research

This study's results must be interpreted with certain caveats in mind. Firstly, to provide a parsimonious model, only a limited number of variables were included in the regression analysis. The variables included explained 18% and 21%, respectively, of the variance in SATISFACTION and INTENT TO REMAIN. Additional variables should be considered for inclusion as the model is incomplete. Secondly, the measures used in this study were initially developed on a diverse sample of subjects not limited to accountants. As a result, their transferability and relevance to accountants may be limited. However, the strong results obtained from reliability analyses support the validity of the measures for use in this study. Thirdly, various concerns impacting the generalisability of the results exist, including the survey response rate and the use of accountants. These generalisability issues, while valid, are offset, we believe, by the value added from the use of a sample in a profession experiencing substantial shortages. Finally, the sample was limited to accountants in the US, where a high degree of individualism exists (and may have had an impact on the non-significance of relationship fit). Future research should examine the utility of the Work Environment Scale on cross-cultural samples in accounting.

These limitations notwithstanding, the results of this study have theoretical and practical implications. Additional research is needed to identify more specifically the sub-dimensions of goal orientation and system maintenance that are important to accountants' job satisfaction. This information will enable employers to identify the changes that may be needed to positively structure work environments in a manner that will improve accountants' work experience. As mentioned previously, further research is also needed to test the WES in other countries and other occupational areas experiencing talent shortages. Our study used the US accounting industry as an illustrative example. The cited talent shortages, however, are occurring worldwide and in other disciplines besides accounting.

In a practical sense, employers hard-pressed to hire and retain accountants may be able to utilise the information provided by the WES to create more desirable working environments and to achieve enhanced employee outcomes. The current difficulties experienced by employers throughout the world in hiring accountants are not expected to disappear in the near future. In fact, the shortages are expected to grow. Organisations, particularly those in need of large numbers of accountants, should utilise every advantage possible in attracting, hiring and retaining the necessary staff.

References

- 'Shortage of accountants is 'severe'.' (2007) *Chartered Accountant*, March, p.1475.
- Adams, J.A. (1965) 'Inequity in social exchange', in L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 2), New York: Academic Press.
- Agho, A.O., Mueller, C.W. and Price, J.L. (1993) 'Determinants of employee job satisfaction: an empirical test of a causal model', *Human Relations*, Vol. 48, No. 8, pp.1007–1020.
- Agho, A.O., Price, J.L. and Mueller, C.W. (1992) 'Discriminant validity of measures of job satisfaction, positive affectivity and negative affectivity', *Journal of Occupational and Organizational Psychology*, Vol. 65, pp.185–196.
- Amabile, T.M. (1988) 'A model of creativity and innovation in organizations', in B.M. Staw and L.L. Cummings (Eds.), *Research in Organizational Behavior*, Vol. 10, Greenwich, CT: JAI Press, pp.123–167.

- Bloom, D.E. and Canning, D. (2006) 'Booms, busts, and echoes: how the biggest demographic upheaval in history is affecting global development', *Finance and Development*, September, pp.8–13.
- Blumberg, M. and Pringle, C.D. (1982) 'The missing opportunity in organizational research: some implications for a theory of work performance', *Academy of Management Review*, Vol. 7, pp.560–569.
- Brewer, M.B. and Miller, N. (1984) *Groups in Contact: The Psychology of Contact*, New York: Academic Press.
- Bureau of Labor Statistics, US Department of Labor (2007) *Occupational Outlook Handbook, 2006–07 Edition*, accessed March 17, 2007, available from: <http://www.bls.gov/ocos001.htm>.
- Cable, D.M. and Judge, T.A. (1997) 'Interviewers' perceptions of person-organization fit and organizational selection decisions', *Journal of Applied Psychology*, Vol. 82, pp.546–561.
- Chatman, J.A. (1989) 'Improving interactional organizational research: a model of person-organization fit', *Academy of Management Review*, Vol. 14, pp.333–349.
- Chatman, J.A. (1991) 'Matching people and organizations: selection and socialization in public accounting firms', *Administrative Science Quarterly*, Vol. 36 (September), pp.459–484.
- Cronbach, L.J. (1951) 'Coefficient alpha and the internal structure of tests', *Psychometrika*, Vol. 16, pp.297–334.
- Dawis, R.V. (1994) 'The theory of work adjustment as convergent theory', in M.L. Savikas and R.W. Lent (Eds.), *Convergence in Career Development Theories: Implications for Science and Practice*, Palo Alto, California: Consulting Psychologists Press.
- Drucker, P.F. (1974) *Management: Tasks, Responsibilities, Practices*, New York: Harper and Row.
- Greenhaus, J.H., Collins, K.M., Singh, R. and Parasuraman, S. (1997) 'Work and family influences on departure from public accounting', *Journal of Vocational Behavior*, Vol. 50, pp.249–270.
- Gregson, T. (1990) 'Measuring job satisfaction with a multiple-choice format of the job descriptive index', *Psychological Reports*, Vol. 66, pp.787–793.
- Hansen, F. (2006) 'Feast and famine in recruiting of professionals', *Workforce Management*, (April).
- Harrell, A. (1990) 'A longitudinal examination of large CPA firm auditors' personnel turnover', *Advances in Accounting*, Vol. 8, pp.233–246.
- Hofstede, G. (2001) *Culture's Consequences*, 2nd edition, Thousand Oaks, CA: Sage Publications.
- Holland, J.L. (1966) *The Psychology of Vocational Choice: A Theory of Personality Types and Model Environments*, Waltham, MA: Blaisdell.
- Judge, T.A., Locke, E.A., Durham, C.C. and Lkuger, A.N. (1998) 'Dispositional effects on job and life satisfaction: the role of core evaluations', *Journal of Applied Psychology*, Vol. 83, No. 1, pp.17–34.
- Kuption, C. and Pang, E.F. (Eds.) (2006) *Competing for Global Talent*, Geneva, Switzerland: International Labour Organization.
- Latham, G., Locke, E. and Fassina, N. (2002) 'The high performance cycle: standing the test of time', in S. Sonnentag (Ed.), *The Psychological Management of Individual Performance. A Handbook in the Psychology of Managing Organizations*, Chichester, England: Wiley.
- Lewin, K. (1997[1943]) 'Defining the field at a given time', in D. Carwright (Ed.) *Field Theory in Social Science*, Washington, DC: American Psychological Association, pp.200–211.
- Locke, E. and Latham, G. (2002) 'Building a practically useful theory of goal setting and task motivation: a 35-year odyssey', *American Psychologist*, Vol. 57, pp.705–717.
- Lubinsky, D. (2000) 'States of excellence', *American Psychologist*, Vol. 55, No. 1, pp.137–150.
- Maister, D.H. (1993) *Managing the Professional Service Firm*, New York, NY: The Free Press.
- Manpower (2006a) 'Confronting the coming talent crunch: what's next?', accessed November 10, 2006, available from: http://www.manpower.com/mpcom/files?name=Talent_Shortage_Whitepaper_Global_Final.pdf.

- Manpower (2006b) 'Talent shortage survey global results', accessed November 10, 2006, available from: http://www.manpower.com/mpcom/files?name=Results_TalentShortage_2006.pdf.
- McGee, S. (2005) 'CPA recruitment intensifies as accounting rules evolve', *Wall Street Journal*, March 22, p.B6.
- Moos, R.H. (1987) 'Person-environment congruence in work, school, and health care settings', *Journal of Vocational Behavior*, Vol. 31, pp.231–247.
- Moos, R.H. (1994) *Work Environment Scale Manual* (3rd Ed.), Palo Alto, CA: Consulting Psychologists Press.
- Murray, H.A. (1938) *Explorations in Personality*, New York: Oxford University Press.
- Naumann, S. and Bennett, N. (2000) 'A case for procedural justice climate: development and test of a multilevel model', *Academy of Management Journal*, Vol. 43, pp.881–889.
- Neal, A., Griffin, M.A. and Hart, P. (2000) 'The impact of organisational climate on safety climate and individual behavior', *Safety Science*, Vol. 34, pp.99–109.
- Neter, J., Wasserman, W. and Kutner, M.H. (1985) *Applied Linear Statistical Models*, Homewood, Illinois: Irwin.
- Niles, S.G. and Harris-Bowlsbey, J. (2002) *Career Development Interventions in the 21st Century*, Upper Saddle River, NJ: Merrill Prentice Hall.
- O'Driscoll, M., Pierce, J. and Coghlan, A. (2006) 'The psychology of ownership – work environment structure, organizational commitment, and citizenship behaviors', *Group and Organization Management*, Vol. 31, No. 3, pp.388–416.
- O'Reilly, C., Chatman, J. and Caldwell, D. (1991) 'People and organizational culture: a Q-sort approach to assessing person-organization fit', *Academy of Management Journal*, Vol. 34, pp.487–516.
- Olson, D.M. and Borman, W.C. (1989) 'More evidence on the relationships between the work environment and job performance', *Human Performance*, Vol. 2, No. 2, pp.113–130.
- O'Neill, B.S. and Mone, M.A. (1998) 'Investigating equity sensitivity as a moderator of relations between self-efficacy and workplace attitudes', *Journal of Applied Psychology*, Vol. 83, No. 5, pp.805–816.
- Organ, D.W. (1988) 'A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior', *Personnel Psychology*, Vol. 48, No. 4, pp.775–802.
- Patel, D. (2002) 'Managing talent,' *HR Magazine*, Vol. 47, No. 3, p.112.
- Peters, L.H., O'Connor, E.J. and Fulberg, J.R. (1985) 'Situational constraints: sources, consequences, and future considerations', in G.R. Ferris and K.M. Rowlands (Eds.), *Research in Personnel and Human Resources Management*, Greenwich, Connecticut: JAI Press, pp.79–114.
- Pierce, J., Kostova, T. and Dirks, K. (2001) 'Toward a theory of psychological ownership in organizations', *Academy of Management Review*, Vol. 27, pp.298–310.
- Quinn, J.B., Anderson, P. and Finkelstein, S. (1996) 'Making the most of the best', *Harvard Business Review*, March–April, pp.71–80.
- Raelin, J. (1986) *Clash of Cultures*, Boston, MA: Harvard Business School Press.
- Randel, A. and Jaussi, K. (2003) 'Functional background identity, diversity, and individual performance in cross-functional teams', *Academy of Management Journal*, Vol. 46, No. 6, pp.763–774.
- Reed, S.A., Kratchman, S.H. and Strawser, R.H. (1994) 'Job satisfaction, organizational commitment, and turnover intentions of United States accountants: the impact of locus of control and gender', *Accounting, Auditing and Accountability Journal*, Vol. 7, No. 1, pp.31–58.
- Salancik, G.R. and Pfeffer, J. (1978) 'A social information processing approach to job attitudes and task design', *Administrative Science Quarterly*, Vol. 23, pp.224–253.

- Schneider, B. (1975) 'Organizational climates: an essay', *Personnel Psychology*, Vol. 28, pp.447–479.
- Schneider, B. (1987) 'The people make the place', *Personnel Psychology*, Vol. 40, pp.437–454.
- Seijts, G., Latham, G., Tasa, K. and Latham, B. (2004) 'Goal setting and goal orientation: an integration of two different yet related literatures', *Academy of Management Journal*, Vol. 47, No. 2, pp.227–239.
- Shalley, C.E., Gilson, L.L. and Blum, T.C. (2000) 'Matching creativity requirements and the work environment: effects on satisfaction and intentions to leave', *The Academy of Management Journal*, Vol. 43, No. 2, pp.215–223.
- Shapiro, A. (1985) *Managing Professional People: Understanding Creative Performance*, New York: The Free Press.
- Sheridan, J.E. (1992) 'Organizational culture and employee retention', *Academy of Management Journal*, Vol. 35, No. 5, pp.1036–1056.
- Stedham, Y., Yamamura, J., Taylor, D. and Nelson, M. (2002) 'Organizational factors and dimensions of satisfaction: a comparative study of accountants in Australia and the US', *Australian Accounting Review*, Vol. 12, No. 3, pp.32–40.
- Strickland, O.J. and Galimba, M. (2001) 'Managing time: the effects of personal goal setting on resource allocation strategy and task performance', *The Journal of Psychology*, Vol. 135, No. 4, pp.357–367.
- Tajfel, H. and Turner, J.C. (1979) 'An integrative theory of intergroup conflict', in W.G. Austin and S. Worchel (Eds.), *The Social Psychology of Intergroup Relations*, Monterey, CA: Brooks/Cole, pp.33–47.
- Taylor, D., Yamamura, J., Stedham, Y. and Nelson, M. (1999) 'Managing professionals: the impact of organisational factors on dimensions of satisfaction in chartered accounting firms', *Journal of Contemporary Issues in Business and Government*, Vol. 5/1, pp.21–33.
- Taylor, D., Yamamura, J., Stedham, Y. and Nelson, M. (2001) 'Managing knowledge-workers in accounting firms', *Journal of Knowledge Management Practice*, Vol. 2, (July), available from: <http://www.tlinc.com/jkmpv2.htm>.
- Tsui, A.S., Egan, T.D. and O'Reilly, C.A. (1992) 'Being different: relational demography and organizational attachment', *Administrative Science Quarterly*, Vol. 37, pp.549–579.
- Van Maanen, J. and Barley, S.R. (1984) 'Occupational communities: culture and control in organizations', in B.M. Staw and L.L. Cummings (Eds.), *Research in Organizational Behavior*, Vol. 6, Greenwich, CT: JAI Press, pp.287–365.
- Walsh, W.B. (1987) 'Person-environment congruence: a response to the Moos perspective', *Journal of Vocational Behavior*, Vol. 31, pp.347–352.
- Werbel, J.D. and Johnson, D.J. (2001) 'The use of person-group fit for employment selection: a missing link in person-environment fit', *Human Resource Management*, Vol. 40, No. 3, pp.227–240.
- Westerman, J.W. (2001) *The Impact of Person-Organization Fit on Employee Attitudes and Outcomes*, Lewiston, NY: Edwin Mellen.
- Westerman, J.W. and Cyr, L. (2004) 'An integrative analysis of person-organization fit theories', *International Journal of Selection and Assessment*, Vol. 12, No. 3, pp.252–261.
- Woodman, R., Sawyer, J. and Griffin, R. (1993) 'Toward a theory of organizational creativity', *Academy of Management Review*, Vol. 18, pp.293–321.