



The moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance

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Lee Huey Yiing and Kamarul Zaman Bin Ahmad
*Faculty of Business and Accountancy, University of Malaya,
Kuala Lumpur, Malaysia*

Abstract

Purpose – The purpose of this paper is to investigate the moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance in the Malaysian setting.

Design/methodology/approach – Data were gathered from 238 Malaysian UM MBA part-time students and the researchers' working peers. Data on the respondents' organizational culture and leadership behaviours, and how they affect organizational commitment, job satisfaction and employee performance, were collected using the OCL, leadership behaviour questionnaire, ACS, single global rating for job satisfaction and overall performance questionnaire, respectively. Descriptive statistics were reported, followed by factor analysis, reliability analysis, Pearson correlation and hypotheses testing using hierarchical multiple regression.

Findings – Generally, and with a few exceptions, leadership behaviour was found to be significantly related to organizational commitment, and organizational culture played an important role in moderating this relationship. Organizational commitment was found to be significantly associated with job satisfaction, but not with employee performance. However, only supportive culture influenced the relationship between commitment and satisfaction. Possible causes and implications for managers are discussed.

Originality/value – The paper contributes to the existing pool of knowledge on the relationships between leadership behaviours, organizational culture, organizational commitment, job satisfaction and employee performance. Different aspects of these variables were tested, so as to provide a wider and more comprehensive understanding of the factors that affect organizations and employees.

Keywords Leadership, Organizational culture, Job satisfaction, Performance management, Malaysia

Paper type Literature review



Introduction and background

In 1998, a *Fortune* survey among the CEOs of most admired companies indicated that corporate culture was believed to be the most important lever in enhancing their key capabilities. Recent organizational crises have emphasized the need for leadership from

decision makers which, then, become more critical for achieving organizational success (Earle, 1996).

There exists a substantial amount of research on antecedents and outcomes of organizational culture, leadership behaviour, organizational commitment, job satisfaction and employee performance. For example, work ethics (Yousef, 2001), person-organization fit (Silverthorne, 2004), national culture (Lok and Crawford, 2004), task structure and role ambiguity (Tan, 2005), and turnover (Poh, 2002). Much of these focused on independent relationships, such as culture and performance, or commitment and performance (Rashid *et al.*, 2003). Only a handful looked into identifying precise relationships between multiple areas of organization behaviour and the application of such findings to the corporate firms. These have practical implications for managers and consultants in management development, and ultimately could bring about superior performance in their respective organizations.

With increasing globalization, greater knowledge of the interactions between these factors in non-western cultures can be beneficial for assessing the effectiveness of current theories, as well as benefiting practicing leaders and decision makers. Only a handful of researchers focused on the Asian setting, and very few are relevant or specific to Malaysia. This study intends to contribute to the existing knowledge base, in particular, from a Malaysian perspective.

The objective of the research is to examine the moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance in the Malaysian setting. For the purpose of this study, Li's (2004) conceptualization of the relationships between these variables has been partially adapted.

It is noted that the use of convenience sampling is a major limitation of this study, as findings from the study sample cannot be confidently generalized to the population. However, the benefits of time and cost-effectiveness, and the fact that adequate information about the study population is not readily available for probability sampling, are taken into account when deciding the sampling method for this study.

Literature review and theoretical framework

Antecedents and independent variables

Leadership behaviour. Daft (2005) defined leadership as an influence relationship among leaders and followers who intend real changes and outcomes that reflect their shared purposes. Over the course of time, a number of dimensions or facets of leadership behaviour have been developed and applied as researchers continue to discover what contributes to leadership success and failures. These included, among others, autocratic versus democratic, task-oriented versus people-oriented, and the contingency approaches.

Currently, the most influential contingency approach to leadership is the Path-Goal theory, developed by Robert House (Robbins, 2005). This theory states that the main goal of the leader is to help subordinates attain the subordinates' goals effectively, and to provide them with the necessary direction and support to achieve their own goals as well as those of the organization (Silverthorne, 2001). The two situational contingencies in the Path-Goal theory are:

- (1) the personal characteristics of group members; and
- (2) the work environment (Daft, 2005).

The Path-Goal theory suggests a fourfold classification of leader behaviours, as described below.

Directive leadership (initiating structure; task-oriented) tells subordinates exactly what they are supposed to do. This leadership behaviour is similar to the initiating structure or task-oriented leadership styles. Supportive leadership (consideration; people-oriented) shows concern for subordinates' wellbeing and personal needs, and is similar to the consideration or people-oriented leadership styles. Participative leadership consults with subordinates about decisions. Achievement-oriented leadership sets clear and challenging goals for subordinates. No one leadership style is ideal for every situation (Rad and Yarmohammadian, 2006).

The study of leadership behaviours as conceptualized under the Path-Goal theory has been applied in many types of researches. For example, in the context of business strategies in international marketing channels (Mehta *et al.*, 1990; Mehta *et al.*, 2003), small and middle-sized firms (Li, 2004), company managers (Silverthorne, 2001), steel industry (Downey *et al.*, 1975), automotive industry (Chang *et al.*, 2003), and market orientation of UK firms (Harris and Ogbonna, 2001).

Past research on corporate leadership in Malaysia frequently focused on its unique, multi-ethnic, multi-cultural and collectivist society. No one, distinct management style can be identified, and it is acknowledged that leadership in Malaysia is deeply entrenched and connected to its diverse Asian culture, traditions and values. Hence, commonly-accepted leadership theories from the west, and how it is thought to affect other organizational behaviour factors, may not be directly transferable to the Malaysian context.

Organizational culture. Organizational culture is generally seen as a set of key values, assumptions, understandings, and norms that is shared by members of an organization and taught to new members as correct (Daft, 2005). It is argued that organizational culture may be the critical key that managers can use to direct the course of their firms (Smircich, 1983).

The study on organizational culture can take on a multitude of aspects, including levels (visible, expressed values, and underlying assumptions), strength (strong or weak), and adaptiveness (adaptive or unadaptive). Organizational cultures can be assessed along many dimensions, resulting in conceptually different, but fundamentally similar, models and theories. For example, culture can be categorized as adaptability/achievement/clan/bureaucratic (Daft, 2005), clan/adhocracy/hierarchy/market (Cameron and Freeman, 1991; Quinn and Cameron, 1983; Quinn and Rohrbaugh, 1983), and communal/fragmented/networked/mercenary (Goffee and Jones, 1998).

According to Wallach (1983), an organization's culture can be a combination of three categories – bureaucratic, innovative or supportive – to varying degrees. Wallach's (1983) framework is adapted for the purpose of this study. Wallach (1983) states that the Organizational Culture Index (OCI) profiles culture on the three stereotypical dimensions, and the "flavor" of an organization can be derived from the combination of these three dimensions.

A bureaucratic culture is hierarchical, compartmentalized, organized, systematic, and has clear lines of responsibility and authority. An innovative culture refers to a creative, results-oriented, challenging work environment. A supportive culture exhibits teamwork and a people-oriented, encouraging, trusting work environment. An

employee can be more effective in his or her current job, and realize his or her best potentials, when there is a match between the individual's motivation and the organizational culture. This has significant implications in recruitment, management, motivation, development and retention of employees (Shadur *et al.*, 1999).

Few published studies exist that describe the corporate culture of Malaysian companies, which are generally more or less similar to other fast-growing, competitive, developing Asian countries. Government offices are generally considered to be bureaucratic, while public-listed and private companies are more entrepreneurial in nature. This is exemplified in a study done by Rashid *et al.* (2003), where companies listed in the Kuala Lumpur Stock Exchange were found to be predominantly competitive, and value risk-taking, demanding goals, and market superiority. Another study by Rashid *et al.* (2004) showed that among manufacturers in the country, many had mercenary culture, which emphasized on strategy and winning in the marketplace. To balance this, there exists to a lesser degree consensual, network and supportive cultures within Malaysian companies, consistent to the cultural values of Malaysian managers. Tradition, loyalty, teamwork and personal commitment are among some of the values prevalent in Malaysian companies.

Dependent variables

Organizational commitment. Organizational commitment refers to an employee's belief in the organization's goals and values, desire to remain a member of the organization and loyalty to the organization (Mowday *et al.*, 1982; Hackett *et al.*, 2001). With the increasing speed and scale of change in organizations, managers are constantly seeking ways to generate employees' commitment, which translates to competitive advantage and improved work attitudes such as job satisfaction, performance, absenteeism, and turnover intentions (Lok and Crawford, 2001; Yousef, 2000).

Allen and Meyer (1990) conceptualized a model of organizational commitment and identified three components:

- (1) affective;
- (2) continuance; and
- (3) normative commitment.

The affective component refers to the employee's emotional attachment to, identification with, and involvement in, the organization. Much of the research undertaken in the area of organizational commitment focused on affective commitment (Brunetto and Farr-Wharton, 2003). The continuance component refers to commitment based on the costs that the employee associates with leaving the organization. The normative component refers to the employee's feeling of obligation to remain with the organization. Normative involvement has received less research attention.

Many studies have revealed that the level of organizational and managerial support an employee feels, their involvement in decision making (Porter *et al.*, 1974; Mowday *et al.*, 1982) the amount of feedback received about job performance and job role (Mathieu and Zajac, 1990), leadership behaviours and organizational culture influence whether a person has high or low organizational commitment.

Job satisfaction. Robbins (2005) defined job satisfaction as a collection of feelings that an individual holds towards his or her job. Numerous factors influence employee job satisfaction, as reviewed by Rad and Yarmohammadian (2006). Job satisfaction has

been observed to affect levels of job dissatisfaction, absenteeism, grievance expression, tardiness, low morale, high turnover, quality improvement and participation in decision-making.

Employee performance. Motowidlo and Van Scotter (1994) proposed two dimensions of employee performance. Task performance (or technical job performance) is the behaviour associated with maintaining and servicing an organization's technical core. Contextual performance (or interpersonal job performance) is a function of one's interpersonal skill knowledge that supports the broader social environment in which the technical core must function.

Relationship between variables

Although a considerable number of researchers have argued that there is a constant interplay between organizational culture and leadership, there are limited empirical studies examining the relation between leadership and culture as well as their joint effect on important organizational outcomes (Hickman and Silva, 1984; Peters and Waterman, 1982; Schein, 1985; Sergiovanni and Corbally, 1984; Smith and Peterson, 1988; Tichy and Cohen, 1997; Trice and Beyer, 1993). More importantly, research has found that the harmonious combination of appropriate leadership behaviours with certain types of organizational cultures can positively influence employees' performance (Harris and Ogbonna, 2001; Hickman and Silva, 1984; Lim, 1995).

According to Appelbaum *et al.* (2004) and Yousef (2000), the relationship between leadership behaviour and job satisfaction has received a great deal of attention in past research, however, findings have been mixed (Pool, 1997; Savery, 1994; Yousef, 2000). Research therefore does not directly link employee satisfaction to a specific leadership style. Instead, many suggest that leadership style needs to adapt to the culture or situation as it attempts to reduce employee dissatisfaction.

According to a comprehensive literature review by Yousef (2000), several researchers have also looked into the relationship between leadership behaviour and job performance. Findings were inconsistent as well. A couple of studies in the steel industry and electronic meeting systems reported higher satisfaction and performance levels under directive leadership style when given a highly structured task, while supportive leadership style is preferred for unstructured problems (Downey *et al.*, 1975; Kahai *et al.*, 1997).

Results from investigations of antecedents of commitment have not been entirely consistent (Yousef, 2000). Blau (1985) and Williams and Hazer (1986) reported that consideration leadership style had greater influence on commitment than a structured or task-oriented one, while Kim (2002) identified a positive relationship between participative management style and employees' job satisfaction and commitment.

Organizational culture too, plays an important role in generating commitment and enhancing performance (Deal and Kennedy, 1982; Lok and Crawford, 2001; Peters and Waterman, 1982). In particular, studies in various industries and countries showed that innovative and supportive cultures had strong positive effects on commitment and job satisfaction, while bureaucratic cultures had a negative impact (Brewer, 1993; Brewer, 1994; Brewer and Clippard, 2002; Kratrina, 1990; Krausz *et al.*, 1995; Lok and Crawford, 2001; London and Larsen, 1999; Rashid *et al.*, 2003; Silverthorne, 2004; Trice and Beyer, 1993; Wallach, 1983).

Yousef (2000) investigated the role of organizational commitment as a mediator of the relationships between leadership behaviour with job satisfaction and performance, specifically in a multicultural, non-western country. Results from various organizations in the United Arab Emirates suggest (in support of many western studies) that those who perceive their superiors as adopting consultative or participative leadership behaviour are more committed to their organizations, more satisfied with their jobs, and their performance is high.

When employees are dissatisfied at work, they are less committed and will look for other opportunities to quit. If opportunities are unavailable, they may emotionally or mentally “withdraw” from the organization. Thus, organizational commitment and job satisfaction are important attitudes in assessing employees’ intention to quit and the overall contribution of the employee to the organization. Many studies across different industries and geographical regions revealed strong correlations between organizational commitment with job satisfaction (Benkhoff, 1997; Caykoylu *et al.*, 2007; Chen, 2007; Iverson and Roy, 1994; Jernigan *et al.*, 2002; Leong *et al.*, 1996; Lok and Crawford, 2001; Mathieu and Hamel, 1989; Mathieu and Zajac, 1990; Michaels, 1994; Price and Mueller, 1981; Samad, 2005; Taunton *et al.*, 1989; Williams and Hazer, 1986; Yousef, 2001), and organizational commitment with job performance (Baugh and Roberts, 1994; Brett *et al.*, 1995; Kalleberg and Marden, 1995; Mathieu and Zajac, 1990; Meyer *et al.*, 1989; Mowday *et al.*, 1974; Putti *et al.*, 1990; Ward and Davis, 1995; Yousef, 2000). However, Leong *et al.* (1994) found a weak correlation between the two variables, Lee and Mowday (1989) found negligible relationship, and Wright (1997) reported a negative relationship between the two.

Very few relevant studies in the Malaysian context have been published to date. Samad (2005) studied 584 managerial-level of employees in Telekom Malaysia, and reported that job satisfaction did play a positive moderating role in the relationship between organizational commitment and job performance. Rashid *et al.* (2003) surveyed over 200 companies listed in the Kuala Lumpur Stock Exchange. Different types of corporate cultures were found to influence affective commitment, but overall, corporate culture was found to significantly affect the financial performance of these companies (return on assets, return on investment). Combining these findings with studies from other countries, both western and non-western, it is reasonable to expect that different types of leadership behaviour does affect organizational commitment, which in turn, influences both job satisfaction and employee performance. It is anticipated that these relationships are dependent on the type of organizational culture exhibited by the companies.

In summary, there have been a number of researches devoted to the relationship between leadership behaviour, organizational culture, organizational commitment, job performance and/or job satisfaction. The findings are, however, not entirely consistent. A Taiwanese study by Li (2004) confirmed that the effect of leadership behaviours on organizational commitment is differed by organizational culture. In addition, it was found that organizational commitment might mediate the relationship between leadership behaviours and job satisfaction and performance; however the presence of this mediating effect was contingent upon the type of leadership and organizational culture.

Demographics

Demographics have been found to exert influence on organizational behaviour constructs. For example, age (Mathieu and Zajac, 1990; Michaels, 1994; Williams and Hazer, 1986), cultural background (Al-Meer, 1989), organizational tenure (Mathieu and Hamel, 1989; Mathieu and Zajac, 1990), job position (McCaul *et al.*, 1995) and position tenure (Gregersen and Black, 1992; Mathieu and Zajac, 1990) have been found to be positively associated with organizational commitment.

Kirchmeyer (1995) and Madsen *et al.* (2005) determined that organizational commitment was slightly related to gender (being female) and age. However, Goulet and Singh (2002) concluded that organizational commitment was not related to age but was instead related to gender.

Educational level has been reported to be negatively correlated with organizational commitment (DeCotiis and Summers, 1987; Mathieu and Zajac, 1990; Mottaz, 1988; Mowday *et al.*, 1982). It has been argued that this inverse relationship is attributable to the fact that more highly educated individuals have higher expectations. They are therefore more likely to feel that their employers are not rewarding them adequately, and so the level of organizational commitment is diminished (DeCotiis and Summers, 1987).

Russ and McNeilly (1995) looked into the relationship between organizational commitment and job satisfaction using experience, gender and performance as moderators. They discovered that experience and performance moderate the relationship between organizational commitment and job satisfaction.

Theoretical framework

Based on the literature review, the theoretical framework is proposed as shown in Figure 1. This framework is similar to that of Li's (2004), except that the directive, participative and supportive leadership behaviours are studied, instead of transformational and transactional leadership styles. Organizational commitment is considered as a dependent and independent variable, rather than a mediating factor.

Research methodology

Development of hypotheses

As mixed findings are observed in prior studies as described in the literature review, null hypotheses are proposed to test the relationships between the variables, as shown in Figure 1:

- H*₁. Leader's directive, participative and supportive behaviours have no significant relationship with organizational commitment.
- H*₂. Organizational culture (bureaucratic, innovative and supportive) has no effect on the relationship between leadership behaviour and organizational commitment.
- H*₃. Organizational commitment has no significant relationship with job satisfaction and job performance.
- H*₄. Organizational culture (bureaucratic, innovative and supportive) has no effect on the relationship between organization commitment and job satisfaction and job performance.

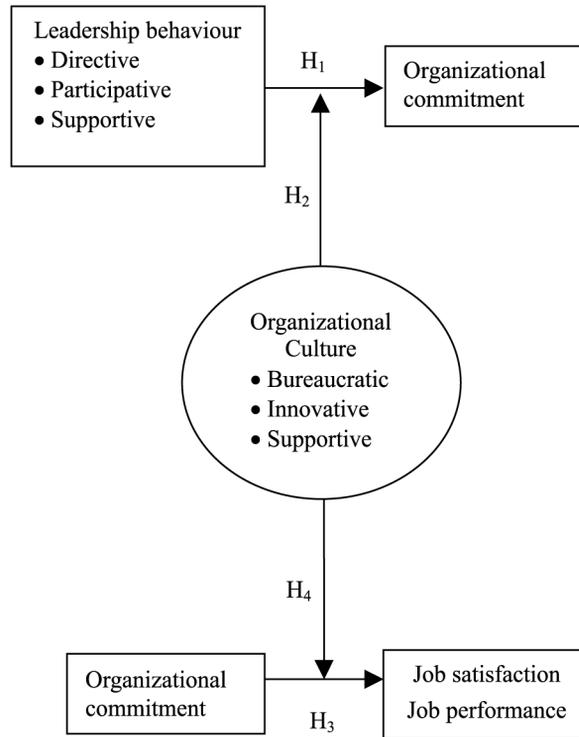


Figure 1.
Theoretical framework

Selection of instruments and measures

The selection of instruments differed partly from Li's (2004) study due to consideration for the ease and time limitation for respondents to answer the questions, and space constraints in the questionnaire. Moreover, some of the instruments measured different dimensions of the variables to add originality value to this research.

Organizational culture. Although a number of typologies, categorizations and instruments for measuring organizational culture exist, there is little agreement on which ones are more appropriate or superior to the other. Hence, the popular 24-item OCI by Wallach (1983) has been used for the purpose of this study, the reason being that it was also used in Li's (2004) research. Wallach (1983) classified organizational culture profiles as bureaucratic, innovative and supportive, and each of the three profiles is assigned 8 items in the OCI. The OCI has also been used by other researchers (Koberg and Chusmir, 1987, cited in Lok and Crawford, 2004; Lok and Crawford, 2004).

Respondents were asked about how they perceive their organization's culture. A four-point Likert scale was used, ranging from "does not describe my organization" valued as a "1" to "describes my organization most of the time" valued as a "4". The scores were added up for every profile, and an observation was assigned to the profile with the highest mean score.

Leadership behaviour. In this study, the 13-item measure of leadership behaviour has been adapted from Harris and Ogbonna (2001), which was based on previous research by House (1971), House and Dessler (1974), Fleishman (1957) and Stogdill

(1963). This measure of leadership has been widely used in the marketing and strategy literatures and has been generally accepted as a good measure of subordinate's perceptions of leadership style and behaviour (Harris and Ogbonna, 2001). It has been used to identify the leadership behaviour as participative (five items), supportive (four items) and directive (four items).

Churchill (1991) argued that to determine the form of response to individual questions is a crucial aspect of empirical data collection. Consequently, it was decided to adopt the commonly used seven-point Likert-type scoring for all items. Past uses of measures of perceived leadership behaviours had previously utilized five-point scales. However, Barnes *et al.* (1994) argued that a switch to the seven-point scale has no effect on principal components analysis but often improves the reliability of answers. Thus, a seven-point scale was used for reasons of reliability and validity, as well as for the ease of response and administration (Malhotra, 1993). This is similar to what was done in Harris and Ogbonna's study (Harris and Ogbonna, 2001).

Respondents were asked to describe the leadership behaviour of their immediate supervisor. The seven-point Likert scale was used, ranging from "strongly agree/very true" valued as a "1" to "strongly disagree/very unlikely" valued as a "7". The mean scores for each leadership style were obtained.

Organizational commitment. According to Mathieu and Zajac (1990) and Liu (2007), currently the most widely used measure of organizational commitment is the Organizational Commitment Questionnaire (OCQ) (Mowday *et al.*, 1979). However, for the purpose of this study, the 11-item Affective Commitment Scale (ACS) (Allen and Meyer, 1990) has been used to assess the affective orientation of employees towards the organization. It is shorter than the OCQ, and Dunham *et al.* (1994) and Randall *et al.* (1990) found that the OCQ converged with the ACS. The ACS also has the advantage that its items were written to assess only affective orientation towards the organization and not employees' behaviour or behavioural intentions (e.g. intention to exert effort or leave the organization).

Continuance and normative components of commitment were not assessed because:

- employees' behaviour or behavioural intentions (e.g. intention to exert effort or leave the organization) are either beyond the scope of the research (e.g. turnover), or already measured as other variables (e.g. performance); and
- there is still a lack of confidence and validity in the Normative Commitment Scale (Allen and Meyer, 1990; Ko *et al.*, 1997).

Furthermore, according to Liu (2007), it is more appropriate to use affective commitment as a measure of impressions and attitudes of new employees, because there is little chance to develop a meaningful continuance or normative commitment to the organization in the early employment stage. This happened to be suitable for this study's sample population, which was predominantly employees with less than three years tenure in their organizations.

Most investigations of organizational commitment have been conducted using self-report measures, however, the veracity of self-reports is often questioned. Goffin and Gellatly (2001) assessed affective commitment among public-sector administrative staff, by using different sources of raters to test the explanations of the factors influencing self-report measures. They found that self-report commitment measures are affected mainly by observations or experiences of the self-reporter rather than by

systematic bias related to defensive responding. This increases confidence that scores from self-report measures of affective commitment are veridical.

In this study, respondents were asked to describe their affective commitment towards their organizations. The seven-point Likert scale was used, ranging from “strongly agree/very true” valued as a “1” to “strongly disagree/very unlikely” valued as a “7”. A higher mean score indicated a higher level of commitment. Negative items were reverse-coded prior to data analysis.

Job satisfaction. According to Robbins (2005), job satisfaction can be measured using a single global rating by asking the question: “All things considered, how satisfied are you with your job?”.

According to Yousef (2000), a number of researchers supported the usefulness of a single-item measure of global job satisfaction (Scarpello and Campbell, 1983; Begley and Czajka, 1993; Bhuian and Islam, 1996). Wanous *et al.* (1987) supported the use of a single-item measure unless a study’s inquiries or circumstances direct toward selecting a well-constructed scale. They also argued that the single-item measure could be used if space on a questionnaire is limited.

Respondents were asked to describe their job satisfaction. The five-point Likert scale was used, ranging from “not satisfied” valued as a “1” to “very satisfied” valued as a “5”. A higher mean score indicated a higher level of job satisfaction.

Employee performance. To measure employee performance, the self-rating 3-item overall performance definition developed by Motowidlo and Van Scotter (1994) has been used, as described by Li (2004). Researchers have criticized that self-ratings tend to be inflated, suffering from leniency and social desirability bias. In fact, it is argued that a non-self-report or multi-rater approach would be more accurate (i.e. ratings from supervisors, peers, etc.). This downside of self-rating is due to self-serving bias, where people tend to ascribe their own successes to internal personal factors, and their failures to external situational causes.

However, a self-appraisal approach for rating performance has been used for other types of performance measurements, as done previously by Al-Gattan (1983), Stevens *et al.* (1978) and Yousef (2000) with acceptable outcomes. Young and Dulewicz (2007), in a wider study into effective performance in the British Royal Navy, demonstrated that self-evaluation of own performance was significantly correlated with appraised (actual) performance using different psychometric questionnaires.

Respondents have been asked to determine:

- their standard of job performance as measured by self that ranged from “does not meet standard” valued as a “1” to “exceeds standard” valued as a “5”;
- performance as compared with others of the same rank that ranged from “low level” valued as a “1” to “high level” valued as a “5”; and
- job contribution to the organization as compared to other members of the work unit that ranged from “less contribution” valued as a “1” to “more contribution” valued as a “5”.

A higher mean score represented a higher level of performance.

Classification questions. Classification questions have been included at the end of the questionnaires. These were used for profiling the companies, for example, type of business, years of establishment, number of employees, and also for profiling the

respondents, for example, age, gender, job position, education, number of years in present organization/position.

Sampling design and data collection

Data was collected using self-administered questionnaires to examine the preceding issues because:

- responses could be easily quantified and summarized;
- data could be collected quickly, inexpensively and efficiently; and
- a large number of participants could be reached in a short span of time.

A small-scale piloting was conducted prior to distribution of the questionnaires. Several important aspects were checked (see Oppenheim, 2004, pp. 47-50), which resulted mostly in changes in the layout of the questionnaire. For the electronic version of the questionnaire, participants were asked to mark “x” in the appropriate yellow-colored boxes, rather than circling the responses. This is to ease the respondents’ work and to reduce non-response rates. Overall, the wording/phrasing of the questions were preserved to maintain the measurements’ integrity.

Questionnaires were distributed via e-mail and personally-administered by hand to 400 participants consisting of Malaysian UM MBA part-time students and the researcher’s working peers. This non-probability convenience sampling was chosen for convenience and for time- and cost-effectiveness for the research.

Approximately 70 percent of the questionnaires were distributed among MBA students, while the remaining 30 percent were handed to the researcher’s working peers. A total of 238 usable responses were received, giving a response rate of 59.5 percent. The response rates were roughly equal among MBA students and the researcher’s working peers.

It is anticipated that there are no differences between the responses from the MBA students and the working peers. This is because the MBA students comprise of working people from various career backgrounds who, in the course of their work, encounter different leadership behaviours and organizational cultures, and experience different states of commitment, performance and job satisfaction – which is similar to the researcher’s own work colleagues. Hence, they are in a position to give meaningful responses to the questionnaires as the researcher’s working peers.

Moreover, it was not the intention of this research to compare any differences between these two groups of subjects. Therefore, the any distinction between these two groups of subjects were not identified in the questionnaires that were handed out.

A very small number of returned questionnaires had missing data in one or more sections, but these are taken into account to make full use of the available data, e.g. by using “exclude cases pairwise” option when assessing normality using the SPSS program.

Results and discussion

Summary statistics of respondents

Demographic variables of the respondent sample were extracted by asking questions on age, gender, marital status, job position, number of years worked with current employer, type and nature of organizations, number of years of establishment of

organizations and size of organizations (number of employees). Table I summarizes the demographic information of the sample population for this study.

Majority of the respondents were single and young (aged 20-39 years), of nearly equal gender distribution, were degree holders and working as executives or senior executives in their organizations. Most were relatively new employees, having worked less than three years with their current employer.

Many of the respondents worked in private or proprietary organizations that had been operating for more than 15 years. Most of these organizations were service-oriented, such as in the sales, banking, education and consultancy lines. The size of the respondents' organizations was predominantly small or very large (less than 100 employees, and more than 700 employees, respectively).

Analyses of measures

Descriptive statistics. Table II shows that the standard deviations, skewness and kurtosis levels are low. Hence, the collected data was robust, representative of the samples, and normal. Parametric analyses techniques are therefore possible in the subsequent sections.

The measures of organizational culture, job satisfaction and employee performance all exhibited mean scores notably above their respective mid-points. In contrast, the measures of leadership and organizational commitment were notably lower than their mid-points. Although few inferences can be gained from this analysis, however, it may be argued that demographics could be an important factor. As an example, drawing from past literature, the low mean scores of organizational commitment could be due to the majority of respondents being young, highly-educated, and having short organizational tenures (DeCotiis and Summers, 1987; Mathieu and Hamel, 1989; Mathieu and Zajac, 1990; Michaels, 1994; Mottaz, 1988; Mowday *et al.*, 1982; Williams and Hazer, 1986).

Factor analysis. From the comprehensive review of the references, it was found that factor analysis was generally not conducted for items or dimensions in the instruments, as they were perceived as well-established and possessed well-documented reliability and validity.

Sampling adequacy was conducted using the Kaiser-Meyer-Olkin (KMO) analysis for all measures. Table III summarizes the KMO measurements and shows significant results for Bartlett's test of sphericity ($p = 0.000$), which further supported sampling adequacy of the data.

Factor analysis was conducted using principal axis factoring extraction method, and factors with eigenvalues of greater than one were extracted and retained. In analyzing matrices, factors with loadings below 0.3 were suppressed.

For organizational culture and leadership behaviour, it was expected that the factors extracted would be independent of one another according to pre-existing categories demonstrated in the original research by Wallach (1983) and Harris and Ogbonna (2001), respectively. Hence, orthogonal rotation (varimax) was selected to interpret factor loadings. Analyses results described three factors which can be extracted for each measurement, hence corresponding exactly to the structure of the measurements used by Wallach (1983) and Harris and Ogbonna (2001).

For organizational commitment and employee performance, as items were originally supposed to measure a single variable, therefore it was expected that the

Demographic variable	Percentage of sample
<i>Age</i>	
20-29 years	43.9
30-39 years	41.4
40-49 years	11.8
50 and above	3.0
<i>Gender</i>	
Female	51.1
Male	48.9
<i>Education level</i>	
Secondary	3.8
Diploma	8.0
Degree	57.8
Postgraduate	30.4
<i>Marital status</i>	
Single	58.9
Married	41.1
<i>Job position</i>	
Administrative or clerical	6.4
Technician	3.0
Executives or senior executive	37.3
Assistant manager	10.6
Managers or senior manager	28.0
Others	14.8
<i>Number of years worked with current employer</i>	
Less than 3 years	45.6
3-6 years	32.9
7-10 years	11.4
More than 10 years	10.1
<i>Type of organization</i>	
Manufacturing	11.4
Service	58.6
Others	30.0
<i>Nature of organization</i>	
Private/proprietary	72.6
Government	5.1
Government-linked (GLC)	16.7
Others	5.6
<i>Number of years of establishment of organization</i>	
Less than 10 years	23.7
10-15 years	17.8
More than 15 years	58.5
<i>Number of employees in organization</i>	
Less than 100	34.5
101-300	23.4
301-700	10.6
More than 700	31.5

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Table I.
Summary statistics of
respondents

	Valid cases	Mean ^a	Std. dev.	Skewness	Kurtosis
Bureaucratic culture	238	3.04	0.56	-0.56	0.48
Innovative culture	238	2.92	0.59	-0.14	0.94
Supportive culture	238	2.91	0.52	-0.33	-0.19
Participative leadership	238	3.35	1.25	0.61	0.08
Supportive leadership	238	3.62	1.19	0.38	0.17
Directive leadership	237	3.31	1.28	0.25	-0.51
Organizational commitment	238	3.65	0.75	-0.20	0.38
Job satisfaction	235	3.33	0.83	-0.36	0.59
Employee performance	237	3.75	0.64	-0.22	-0.11

Notes: ^aThe OCI was measured on a four-point scale, resulting in a mid-point of 2.5. Both job satisfaction and employee performance were measured on a five-point scale, hence a mid-point of 3. Leadership behaviour and organizational commitment were measured using seven-point scales; therefore they have a mid-point of 4

Table II.
Descriptive statistics

	KMO measure of sampling adequacy	Bartlett's test of sphericity (Sig.)
Organizational culture	0.878 (Great)	0.000
Leadership behaviour	0.904 (Superb)	0.000
Organizational commitment	0.784 (Good)	0.000
Employee performance	0.692 (Mediocre)	0.000

Table III.
KMO and Bartlett's test

factors extracted would be independent of one another. Hence oblique rotation (direct oblimin) was selected to interpret factor loadings. Analyses results showed that three factors could be extracted for the organizational commitment measurement, suggesting the possibility of further refinements on Allen and Meyer's (1990) ACS. On the other hand, only one factor could be extracted in the employee performance measurement, which describes accurately the structure of the employee performance instrument used by Li (2004).

Reliability analysis. Table IV shows that the results in the calculation of Cronbach Alpha coefficients ranged from 0.709 (for organizational commitment) to 0.921 (for participative leadership). The Cronbach Alpha coefficients obtained from this study were found to be relatively similar to reference studies. The high coefficient scores (more than 0.7) led to the conclusion that the scales were acceptably reliable. No items were deleted so as to maintain the integrity of these established, original instruments.

Correlation analyses. To study the correlation between variables, Pearson coefficient was selected as it was designed for interval level or continuous variables. The correlation patterns in Table V only partially followed the findings from Li's (2004) study. That is, organizational culture was found to be significantly and positively correlated to job satisfaction, but not with employee performance. In addition, leadership behaviours were found to significantly and positively correlate to organizational commitment.

However, the results differ from Li's (2004) study in a number of aspects. Organizational culture was found to be either not significantly or significantly

	No. of items	Cronbach Alpha (present study)	Cronbach Alpha (reference study)
Bureaucratic culture	8	0.824	0.86 ^a
Innovative culture	8	0.790	0.70 ^a
Supportive culture	8	0.812	0.97 ^a
Participative leadership	5	0.921	0.9279 ^b
Supportive leadership	4	0.788	0.7693 ^b
Directive leadership	4	0.860	0.6688 ^b
Organizational commitment	11	0.709	0.87 ^c
Employee performance	3	0.774	0.83 ^a

Sources: ^aLi (2004); ^bHarris and Ogbonna (2001); ^cAllen and Meyer (1990)

Table IV.
Reliability analysis

negatively correlated to leadership behaviours. Organizational culture also had significant negative correlation with organizational commitment. Leadership behaviours did not affect employee performance significantly, but significantly affected job satisfaction negatively. Employee performance was found to be significantly and positively correlated to job satisfaction.

Testing of hypotheses

To test the hypotheses using SPSS, hierarchical multiple regression was used following Coakes *et al.* (2006, pp. 140-143). This method was selected as the order in which independent variables are entered into the regression equation were known, and were based on logical or theoretical considerations (Ahmad, 2001; Tabachnick and Fidell, 1983). Tables VI-XI show the results of hierarchical multiple regression analyses.

Leadership behaviour, organizational culture and organizational commitment. H_1 stated that a leader's directive, participative and supportive behaviours have no significant relationship with organizational commitment. From the analyses, leadership behaviours explained about 20 to 30 percent of the variance (R^2) in organizational commitment, all of which were significant as indicated by the respective F-values ($p < 0.05$). Based on the R -values and t -values, all three types of leadership behaviours contributed positively and significantly to the prediction of organizational commitment ($p < 0.05$). Higher scores for each leadership behaviour led to stronger organizational commitment in the employees. Therefore, the null hypothesis H_1 is rejected, that is, leader's directive, participative and supportive behaviours have positive and significant relationship with organizational commitment.

This finding is consistent with some previous studies (Blau, 1985; Williams and Hazer, 1986) and lends credibility to the notion that leadership does play an influential role in generating commitment. Employees who are committed are highly involved in their organization, and are more willing to put in considerable effort at work, and possess a strong desire to remain in their organizations.

According to H_2 , the organizational culture (bureaucratic, innovative and supportive) has no effect on the relationship between leadership behaviour and organizational commitment. From the R^2 Change and Sig. F Change values, both

Table V.
Correlation

	Bureaucratic culture	Innovative culture	Supportive culture	Participative leadership	Supportive leadership	Directive leadership	Employee performance	Organizational commitment	Job satisfaction
Bureaucratic culture	Pearson correlation Sig. (1-tailed) n	1 238	0.427** 0.000 238	0.307** 0.000 238	0.019 0.383 238	0.006 0.462 238	-0.125* 0.027 237	-0.065 0.160 237	-0.128* 0.024 238
Innovative culture	Pearson correlation Sig. (1-tailed) n	0.427** 0.000 238	1 0.000 238	0.565** 0.000 238	-0.126* 0.026 238	-0.163** 0.006 238	-0.105 0.054 237	-0.020 0.378 237	0.253** 0.000 238
Supportive culture	Pearson correlation Sig. (1-tailed) n	0.307** 0.000 238	0.565** 0.000 238	1 0.000 238	-0.406** 0.000 238	-0.401** 0.000 238	-0.208** 0.001 237	0.045 0.244 237	0.300** 0.000 238
Participative leadership	Pearson correlation Sig. (1-tailed) n	0.019 0.383 238	-0.126* 0.026 238	-0.406** 0.000 238	1 0.000 238	0.688** 0.000 238	0.452** 0.000 237	0.068 0.150 237	0.500** 0.000 238
Supportive leadership	Pearson correlation Sig. (1-tailed) n	0.006 0.462 238	-0.163** 0.006 238	-0.401** 0.000 238	0.688** 0.000 238	1 0.000 238	0.515** 0.000 237	0.088 0.089 237	0.541** 0.000 238
Directive leadership	Pearson correlation Sig. (1-tailed) n	-0.125* 0.027 237	-0.105 0.054 237	-0.208** 0.001 237	0.452** 0.000 237	0.515** 0.000 237	1 0.000 237	0.033 0.306 237	-0.147* 0.000 237
Employee performance	Pearson correlation Sig. (1-tailed) n	-0.065 0.160 237	-0.020 0.378 237	0.045 0.244 237	0.068 0.150 237	0.088 0.089 237	0.033 0.306 237	1 0.000 237	0.450** 0.000 237
Organizational commitment	Pearson correlation Sig. (1-tailed) n	-0.128* 0.024 238	-0.375** 0.000 238	-0.423** 0.000 238	-0.119* 0.033 237	0.423** 0.000 238	1 0.000 237	0.305** 0.033 237	0.305** 0.000 238
Job satisfaction	Pearson correlation Sig. (1-tailed) n	0.012 0.012 235	0.000 0.000 235	0.000 0.000 235	0.000 0.000 235	0.000 0.000 235	0.012 0.012 234	0.000 0.000 234	0.000 0.000 235

Notes: ** Significant at the 0.01 level (1-tailed); * Significant at the 0.05 level (1-tailed)

Independent variables	Model summary		ANOVA ^c		Coefficients ^d		
	R^2 excl. interaction ^a	R^2 incl. interaction ^b	F	Sig.	Beta	t	Sig.
Directive leadership	0.203	0.208	30.742	0.000	-0.098	-1.233	0.219
Participative leadership	0.250	0.269	43.212	0.000	-0.185	-2.473	0.014
Supportive leadership	0.293	0.310	52.899	0.000	-0.177	-2.430	0.016

Notes: ^a R^2 with leadership behaviour and organizational culture, but excluding interaction leadership behaviour * organizational culture; ^b R^2 including interaction term leadership behaviour * organizational culture; ^cANOVA predictors: (constant), leadership behaviour, organizational culture; ^dCoefficients of organizational culture in the model: (constant), leadership behaviour, organizational culture

Table VI.
Results of hierarchical
regression analysis of
organizational
commitment on
leadership behaviours in
bureaucratic culture

Table VII.
Results of hierarchical regression analysis of organizational commitment on leadership behaviours in innovative culture

Independent variables	R^2 excl. interaction ^a	Model summary		ΔR^2	Sig. F change	ANOVA ^c		Coefficients ^d		
		R^2 incl. interaction ^b	F			Sig.	B	Beta	t	Sig.
Directive leadership	0.203	0.312	52.983	0.109	0.000	0.000	-0.421	-0.332	-6.081	0.000
Participative leadership	0.250	0.349	62.938	0.099	0.000	0.000	-0.402	-0.317	-5.976	0.000
Supportive leadership	0.293	0.378	71.330	0.085	0.000	0.000	-0.374	-0.295	-5.653	0.000

Notes: ^a R^2 with leadership behaviour and organizational culture, but excluding interaction leadership behaviour * organizational culture; ^b R^2 including interaction term leadership behaviour * organizational culture; ^cANOVA predictors: (constant), leadership behaviour, organizational culture; ^dCoefficients of organizational culture in the model: (constant), leadership behaviour, organizational culture

Independent variables	Model summary		ANOVA ^c		Coefficients ^d		
	R ² excl. interaction ^a	R ² incl. interaction ^b	F	Sig.	B	t	Sig.
Directive leadership	0.203	0.339	59.891	0.000	-0.545	-6.927	0.000
Participative leadership	0.250	0.325	56.640	0.000	-0.435	-5.125	0.000
Supportive leadership	0.293	0.360	66.058	0.000	-0.408	-4.951	0.000

Notes: ^aR² with leadership behaviour and organizational culture, but excluding interaction leadership behaviour * organizational culture; ^bR² including interaction term leadership behaviour * organizational culture; ^cANOVA predictors: (constant), leadership behaviour, organizational culture; ^dCoefficients of organizational culture in the model: (constant), leadership behaviour, organizational culture

Table VIII.
Results of hierarchical
regression analysis of
organizational
commitment on
leadership behaviours in
supportive culture

Table IX.
Results of hierarchical regression analysis of job satisfaction and employee performance on organizational commitment in bureaucratic culture

Dependent variables	R^2 excl. interaction ^a	Model summary R^2 incl. interaction ^b	ΔR^2	Sig. F change	ANOVA ^c		Coefficients ^d		
					F	Sig.	Beta	t	Sig.
Job satisfaction	0.179	0.187	0.009	0.113	26.760	0.000	0.141	1.591	0.113
Employee performance	0.014	0.021	0.007	0.213	2.482	0.086	-0.093	-1.248	0.213

Notes: ^a R^2 with organizational commitment and organizational culture, but excluding interaction leadership behaviour * organizational culture; ^b R^2 including interaction term organizational commitment * organizational culture; ^c ANOVA predictors: (constant), organizational commitment, organizational culture; ^d Coefficients of organizational culture in the model: (constant), organizational commitment, organizational culture

Dependent variables	Model summary			ANOVA ^c		Coefficients ^d		
	R ² excl. interaction ^a	R ² incl. interaction ^b	Δ R ²	F	Sig.	Beta	t	Sig.
Job satisfaction	0.179	0.189	0.011	27.071	0.000	0.155	1.744	0.082
Employee performance	0.014	0.019	0.005	2.288	0.104	-0.081	-1.084	0.280

Notes: ^a R² with organizational commitment and organizational culture, but excluding interaction leadership behaviour * organizational culture; ^b R² including interaction term organizational commitment * organizational culture; ^c ANOVA predictors: (constant), organizational commitment, organizational culture; ^d Coefficients of organizational culture in the model: (constant), organizational commitment, organizational culture

Table X.
Results of hierarchical regression analysis of job satisfaction and employee performance on organizational commitment in innovative culture

Table XI.
Results of hierarchical regression analysis of job satisfaction and employee performance on organizational commitment in supportive culture

Independent variables	R^2 excl. interaction ^a	Model summary		ANOVA ^c		Coefficients ^d			
		R^2 incl. interaction ^b	ΔR^2	F	Sig.	Beta	t	Sig.	
Job satisfaction	0.179	0.193	0.015	27.793	0.000	0.217	0.136	2.056	0.041
Employee performance	0.014	0.014	0.000	1.704	0.184	-0.014	-0.011	-0.155	-0.877

Notes: ^a R^2 with organizational commitment and organizational culture, but excluding interaction leadership behaviour * organizational culture; ^b R^2 including interaction term organizational commitment * organizational culture; ^c ANOVA predictors: (constant), organizational commitment, organizational culture; ^d Coefficients of organizational culture in the model: (constant), organizational commitment, organizational culture

innovative and supportive cultures made significant, unique contributions of 8.5 to 10.9 percent, and 6.7 to 13.6 percent, respectively, to the variance of organizational commitment after leadership behaviour had been taken into account ($p < 0.05$). The effect was most pronounced with directive leadership, followed by participative and least of all, supportive leadership styles. The effect is less clear in bureaucratic environments; it did not make any significant contributions to the variance of organizational commitment under directive leadership, but significantly increased the variances by nearly 2 percent under participative and supportive leadership styles.

The negative beta values indicated that higher scores in organizational culture was associated with lower commitment, with the exception of bureaucratic culture with directive leadership. Hence, organizational culture was generally found to be a significant moderator in the relationship between leadership behaviours and organizational commitment.

Therefore, the null hypothesis H_2 is partially rejected. Organizational culture generally has significant moderating effect on the relationship between leadership behaviour and organizational commitment, except for the relationship between directive leadership behaviour and organizational commitment under a bureaucratic environment.

Bureaucratic, innovative and supportive cultures have significant moderating effects on the relationship between participative and supportive leadership behaviours and organizational commitment. The relationship between directive leadership behaviour and organizational commitment is significantly moderated by both innovative and supportive cultures; however, bureaucratic culture did not significantly moderate this relationship.

This finding is in agreement with Li's (2004) study in that the effect of different leadership behaviors on organizational commitment is contingent upon organizational culture. Although all three types of organizational culture moderated the relationships between directive, participative and supportive leadership behaviours with commitment by negatively impacting them, bureaucratic culture was found to exert the least effect. Leaders should recognize this as they seek to influence employees and achieve their organizational goals, of which success can be contingent upon the type of organizational culture being practiced. Regardless of conditions in the labor market, committed employees are always a necessary and valuable organizational resource (Li, 2004).

The finding that directive leadership style is not affected by a bureaucratic environment in generating commitment contributes further evidence that a particular leadership style can be effective in one culture, but may not benefit (or become ineffective) in another culture.

Organizational commitment, organizational culture, job satisfaction and employee performance. According to H_3 , organizational commitment is posited to have no significant relationship with job satisfaction and job performance. From the analyses, organizational commitment explained 17.9 percent of the variance (R^2) in job satisfaction, which was significant as indicated by the F -value ($p < 0.05$). In contrast, organizational commitment explained 1.4 percent of the variance in employee performance, which was not significant as indicated by the F -value ($p > 0.05$). Based on the R -values and t -values, organizational commitment is a significant and negative

predictor of job satisfaction ($p < 0.05$), but is not a predictor for employee performance ($p > 0.05$). The stronger the commitment, the lower the job satisfaction. Therefore, the null hypothesis H_3 is partially rejected, that is, organizational commitment has a negative significant relationship with job satisfaction, and has an insignificant relationship with employee performance.

The findings are contrary to the reviewed literature with regards to the association between organizational commitment and job satisfaction. For instance, Mathieu and Zajac's (1990) research suggested that affective and continuance commitment are positively related with job satisfaction, but this was not observed in this study. One possible reason is that the sample population consists mostly of young, highly educated persons holding high executive or managerial positions. They may be involved and be enthusiastic about their work professionally, however, actual expectations and feelings about their work may differ, which may lead to dissatisfaction. On the other hand, the findings agree to Lee and Mowday's (1989) study, where there is negligible relationship between commitment and employee performance. There may be other more important factors which impacts performance and productivity besides organizational commitment. Managers can benefit by attempting to uncover underlying factors that are critical in determining job satisfaction and performance levels, as organizational commitment itself may not contribute as much as previously thought.

H_4 stated that organizational culture (bureaucratic, innovative and supportive) has no effect on the relationship between organization commitment and job satisfaction and job performance. From the R^2 Change and Sig. F Change values, only supportive culture made a significant, unique (albeit weak) contribution of 1.5 percent to the variance of job satisfaction after organizational commitment ($p = 0.041$). The positive beta (beta = 0.136) indicated that higher score in supportive culture was associated with higher job satisfaction. Hence, supportive culture was found to be a significant moderator in the relationship between organizational commitment and job satisfaction.

Organizational culture was found not to contribute significantly to the variance of employee performance after organizational commitment ($p > 0.05$). Hence, in the sample population, organizational culture was not a significant moderator in the relationship between organizational commitment and employee performance.

Therefore, the null hypothesis H_4 is partially rejected, that is, only supportive culture has a significant moderating effect on the relationship between organizational commitment and job satisfaction. Bureaucratic and innovative cultures did not significantly influence the relationship between organizational commitment with job satisfaction. In addition, all three types of organizational cultures did not moderate the relationship between organizational commitment and employee performance.

This finding is in agreement with past literature, where a trusting, encouraging and team-oriented environment increased job satisfaction levels. In corporations where rigid bureaucratic, or challenging, aggressive innovative cultures exist, Malaysian managers may want to consider introducing softer and more people-oriented elements into the working environment, so as to increase satisfaction, which in turn, may benefit productivity, stress levels or turnover rates.

Conclusion and recommendations

Summary of findings

The purpose of this study was to investigate the moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance, particularly in the Malaysian setting.

To date, little empirical research has been done to investigate the relationships and organizational outcomes of these constructs. This study, therefore, is unique in that it has helped to fill this gap in an effort to improve our understanding of the role of leadership and organizational commitment in the Malaysian environment and beyond. With the advent of globalization in recent years, greater knowledge of the interactions of these factors specifically in the multiracial and multicultural Malaysian setting can be beneficial for assessing the effectiveness of current theory as well as benefiting practicing leaders and decision makers. Findings from this study can help leaders and scholars, especially those concerned with Malaysian companies.

By using questionnaires, data was gathered from 238 Malaysian UM MBA part-time students and the researcher's working peers. Data on the respondents' organizational culture and leadership behaviours, and how they affect organizational commitment, job satisfaction and employee performance, were collected using the OCI (Wallach, 1983), leadership behaviour questionnaire (Harris and Ogbonna, 2001), ACS (Allen and Meyer, 1990), single global rating for job satisfaction (Robbins, 2005), and overall performance questionnaire (Motowidlo and Van Scotter, 1994), respectively. Descriptive statistics were reported, followed by factor analysis, reliability analysis, Pearson correlation and hypotheses testing using hierarchical multiple regression.

In this study, although the correlations were statistically significant ($p < 0.05$), the amount of correlation with each variable was relatively small. One of the reasons could be that there are other, possibly stronger, predictors and dependents for the variables investigated in this study. For example, there are numerous factors which influence, or are influenced by job satisfaction, as described by Rad and Yarmohammadian (2006).

Four hypotheses were developed based on the research objectives and from the existing literature. The hypotheses were tested and thus, the research objectives were achieved.

H_1 stated that a leader's directive, participative and supportive behaviours have no significant relationship with organizational commitment. However, based on the research results, the null hypothesis H_1 is rejected. The leader's directive, participative and supportive behaviours were found to have positive and significant relationship with organizational commitment. These results were consistent with the pattern found in a number of western studies, as described by Yousef (2000). In his research on major United Arab Emirates organizations, he found that employees can be highly committed to their organizations when they perceive their superiors as adopting consultative or participative leadership behaviours.

According to H_2 , the organizational culture (bureaucratic, innovative and supportive) has no effect on the relationship between leadership behaviour and organizational commitment. From the findings, the null hypothesis H_2 is partially rejected. Bureaucratic, innovative and supportive cultures have significant moderating effects on the relationship between participative and supportive leadership behaviours and organizational commitment. The relationship between directive leadership

behaviour and organizational commitment is significantly moderated by both innovative and supportive cultures; however, bureaucratic culture did not significantly moderate this relationship. This finding is somewhat reflected in previous western studies, where innovative and supportive cultures were found to exert stronger influence or even enhance employees' commitment than a bureaucratic culture (Brewer, 1993; Brewer, 1994; Kratina, 1990; Wallach, 1983).

According to H_3 , organizational commitment is posited to have no significant relationship with job satisfaction and job performance. Following the data analysis, the null hypothesis H_3 is partially rejected. Organizational commitment has a negative significant relationship with job satisfaction, but has an insignificant relationship with employee performance. This is contrary to findings from western studies with regards to the association between organizational commitment and job satisfaction. For instance, Mathieu and Zajac (1990) found that commitment is positively related with job satisfaction, but this was not observed in this study. On the other hand, this study's findings agree to Lee and Mowday's (1989), where there is negligible relationship between commitment and employee performance. This difference could be explained by the demographics of the study sample – young, highly-educated workers who may be satisfied with their work per se but not committed to their organization. Their performance could be influenced by other factors aside from commitment alone.

H_4 stated that organizational culture (bureaucratic, innovative and supportive) has no effect on the relationship between organization commitment and job satisfaction and job performance. From the analysis, it is concluded that the null hypothesis H_4 is partially rejected. Only supportive culture has a significant moderating effect on the relationship between organizational commitment and job satisfaction. Bureaucratic and innovative cultures did not significantly influence the relationship between organizational commitment with job satisfaction. In addition, all three types of organizational cultures did not moderate the relationship between organizational commitment and employee performance. This finding is somewhat in agreement with previous western studies, where supportive cultures were predominantly associated with higher levels of job satisfaction and performance, while bureaucratic cultures did the opposite (Brewer and Clippard, 2002; Krausz *et al.*, 1995; London and Larsen, 1999; Silverthorne, 2004; Trice and Beyer, 1993).

There exists very few published research work of similar nature conducted in Malaysia. Findings from this study did not agree with Samad (2005)'s, in that organizational commitment was found to be negatively related to job satisfaction and unrelated to employee performance. Hence, the sampled Malaysian employees who feel attached and involved in their companies did not feel more satisfied with their jobs, and did not perform better either.

Although no direct comparisons could be made against findings from Rashid *et al.* (2003)'s study, it can be loosely concluded that a bureaucratic environment does not affect organizational commitment and other consequents such as satisfaction and performance in the Malaysian setting. Rashid *et al.* (2003) found that a consensual (supportive) culture positively influenced affective commitment, whereas an entrepreneurial (innovative) culture did otherwise. Such findings were not observed in this study, however.

Suggestions for future research

Sampling was one of the limitations identified in this study. The fact that convenience sampling was used meant that results were not immediately transferable to the general working population. In addition, the sample subjects in this study were mostly young executives in the urban Klang Valley area, who worked less than three years in their companies, and were mostly from the private sector; thus, findings could not be generalized. Therefore, future research could look into extending the study population to include collect input from more experienced business managers and leaders who have better insight of the workings of the corporation. If samples were drawn from a wider range of demographics, then the results may become more meaningful. Moreover, if adequate population data can be obtained, probability sampling methods can be used.

Future research could explore the differences in response towards the investigated variables among different groups of people of varied backgrounds and demographics. For example, comparisons can be made between workers from different industries, ethnicities, or countries.

Another possible future direction is to use a more differentiated measure of job satisfaction, such as the Job Descriptive Index or Overall Job Satisfaction questionnaires, provided the benefits of using such lengthier measures outweigh the disadvantages. Such measures can provide a more detailed analysis on the facets of job satisfaction that are affected by organizational behaviour variables.

Implications

There can be a number of implications for Malaysian corporate leaders, managers and supervisors from this study. Leaders need to realize the impact of their personal leadership styles upon their employees' commitment to the workplace, and that the success of their endeavours is dependent on the shared values and norms within the organization. Hence, to enhance their effectiveness, leaders could consider changing their leadership style to synergize with the organization's culture, or initiate changes to the culture itself. In addition, this further reaffirms the use of the contingency approach in conceptualizing leadership styles and behaviours.

For example, in Malaysia there are many bureaucratic organizations such as government institutions, large manufacturing plants, and traditional family-owned companies. In these organizations, directive leadership is still quite prevalent where supervisors continue to direct and plan work for employees, and rigid rules and policies are enforced. Such organizations continue to thrive today as demonstrated by years of continued financial success. Working conditions in such bureaucratic cultures may not immediately favour supportive leadership styles; where efficiency and strict adherence to rules are valued, a manager adopting a softer, caring approach risks losing respect from older employees, and gaining lazy workers who take advantage of the open, friendly atmosphere. Therefore, the supportive manager needs to change his leading style, perhaps by adopting a more directive leadership approach.

Malaysian leaders should also realize that contrary to common belief, committed employees may not automatically equate to satisfied and high-performing workers in the organization, even if a favourable environment exists for the employees. There could be other, more significant underlying reasons for an employee's commitment, which could subsequently affect other critical bottom-lines, such as absenteeism,

turnover, profitability and productivity. Leaders need to investigate and find out what exactly keeps their employees happy and working hard.

As an example, in Malaysia the sales and marketing divisions of many fast-moving industries, such as telecommunications, electronics, consumer goods and healthcare products, employ young people who are enthusiastic, driven and possess high-performing qualities. They are committed to their organizations, often bearing hopes of finding an ideal working environment, rewarding salary package and promotion opportunities, and an exciting job. However, it is also true that turnover among new recruits in sales teams and marketing departments in such industries is high, and targets are not always met. Managers should perhaps look into what affects their subordinates' job satisfaction and performance, such as too much stress or inadequate training.

References

- Ahmad, K. (2001), "Corporate leadership and workplace motivation in Malaysia", *International Journal of Commerce & Management*, Vol. 11 No. 1, pp. 82-101.
- Al-Gattan, A.R. (1983), "The path-goal theory of leadership: an empirical and longitudinal analysis", unpublished doctoral dissertation, Arizona State University, Tempe, AZ.
- Al-Meer, A.R.A. (1989), "Organizational commitment: a comparison of Westerners, Asians, and Saudis", *International Studies of Management & Organization*, Vol. 19 No. 2, pp. 74-84.
- Allen, N. and Meyer, J. (1990), "The measurement and antecedents of affective, normative and continuance commitment to the organization", *Journal of Occupational Psychology*, Vol. 63, pp. 1-18.
- Appelbaum, S., Bartolomucci, N., Beaumier, E., Boulanger, J., Corrigan, R., Dore, I., Girard, C. and Serroni, C. (2004), "Organizational citizenship behaviour: a case study of culture, leadership and trust", *Management Decision*, Vol. 42 Nos 1/2, pp. 13-40.
- Barnes, J.H., Daswar, A.K. and Gilbert, F.W. (1994), "Number of factors obtained by chance: a situation study", in Wilson, K.J. and Black, W. (Eds), *Developments in Marketing Science*, Vol. XVII, Academy of Marketing Science, Nashville, TN.
- Baugh, S.G. and Roberts, R.M. (1994), "Professional and organizational commitment among engineers: conflicting or complementary?", *IEEE Transactions on Engineering Management*, Vol. 41 No. 2, pp. 108-14.
- Begley, T.M. and Czajka, J.M. (1993), "Panel analysis of the moderating effects of commitment on job satisfaction, intent to quit, and health following organizational change", *Journal of Applied Psychology*, Vol. 78 No. 4, pp. 552-6.
- Benkhoff, B. (1997), "Disentangling organizational commitment: the changes of the OCQ for research and policy", *Personnel Review*, Vol. 26 No. 1, pp. 114-20.
- Bhuiyan, S.N. and Islam, M.S. (1996), "Continuance commitment and extrinsic job satisfaction among a novel multicultural expatriate workforce", *The Mid-Atlantic Journal of Business*, Vol. 32 No. 1, pp. 35-46.
- Blau, G. (1985), "The measurement and prediction of career commitment", *Journal of Occupational Psychology*, Vol. 58, pp. 277-88.
- Brett, J.F., Cron, W.L. and Slocum, J.W. Jr (1995), "Economic dependency on work: a moderator of the relationship between organizational commitment and performance", *Academy of Management Journal*, Vol. 38 No. 1, pp. 261-71.
- Brewer, A. (1993), *Managing for Employee Commitment*, Longman, London.

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- Brewer, A. (1994), *The Responsive Employee*, Allen & Unwin, Sydney.
- Brewer, E.W. and Clippard, L.F. (2002), "Burnout and job satisfaction among Student Support Services personnel", *Human Resource Development Quarterly*, Vol. 13 No. 2, pp. 169-86.
- Brunetto, Y. and Farr-Wharton, R. (2003), "The commitment and satisfaction of lower-ranked police officers: lessons for management", *Policing: An International Journal of Police Strategies & Management*, Vol. 26 No. 1, pp. 43-63.
- Cameron, K.S. and Freeman, S.J. (1991), "Cultural congruence, strength, and type: relationships to effectiveness", *Research in Organizational Change and Development*, Vol. 5, pp. 23-58.
- Caykoylu, S., Egri, C.P. and Havlovic, S. (2007), "Organizational commitment across different employee groups", *The Business Review*, Vol. 8 No. 1, pp. 191-7.
- Chang, T.Z., Palsa, P. and Chen, S.J. (2003), "Manufacturer channel management behaviour and retailers' performance: an empirical investigation of automotive channel", *Supply Chain Management*, Vol. 8 No. 2, pp. 132-9.
- Chen, Y.J. (2007), "Relationships among service orientation, job satisfaction, and organizational commitment in the international tourist hotel industry", *Journal of American Academy of Business*, Vol. 11 No. 2, pp. 71-82.
- Churchill, G.A. (1991), *Marketing Research: Methodological Foundations*, The Dryden Press, London.
- Coakes, S.J., Steed, L. and Dzidic, P. (2006), *SPSS version 13.0 for Windows: Analysis without Anguish*, John Wiley & Sons Australia Ltd, North Ryde.
- Daft, R.L. (2005), *The Leadership Experience*, 3rd ed., Thomson-Southwestern, Vancouver.
- DeCotiis, T. and Summers, T. (1987), "A path analysis of a model of the antecedents and consequences of organizational commitment", *Human Relations*, Vol. 40 No. 7, pp. 445-70.
- Deal, T.E. and Kennedy, A.A. (1982), *Corporate Cultures*, Addison-Wesley, Reading, MA.
- Downey, H.K., Sheridan, J.E. and Slocum, J.W. Jr (1975), "Analysis of relationships among leader behaviour, subordinate job performance and satisfaction: a path-goal approach", *Academy of Management Journal*, Vol. 18 No. 2, pp. 253-62.
- Dunham, R.B., Grube, J.A. and Castenada, M.B. (1994), "Organizational commitment: the utility of an integrative definition", *Journal of Applied Psychology*, Vol. 79 No. 3, pp. 370-80.
- Earle, V. (1996), "Motivational leadership", *Executive Excellence*, Vol. 13 No. 11, pp. 16-17.
- Fleishman, E.A. (1957), "A leadership behaviour description for industry", in Stogdill, R.M. and Coons, A.E. (Eds), *Leader Behavior: Its Description and Measurement*, The Ohio State University Bureau of Business Research, Columbus, OH.
- Goffee, R. and Jones, G. (1998), *The Character of a Corporation: How Your Company's Culture Can Make or Break Your Business*, HarperBusiness, London.
- Goffin, R.D. and Gellatly, I.E. (2001), "A multi-rater assessment of organizational commitment: are self-report measures biased?", *Journal of Organizational Behavior*, Vol. 22 No. 4, pp. 437-51.
- Goulet, L.R. and Singh, P. (2002), "Career commitment: a re-examination and an extension", *Journal of Vocational Behaviour*, Vol. 61, pp. 73-91.
- Gregersen, H.B. and Black, J.S. (1992), "Antecedents to commitment to a parent company and a foreign operation", *Academy of Management Journal*, Vol. 35 No. 1, pp. 65-90.
- Hackett, R.D., Lapierre, L.M. and Hausdorf, P.A. (2001), "Understanding the links between work commitment constructs", *Journal of Vocational Behaviours*, Vol. 58, pp. 392-413.
- Harris, L.C. and Ogbonna, E. (2001), "Leadership style and market orientation: an empirical study", *European Journal of Marketing*, Vol. 35 Nos 5/6, pp. 744-64.

-
- Hickman, C. and Silva, M. (1984), *Creating Excellence: Managing Culture and Change in the New Age*, New American Library, New York, NY.
- House, R.J. (1971), "A path-goal theory of leader effectiveness", *Administrative Science Quarterly*, Vol. 16, pp. 321-38.
- House, R.J. and Dessler, G. (1974), "The path-goal theory of leadership: some *post hoc* and a priori tests", in Hunt, J.G. and Larson, L.L. (Eds), *Contingency Approaches to Leadership*, Southern Illinois University Press, Carbondale, IL.
- Iverson, R.D. and Roy, P. (1994), "A causal model of behavioural commitment: evidence from a study of Australian blue-collar employees", *Journal of Management*, Vol. 20 No. 1, pp. 15-41.
- Jernigan, I.E., Beggs, J.M. and Kohut, G.F. (2002), "Dimensions of work satisfaction as predictors of commitment type", *Journal of Managerial Psychology*, Vol. 17 No. 7, pp. 564-79.
- Kahai, S.S., Sosik, J.J. and Avolio, B.J. (1997), "Effects of leadership style and problem structure on work group process and outcomes in an electronic meeting system environment", *Personnel Psychology*, Vol. 50 No. 1, pp. 121-46.
- Kalleberg, A.L. and Marden, P.V. (1995), "Organizational commitment and job performance in the US labor force", *Research in the Sociology of Work*, Vol. 5, pp. 235-57.
- Kim, S. (2002), "Participative management and job satisfaction: lessons for management leadership", *Public Administration Review*, Vol. 62 No. 2, pp. 231-41.
- Kirchmeyer, C. (1995), "Managing the work-nonwork boundary: an assessment of organizational responses", *Human Relations*, Vol. 48 No. 5, pp. 515-36.
- Ko, J.W., Price, J.L. and Mueller, C.W. (1997), "Assessment of Meyer and Allen's 3 Component Model of Organizational Commitment in South Korea", *Journal of Applied Psychology*, Vol. 82 No. 6, pp. 961-73.
- Kratrina, S. (1990), "Organizational culture and head nurse leadership: the relationship to nurses' job satisfaction and turnover in hospital settings", unpublished PhD thesis, College of Education, Georgia State University, Atlanta, GA.
- Krausz, M., Koslowsky, M., Shalon, N. and Elyakim, N. (1995), "Predictors of intention to leave the ward, the hospital and the nursing profession: a longitudinal study", *Journal of Organizational Behaviour*, Vol. 16, pp. 277-88.
- Lee, T.W. and Mowday, R.T. (1989), "Voluntarily leaving an organization: an empirical investigation of Steers and Mowday's Model of Turnover", *Academy of Management Journal*, Vol. 30, pp. 721-43.
- Leong, C.S., Furnham, A. and Cooper, C.L. (1996), "The moderating effect of organizational commitment on the occupational stress outcome relationship", *Human Relations*, Vol. 49 No. 10, pp. 1345-63.
- Leong, S.M., Randoll, D.N. and Cote, J.A. (1994), "Exploring the organizational commitment-performance", *Journal of Business Research*, Vol. 29 No. 1, pp. 57-63.
- Li, Y.C. (2004), "Examining the effect of organization culture and leadership behaviours on organizational commitment, job satisfaction, and job performance at small and middle-sized firms of Taiwan", *Journal of American Academy of Business*, Vol. 5 Nos 1/2, pp. 432-8.
- Lim, B. (1995), "Examining the organizational culture and organizational performance link", *Leadership & Organization Development Journal*, Vol. 16, pp. 16-21.
- Liu, C.M. (2007), "The early employment influences of sales representatives on the development of organizational commitment", *Employee Relations*, Vol. 29 No. 1, pp. 5-15.

-
- Lok, P. and Crawford, J. (2001), "Antecedents of organizational commitment and the mediating role of job satisfaction", *Journal of Managerial Psychology*, Vol. 16 Nos 7/8, pp. 594-613.
- Lok, P. and Crawford, J. (2004), "The effect of organizational culture and leadership style on job satisfaction and organizational commitment: a cross-national comparison", *Journal of Management Development*, Vol. 23 No. 4, pp. 321-38.
- London, M. and Larsen, H. (1999), "Relationships between feedback and self-development", *Group and Organization Management*, Vol. 24 No. 1, pp. 5-27.
- McCaul, H.S., Hinsz, V.B. and McCaul, K.D. (1995), "Assessing organizational commitment: an employee's global attitude towards the organization", *Journal of Applied Behavioural Science*, Vol. 31 No. 1, pp. 80-90.
- Madsen, S.R., Miller, D. and John, C.R. (2005), "Readiness for organizational change: do organizational commitment and social relationships in the workplace make a difference?", *Human Resource Development Quarterly*, Vol. 16 No. 2, pp. 213-33.
- Malhotra, N.K. (1993), *Marketing Research: An Applied Orientation*, Prentice-Hall International, London.
- Mathieu, J. and Hamel, D. (1989), "A cause model of the antecedents of organizational commitment among professionals and non-professionals", *Journal of Vocational Behaviour*, Vol. 34, pp. 299-317.
- Mathieu, J. and Zajac, D. (1990), "A review of meta-analysis of the antecedents, correlates and consequences of organizational commitment", *Psychological Bulletin*, Vol. 108 No. 2, pp. 171-94.
- Mehta, R., Dubinsky, A.J. and Anderson, R.E. (2003), "Leadership style, motivation and performance in international marketing channels: an empirical investigation of the USA, Finland and Poland", *European Journal of Marketing*, Vol. 37 Nos 1/2, pp. 50-85.
- Mehta, R., Larsen, T. and Rosenbloom, B. (1990), "The influence of leadership style on co-operation in channels of distribution", *International Journal of Physical Distribution & Logistics Management*, Vol. 26 No. 6, p. 32.
- Meyer, J.P., Paunonen, S.V., Gellatly, I.R., Goffin, R.D. and Jackson, D.N. (1989), "Organizational commitment and job performance: it's the nature of the commitment that counts", *Journal of Applied Psychology*, Vol. 74 No. 1, pp. 152-6.
- Michaels, P. (1994), "An expanded conceptual framework on organizational commitment and job satisfaction for salesforce management", *Journal of Business and Society*, Vol. 7 No. 1, pp. 42-67.
- Motowidlo, S.J. and Van Scotter, J.R. (1994), "Evidence that task performance should be distinguished from contextual performance", *Journal of Applied Psychology*, Vol. 79, pp. 475-80.
- Mottaz, C. (1988), "Determinants of organizational commitments", *Human Relations*, Vol. 41 No. 6, pp. 467-82.
- Mowday, R.T., Porter, L.M. and Dubin, R. (1974), "Unit performance, situational factors and employee attitudes in spatially separated work units", *Organizational Behaviour and Human Performance*, Vol. 12, pp. 231-48.
- Mowday, R.T., Porter, L.M. and Steers, R.M. (1982), *Employee-Organization Linkages: The Psychology of Commitment, Absenteeism and Turnover*, Academic Press, New York, NY.
- Mowday, R.T., Steers, R.M. and Porter, L.W. (1979), "The measurement of organizational commitment", *Journal of Vocational Behaviour*, Vol. 14, pp. 224-47.

- Oppenheim, A.N. (2004), *Questionnaire Design, Interviewing and Attitude Measurement*, new edition, Continuum, New York, NY.
- Peters, T. and Waterman, R. (1982), *In Search of Excellence*, Harper & Row, New York, NY.
- Poh, F.F. (2002), "The relationship between employee intention to leave and job satisfaction and organizational commitment", MBA dissertation, Faculty of Business and Accountancy, Universiti Malaya, Kuala Lumpur.
- Pool, S.W. (1997), "The relationship of job satisfaction with substitutes of leadership, leadership behaviour, and work motivation", *The Journal of Psychology*, Vol. 13 No. 3, pp. 271-83.
- Porter, L.W., Steers, R.M., Mowday, R.T. and Boulian, P.V. (1974), "Organisational commitment, job satisfaction and turnover among psychiatric technicians", *Journal of Applied Psychology*, Vol. 59 No. 5, pp. 603-9.
- Price, J. and Mueller, C. (1981), *Professional Turnover: The Case of Nurses*, Medical and Scientific Books, New York, NY.
- Putti, J.M., Aryee, S. and Phua, J. (1990), "Communication relationship satisfaction and organizational commitment", *Group & Organization Studies*, Vol. 15 No. 1, pp. 44-52.
- Quinn, R.E. and Cameron, K. (1983), "Organizational life cycles and sifting criteria of effectiveness: some preliminary evidence", *Management Science*, Vol. 29, pp. 33-51.
- Quinn, R.E. and Rohrbaugh, J. (1983), "A spatial model of effectiveness criteria: towards a competing values approach to organizational analysis", *Management Science*, Vol. 29, pp. 363-77.
- Rad, A.M.M. and Yarmohammadian, M.H. (2006), "A study of relationship between managers' leadership style and employees' job satisfaction", *Leadership in Health Services*, Vol. 19 No. 2, pp. 11-28.
- Randall, D.M., Fedor, D.B. and Longenecker, C.O. (1990), "The behavioral expression of organizational commitment", *Journal of Vocational Behavior*, Vol. 36 No. 2, pp. 210-24.
- Rashid, M.Z.A., Sambasivan, M. and Johari, J. (2003), "The influence of corporate culture and organizational commitment on performance", *Journal of Management Development*, Vol. 22 No. 8, pp. 708-28.
- Rashid, M.Z.A., Sambasivan, M. and Rahman, A.A. (2004), "The influence of organizational culture on attitudes toward organizational change", *Leadership & Organization Development Journal*, Vol. 25 No. 2, pp. 161-79.
- Robbins, S.P. (2005), *Organizational Behavior*, 11th ed., Pearson Prentice-Hall, Englewood Cliffs, NJ.
- Russ, F.A. and McNeilly, K.M. (1995), "Links among satisfaction, commitment, and turnover intentions: the moderating effect of experience, gender and performance", *Journal of Business Research*, Vol. 34 No. 1, pp. 57-65.
- Samad, S. (2005), "Unraveling the organizational commitment and job performance relationship: exploring the moderating effect of job satisfaction", *The Business Review*, Vol. 4 No. 2, pp. 79-84.
- Savery, L.K. (1994), "Attitudes to work: the influence of perceived style of leadership on a group of workers", *Leadership & Organization Development Journal*, Vol. 15 No. 4, pp. 12-18.
- Scarpello, V. and Campbell, J.P. (1983), "Job satisfaction: are all the parts there?", *Personal Psychology*, Vol. 36, pp. 557-600.
- Schein, E. (1985), "How culture forms, develops and changes", in Kilman, P.H., Saxton, M.J. and Serpa, R. (Eds), *Gaining Control of the Corporate Culture*, Jossey-Bass, San Francisco, CA.

-
- Sergiovanni, T. and Corbally, J. (1984), *Leadership and Organizational Culture*, University of Chicago, Chicago, IL.
- Shadur, M.A., Kienzle, R. and Rodwell, J.J. (1999), "The relationship between organizational climate and employee perceptions of involvement: the importance of support", *Group & Organization Management*, Vol. 24 No. 4, pp. 479-503.
- Silverthorne, C. (2001), "A test of the path-goal leadership theory in Taiwan", *Leadership & Organization Development Journal*, Vol. 22 No. 4, pp. 151-8.
- Silverthorne, C. (2004), "The impact of organizational culture and person-organization fit on organizational commitment and job satisfaction in Taiwan", *Leadership & Organization Development Journal*, Vol. 25 No. 7, pp. 592-9.
- Smircich, L. (1983), "Concepts of culture and organizational effectiveness", *Administrative Science Quarterly*, Vol. 28 No. 3, pp. 339-58.
- Smith, P.B. and Peterson, M.F. (1988), *Leadership, Organizations and Culture: An Event Management Model*, Sage, London.
- Stevens, J.M., Beyer, J.M. and Trice, H.M. (1978), "Assessing personal role and organizational predictors of managerial commitment", *Academy of Management Journal*, Vol. 21, pp. 380-96.
- Stogdill, R.M. (1963), *Manual for Leadership Description Questionnaire Form XII*, The Ohio State University Bureau of Business Research, Columbus, OH.
- Tabachnick, B.G. and Fidell, L.S. (1983), *Using Multivariate Statistics*, Harper & Row, New York, NY.
- Tan, W.L. (2005), "A partial test of path-goal theory of leadership in the domain of Malaysia", MBA dissertation, Faculty of Business and Accountancy, Universiti Malaya.
- Taunton, R., Krampitz, S. and Wood, C. (1989), "Manager impact on retention of hospital staff Part 1", *Journal of Nursing Administration*, Vol. 19 No. 3, pp. 14-19.
- Tichy, N. and Cohen, E. (1997), *The Leadership Engine*, HarperBusiness, New York, NY.
- Trice, H. and Beyer, J.M. (1993), *The Cultures of Work Organization*, Prentice-Hall, Englewood Cliffs, NJ.
- Wallach, E.J. (1983), "Individuals and organizations: the cultural match", *Training and Development Journal*, Vol. 37, pp. 29-36.
- Wanous, J., Reicher, A.E. and Hudy, M. (1987), "Overall job satisfaction: how good are single-item measures?", *Journal of Applied Psychology*, Vol. 82, pp. 247-52.
- Ward, E.A. and Davis, E. (1995), "The effect of benefit satisfaction on organization commitment", *Compensation & Benefits Management*, Vol. 11 No. 3, pp. 35-40.
- Williams, L.J. and Hazer, J.T. (1986), "Antecedents and consequences of satisfaction and commitment in turnover models: a re-analysis using latent variable structural equation methods", *Journal of Applied Psychology*, Vol. 71 No. 2, pp. 219-31.
- Wright, T.A. (1997), "Job performance and organizational commitment", *Perceptual and Motor Skills*, Vol. 85 No. 2, pp. 447-50.
- Young, M. and Dulewicz, V. (2007), "Relationships between emotional and congruent self-awareness and performance in the British Royal Navy", *Journal of Managerial Psychology*, Vol. 22 No. 5, pp. 465-78.
- Yousef, D.A. (2000), "Organizational commitment: a mediator of the relationships of leadership behaviour with job satisfaction and performance in a non-western country", *Journal of Managerial Psychology*, Vol. 15 No. 1, pp. 6-28.

Yousef, D.A. (2001), "Islamic work ethic: a moderator between organizational commitment and job satisfaction in a cross-cultural context", *Personnel Review*, Vol. 30 No. 2, pp. 152-69.

Further reading

Ahmad, K.Z. (2001), "The association between person, work environment, job satisfaction and performance: a study in light manufacturing assembly plants", PhD thesis, University of Manchester, Manchester.

Fortune (1998), "What makes a company great?", *Fortune*, Vol. 138 No. 8, pp. 218-19.

Lok, P. and Crawford, J. (1999), "The relationship between commitment and organizational culture, subculture, leadership style and job satisfaction in organizational change and development", *Leadership & Organization Development Journal*, Vol. 20 No. 7, pp. 365-73.

Mayer, R.C. and Schoorm, F.C. (1992), "Predicting participation and production outcomes through a two-dimensional model of organizational commitment", *Academy of Management Journal*, Vol. 35 No. 3, pp. 671-84.

Corresponding author

Kamarul Zaman Bin Ahmad can be contacted at: drkamphd@yahoo.com