The effect of organisational culture and leadership style on job satisfaction and organisational commitment

A cross-national comparison

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Keywords National cultures, Leadership, Organizational culture, Job satisfaction, Job commitment

Abstract This study examined the effects of organisational culture and leadership styles on job satisfaction and organisational commitment in samples of Hong Kong and Australian managers. Statistically significant differences between the two samples were found for measures of innovative and supportive organizational cultures, job satisfaction and organizational commitment, with the Australian sample having higher mean scores on all these variables. However, differences between the two samples for job satisfaction and commitment were removed after statistically controlling for organisational culture, leadership and respondents’ demographic characteristics. For the combined samples, innovative and supportive cultures, and a consideration leadership style, had positive effects on both job satisfaction and commitment, with the effects of an innovative culture on satisfaction and commitment, and the effect of a consideration leadership style on commitment, being stronger in the Australian sample. Also, an “initiating Structure” leadership style had a negative effect on job satisfaction for the combined sample. Participants’ level of education was found to have a slight negative effect on satisfaction, and a slight positive effect on commitment. National culture was found to moderate the effect of respondents’ age on satisfaction, with the effect being more positive amongst Hong Kong managers.

Introduction
Organisational commitment and job satisfaction have received significant attention in studies of the work place. This is due to the general recognition that these variables can be the major determinants of organisational performance (Angle, 1981; Riketta, 2002) and effectiveness (Laschinger, 2001; Miller, 1978). Some studies have reported strong correlations of organisational commitment and job satisfaction with turnover (Benkhoff, 1997). 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 organisation. Thus, organisational commitment
and job satisfaction are important attitudes in assessing employees’ intention to quit and the overall contribution of the employee to the organisation.

Numerous antecedents of job satisfaction and organisational commitment have been suggested in the earlier studies (Chen and Francesco, 2000; Mathieu and Zajac, 1990; Williams and Hazer, 1986). For example, leadership (Williams and Hazer, 1986) and organisational culture (Trice and Beyer, 1993) were shown to have significant impact on both job satisfaction and organisational commitment (Lok and Crawford, 1999, 2001). However, the influence of national culture on leadership styles, organisational culture and their subsequent effects on employee’s job satisfaction and commitment were not explored. Earlier studies have shown that national cultures can affect managerial styles (Westwood and Posner, 1997) and employee behaviour (Chen and Francesco, 2000; Miroshnik, 2002).

The intention of this study is to examine the differences between east and west in the determinants of manager’s perception of their level of job satisfaction and commitment. The organisational variables of leadership and organisational culture were selected as determinant for the present study. Managers from Hong Kong and Australia were used in this study to represent this east-west dichotomy. This study is based on the assumption that the differences in national characteristics (Hofstede, 1981, 1991; Phatak, 1986; Trompenaars and Hampden-Turner, 1998) such as power distance, collectivism and risk orientation (to name a few) are well established between east and west. Also, the influence of certain demographic variables such as age, education level, gender and tenure was also investigated, because it is plausible that the influence of Confucian values (Chen, 2001) in the east might produce different patterns of relations than in the west.

Although Hong Kong was a British colony until 1997 and had a British system of government and legal system, it has preserved a majority of traditional Chinese (Confucian) values and customs. Since 98 per cent of inhabitant in Hong Kong are ethnic Chinese, Hong Kong can be seen as having a Chinese culture (Redding, 1990). Australia has predominantly an Anglo-Saxon culture. Although Australia is a multicultural society, its value system is seen as that of a western culture.

National culture on job satisfaction and organisational commitment

Employees’ expectations, behaviour and performance may be different with various national cultures (Redding, 1990). The influence of national culture on individual behaviour is well established and the differences between eastern and western cultures are rather significant (Hofstede, 1980; Trompenaars and Hampden-Turner, 1998). The differences in national cultures are reflected in how organisations are structured and managed (Chen, 2001; Cheng, 1995; Hofstede, 1991; Trompenaars and Hampden-Turner, 1998). For example, firms in South Korea and Chinese firms in Taiwan tend to be owned by founders and
families. They tend to be paternalistic, promote values of high power distance and collectivism, and have bureaucratic control and centralised decision making with little worker empowerment. Promotion is often associated with family ties and networks or guanxi (Chen, 2001; El Kahal, 2002; Somers, 1995; Sommer et al., 1996). By contrast, Western firms tend to be owned by public shareholder and run by a professional manager. They are flatter in structure, less bureaucratic, promote individualism, decentralised decision making and more empowering to their workers. Promotion is often linked with personal competencies and merits (Chen, 2001; El Kahal, 2002). With the trend towards globalisation, organisations and managers need to have a greater understanding of the relative importance of organisational variables such as leadership styles and organisational culture that determine levels of commitment and job satisfaction in different national contexts.

National culture and organisational culture

Organisational culture can influence how people set personal and professional goals, perform tasks and administer resources to achieve them. Organisational culture affects the way in which people consciously and subconsciously think, make decisions and ultimately the way in which they perceive, feel and act (Hansen and Wernerfelt, 1989; Schein, 1990). Deal and Kennedy (1982) and Peters and Waterman (1982) have suggested that organisational culture can exert considerable influence in organisations particularly in areas such as performance and commitment. Researchers on organisational cultures have also proposed different forms or types of cultures. For example, Goffee and Jones (1998) identified four forms of organisational cultures (i.e. networked, mercenary, fragmented and communal). Martin (1992) viewed organisational culture from three perspectives (i.e. integration, differentiation and fragmentation). Wallach (1983) suggested that there are three main types of organisational cultures (i.e. bureaucratic, supportive and innovative). Since individuals bring their personal values, attitude and beliefs to the workplace, their levels of commitment to the organisation may differ. Values, attitudes and beliefs are reflected in different national cultures. How personal values fit in with the existing organisational culture and the influence of national culture on personal values could be a major difference in the difference in how firms in the east and west are managed. In cross-cultural research, it is acknowledged that there are significant differences in national culture characteristics between the eastern and western cultures (Chen, 2001; El Kahal, 2001; Hofstede, 1980, 1991). For example, the existence of high power distance values and a bureaucratic culture in Chinese firms is well acknowledged (Chen, 2001; Pye, 1985). Since organisations in Hong Kong are mainly managed by ethnic Chinese, their relative high power distance preference and Confucian values can make significant influence on the organisational culture. Confucian values are often associated with obedience, respect of authority and loyalty.
(Chen, 2001; El Kahal, 2001). For example, important decisions are made by the owners and senior management of the Korean and Chinese firms. Owners and executives are on top of any bureaucratic structure in these firms. Direction and orders tend to be top-down and there is little delegation and empowerment. On the contrary, this is generally the reverse in western firms. According to Hofstede (1980), both US and Australia are relatively low power distance countries and values of democracy, equalitarianism and participation are more prevalent. In the US and Australia, authority is legitimised more on performance and merit. There is greater delegation and decentralisation of decision making and control. However, studies have shown that greater empowerment by management could further enhance the employees’ participation, productivity, satisfaction and commitment (Conger and Kanungo, 1988; Malone, 1997). Although, western firms have bureaucratic structure and rules, they are mainly used to coordinate activities and reporting purposes. Chinese firms see bureaucracy as ownership, control and centralised decision making. Employees must follow instructions without questions. On the basis of these differences between Chinese and Australian cultures in power distance, control, decision making and governance, it is predicted that national cultures can influence the firm’s organisational culture, leadership style and subsequently, their level of job satisfaction and commitment.

**H1.** Bureaucratic organisational culture is higher among the Hong Kong sample than the Australian sample.

**H2.** Innovative and supportive organisational cultures are higher among the Australian sample than the Hong Kong sample.

**National culture and leadership styles**

Leadership contributes significantly in the success and failure of an organisation. The relationships of leadership style, motivation and employee performance have been extensively studied (Bass, 1990; Collins and Porras, 1996; Manz and Sims, 1991; Sarros and Woodman, 1993). Transformational leadership attributes, such as empowerment and clear vision, are often seen as important elements for employee job satisfaction and commitment (Iverson and Roy, 1994; Sergiovanni and Corbally, 1984; Smith and Peterson, 1988). This type of leadership style is often associated with a flatter organisational structure and low power distance as in western firms (Chen, 2001; Whitley, 1997). On the contrary, Asian firms tend to be more bureaucratic, hierarchical, have central decision making and are policy driven. Leadership tends to be based on position, authority and seniority. For example, commitment is highly associated with loyalty to the top boss in China (Chen and Francesco, 2000). Redding (1990) further suggested that Chinese society is characterised by “personalism”. That is, personal relationship could command a high employees’ commitment and the paternalistic approach would generate
greater job satisfaction. Walder (1995) further observed that Asian firms are often rule by person rather than rule by law whereby top bosses dominate organisations. Based on Stogdill’s (1970) leadership style inventory differentiating the types of leadership in “structure” and “consideration”, it is anticipated that a more “initiating structure” leadership style would provide greater commitment and job satisfaction in Asian firms. Also, a more “consideration” leadership style would provide greater commitment and job satisfaction in a western firm.

**H3.** The effects of a “consideration” leadership style on organisational commitment and job satisfaction are more positive amongst Australian managers than amongst Hong Kong managers.

**H4.** The effects of an “initiating structure” leadership style on organisational commitment and job satisfaction are more positive amongst Hong Kong managers than amongst Australian managers.

**Demographic variables on job satisfaction and organisational commitment**

Empirical evidence has been produced whose demographic variables such as years in organisation, age, level of education and the duration of leadership (Chen and Francesco, 2000; Mathieu and Zajac, 1990; Salancik, 1977) can have significant impact on organisational commitment. Sommer *et al.* (1996) revealed that position, tenure and age were significantly related to employee commitment for Korean subjects. In particular, those with higher positions who had been in the same job longer and who were older, had a greater level of commitment. These results were consistent with the western results. In contrast to the earlier findings with western samples, no relationship was found between organisational commitment and level of education (Sommer *et al.*, 1996). Sommer *et al.* (1996) concluded that the differences could be due to the influence of cultural values. Sommer *et al.* (1996) suggested that, because of Korean practice linking education level and institution with organisational and occupational selection, there were no unmet expectations with respect to rewards as there might be in the west, thus eliminating the relationship between education and employee commitment. Chen and Francesco (2000) sampled 333 employees in the People’s Republic of China and concluded that position is positively correlated with employee commitment while all other demographic variables, including age and tenure, are not. With reference to the practice of Confucian philosophy, issues such as authority, respect for the elder, loyalty (Cheng, 1995), the value of education (Knight and Shi, 1996), conformity and guanxi (obligation based relationships with the boss, colleagues and friends) are different between the east and west (Chen, 2001; El Kahal, 2001). It is anticipated that length of employment in the organisation, age, educational
level and duration of leadership are positively associated with commitment in an Asian firm.

H5. Years in organisation is more positively correlated with job satisfaction and organisational commitment in the Hong Kong than the Australian sample.

H6. Age is more positively correlated with job satisfaction and organisational commitment in the Hong Kong than the Australian sample.

H7. There is a negative effect of education on commitment amongst Hong Kong managers, but no such effect amongst Australian managers.

Method – sample and data collection
The sample was drawn from participants who are currently completing their MBA studies in Hong Kong and Sydney. All participants were holding middle or senior management positions. The questionnaires were given to these managers by the research assistant in class and participants had 7 days to return these in the specified box. Subjects were asked to seal the completed questionnaire in the envelopes provided and to deposit them in a sealed box in the reception area of the teaching centre. Only sealed envelopes were collected by the research assistant at the end of day seven. The completion of these questionnaires was entirely voluntary and responses were anonymous.

Measures
The questionnaire has five sections. Section 1 is the Wallach’s (1983) organizational culture index (OCI) that describes organizational culture in terms of three distinct dimensions: bureaucratic, innovative and supportive. It was selected because these three dimensions appear to be related more closely with the national cultural dimensions (Hofstede, 1980) as compared to the other cultural instruments such as Goffee and Jones (1998), and could be expected to yield differences between the two samples. The OCI has been used by other researchers (Koberg and Chusmir, 1987). There are 24 items in this questionnaire and it has a Likert scale ranging from three (describe my organisation most of the time) to zero (does not describe my organisation).

Section 2 is the Stogdill’s (1974) leader behaviour description questionnaire (LBDQ) and has 40 items assigned to “Consideration” and “Initiating Structure” categories of leadership style. It is a very well established questionnaire and has been extensively used in the past (Michael, 1994; Warr et al., 1979). Subjects responded on a five point scale, ranging from “not at all” (1) to “a great deal” (5). The variables leadership style (Consideration) and leadership style
(Initiating Structure) were formed as summative scales by averaging an individual’s responses for items assigned to these two categories.

Section 3 is the Warr et al. (1979) job satisfaction questionnaire. This instrument has been widely used by other researchers in this field and it comprised of 16 items that relate to different aspects of the work or work environment. Subjects indicate their level of satisfaction with each of these aspects by responding on a seven point rating scale ranging from “extremely dissatisfied” (1) to “extremely satisfied” (7).

Section 4 is the Mowday et al.’s (1982) organisational commitment questionnaire (CQ). It is frequently used by researchers. The Mowday et al.’s (1979) OCQ has 15 items. For each item, a statement is given (for example, “I really care about the fate of this ward”) and subjects respond using a seven point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (7).

Section 5 consists of basic demographic data, including age, the number of years in their present position and educational qualifications, and the duration of leadership.

Data analysis
All statistical analyses were carried out using the SPSS statistical computer package, Version 10. Responses to the items measuring organisational culture, leadership style, job satisfaction and organisational commitment, were factor analysed, and factor scores obtained were used for subsequent data analysis. These were derived using the Regression method, as implemented in the SPSS factor analysis procedure. For all factor analyses, the Principal Axes method of factor extraction was used with oblique rotation to simple structure, using the Oblimin procedure. Correlations between the major variables of the study were calculated. A series of t-tests were used to compare the Australian and Hong Kong samples on factor scores derived from the above factor analyses. Regression analyses were used to examine the extent to which respondents’ job satisfaction and organisational commitment can be predicted from the leadership style and organisational culture variables. Regression analysis was also used to investigate the influence of demographic variables (age, sex, organizational tenure, education, and type of industry) on organisational commitment. The moderating effect of the sample location (Hong Kong vs Australia) on these relationships was also examined by including interactions with sample location in the regression equations.

Results
The final sample consisted of 337 managers, 219 managers from Hong Kong, representing a response rate of 63 per cent, and 118 from Australia, with a response rate of 51 per cent. Of the samples 65 per cent were male and 35 per cent female, with a majority of respondents (91 per cent) being between
the ages of 26 and 45. They came from a wide variety of industries, the most
common being telecommunications (19.8 per cent) and manufacturing
(16.2 per cent). Other industry groups are banking, professional services,
transport, retail and others. Positions within their organisations included that of
team member (17.8 per cent), supervisor (18.4 per cent), manager (31.8 per cent),
senior manager (5.9 per cent), department head (13.9 per cent) and CEO
(4.7 per cent).

Factor analyses
Factor analysis of the organisational culture items yielded three factors that
were readily interpreted in terms of the original subscales, that measure a
bureaucratic, an innovative, and a supportive, organisational culture. Although
root-one criterion suggested that six factors could be extracted, an inspection of
the eigenvalue plot and using the scree test, suggested a three-factor solution.
The three-factor solution was adopted because of the interpretability of the
factors. All six items with their major loading on the first factor were derived
from the subscale measuring an innovative culture. The second factor was
most strongly defined by seven items derived from the bureaucratic culture
subscale, but with minor loadings from two other items derived from the
supportive and innovative culture subscales. The third factor was mainly
defined by items indicating a supportive culture. However, a single item from
the bureaucratic culture subscale (the organisation being perceived as
“power-oriented”) had a strong negative loading on this factor. Factor scores
derived from this analysis were therefore, labelled innovative culture,
bureaucratic culture and supportive culture.

The LBDQ leadership style items have been commonly used to measure
“Consideration” and “Initiating Structure” leadership behaviours. Factor
analysis of these items, with the use of the scree test, suggested that four
factors could be extracted. However, the two-factor solution was adopted as the
factors could be readily interpreted in terms of the original two leadership
styles, and the addition of the two further factors produced only a small
increase (12 per cent) in the percentage of variance extracted. Variables derived
as the factor scores from this analysis were therefore named Consideration and
Initiating Structure.

Factor analysis of the job satisfaction items yielded a strong first principle
factor, with the first two factor eigenvalues being 6.7 and 1.6. It was decided for
the purpose of the present paper to obtain a single global measure of job
satisfaction. Therefore, factor scores obtained from the single-factor solution
were used to define the single variable, job satisfaction. A similar finding
resulted from the factor analysis of the organisational commitment items, with
the first two eigenvalues being 7.4 and 1.5. A single overall measure of
organisational commitment, commitment, derived from the factor scores from
the single factor solution, was therefore, used in the study.
Correlations
Table I shows the correlations amongst the main variables of the study. The strongest correlations can be seen between commitment and job satisfaction ($r = 0.70$), and between these variables and certain organizational culture and leadership variables. Correlations ranging from 0.50 to 0.66 can be seen with commitment and job satisfaction, for the innovative culture and supportive culture factors, and the leadership style factor, consideration. It is also interesting to note the near zero correlations of commitment and job satisfaction with bureaucratic culture and the small, but statistically significant correlation between job satisfaction and initiating structure ($r = 0.35$, $p < 0.01$). Regarding the demographic variables (variables 8-12), relatively low correlations of less than 0.30 are found between these and the other main variables of the study.

Comparison of Hong Kong and Australian samples
A comparison of factor scores, derived from the above factor analyses, between the Australian and Hong Kong samples was done using a series of $t$-tests. The results of these analyses are shown in Table II.

Statistically significant differences (all at the 0.01 level) between the two samples were found for four of the seven factor scores. The Australian sample scored significantly more highly on the two organisational culture factors, which reflect more innovative and supportive organisational cultures. The Australian sample also scored significantly more highly on job satisfaction and commitment. No statistically significant difference was found for the Bureaucratic culture factor. For both of the leadership style factors, consideration and initiating structure, no statistically significant differences between the samples were found.

Regression analyses
In this section, hierarchical regression analysis will be used to investigate the prediction of job satisfaction and organisational commitment on the basis of the leadership style and organisational culture variables, and to examine whether the sample origin (Australia or Hong Kong) moderates the relationships between these variables. Also, in these analyses the respondent variables (sex, age, tenure in their organisation, level of education, and the industry category for their organisation) will be entered into the equation as control variables.

Table III shows the hierarchical regression for the prediction of Job satisfaction. In the first step, the respondents’ demographic variables were entered as control variables. In the second step, the organisational culture and leadership style variables were entered into the equation. This produced a statistically significant increase in $R^2$ ($\Delta R^2 = 0.46$, $p < 0.01$). The introduction of the dummy variable “Sample” (coded as $-1$ for respondents in the Australian sample, and $1$ for those in the Hong Kong sample) did not
### Table I.

Correlations between main variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<td>Innovative culture</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Bureaucratic culture</td>
<td>0.42**</td>
<td>0.03</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Supportive culture</td>
<td></td>
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<td>0.41**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Consideration</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Initiating structure</td>
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<td>-0.26**</td>
<td>-0.09</td>
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<td>Job satisfaction</td>
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<td>0.00</td>
<td>0.60**</td>
<td>0.50**</td>
<td>-0.35**</td>
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<td>Commitment</td>
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<td>0.57**</td>
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<td>0.05</td>
<td>-0.01</td>
<td>-0.18**</td>
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<td>0.02</td>
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<td>-0.12*</td>
<td>0.13*</td>
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<tr>
<td>Age</td>
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<td>0.08</td>
<td>0.23**</td>
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<td>-0.04</td>
<td>0.16**</td>
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<td>-0.18**</td>
<td>0.02</td>
<td>0.14*</td>
<td>0.09</td>
<td>0.02</td>
<td>0.27**</td>
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</tbody>
</table>

**Notes:** *The variable sample was coded 1 for Australian and 2 for Hong Kong; *p < 0.05 and **p < 0.01
### Table II. A comparison of mean factor scores for the Australian and Hong Kong samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>Australian sample</th>
<th>Hong Kong sample</th>
<th>t-value (df = 335)</th>
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<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
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<td>Innovative culture</td>
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<td>0.86</td>
<td>−0.20</td>
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<td>Bureaucratic culture</td>
<td>0.02</td>
<td>1.00</td>
<td>−0.01</td>
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<tr>
<td>Supportive culture</td>
<td>0.21</td>
<td>0.96</td>
<td>−0.13</td>
</tr>
<tr>
<td>Consideration</td>
<td>−0.06</td>
<td>1.01</td>
<td>0.04</td>
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<tr>
<td>Initiating structure</td>
<td>0.02</td>
<td>0.71</td>
<td>−0.01</td>
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<tr>
<td>Job satisfaction</td>
<td>0.23</td>
<td>0.95</td>
<td>−0.14</td>
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<tr>
<td>Organisational commitment</td>
<td>0.26</td>
<td>1.17</td>
<td>−0.16</td>
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</table>

Notes: *p < 0.05 and **p < 0.01

### Table III. Hierarchical regression analyses: effects of leadership style, organisational culture and sample origin on job satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tr>
<td>Sex</td>
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<td>−0.01</td>
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<tr>
<td>Tenure</td>
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<tr>
<td>Education</td>
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<td>Industry 6</td>
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</tr>
<tr>
<td>Bureaucratic culture</td>
<td>−</td>
<td>−0.02</td>
<td>−0.02</td>
<td>0.10</td>
</tr>
<tr>
<td>Supportive culture</td>
<td>−</td>
<td>0.29**</td>
<td>0.30**</td>
<td>0.48**</td>
</tr>
<tr>
<td>Consideration</td>
<td>−</td>
<td>0.30**</td>
<td>0.30**</td>
<td>0.19**</td>
</tr>
<tr>
<td>Initiating structure</td>
<td>−</td>
<td>−0.25**</td>
<td>−0.25**</td>
<td>−0.32**</td>
</tr>
<tr>
<td>Sample</td>
<td>−</td>
<td>−0.06</td>
<td></td>
<td>0.01</td>
</tr>
<tr>
<td>Sample × Innovative culture</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−0.32**</td>
</tr>
<tr>
<td>Sample × Bureaucratic culture</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−0.10</td>
</tr>
<tr>
<td>Sample × Supp culture</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>0.09</td>
</tr>
<tr>
<td>Sample × Consideration</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−0.08</td>
</tr>
<tr>
<td>Sample × Initiating structure</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>0.11</td>
</tr>
<tr>
<td>Sample × Sex</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>0.10*</td>
</tr>
<tr>
<td>Sample × Age</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>0.25**</td>
</tr>
<tr>
<td>Sample × Tenure</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−0.08</td>
</tr>
<tr>
<td>Sample × Education</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>0.06</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td>0.16**</td>
<td>0.62**</td>
<td>0.62**</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td></td>
<td>0.46**</td>
<td>0.00</td>
<td>0.08**</td>
</tr>
</tbody>
</table>

Notes: *p < 0.05 and **p < 0.01
produce a significant increase in $R^2$. In the final step (model 4), product terms representing interactions of the culture, leadership and demographic variables with the sample variable were entered into the equation. This resulted in a small, but statistically significant increase in $R^2$ ($\Delta R^2 = 0.08$, $p < 0.01$). Inspection of the final model (model 4) shows statistically significant positive effects for innovative culture, supportive culture and consideration ($\beta = 0.42$, 0.48 and 0.19, respectively, $p < 0.01$) on job satisfaction. The leadership style variable, initiating structure, had a significant negative effect on satisfaction ($\beta = -0.32$, $p < 0.01$). It can also be noted that education had a statistically significant negative $\beta$ of $-0.16$ ($p < 0.01$), indicating that more educated respondents tended to have lower levels of job satisfaction, after controlling for the effects of other variables in the equation.

The variable, Sample, has no significant direct effect on job satisfaction. However, statistically significant interaction terms show that Sample has significant moderating effects on the influence of innovative culture and supportive culture on job satisfaction. The negative $\beta$ for the Sample $\times$ Innovative culture interaction term ($\beta = -0.32$) indicates that the effect of an innovative culture on satisfaction is stronger (and more positive) within the Australian sample than within the Hong Kong sample.

Interactions between the sample origin and the respondents sex and age were also statistically significant. $\beta = 0.10$ for the Sample $\times$ Sex term indicates that females in the Hong Kong sample have higher levels of job satisfaction than in the Australian sample, after having controlled for the other variables in the equation. Similarly, $\beta = 0.25$ for the Sample $\times$ Age term indicates that older respondents in the Hong Kong sample have higher levels of job satisfaction than in the Australian sample, after having controlled for the other variables in the equation.

A similar, though not identical, pattern of results can be seen in Table IV, that shows the hierarchical regression equations for the prediction of organisational commitment. A statistically significant change in $R^2$ occurred with the introduction of the culture and leadership variables into the equation ($\Delta R^2 = 0.48$, $p < 0.01$), after having controlled for the demographic variables of sex, age, tenure, education and industry. No significant change in $R^2$ occurred with the introduction of the sample dummy variable into the equation. However, a statistically significant change in $R^2$ occurred with the introduction of the interaction variables into the equation ($\Delta R^2 = 0.10$, $p < 0.01$). Examination of the final model in Table IV shows a similar pattern of regression coefficients as in Table III, with positive effects of Innovative culture, supportive culture and consideration on commitment, and no significant effect for the variable, sample. However, the leadership variable initiating structure was found to have no significant effect on commitment, which can be contrasted with its statistically significant negative effect on job satisfaction.
Regarding the demographic variables, a small but statistically significant effect of sex on commitment can be seen ($\beta = -0.09, p < 0.05$), indicating a slight tendency for females to be less committed, after controlling for the other variables listed in the table. There was also a statistically significant positive effect of education on commitment ($\beta = 0.13, p < 0.05$). This contrasts with the significant negative effect of education on job satisfaction mentioned above, and shown in Table III.

As with the results in Table III, a statistically significant negative interaction effect can be observed for the sample and innovative culture variables ($\beta = -0.27, p < 0.01$). However, a statistically significant negative $\beta$, not present earlier, can also be observed for the Sample × Consideration term ($\beta = -0.20, p < 0.01$). These results indicate a stronger positive influence of the variables innovative culture and consideration within the
Australian sample, than in the Hong Kong sample. No statistically significant interaction terms involving Sample and the demographic variables sex, age, tenure or education, are present for the prediction of commitment.

Discussion and conclusion
This study has investigated the effect of organisational culture and leadership style on job satisfaction and organisational commitment in Australian and Hong Kong samples. Also, differences between the two samples on mean values of these variables were also investigated. The results of this study revealed that the Australian managers scored more highly the innovative and supportive culture measures, and on job satisfaction and organisational commitment. This is consistent with studies that have shown that there is strong positive link between empowerment, job satisfaction and commitment. No significant difference between these two samples was found in bureaucratic organisational culture or on consideration and initiating structure leadership styles. Thus $H2$ is supported, but $H1$ is not supported.

The rejection of $H1$ is an interesting finding because earlier studies have suggested that Confucian values, high power distance, autocratic decision making style, and family ownership in Chinese firms would provide a stronger bureaucratic culture and initiating structure leadership style in the organisation. The findings could possibly be explained if there were a high proportion of managers in the sample who were working for multinational corporations and not family-owned businesses. However, we did not obtain this information, so this explanation is not able to be tested.

The results from Tables III and IV revealed that the impact of innovative and supportive organisational cultures on commitment, and the impact of an innovative culture on satisfaction, is stronger with Australian managers than Hong Kong managers. There is no significant difference found with the impact of leadership style on job satisfaction and commitment between Hong Kong and Australian managers. Hence, $H3$ is partially supported, but $H4$ is not supported ($H3$ is supported for the prediction of commitment, but not for job satisfaction.).

The results revealed no significant difference between the two samples in the effects of demographic variables age, sex, tenure and education levels organisational commitment. However, differences were found in the effects of sex and age on job satisfaction. Age was found to have a more positive effect on job satisfaction in the Hong Kong sample than in the Australian sample. Hence, $H5$ and $H7$ are rejected, but $H6$ is partially supported. The results on the effects of age, level of education and tenure on job satisfaction and commitment from managers in Asian firms are interesting. Traditionally, in Chinese society, education is highly valued and its impact on ones life and employment could be significant. Also, Confucian values on seniority and age should have strong
effect on job satisfaction and commitment. These issues could be further investigated.

One limitation of this study is the nature of the sample. The subjects came from a diverse types of industries and is difficult to group them coherently to determine the different effects of industry groups on organisational commitment. Also, as mentioned earlier, we did not collect information on whether managers were working in multinational corporations or in family owned businesses. It would be interesting in future studies to investigate the influence of this difference, as multinational corporations and family owned businesses have different organisational cultures, philosophies and managerial practices. Another limitation is that samples were taken from two major cities, namely Hong Kong and Sydney. Although the Hong Kong sample is predominantly ethnic Chinese, they are most exposed to western influences and some of them are working in western owned firms. Hence, they may not reflect true Chinese managerial practices. If the Chinese samples were drawn from a wider range of locations (including various cities in China), it is possible that differences between east and west could be more significant.

To conclude, this study is an active attempt to investigate the effects of organisational culture and leadership style on job satisfaction and commitment, and how this might differ between the east and west. Although many of the findings in this study are left unexplained, it has suggested some interesting topics for future cross cultural research. This study confirms that organisational culture and leadership styles are important organisational antecedents of job satisfaction and commitment. However, the important contribution was the demonstration that national culture can produce statistically significant moderating effects on the impact of certain demographic, leadership and organisational culture variables on job satisfaction and commitment.

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