THE ORGANIZATIONAL CULTURE PROFILE: AN AUSTRALIAN PERSPECTIVE

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Abstract

Our paper develops a restructured version of the Organizational Culture Profile developed by O’Reilly et al. (1991) and examines its structural properties across a stratified random sample of 1,918 managers in Australia. Seven discrete factors of organizational culture were identified. These factors were classified on the basis of selected demographic variables to provide a detailed profile of executives and their workplace cultures. Recommendations for further research and development are provided.

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INTRODUCTION: THE CULTURE-CLIMATE CONNECTION

Studies of organizational culture are varied, multilevel (department, division, company, country), and ubiquitous. The constructs of culture and climate are often interchanged, confused, and misconstrued without adequate explanation or justification (e.g., Alvesson, 1993; Chatman, 1991; Frost, 1991; Hatch, 1993; Litwin and Stringer, 1968; Pettigrew, 1990; Reichers and Schneider, 1990; Schultz and Hatch, 1996; Trice and Beyer, 1992). Denison (1996:624) asserts that culture is "the deep structure of organizations, which is rooted in the values, beliefs and assumptions held by organizational members." In comparison, "climate is often considered as relatively temporary, subject to direct control, and largely limited to those aspects of the social environment that are consciously perceived by organizational members" (Denison, 1996:624). Culture evolves and is sufficiently complex to not be manipulated easily, while climate is temporal and often subject to manipulation by people with power and influence (Denison, 1996:644). Some of the more prominent culture researchers include Alvesson (1985, 1993), O’Reilly, Chatman and Caldwell (1991), Schein (1983, 1985, 1990, 1992), Smircich (1983), Smircich and Calas (1987), and Trice and Beyer (1992).

Organisational culture is shaped by varying aspects of organisational life, such as strategies, interpersonal relationships, and context (Baron and Kreps, 1999; Cabrera and Bonache, 1999; Carroll and Harrison, 1998; Chatman and Jehn, 1994; Denison and Mishra, 1995; Joyce and Slocum, 1982, 1984; Schneider, 1990). A complete analysis of organizational culture should factor in these influences. Adler and Boyacigiller (1996) suggest that in the past too much emphasis has been placed on national culture in international research, which has neglected the inclusion of explanatory organisational behaviour variables, such as industry and company contextual factors. The purpose of our study is to address these deficiencies by examining organizational culture across varying demographic groupings and industry sectors on a national basis.

ORGANIZATIONAL CULTURE PROFILE - STAGES OF RESTRUCTURE AND ASSOCIATED SAMPLES

Stage One

The Organizational Culture Profile (OCP) developed by O’Reilly, Chatman and Caldwell (1991) and since revised by Cable and Judge (1997) and Judge and Cable (1997) was used to measure organizational and personal culture orientations. The OCP has been identified as a measure of culture (and values as one facet of culture) at the organizational level (Agle and Caldwell, 1999:345), and as one of the top ten culture instruments in use today (Agle and Caldwell, 1999:367; Howard, 1998; Judge and Cable, 1997). Vandenberghhe (1999:183) has recommended that more cross-cultural analysis of the OCP is warranted: “additional work is needed on the structure of the OCP across nations and industries.” Howard (1998) asserted that "the reliability of all OCP value dimensions remains in need of examination." In personal correspondence to the researchers, both Cable (1999) and Vandenberghhe (1999a,b) have confirmed the need to examine the structure of the OCP in more detail.

The OCP measures organizational culture along eight factors, namely innovation, attention to detail, outcome orientation, aggressiveness, supportiveness, emphasis on rewards, team orientation, and decisiveness. The instrument uses the Q-sort method of data collection (Block, 1978) to identify values that characterize a target organization and an individual’s preference for that particular configuration of values. O’Reilly et al. (1991) reported an average reliability coefficient for the OCP of 0.88, while Vandenberghhe’s (1999a) study established an average reliability of 0.86. The OCP uses a Q-sample of 54 value statements represented by eight value dimensions that capture these underlying meanings.
Stage Two

For the purpose of the present study, an abbreviated version of the OCP (Cable and Judge, 1997) was used. This abbreviated version (40 items reduced from original 54) has a test-retest reliability of .87. The shorter version of the OCP was further modified for this study by developing a Likert-type scale for ease of completion of the instrument by respondents without the need of the researcher facilitating the study as is required in Q-methodology. In this revised and reformatted version, responses indicating the organization’s characteristic cultural values orientation are along a five-point Likert scale where 1=Not At All, 2=Minimally, 3=Moderately, 4=Considerably, and 5=Very Much (amending the original Q-sort procedure to a normative scale). Representative items of organizational culture measured by the OCP are “Adaptability,” “Taking individual responsibility,” and “Not being constrained by many rules.” Permission to use an amended and revised version was received from the American Psychological Association (27 September 1999) and Professor Charles O’Reilly (21 December 1999).

Sample
Numerous samples consisting of graduate students and practising executives attending graduate management classes in two universities and four campuses throughout Australia were used in the development of our version of the OCP. A total sample of 154 respondents established the following factors for the OCP and their associated Cronbach reliabilities (shown in parentheses): Competitiveness (formerly Outcome Orientation)(.79); Social Responsibility (combination of Outcome Orientation and Innovation) (.80); Supportiveness (.81); Autonomy (formerly Innovation) (.65); Emphasis on Rewards (.62); Performance Orientation (Outcome Orientation and Innovation) (.60); Stability (new factor) (.61); Detail Orientation (.56).

Stage Three

Results from Stage Two revealed the factor structure of the Cable and Judge (1997) version of the OCP was unreliable when the Q-sort method of data collection was not utilised. Subsequent to this pilot test, we revised the OCP on the basis of the data collected from the present study in the following fashion.

Sample
A multi-instrument survey was mailed to a stratified sample of 5000 members of the Australian Institute of Management (AIM). The sample was stratified on the basis of personal membership categorized by state of origin. A total of 1,918 usable responses was returned from a final sample size of 4962, representing a 39% response rate. There were no statistically significant differences between the achieved and proposed sample categorized by state of origin. The majority of respondents were male (76%), between 40-59 years of age (68%), evenly distributed between top and executive (CEO, COO, VP) and upper middle (Dept Exec, Super, Plant Manager) levels of management (50% respectively), had 12 or more years experience as an executive (55%), with 54% in organizations of 499 or fewer employees and 30% in organizations with 1000 or more employees.

Restructured OCP

Exploratory factor analysis was used by O’Reilly et al. (1991) to examine the underlying dimensions of the OCP resulting in eight dimensions namely: Innovation, Attention to Detail, Outcome Orientation, Aggressiveness, Supportiveness, Emphasis on Rewards, Team Orientation, and Decisiveness. However, exploratory factor analysis does not ensure that items loading on a single factor are measuring the same theoretical content (Finch and West, 1997). The current study followed the recommendation of Schriesheim, Powers, Scandura, Gardiner, and Lankau (1993) that Confirmatory Factor Analyses (CFA) should be used to improve the rigor with which content validity is assessed. The statistical software package AMOS (Arbuckle and Wothke, 1999) was used to undertake confirmatory factor analysis (CFA) which tests the theoretically derived, hypothetical structure of factors. CFA overcomes the limitations associated with mathematically determined factor structures using exploratory factor analysis (Long, 1983).
The most basic form of CFA is a one-factor congeneric measurement model as described by Jöreskog (1971) which enables the specified interrelationships among observed variables (items) for a single latent factor to be examined in detail. In this study, one-factor congeneric measurement models were calculated based on substantive theory to determine factor score weights for composite factors, to model error in the measurement of observed variables, and to calculate composite factor reliabilities. Chin (1998) suggested that it is preferable to have four items loading on each factor to test for convergent validity. Items which had t-values which were not significant, where the standardized regression weights indicated weak effects, and where low (less than 0.3) squared multiple correlations indicated that the item was not a good measure of the factor were omitted from further calculations.

The resulting composite factors took into account the differences in the degree to which each individual item contributed to the overall composite (latent) factor, thus ensuring that each factor provides a realistic representation of the data (Fleishman and Benson, 1987). The validity of the composite factors was assessed by examining the fit statistics which estimate how well the model fits the data. Based on the nature of the items loading on each composite factor and taking into account the original factor labels where appropriate, the new, shortened version of the OCP now consists of a 28-item, seven factor structure as follows (reliabilities in parentheses): Supportiveness (.87), Innovation (.80), Competitiveness (.75), Performance Orientation (.74), Stability (.66), Emphasis on Rewards (.80), and Social Responsibility (.74).

Table 1 presents the means, standard deviations and variances for each composite factor which were used to calculate the composite factor reliability coefficient according to the procedure suggested by Fleishman and Benson (1987) and Jöreskog (1971) which maximises the reliability of the composite factor. For comparative purposes, the traditional estimate of internal consistency, Cronbach’s alpha coefficient has been provided. However Cronbach’s alpha coefficients are lower-bound estimates based on negatively-biased and inappropriate Pearson product-moment correlations among the constituent items (McDonald, 1981). The results indicate that the composite factor reliability coefficients exceed the Cronbach’s alpha coefficients for all factors except for Supportiveness and Social Responsibility. Both measures indicate high internal consistency for each factor.

As indicated in Table 1, performance orientation was the prominent organizational culture dimension in this study (mean=4.02), followed by social responsibility (m=3.93), supportiveness (m=3.70), and emphasis on rewards (m=3.61). These results reflect the trend reported by Sarros et al. (1999) who found among the 181 executives surveyed an emphasis on achievement, benevolence, self-direction, and security as core values. The performance orientation and social responsibility dimensions of the current study are reflected in the values of achievement and benevolence as reported by Sarros et al. (1999) and Sarros and Santora (2001b). The lowest ranked dimensions of organizational culture were competitiveness and innovation (m=3.37 respectively).

The goodness-of-fit of the hypothesized model to the data was assessed using absolute and comparative fit indices (Arbuckle and Wothke, 1999) as presented in Table 2.

The fit measures for all samples (A to C) indicated that the model provided an adequate fit of the data with very little variation evident among samples. The results for the total sample (N=1918) were as follows: a $\chi^2/df$ ratio of 4.15, a Goodness-of-Fit Index of 0.99, an Adjusted Goodness-of-Fit Index of 0.98, a Standardized Root Mean Residual of 0.01 and all comparative fit indices above 0.95.
CULTURE CLASSIFIED BY DEMOGRAPHIC VARIABLES

In order to examine differences among dimensions of organizational culture when classified by demographic variables, analyses of variance and t-tests were conducted. The results of these analyses are reported as follows.

Organizational Culture by State
Executives in Victoria recorded significantly higher levels of supportiveness (3.82 cw. 3.60, $F=3.94$, $p<.001$), social responsibility (4.05 cw. 3.88, $F=3.75$, $p<.001$), and emphasis on rewards (3.74 cw. 3.52, $F=4.69$, $p<.001$) compared with their counterparts in New South Wales. Although not statistically significant, executives in the Northern Territory registered the highest mean scores on most OCP factors, apart from stability and performance orientation.

Organizational Culture by Gender
Male respondents recorded significantly higher scores on all organizational culture items than did women, apart from social responsibility and competitiveness. The highest mean score for both men and women was recorded for performance orientation (4.03 cw. 3.98, $t=7.91$, $p<.01$), followed by social responsibility.

Organizational Culture by Age
Executives 50 years of age and older reported their organizational cultures as significantly higher in all facets (supportiveness, social responsibility, etc) compared with their younger counterparts. The lowest scores were recorded by executives 39 years of age and younger. Similar to the findings recorded for the MLQ, younger executives in Australia saw themselves as both being less effective leaders and less likely to grow and sustain competitive and caring organizational cultures compared with their older and arguably more experienced colleagues.

Organizational Culture by Level of Seniority
Respondents from the top level of seniority (CEO, COO) recorded significantly higher scores on all organizational culture profiles compared with all other respondents. Similarly, respondents from the executive level (VP, Director) recorded higher scores on these factors than did respondents from the upper middle level (Department Executive, Superintendent, Plant Manager).

Organizational Culture by Years as an Executive
Executives with fewer than six years experience recorded significantly lower scores on social responsibility, competitiveness, stability and innovation compared with executives with 11 or more years experience.

Organizational Culture by Years in Current Position
Executives who had been in their current positions for three or more years recorded significantly higher levels on all organizational culture profiles compared with executives with three or fewer years experience.

Organizational Culture by Salary
Generally, the higher the salary, the more respondents described their organizational cultures as being supportive, socially responsible, and competitive. The findings show that as age, seniority, tenure, and level of remuneration increased, favorable assessments of organizational culture also increased.

Organizational Culture by Formal Education
Respondents who finished high school recorded significantly higher scores on all OCP factors compared to respondents with Bachelors degrees. Executives with Bachelors degrees scored significantly higher on social responsibility, competitiveness, and stability compared with Masters degree holders. Generally, the higher the formal qualification, the less likely it was to identify the company as scoring high on the organizational culture profiles.

Organizational Culture by Size of Organization
Executives in smaller-sized companies (fewer than 100 employees and between 100 and 499 employees) recorded significantly higher levels on all cultural profiles compared with larger-sized organizations. The highest scores were recorded for performance orientation, social responsibility, and emphasis on rewards.
DISCUSSION

In this paper we explored the Organizational Culture Profile as a measurement tool for examining individual perceptions of organizational culture dimensions. Our analysis included revising and restructuring the measurement attributes of the OCP through confirmatory factor analyses. The revised and restructured OCP was then used in analyses of variance and t-tests of significance to determine relationships among selected demographic variables of the sample and core culture dimensions.

Originally, the OCP was developed to examine the congruence between individual and organizational values (O’Reilly, Chatman and Caldwell, 1991). The use of the restructured OCP could provide operational data to aid in the recruitment and selection of new employees. Chatman’s (1991) study of 171 entry-level auditors working in eight US public accounting found that recruits whose values upon entry matched those of the firm adjusted to the organizational culture more quickly, and recruits whose values most closely match the firms feel most satisfied and remain longer with the firm. According to Cable and Parsons (2001), job applicants self-select into organizations based on subjective person-organization fit and interviewers use an estimation of person-organization fit when evaluating and hiring job applicants. The development of the OCP may enable more accurate information to be provided on person-organization fit which could lead to improved recruitment, selection, and socialization practices.

The revised and restructured OCP used in our study may provide a diagnostic tool for evaluating organizational culture according to the seven dimensions. Having a representative sample of organizational members complete the OCP would assist in identifying different perspectives of organizational culture. Such activities should stimulate worthwhile discussion among organizational members and build understanding of the values that underpin the organizational culture profile. In addition, the cultural profiles of divisions, departments and teams within organizations should be evaluated and compared with the ratings for the cultural profile of the organization as a whole. Research indicates that leadership and values (as indicators of organizational culture) are related (Deal and Kennedy, 1999; Schein, 1985; Rousseau, 1990). Values are also associated with levels of corporate trust (Whitener et al., 1998:523). It follows that promoting and developing transformational leadership in the organization should lead to dynamic workplace cultures associated with high levels of workplace trust. Further research is required to validate these linkages.

The OCP may also be used to: (1) provide insight into similarities and differences concerning cultural profiles, particularly when organizational mergers or takeovers are proposed; (2) identify targets for organizational change in order to survive, adapt, and prosper in a turbulent environment; and to monitor cultural change. There is considerable evidence that the success of performance enhancing strategies such as reengineering, TQM, and downsizing is dependent on cultural change (Becker and Gerhart, 1996; Daymon, 2000; Delaney and Huselid, 1996; Heifetz and Laurie, 1997; Kanungo, 1998; Martin, Sitkin and Boehm, 1985; Siehl and Martin, 1990). The new measure will facilitate the monitoring of organizational cultural change in conjunction with changes in values, leadership styles, and approaches to problem solving.

A key finding of this study was that executives in smaller sized companies (fewer than 100 employees and between 100 and 499 employees) recorded significantly higher levels on all cultural profiles compared with larger-sized organizations. The highest scores were recorded for performance orientation, social responsibility, and emphasis on rewards. We suggest that larger organizations might benefit by creating strategic business units empowered to focus on their areas of expertise and begin to build cultures necessary for achieving their objectives. Research suggests a strong link between organizational size, performance, and culture (e.g., Howard, 1998; Whipp, Rosenfeld, and Pettigrew, 1989). George, Sleeth and Siders (1999:548) claim that "culture does suggest associations between tangible aspects of corporate strategy - like downsizing."

When compared across all demographics, levels of innovation were fairly consistent for all states in Australia. However, female executives recorded a significantly lower score on innovation than their male counterparts (3.43 cw. 3.52, t=15.29, p<.001). Older (50+ years of age) and more senior (CEO, Director) executives also saw their organizations as being more innovative than did younger (less than 39 years old) and less senior (Upper middle) executives. The most compelling finding was that executives in smaller sized companies (fewer than 100 employees and between 100 and 499 employees) recorded a significantly higher level on innovation compared with larger sized organizations. In fact, as organization size decreased, levels
of innovation increased. Surprisingly, higher levels of innovation were also related to higher levels of stability in smaller sized organizations. The significantly lower levels recorded for stability for larger organizations may reflect the pervasiveness of change over the last decade as organizations attempted to improve productivity, efficiency, competitiveness and effectiveness. Therefore stability may be interpreted more often as stagnation and maintaining the status quo rather than steadiness (Cameron and Quinn, 1999).

Our results suggest that in order to build innovative and creative work cultures, organisational leaders should consider challenging convention, and be willing to take calculated risks. On the basis of our findings, changing organizational culture is easier in smaller-sized firms (Stoica and Schindehutte, 1999). The emphasis on leaders able to build these cultures is profound. George et al. (1999:550) state that "by shaping culture, a leader creates a repository of values, sets a strategic view of the future, and offers measures of interim activity."
REFERENCES


Table 1: Means, Standard Deviations, Variance, and Reliabilities for OCP Factors (N=1918)

<table>
<thead>
<tr>
<th>Composite Factor</th>
<th>Mean</th>
<th>SD</th>
<th>Variance</th>
<th>(\alpha^b)</th>
<th>(r_c^c)</th>
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</thead>
<tbody>
<tr>
<td>Supportiveness</td>
<td>3.70</td>
<td>0.90</td>
<td>0.81</td>
<td>0.87</td>
<td>0.77</td>
</tr>
<tr>
<td>Innovation</td>
<td>3.37</td>
<td>0.91</td>
<td>0.82</td>
<td>0.80</td>
<td>0.92</td>
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<tr>
<td>Competitiveness</td>
<td>3.37</td>
<td>0.65</td>
<td>0.42</td>
<td>0.75</td>
<td>0.85</td>
</tr>
<tr>
<td>Performance Orientation</td>
<td>4.02</td>
<td>0.71</td>
<td>0.51</td>
<td>0.74</td>
<td>0.88</td>
</tr>
<tr>
<td>Stability</td>
<td>3.46</td>
<td>0.72</td>
<td>0.52</td>
<td>0.66</td>
<td>0.94</td>
</tr>
<tr>
<td>Emphasis on Rewards</td>
<td>3.61</td>
<td>0.90</td>
<td>0.80</td>
<td>0.80</td>
<td>0.87</td>
</tr>
<tr>
<td>Social Responsibility</td>
<td>3.93</td>
<td>0.74</td>
<td>0.55</td>
<td>0.74</td>
<td>0.71</td>
</tr>
</tbody>
</table>

\(a\) 1 = Not at all, 2 = Minimally, 3 = Moderately, 4 = Considerably, and 5 = Very much.
\(b\) \(\alpha\) = Cronbach’s alpha
\(r_c\) = composite factor reliability coefficient calculated from the maximally weighted factor score regression coefficients obtained from fitting one-factor congeneric measurement models to constituent indicator items.

Table 2: Fit indices for the OCP

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>(\chi^2)</th>
<th>df</th>
<th>(\chi^2/df)</th>
<th>GFI</th>
<th>AGFI</th>
<th>RMR</th>
<th>NFI</th>
<th>IFI</th>
<th>TLI</th>
<th>CFI</th>
</tr>
</thead>
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<tr>
<td>A</td>
<td>981</td>
<td>19.15</td>
<td>5</td>
<td>3.83</td>
<td>0.99</td>
<td>0.97</td>
<td>0.01</td>
<td>0.99</td>
<td>0.99</td>
<td>0.98</td>
<td>0.99</td>
</tr>
<tr>
<td>B</td>
<td>937</td>
<td>7.58</td>
<td>5</td>
<td>1.52</td>
<td>0.99</td>
<td>0.98</td>
<td>0.01</td>
<td>0.99</td>
<td>0.99</td>
<td>0.99</td>
<td>0.99</td>
</tr>
<tr>
<td>C</td>
<td>1918</td>
<td>20.75</td>
<td>5</td>
<td>4.15</td>
<td>0.99</td>
<td>0.98</td>
<td>0.01</td>
<td>0.99</td>
<td>0.99</td>
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