MONASH University

THE AUSTRALIAN BUSINESS LEADERSHIP SURVEY #3:

Leadership, Organizational Culture, and Innovation of Australian Enterprises

James C. Sarros

Judy Gray

Iain Densten

Ken Parry

Anne Hartican

Brian Cooper

A joint Australian Institute of Management-Monash University

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Research Team

Research Director: **Professor James C. Sarros**
Monash University

Co-researchers: **Associate Professor Judy Gray**
Monash University

Associate Professor Iain Densten
UNSW – ADFA

Professor Ken Parry
Griffith University

Research Assistant: **Dr. Anne Hartican**
Monash University

Research Fellow: **Brian Cooper**
Monash University

AIM Coordinator

Carolyn Barker

CEO AIM Queensland

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Executive Summary

The Australian Business Leadership Survey #3 (ABLS3) is the culmination of research involving the Australian Institute of Management and Monash University over the last five years, and builds on the findings from two previous studies, ABLS1 and ABLS2.

A stratified random sample of over 6,000 members from the Institute's Australia-wide membership base resulted in a response sample of 2,376 members, who provided information on their personal leadership styles and their organizational cultures and approaches to innovation.

The ABLS3 is a self-assessment approach, so responses were checked for common method variance and social desirability bias. Not surprisingly, the more senior and experienced, better educated and remunerated executives indicated higher levels of transformational leadership, culture, and innovation than their more junior counterparts. These senior executives were also associated with higher levels of social desirability, indicating that while they recognized the types of leadership approaches needed to build strong and innovative workplace cultures, the reality may be different. The findings do reveal executives in touch with what makes the workplace achieve excellent outcomes, but they also indicate glaring deficiencies in how far companies are prepared to go in providing the resources and time to achieve these outcomes. The intention to perform and become competitive has improved since our last surveys, but innovation as a cornerstone of competitiveness remains a concern. There is a pressing need to shorten this time lag between remaining competitive while becoming innovative. There were also indications that leadership vision is slipping away, although Australian managers retain their sense of coaching, socially responsible leadership behaviors as their common strengths. The results reveal some welcome trends, add further information to our data base, provide indicators of strengths and strategies, and highlight areas in need of further improvement. The prospects look good with some concerted effort at getting it right.

Key Findings

- The ABLS3 is a 2005 study of 2376 members of the Australian Institute of Management (73% male, 27% female) which examined relationships among organizational leadership, culture, and innovation in Australian enterprises
- Most respondents were in New South Wales, Queensland/NT, and Victoria (78%)
- Majority of respondents were 40-59 years old; representation of those over 50 years of age has increased by 5 percent since ABLS1 (2001)
- Most respondents were at the executive and upper middle level of seniority; respondents at the top and executive levels have increased by 3 percent since ABLS1.
- Majority of respondents have had 12 years of more management experience, but have been in current position for fewer than five years, suggesting that executive replacement at senior levels continues after the first few years of appointment
- 64% of respondents hold Bachelors or Masters degree, 5 percent more since ABLS1
- Most respondents are in small to medium sized organizations (up to 100 employees); respondents in larger companies (1000 or more employees) are down 10 percent since ABLS1
- Female executives were younger (less than 50 years of age, 70%) compared with their male counterparts (52%).
- More males occupy the two top level positions than do female executives (56% compared with 44% respectively). However, female representation at the top levels (CEO, VP/Director) has increased 8 percent from 36% in 2001 (ABLS1)

Leadership

- Transformational Leadership Scale (TLS) was used in this study
- Key leadership behaviors in order of ranking (mean) and reliabilities (α=): providing appropriate role model (mean=6.01, α=.69), fostering acceptance of goals (5.99, α=.76), contingent reward (5.82, α=.77), intellectual stimulation (5.82, α=.77), providing individual support (5.78, α=.65), high performance expectations (5.60, α=.75), contingent punishment (4.84, α=.84), and articulating vision (4.63, α=.84)
- Findings indicate that executives are good at leading by example but feel less confident in creating a clear vision and strategy for the future
- Low level of leadership vision warrants further investigation, particularly when we consider it is strongly associated with innovation (correlation matrix)
- Females generally recorded higher levels of transformational leadership than males
- Older (50 years and older) and probably more experienced executives registered significantly higher levels of leadership in terms of vision, intellectual stimulation, individual support, and contingent reward compared with executives 49 years old or younger.
- The higher the salary, the higher the levels of transformational leadership recorded.

- There were no statistically significant differences in leadership approaches categorized by state, level of formal education, years in current position, years of company in Australia, years of company offshore, and type of organization
- Generally, the higher the organizational level of seniority, longer the years as an executive, the greater the recorded levels of leadership across all categories, transformational and transactional.
- Smaller-sized companies recorded higher levels of transformational and contingent reward leadership
- Not for profit and private companies recorded higher levels of vision than did public and government agencies. Government sector managers recorded more intellectual stimulation than did public sector managers. Managers in the private sector recorded higher performance expectation levels than did government and NFP managers. These same differences were repeated for contingent punishment.

Organizational Culture

- Organizational Culture Profile (OCP) was used in this study
- Key dimensions of organizational culture in order of ranking (mean) and reliabilities (α=) were: social responsibility (mean=3.81, α=.72), competitiveness (3.79, α=.74), performance orientation (3.66, α=.74), supportiveness (3.62, α=.81), emphasis on rewards (3.54, α=.78), stability (3.49, α=.67), and innovation (3.45, α=.80)
- These findings are similar to ABLS1 (2001) which found that performance orientation (4.02) was the prominent culture, followed by social responsibility (3.93) and supportiveness (3.70).
- Competitiveness has improved considerably since ABLS1, from equal last to second top, while innovation remains stagnant at the bottom of culture descriptors, although some improvement was recorded
- The low level of innovation remains a concern. The comparisons between ABLS1 and ABLS3 are statistically significant on every culture dimension apart from stability
- Time may be all that is needed for innovation to catch up to competitiveness – important to consider how to get Australian managers to think more innovatively and in less amount of time
- Males recorded higher level of stability compared with females, probably due to their greater representation at senior levels of management
- Older, more senior, and better remunerated managers also recorded highest levels of organizational culture
- The highest ranked type of organizational culture for top executives (CEOs) was social responsibility, followed by competitiveness, and supportiveness. This is a revealing juxtaposition between socially-acceptable approaches to building cultures that are also seen to be competitive and caring. What now needs examination is if these approaches deliver superior results.
- Older, better remunerated and more senior executives also registered higher levels of social desirability bias than their counterparts, suggesting these results may be the result of response artefact whereby the respondents have provided the socially acceptable answer ahead of the true response. Their hearts tell them what "should be" even though their minds tell them "what is." The challenge for executives today is to convert the idealised state of organization leadership, culture, and innovation reported in this study into a real workplace of sustained success.

- Compared to seniority, better educated executives reported lower levels of organizational culture recorded (similar to ABLS1). This finding is puzzling, as the differences in the proportions of qualified senior executives compared with less senior managers, while they exist, are not so different to warrant these differences in culture. For instance, 66% of all CEOs have Bachelor, Master, or doctoral qualifications compared with 75% of executive level managers (board members or directors) and 70% of upper middle managers (department executives, plant managers, senior professional staff)
- Generally, the longer the term as executive, the higher the levels of organizational culture
- Consistent with ABLS1, smaller sized organizations recorded significantly higher scores on all culture dimensions. The message appears to be that in order to produce companies with powerful and innovative cultures, we need to ensure that companies are small to medium in size (500 or fewer employees) with CEOs who are paid well, have been at the business end of things for 10 or more years, and who encourage creative innovations through respect, and the provision of time to pursue creative ideas during the workday
- Apart from stability, companies with 10 or fewer years in Australia recorded higher levels on all culture dimensions compared with companies with 11 or more years establishment in Australia. This finding suggests that length of operation (years) in Australia has a negative impact on the quality of organizational culture in these companies
- Not for profit organizations recorded higher levels of stability, supportiveness, and social responsibility than government, public, and private companies. Private companies were more rewards-, competitive, and innovation-oriented than other types of organizations
- Companies in the banking/finance sectors recorded the highest and government-related organizations the lowest levels of organizational culture in this study. Further research is warranted to explore the reasons for these low levels of culture in the public sector. It should be recognized however that public sector companies reported the lowest level of social desirability, while government agencies recorded the second highest level of social desirability bias
- No statistically significant differences in culture were recorded categorized by state

Innovation

- Climate for Innovation Scale was used in this study
- Key dimensions of the climate for innovation scale in order of ranking (mean) and reliabilities (α=) were: support for creativity (mean=3.69, α=.81), non-conformity (3.63, α=.84), support for innovation (3.50, α=.76), resource supply (3.14, α=.72)
- Two new dimensions of innovation were identified in this study, namely support for creativity and non-conformity
- The results indicate that Australian managers are most supportive of creativity but least supportive of providing sufficient resources for innovation. The attitude appears to be that "we'll endorse your creative spirit but won't provide the materials and resources to help you achieve your creative endeavours"
- Males reported higher levels of climate for innovation on support for innovation (recognition of innovative persons), resource supply (provision of materials for new ideas), and support for creativity (provision of time to pursue creative ideas)

- Similar to the results on leadership and culture, older, better remunerated, more experienced, and more senior executives also registered higher levels on all indicators of innovation. As reported elsewhere, these results need to be treated with caution due to possible social desirability of responses
- Similar to culture, better educated executives reported lower levels of organizational innovation
- Similar to the findings on organizational culture and leadership, smaller sized organizations reported higher levels of innovation. Combined with the earlier data, these results suggest that to build transformational and innovative workplace cultures, companies need to enhance the transformational behaviors of their leaders, build socially responsible and supportive workplaces, and provide the organizational flexibility and resources needed to sustain innovation
- Fewer years as a company in Australia were associated with higher levels of innovation. Similar to the findings on culture, this finding suggests that length of operation (years) in Australia is negatively associated with the level of innovation in these companies
- Private companies recorded the highest levels of innovation followed by not for profit organizations, similar to leadership and culture
- The industry types most associated with higher levels of innovation were building construction (support for innovation, non-conformity, resource supply, support for creativity), banking and finance (resource supply), and manufacturing (resource supply and support for creativity). In all cases, government-associated organizations registered the lowest levels of innovation, followed by education and health providers
- No statistically significant differences in levels of organization categorized by state

Research Hypotheses

Research hypotheses one, two and four were answered as follows:

- H1. Transformational leadership and organizational culture are positively associated with climate for innovation –
  - The transformational leadership factor of articulates vision was the major positive predictor of every factor of the climate for innovation construct. The next strongest predictor was the leadership factor of provides individual support.
  - Organizational culture was more significantly associated with innovation than was leadership. Major culture predictors of innovation were innovation (factor of organizational culture), emphasis on rewards, and supportiveness.
- H2. Transactional leadership and organizational culture are negatively associated with climate for innovation –
  - Transactional leadership was negatively or not associated with innovation.
- H4. Climate for innovation is related to industry type, location, and size –
  - Industry types most associated with higher levels of innovation were building construction, banking and finance, and manufacturing. In all cases, government-associated organizations registered the lowest levels of innovation, followed by education and health providers; no statistically significant differences in levels of organization categorized by state; smaller sized organizations reported higher levels of innovation.

Research hypothesis three was addressed as follows:

- H3. Organizational culture mediates the relationship between leadership and climate for innovation –
  - Structural equation models indicate that culture does mediate the relationship between leadership and innovation

Organization Metaphors

- The most innovative and performance-oriented cultures were associated with a balanced diet of fillet beef, fine seafood like caviar and lobster, fruit, vegetables, dessert and "healthy/nutritional/ restaurant/home-cooked" food. The least innovative and performance-oriented cultures were associated with carbohydrates, take-away food, hamburgers, pies and "slop/poison/ mouldy/rotten" food.
- The most innovative and performance-oriented cultures were associated with sleek, fast, deadly cats like lions, tigers and panthers. They were also associated with fast and effectual animals such as eagles, dolphins and cats. The least innovative and performance-oriented cultures were associated with big, slow, strong animals such as elephant, hippopotamus and rhinoceros. They were also associated with slow and extinct animals like dinosaurs and turtles. Some people envisioned sloths and pejorative metaphors like rodent and hyena.
- The most innovative and performance-oriented cultures were associated with the colour blue. They were also associated with the colour purple and opulent colours like gold and silver. By contrast, the least innovative and performance-oriented cultures were associated with grey/black, beige/white and brown.
- The most innovative and performance-oriented cultures were associated with elite sports cars and computers. The least innovative and performance-oriented cultures were associated with "old", "obsolete" and "malfunctioning" machines. In contrast with other metaphors, there was less differentiation in machine metaphors between the most and least innovative cultures.
- The metaphors chosen by subjects correlated to the same degree as correlations about organization culture, climate for innovation and leadership. Correlations were in the region of 0.60.
- High inter-rater reliability was found across cohorts of respondents.

Common Method Variance and Social Desirability Bias

- Marker variable of Civic Virtue was used to measure common method variance, and the Social Desirability Scale to measure social desirability bias in this study
- Females recorded a higher influence of common method variance (marker variables) compared with males, indicating that some responses are influenced statistically because of self-report bias
- For all results, older, better remunerated, better educated, and more senior executives recorded significantly higher levels of social desirability than other executives. This group of executives also recorded higher scores on transformational leadership, culture, and innovation, indicating that these results need to be treated with caution. The results tell us that although these Australian managers are aware of the leadership behavior they should model, the types of cultures most important in organizations, and the level of support for innovation required in order to be seen to be doing the right thing, the reality is that many of these observations are exaggerated. Nonetheless, believing these attitudes are

important may serendipitously promote their increased use and display in the workplace by managers

- The more a value is strongly prescribed in a social system, the more likely the relationship between that value and social desirability. This proposition supports our results which show statistically significant, but not strong,, associations among social desirability bias and research measures that indicate positive outcomes, such as transformational leadership behaviors, balanced organizational cultures, and innovative organizations. These outcomes suggest a powerful moral and social imperative associated with the "right" and "expected" response

Overall Observations

- Executives are good at leading by example but feel less confident in creating a clear vision and strategy for the future
- Low level of leadership vision warrants further investigation, particularly when we consider it is strongly associated with innovation (correlation matrix)
- Females generally recorded higher levels of transformational leadership than males
- Managers in private sector companies recorded higher levels on the transformational attributes of vision and performance, and also more contingent punishment behaviour, compared with government and not for profit managers. These differences may be due to the greater capacity of private sector managers to determine their company's strategic mission compared with government and not for profit organizations where performance is often an outcome of policy. Nonetheless, not for profits recorded the highest level of visionary leadership compared with all other categories.
- Competitiveness has improved considerably since ABLS1, from equal last to second top, while innovation remains stagnant at the bottom of culture descriptors, although some improvement was recorded
- The low level of innovation remains a concern. Time may be all that is needed for innovation to catch up to competitiveness – important to consider how to get Australian managers to think more innovatively and in less amount of time
- The highest ranked type of organizational culture for top executives (CEOs) was social responsibility, followed by competitiveness, and supportiveness. What now needs examination is if these approaches deliver superior results
- Transformational leadership was positively associated with organizational culture and innovation; transactional leadership was negatively or weakly associated with organizational culture and innovation.
- Older, better remunerated and more senior executives also registered higher levels of social desirability bias than their counterparts; that is, their hearts tell them what "should be" even though their minds tell them "what is." The challenge for executives today is to convert the idealised state of organization leadership, culture, and innovation reported in this study into a real workplace of sustained success.
- Smaller sized organizations recorded significantly higher scores on all culture dimensions, suggesting that powerful and innovative cultures thrive in small to medium sized (500 or fewer employees) companies with CEOs who are paid well, and have been at the business end of things for 10 or more years
- Length of operation (years) of a company in Australia may have a negative impact on the quality of organizational culture and innovation in these companies

- Government sector organizations recorded the lowest levels of organizational culture in this study. When considered in line with these government agencies also recording the second highest level of social desirability bias, the result suggests an unwritten cultural norm of laying low and not performing beyond expected outcomes in the government sector
- Australian managers support creativity as a form of innovation but are reticent of providing sufficient resources for innovation. The attitude appears to be that "we'll endorse your creative spirit but won't provide the materials and resources to help you achieve your creative endeavours"
- Similar to organizational culture and leadership, smaller sized organizations reported higher levels of innovation, suggesting that companies need to enhance the transformational behaviors of their leaders, build socially responsible and supportive workplaces, and provide the organizational flexibility and resources needed to build innovative workplaces
- Higher levels of innovation were in the building construction, banking and finance, and manufacturing industries. Government organizations registered the lowest levels of innovation, followed by education and health providers
- Stronger performing and innovative company cultures were best represented by images of luxury, sleekness, speed, and quality. The most representative metaphors used were: a balanced of fillet beef, fine seafood like caviar and lobster, fruit, vegetables, dessert and "healthy/nutritional/ restaurant/home-cooked" food; sleek, fast, deadly cats like lions, tigers and panthers; the colour blue, and opulent colours like gold and silver; elite sports cars and computers.
- Weaker performing and less innovative company cultures were represented by images of constraint, greyness, stolidity, and introspection. The most representative metaphors were: carbohydrates, take-away food, hamburgers, pies and "slop/poison/ mouldy/rotten" food; big, slow, strong animals such as elephant, hippopotamus and rhinoceros, and slow and extinct animals like dinosaurs and turtles; the colours grey/black, beige/white and brown; old, obsolete and malfunctioning machines.
- Females recorded a higher influence of common method variance (marker variables) compared with males, indicating that some responses are influenced statistically because of self-report bias.
- Older, better remunerated, better educated, and more senior executives recorded significantly higher levels of social desirability than other executives, indicating that their higher scores on transformational leadership, culture, and innovation, need to be treated with caution. So while these Australian managers recognize the leadership behaviors they should model, the types of cultures most important in organizations, and the level of support for innovation required in order to be competitive, the reality is that many of these observations are exaggerated
- The more a value is strongly prescribed in a social system, the more likely the relationship between that value and social desirability. This proposition supports our results which show statistically significant associations among social desirability bias and research measures that indicate positive outcomes, such as transformational leadership behaviors, balanced organizational cultures, and innovative organizations

The Study

Purpose

The purpose of this study was to explore the linkages among leadership, culture, and innovation in Australian enterprises.

Relationships among Constructs

Recent research has called for organizations to be more flexible, adaptive, entrepreneurial and innovative in order to effectively meet the changing demands of today's environment (Orchard, 1998; Parker and Bradley, 2000; Valle, 1999). Appropriate leadership to effect such change has equally been called for (Bass, 1998a,b; Brown, 1992; Kotter and Heskett, 1992; Schein, 1992). However, despite this attention, there has been little empirical analysis of the relationship between the key components that make up such change strategy, including transformational leadership, organizational culture, and the climate for innovation. Much of the research undertaken, although valuable, is conceptual in nature (Miner, 2000; Shane and Venkataraman, 2000), although recent studies are now exploring these relationships in more detail (Mumford and Licuanan, 2004).

Leadership and culture are linked in the process of change (Afsaneh, 1993; Kotter, 1998; Schein, 1984). As Kotter (1998:166) states, "Only through leadership can one truly develop and nurture culture that is adaptive to change". Denison (1990) claims that management behaviors reinforce principles of the culture. Research indicates that transformational leadership and individual innovation are related (Waldman and Bass, 1991), but the inclusion of organizational culture as an intervening variable is yet to be examined comprehensively. Our study examines these linkages in terms of their impact on innovation in Australian companies using the membership of the Australian Institute of Management (AIM) as the data source.

Transformational leadership supports and promotes innovation, which in turn ensures the long-term survival of an organization (Ancona and Caldwell, 1987). In fact, Zahra (1999:38) states that "participation in the emerging global economy requires – in fact, demands – innovation and entrepreneurial risk taking". Innovation as a facet of entrepreneurial activity in a dynamic environment is thought to enable flexibility and adaptability (Moon, 1999). But on the other hand, organizational culture (including the degree of flexibility and adaptability) has also been thought to be an influential factor in the promotion of innovation (Zahra, 1993). Empirical investigations have supported the effects of climate on innovation (Abbey and Dickson, 1983), but to a lesser extent, the relationship between culture and innovation, as well as transformational leadership, culture, and innovation (Stoica and Schindchutte, 1999). Further, innovation has seldom been considered at the group level of analysis within organizations (West and Farr, 1989), and despite widespread suggestions that leadership is critical in the innovation process, there has been only weak theoretical consideration and development of this area (Scott and Bruce, 1994). Following Scott and Bruce's (1994) lead, the current study investigates the relationships between and among these factors. In our study, organizational climate for innovation is the dependent variable, with transformational leadership and culture acting as independent and intervening variables respectively. Our study contributes to the growing research on innovation in relation to climate and addresses the need to explore the relationships among climate for innovation and leadership in more detail (e.g., Amabile and Gryskiewicz, 1989; Isaksen, Laver, Ekvall, and Britz, 2001; Mumford, Scott, Gaddis and Strange, 2002).

Methodology

Research Hypotheses

The following research hypotheses guide this study:

H1. transformational leadership and organizational culture are positively associated with climate for innovation;
H2. transactional leadership and organizational culture are negatively associated with climate for innovation;
H3. organizational culture mediates the relationship between leadership and climate for innovation;
H4. climate for innovation is related to industry type, location, and size.

The study is based on a questionnaire survey of Australian managers who are personal members of the Australian Institute of Management. In May 2004, the sample was mailed a complete survey package consisting of the leadership, organisational culture, and climate for innovation measures through each state-based branch of the AIM. The AIM has fully supported the earlier research phases of the ABLS studies through publications and editorial promotion of the findings (Keating, 2001).

Australian Business Leadership Survey No.3

The ABLS3 consists of six sections as follows.

(1) Section A: Demographic Information on gender, age, salary, seniority level, education, years in current position, years as an executive, number of employees, country of major ownership of company, years in Australia of company, year of establishment of company offshore, organization sector, organization type, and state of AIM membership

(2) Section B: Transformational Leadership Scale (Podsakoff et al., 1990) that examines the six transformational factors of articulates vision, provides appropriate model, fosters the acceptance of goals, high performance expectations, provides individualized support, intellectual stimulation, and the transactional constructs of contingent reward and contingent punishment behavior (Podsakoff et al., 1984). Four marker variables are randomly included in Section B to ensure they are theoretically distinct to the leadership items and as a further check of common method variance (Podsakoff et al., 1990).

(3) Section C: Climate for Innovation Scale (Scott and Bruce, 1994).
(4) Section D: Organizational Culture Profile (O'Reilly et al., 1991; Sarros et al., 2002, 2005).
(5) Section E: View of Yourself (Social Desirability Scale) (Crowne and Marlowe, 1960).
(6) Section F: Open Response Section

The survey also includes a section which invited respondents to describe their organization in terms of four metaphors: as a colour, animal, machine, and food.

Methods of Analysis

Research questions have been tested using hierarchical regression (initial testing of predicted relationships among independent and dependent variables), analyses of variance (ANOVAs) (testing for statistically significant differences in means among sub-groups of respondents classified by demographic and professional characteristics, including industry type, location, and size in relation to leadership, culture, and climate for innovation), and Structural Equation Modelling (to determine relationships among the research variables consistent with the research propositions above).

Measures: Dependent variable

'Support for innovation' (reliability (α)=.92, 16 items) and 'resource supply' (α=.77, six items) (components of 'climate for innovation') were measured by Scott and Bruce's (1994) Climate for Innovation scale. Support for innovation measures the degree to which individuals view the organization as open to change, and resource supply measures the degree to which resources (e.g. personnel, time) are perceived as adequate in the organization (Scott and Bruce, 1994:592).

Measures: Independent variables

Leadership was measured by Podsakoff et al.'s (1990) Transformational Leadership instrument. This instrument measures six factors of transformational leadership and the transactional constructs of contingent reward leadership and contingent punishment behavior. Reliabilities for this instrument range from .86 to .93.

Measures: Intervening variable

Organisational culture was measured by the Organisational Culture Profile (OCP) amended by Sarros, Gray and Densten (2002) from the original by O'Reilly et al. (1991) and Cable and Judge (1997). Sarros, Gray, Densten and Cooper (2005) have reviewed this version in terms of its psychometric properties. The revised version of the OCP has seven 4-item factors as follows (reliabilities are in parentheses): performance orientation (.74), social responsibility (.74), supportiveness (.87), emphasis on rewards (.80), stability (.66), competitiveness (.75), innovation (.80).

Control Variable

The Social Desirability Scale (Crowne and Marlowe, 1960) is a control variable to check for common method variance (Donaldson and Grant-Vallone, 2002; Kline, Sulsky, Rever-Moriyama, 2000). If SDS does not contribute significantly to the variance in innovation and is not significantly correlated with leadership and innovation, then common method variance as a result of social desirability bias (over-inflation of responses) can be discounted.

The Study Sample

A stratified random sample of 6,500 members was selected from the population of 20,563 members of the AIM in Australia at the time of data collection (May 2004). A number of mail-outs to the sample were conducted from May 2004 through to September 2004, with a final total sample of 2376 useable responses. This final sample size represents an impressive 37% return rate from a final sample of 6479, which is exceptional for a study of this type (Baruch, 1999) (the response rate for ABLS1 was 39%). Table 1 illustrates the sample compared with the AIM population (for all tables in this report the sample size varies because of missing data).

Table 1

Stratified Study Sample Categorized by State Membership Compared with Australian Institute of Management (AIM) Membership (2002 data) and ABLS1 Sample

	AIM Members (Dec 2002)		Achieved Sample (ABLS3 -2004)		ABLS1 - 2002	
	f	**%**	**f**	**%**	**f**	**%**
State						
NSW/ACT	8319	41	**801**	**34**	709	37
QLD/NT	4740	23	**617**	**26**	409	22
VIC/TAS	4690	22	**573**	**25**	536	28
WA	1879	9	**196**	**8**	157	8
SA	935	5	**154**	**7**	91	5
			2341	**100**	1902	100
No State Mentioned			35		16	
Totals	20563	100	2376		1918	

Table 1 shows that the ABLS3 sample is larger than the ABLS1 sample, with increases in responses from QLD/NT and SA (percentage returns), while responses from NSW/ACT and VIC/TAS were down.

Demographics

Table 2

Frequency and Percentage Distributions of Respondents Classified by Gender

Gender	f	%	ABLS1
Males	1732	72.9	75.9
Females	644	27.1	24.1
Total	2376	100.0	

Male respondents were fewer than ABLS1 (75.9%) and females increased from 24.1%.

Table 3

Frequency and Percentage Distributions of Respondents Classified by Age

Age	f	%	ABLS1
Less 30	59	2.5	3.8
30-39	437	18.4	20.9
40-49	848	35.7	36.9
50-59	812	34.2	31.3
60+	218	9.2	7.1
Total	2374	100.0	

Majority of respondents were 40-59 years old, and representation of those 50 years or older has increased by 5 percent since ABLS1 (2001).

Table 4

Frequency and Percentage Distributions of Respondents Classified by Level of Seniority

Levels	f	%	ABLS1
Top	745	31.8	29.8
Executive	501	21.4	20.1
Upper Middle	1098	46.8	50.1
Total	2344	100.0	

1= Top (CEO, COO); 2=Executive (VP, Director, Board); 3= Upper Middle (Dept Exec, Superintendent, Plant Manager)

Most respondents were at the executive and upper middle level of seniority, although those at the top and executive levels have increased by 3 percent since ABLS1.

Table 5
Frequency and Percentage Distributions of Respondents Classified by Years as an Executive

Years	f	%[a]
Less than 6 years	488	25.4
6 to 12 years	593	30.9
13 to 20 years	508	26.5
21+	330	17.2
Total	1919	100.0

[a] percentages rounded to 1 decimal point

19.4% - missing values

Majority of respondents have had up to 12 years experience at executive level.

Table 6
Frequency and Percentage Frequency Distributions of Respondents Classified by Years in Current Position

Years	f	%[a]
Less than 5 years	1503	68.3
6 to 12 years	448	20.3
12 to 20 years	174	7.9
21+	77	3.5
Total	2202	100.0

[a] **percentages rounded to 1 decimal point**

The majority of Australian managers (AIM sample) have been in their current positions for fewer than five years, suggesting that executive replacement at senior levels continues after the first few years of appointment.

Table 7
Frequency and Percentage Frequency Distributions of Respondents Classified by Salary

Salary	F	%[a]
<= $60,000	269	12.7
$60,001 to $85,000	483	22.7
$85,001 to $125,000	688	32.4
$125001 +	272	32.2
Total	2125	100.0

[a] **percentages rounded to 1 decimal point**

Most managers in the sample made in excess of $85K annually.

Table 8

Frequency and Percentage Distributions of Respondents Classified by Education

Education	f	%	ABLS1	
High School	156	6.6	7.9	↑
Tech	388	16.4	3.7	
Assoc/Diploma	174	7.3	22.3	↓
Bachelors	713	30.1	31.7	↑
Masters	801	33.8	27.0	
Doctorate	139	5.9	7.4	
Total	2371	100.0		

Education credentials of executives has improved since ABLS1, with 5 percent more having Bachelors or Masters degrees compared with ABLS1 respondents.

Table 9

Frequency and Percentage Distributions of Respondents Classified by Size of Organisation

Size	f	%	ABLS1	
Not relevant	142	6.1	7.1	
Less than 100	1097	47.4	34.2	↑
100 – 499	458	19.8	20.3	
500 – 999	157	6.8	7.7	
1000 – 4999	256	11.1	15.0	
5000 – 9,999	63	2.7	3.9	↓
10,000 or more	140	6.1	11.0	
Total	2313	100.0		

Majority of respondents are in small to medium sized organizations (up to 100 employees), and 20% in large-sized companies (down from 30% in ABLS1).

Table 10
Frequency and Percentage Frequency Distributions of Respondents Classified by Function

Function	F	%
Accounting	93	3.9
Administration	1170	49.6
Education	96	4.0
Human Resource Management	126	5.3
MIS	81	3.4
Marketing	98	4.1
Operations	161	6.8
Other	546	23.0
Total	2371	100.0

[a] **percentages rounded to 1 decimal point**
Others (23%) include advertising/PR, credit/finance, engineering, manufacturing, materials management, medicine, product development, quality control, research and development, sales, and security.

As expected, most managers are in administration.

Table 11
Frequency and Percentage Frequency Distribution of Respondents Classified by State

State	f	%
Victoria	556	23.8
Tasmania	17	.7
New South Wales	668	28.4
Queensland	594	25.4
South Australia	154	6.6
Western Australia	196	8.4
Northern Territory	23	1.0
Australian Capital Territory	133	5.7
Total	2341	100.0

[a] percentages rounded to 1 decimal point

As Table 11 illustrates, the majority of respondents (78%) were fairly evenly distributed (in percentage returns) across NSW, Queensland, and Victoria

Cross-tabulations

Table 12
Frequency and Percentage Frequency Distributions of Respondents Classified by Gender and Age (N=2370)

	Males		Females	
Age	**f**	**%**	**f**	**%[a]**
<30 years old	34	2.0	25	4.0
30-39	256	15.0	181	28.0
40-49	602	35.0	245	38.0
50-59	638	37.0	172	27.0
60+	197	11.0	20	3.0
Total	1727	100.0	643	100.0

[a] percentages rounded to 1 decimal point

χ^2= 102.91, d.f. 4, p=.000

As shown in Table 12, female executives were more likely to be younger (less than 50 years of age, 70%) compared with their male counterparts (52%). Male managers were almost evenly distributed between under (52%) and over (48%) 50 years of age. Differences between male and female managers categorized by age are significantly different as shown by the chi square value and associated level of significance.

Table 13

Frequency and Percentage Distributions of Respondents Classified by Gender and Level of Seniority

Levels	Male f	Male %	ABLS1	Female f	Female %	ABLS1
Top	588	34.0	33.0	155	25.0	20.0
Executive	377	22.0	21.0	122	19.0	16.0
Upper Middle	743	44.0	46.0	355	56.0	64.0
Totals	1708	100.0		632	100.0	

$\chi 2 = 31.68$, d.f. 2, $p < .001$

As shown in Table 13, more males occupy the two top level positions than do female executives (56% compared with 44% respectively). However, female representation at the top levels (CEO, VP/Director) has increased 8 percent from 36% in 2001 (ABLS1). Differences in seniority are significantly different at the $p<.001$ level.

Leadership

The Transformational Leadership Scale by Podsakoff et al. (1990) was used to examine the six transformational factors of: articulates vision, provides appropriate role model, fosters the acceptance of goals, high performance expectations, provides individualized support, intellectual stimulation, and the transactional constructs of contingent reward and contingent punishment behavior (Podsakoff et al., 1984).

A higher order confirmatory factor analysis of the leadership scales revealed the integrity of the scales was retained. The higher-order Confirmatory Factor Analysis (CFA) of the Leadership Factors (χ^2 = 1313.99, df = 602, p = .000; χ^2/df = 2.18; NNFI =.90; RMSEA = .05; CFI = .91; GFI = .89) identified two substantive second-order factors (transformational and transactional leadership), and eight substantive first-order factors (articulates vision, fosters the acceptance of goals, intellectual stimulation, provides appropriate model, high performance expectations, contingent reward and contingent punishment). Table 14 shows the CFA for the TLS, while Table 15 shows the rankings of the leadership factors and compares them to ABLS1 leadership equivalents.

Table 14
Transformational Leadership Scale Confirmatory Factor Analysis

Leadership	Mean	SD	No Items	Items	Cronbach	Composite Reliability
Articulates vision	**4.63**	0.72	5	11,34,1,21,29	0.84	0.73
Fosters the acceptance of goals	5.99	0.68	4	13,30,23,12	0.76	0.73
Provides appropriate model	**6.01**	0.72	3	22,12,2	0.69	0.55
Intellectual stimulation	5.82	0.71	4	17,32,7,26	0.77	0.73
Provides individual support	5.78	0.71	4	25,16,31r,6r	0.65	0.96
High performance expectations	5.60	0.83	3	4,14,24	0.75	0.71
Contingent reward	5.82	0.70	5	35r,8,27,33,18	0.77	0.71
Contingent punishment	4.84	1.05	5	36,37,28,19,9	0.84	0.84

Original response categories: 1=Strongly Disagree; 7=Strongly Agree.

Table 15

Transformational Leadership Scale (ABLS3) compared with ABLS1

Leadership	Mean	α	ABLS1
Provides appropriate role model	6.01	0.69	Same
Fosters acceptance of goals	5.99	0.76	New
Contingent reward	5.82	0.77	Same
Intellectual stimulation	5.82	0.77	Same
Provides individual support	5.78	0.65	↓
High performance expectations	5.60	0.75	New
Contingent punishment	4.84	0.84	Similar
Articulates vision	4.63	0.84	↓

Original response categories for TLS: 1 = Strongly disagree; 7=Strongly agree.

ABLS1 (MLQ) found that Individualized consideration (coaching, role modelling) was highest ranked leadership factor, followed by Inspirational motivation (encouraging commitment to vision) and contingent reward. Idealized attributes (charisma) was lowest transformational behavior. Vision has plunged from second (ABLS1) to last.

As Table 15 shows, Australian managers recorded the highest levels of transformational leadership for role modelling (mean=6.01, strongly agree), fostering the acceptance of goals (mean=5.99) and intellectual stimulation (mean=5.82). The positively affirming transactional factor of contingent reward (mean=5.82) also featured highly. The lowest ranked leadership style was articulating a vision for the company (mean=4.63).

These results are a little disconcerting, as organizations without a vision are like ships without rudders, or teams without captains. Organizational vision is important to strategic planning and operations. In the TLS, vision incorporates the following items:

- Have a clear understanding of where we are going
- Paint an interesting picture of the future of our group
- Am always seeking new opportunities for the organization
- Inspire others with my plans for the future
- Am able to get others committed to my dream.

The low ranking of vision in this study warrants further investigation. Vision is positively and strongly associated with innovation (as shown in the correlation matrix). When vision fails, we can assume that innovation will be adversely affected. In comparison, and similar to ABLS1, Australian executives continue to believe they provide appropriate role modelling behaviors for their workers. Role modelling consists of the following items in the TLS:

- Lead by "doing", rather than simply "telling"
- Provide a good model for others to follow
- Lead by example.

Table 16

T-test for Mean Factor Scores of Transformational and Transactional Leadership Classified by Gender

Factors	Males	Females	T
Provides appropriate model	5.99	6.04	-1.50
Fosters the acceptance of goals	5.99	5.99	0.13
Contingent Reward	5.78	5.92	-4.42***
Intellectual stimulation	5.83	5.79	1.33
Provides individual support	5.74	5.87	-3.80***
High Performance expectations	5.59	5.62	-0.77
Contingent punishment behaviors	4.86	4.78	1.61
Articulates Vision	4.65	4.57	2.38*

Original response categories for factors:

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Females generally recorded higher levels of transformational leadership behavior than did males (similar to ABLS1), and significantly more contingent reward (similar to ABLS1) and individual support leadership behaviors.

Table 17
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Age Group (N=2374)

Transformational and Transactional Leadership Factors	Age Group					F	Sig.Diff Groups
	1	2	3	4	5		
	n = 59	n = 437	n = 848	n = 812	n = 218		
Articulates vision	4.39	4.59	4.58	4.67	4.79	6.56***	1-5, 2-5, 3-5
Fosters the acceptance of goals	5.81	5.95	5.96	6.04	6.04	3.21*	None
Intellectual stimulation	5.57	5.78	5.79	5.87	5.91	4.29**	1-4, 1-5
Provides individual support	5.73	5.73	5.72	5.81	5.96	6.13***	2-5, 3-5
High performance expectations	5.64	5.54	5.57	5.62	5.75	2.65*	None
Provides appropriate model	5.80	5.99	5.98	6.04	6.06	2.14	None
Contingent reward	5.72	5.80	5.75	5.85	5.98	5.45***	3-5
Contingent punishment behaviors	5.00	4.87	4.81	4.80	5.01	2.30	None

Note : 1= <30; 2 = 30 to 39; 3 = 40 to 49; 4 = 50 to 59; 5 = 60+

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Generally, older (50 years and older) and probably more experienced executives registered significantly higher levels of leadership in terms of vision, intellectual stimulation, individual support, and contingent reward compared with executives 49 years old or younger.

Table 18
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Salary Group (N=2125)

Transformational and Transactional Leadership Factors	Salary Group				F	Sig.Diff Groups
	1 n = 269	2 n = 483	3 n = 688	4 n = 685		
Articulates vision	4.43	4.45	4.58	4.84	39.36***	1-3, 1-4, 2-3, 2-4 3-4
Fosters the acceptance of goals	5.85	5.97	5.95	6.09	9.77***	1-4, 2-4 3-4
Intellectual stimulation	5.67	5.73	5.82	5.90	9.29***	1-3, 1-4 2-4
Provides individual support	5.76	5.74	5.72	5.83	2.66*	None
High performance expectations	5.45	5.47	5.55	5.76	16.66***	1-4, 2-4 3-4
Provides appropriate model	5.93	5.95	6.00	6.07	3.77*	None
Contingent reward	5.78	5.82	5.80	5.83	0.58	None
Contingent punishment behaviors	4.77	4.70	4.81	5.00	9.42***	1-4, 2-4 3-4

Note : 1= <$60,000; 2 = $85,000-$125,000; 3 = $85,001-$125,000; 4 = $125,101 or more

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

In most cases, the greater the salary, the higher the levels of transformational leadership recorded. As a form of balance, these managers also recorded the highest levels of transactional leadership (contingent punishment behaviors), which suggests that transformational leaders can take transactional and corrective action when required.

Table 19
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Educational Level (N=2371)

Transformational and Transactional Leadership Factors	Educational Level						F	Sig.Diff Groups
	1 n=156	2 n=388	3 n=174	4 n=713	5 n=801	6 n=139		
Articulates vision	4.72	4.64	4.57	4.59	4.62	4.77	2.35*	None
Fosters the acceptance of goals	6.04	6.02	6.02	5.97	5.98	5.99	0.59	None
Intellectual stimulation	5.77	5.80	5.78	5.80	5.85	5.92	1.47	None
Provides individual support	5.85	5.85	5.79	5.74	5.75	5.78	1.65	None
High performance expectations	5.62	5.63	5.66	5.55	5.58	5.71	1.32	None
Provides appropriate model	6.04	6.07	5.99	5.98	5.97	6.07	1.46	None
Contingent reward	5.91	5.86	5.79	5.81	5.79	5.78	1.28	None
Contingent punishment behaviors	4.93	4.88	5.02	4.87	4.76	4.70	3.04**	None

Note: 1= High School; 2 = Diploma; 3 = Technical; 4 = Bachelor; 5 = Master; 6 = Doctorate

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

There were no statistically significant differences in leadership approaches categorized by level of formal education.

Table 20
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Organizational Level (N=2344)

Transformational and Transactional Leadership Factors	Organizational Level			F	Sig.Diff Groups
	1 n = 745	2 n = 501	3 n = 1098		
Articulates vision	4.87	4.76	4.41	111.46***	1-2, 1-3, 2-3
Fosters the acceptance of goals	6.07	6.04	5.92	12.27***	1-3, 2-3
Intellectual stimulation	5.93	5.83	5.74	15.45***	1-3
Provides individual support	5.87	5.81	5.71	11.82***	1-3, 2-3
High performance expectations	5.72	5.70	5.47	24.94***	1-3, 2-3
Provides appropriate model	6.09	6.06	5.93	12.62***	1-3, 2-3
Contingent reward	5.86	5.82	5.79	2.21	None
Contingent punishment behaviors	4.88	4.97	4.75	8.12***	1-3, 2-3

Note : 1= <$Top; 2 = Executive; 3 = Upper Middle

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$***$p \leq .001$

Generally, the higher the organizational level of seniority, the greater the recorded levels of leadership across all categories, transformational and transactional.

Table 21
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Years in Current Position (N=2243)

Transformational and Transactional Leadership Factors	Years in Current Position						F	Sig.Diff Groups
	1 n=389	2 n=337	3 n=561	4 n=332	5 n=212	6 n=412		
Articulates vision	4.61	4.56	4.61	4.69	4.71	4.66	1.90	None
Fosters the acceptance of goals	5.95	5.96	5.99	6.07	6.05	5.97	1.57	None
Intellectual stimulation	5.85	5.82	5.82	5.82	5.83	5.78	0.42	None
Provides individual support	5.73	5.70	5.81	5.78	5.78	5.82	1.59	None
High performance expectations	5.58	5.56	5.62	5.62	5.60	5.60	0.30	None
Provides appropriate model	5.99	5.96	6.00	6.03	6.07	6.00	0.78	None
Contingent reward	5.83	5.81	5.81	5.82	5.86	5.79	0.30	None
Contingent punishment behaviors	4.74	4.86	4.92	4.85	4.85	4.78	1.63	None

Note: 1= 1yr; 2 = 2 yrs; 3 = 3 to 4 years; 4 = 5 to 6 years; 5 = 7 to 9 years; 6 = 10 yrs +

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

No statistically significant differences recorded.

Table 22
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Years as an Executive (N=1919)

Transformational and Transactional Leadership Factors	Years as an Executive				F	Sig.Diff Groups
	1 n = 488	2 n = 593	3 n = 508	4 n = 330		
Articulates vision	4.57	4.66	4.73	4.75	5.88***	1-3, 1-4
Fosters the acceptance of goals	5.96	6.01	6.03	6.04	1.25	None
Intellectual stimulation	5.76	5.82	5.91	5.87	3.75*	1-3
Provides individual support	5.76	5.75	5.76	5.89	3.13*	None
High performance expectations	5.61	5.61	5.62	5.67	0.43	None
Provides appropriate model	5.99	6.02	6.03	6.05	0.65	None
Contingent reward	5.82	5.81	5.80	5.88	0.91	None
Contingent punishment behaviors	4.88	4.85	4.80	4.89	0.62	None

Note : 1= Les than 6 years; 2 = 6 to 12 years; 3 = 13 to 20 years; 4 = More than 21 years

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Generally, the longer in years as an executive, the higher the levels of leadership recorded.

Table 23
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Number of Employees (N=2313)

Transformational and Transactional Leadership Factors	Number of Employees									F	Sig. Diff. Groups
	1	2	3	4	5	6	7	8	9		
	n = 142	n = 201	n = 379	n = 517	n = 458	n = 157	n = 256	n = 63	n = 140		
Articulates Vision	4.78	4.65	4.64	4.61	4.71	4.63	4.59	4.55	4.44	2.99**	None
Fosters the acceptance of goals	6.03	5.99	5.96	6.02	6.01	6.00	5.99	5.98	5.96	0.29	None
Intellectual stimulation	5.98	5.83	5.78	5.76	5.88	5.84	5.83	5.80	5.82	2.04*	None
Provides individual support	5.90	5.89	5.73	5.77	5.79	5.74	5.70	5.68	5.80	2.05*	None
High performance expectations	5.69	5.62	5.58	5.60	5.62	5.64	5.48	5.56	5.67	1.16	None
Provides appropriate model	6.14	6.06	5.96	6.03	6.01	5.94	5.97	5.97	6.00	1.24	None
Contingent reward	6.03	5.90	5.80	5.77	5.82	5.80	5.79	5.79	5.83	2.43*	None
Contingent Punishment behaviors	4.87	4.62	4.83	4.88	4.88	4.89	4.79	4.88	4.89	1.53	None

Note : : 1= Self Employed (SE) ; 2 = 1 to 4 employees; 3 = 5 to 19 employees; 4 = 20 to 99 employees; 5 = 100 to 499 employees; 6 = 500 to 999 employees; 7 = 1,000 to 4,999 employees; 8 = 5,000 to 9,999 employees; 9 = 10,000 and over.

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Generally, the smaller the organization, the higher the levels of transformational and contingent reward leadership, and the larger the organization, the higher the transactional leadership (contingent punishment). None of these differences were statistically significant.

Table 24
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Years of Company in Australia (N=2107)

Transformational and Transactional Leadership Factors	Years of Company in Australia				F	Sig.Diff Groups
	1 n = 530	2 n = 517	3 n = 441	4 n = 619		
Articulates vision	4.72	4.67	4.59	4.58	4.64**	1-3, 1-4
Fosters the acceptance of goals	6.01	5.00	5.97	5.98	0.33	None
Intellectual stimulation	5.85	5.83	5.80	5.80	0.69	None
Provides individual support	5.83	5.77	5.82	5.72	2.72*	None
High performance expectations	5.66	5.59	5.65	5.54	2.76*	None
Provides appropriate model	6.04	6.06	5.95	5.99	2.52	None
Contingent reward	5.84	5.87	5.79	5.76	2.70*	None
Contingent punishment behaviors	4.86	4.86	4.84	4.85	0.05	None

Note : 1= Less than 10 years; 2 = 11 to 25 years; 3 = 26 to 50 years; 4 = 51 years or more

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

There were no statistically significant differences recorded.

Table 25
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Years of Establishment of Company Offshore (N=418)

Transformational and Transactional Leadership Factors	Years of Establishment					F	Sig.Diff Groups
	1 n = 111	2 n = 105	3 n = 81	4 n = 78	5 n = 43		
Articulates vision	4.73	4.66	4.49	4.49	4.47	2.13	None
Fosters the acceptance of goals	5.99	5.96	5.97	5.85	5.94	0.52	None
Intellectual stimulation	5.89	5.84	5.66	5.77	5.75	1.57	None
Provides individual support	5.76	5.77	5.80	5.62	5.70	0.80	None
High performance expectations	5.68	5.63	5.70	5.64	5.58	0.21	None
Provides appropriate model	6.03	6.00	5.96	5.89	5.93	0.58	None
Contingent reward	5.80	5.77	5.75	5.76	5.60	0.68	None
Contingent punishment behaviors	4.85	4.95	4.88	4.83	4.94	0.22	None

Note : 1= Less than 11 years ; 2 = 11 to 25 years; 3 = 25 to 50; 4 = 51 to 100; 5 = 101 years and more

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

No statistically significant differences recorded.

Table 26
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Job Function (N=2005)

Transformational and Transactional Leadership Factors	Job Function Group								F	Sig.Diff Groups
	1 n = 93	2 n = 1170	3 n = 96	4 n = 126	5 n = 81	6 n = 98	7 n = 161	8 n = 180		
Articulates Vision	4.33	4.75	4.61	4.53	4.59	4.54	4.45	4.49	10.13***	1-2, 2-7, 2-8
Fosters the acceptance of goals	5.80	6.04	5.89	6.00	6.00	5.95	6.01	5.98	2.36*	None
Intellectual stimulation	5.57	5.87	5.94	5.86	5.82	5.66	5.73	5.77	4.19***	1-2
Provides individual support	5.63	5.83	5.75	5.82	5.81	5.73	5.60	5.76	2.95**	None
High performance expectations	5.38	5.65	5.63	5.59	5.52	5.70	5.48	5.56	2.49*	None
Provides Appropriate model	5.88	6.06	5.95	5.98	6.07	5.91	5.96	5.94	2.02*	None
Contingent reward	5.63	5.84	5.87	5.84	5.91	5.81	5.82	5.70	2.18*	None
Contingent Punishment behaviors	4.82	4.85	4.62	4.84	4.83	4.83	4.91	4.95	0.96	None

Note : : 1= Accounting ; 2 = Administration; 3 = Education; 4 = HRM; 5 = MIS; 6 = Marketing; 7 = Operation; 8 = Other

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Administrators recorded significantly more intellectual stimulation than did managers from an accounting background.

Table 27
Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by Organization Sector (N=2359)

Transformational and Transactional Leadership Factors	Organization Sector				F	Sig.Diff Groups
	1 n = 472	2 n = 275	3 n = 1308	4 n = 304		
Articulates vision	4.52	4.53	4.67	4.69	8.01***	1-4, 2-3, 1-3
Fosters the acceptance of goals	6.00	5.93	5.99	6.02	0.93	None
Intellectual stimulation	5.90	5.71	5.83	5.79	4.49**	1-2
Provides individual support	5.71	5.71	5.81	5.78	3.36*	None
High performance expectations	5.50	5.57	5.67	5.47	8.14***	1-3, 3-4
Provides appropriate model	5.98	5.92	6.03	6.02	2.28	None
Contingent reward	5.82	5.82	5.82	5.79	0.14	None
Contingent punishment behaviors	4.74	4.82	4.93	4.62	9.76***	1-3, 3-4

Note : 1= Government; 2 = Public; 3 = Private 4 = Non-profit

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

NFPs and private companies recorded higher levels of vision than did public and government agencies. Government sector managers recorded more intellectual stimulation than did public sector managers. Managers in the private sector recorded higher performance expectation levels than did government and NFP managers. These same differences were repeated for contingent punishment. Overall, managers in private sector companies recorded higher levels on the transformational attributes of vision and performance, and also more contingent punishment behaviour, compared with government and not for profit managers. These differences may be due to the greater capacity of private sector managers to determine their company's strategic mission compared with government and NFPs where performance is often an outcome of policy. Nonetheless, NFPs recorded the highest level of visionary leadership compared with all other categories.

Table 28

Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified Organization Type (N=2360)

Transformational and Transactional Leadership Factors	Number of Employees									F	Sig. Diff. Groups
	1 n = 149	2 n = 107	3 n = 287	4 n = 219	5 n = 271	6 n = 157	7 n = 238	8 n = 174	9 n = 758		
Articulates Vision	4.59	4.60	4.49	4.61	4.61	4.64	4.73	4.61	4.67	2.28*	None
Fosters the acceptance of goals	6.00	5.97	5.96	5.94	5.95	6.02	6.10	5.93	6.01	1.30	None
Intellectual stimulation	5.70	5.70	5.83	5.77	5.87	5.87	5.88	5.79	5.83	1.65	None
Provides individual support	5.75	5.78	5.66	5.82	5.77	5.69	5.86	5.73	5.81	1.95*	None
High performance expectations	5.63	5.74	5.45	5.65	5.55	5.64	5.63	5.55	5.62	2.01*	None
Provides appropriate model	5.60	5.93	5.96	6.06	6.04	5.99	6.06	5.88	6.03	1.52	None
Contingent reward	5.73	5.76	5.75	5.79	5.85	5.86	5.90	5.77	5.83	1.39	None
Contingent Punishment behaviors	4.91	5.00	4.74	4.93	4.59	4.88	4.93	4.86	4.86	3.21**	None

Note : 1= Retail/Wholesale Trade; 2 = Building/Construction; 3 = Government/Defence/Justice; 4 = Banking/Finance/Insurance; 5 = Education ; 6 = IT/Communications; 7 = Health/Community; 8 = Manufacturing; 9 = Other (Electricity, Gas and Water Supply, Vehicle/Metal, Farming, Textiles/Clothing/Footwear, Transport/Storage, Mining, Cultural/Recreational, and other).

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

No statistically significant differences recorded.

Table 29

Analysis of Variance for Mean Factor Scores of Respondents on Leadership Classified by State (N=2341)

Transformational and Transactional Leadership Factors	State								F	Sig.Diff Groups
	1 n = 556	2 n = 17	3 n = 668	4 n = 594	5 n = 154	6 n = 196	7 n = 23	8 n = 133		
Articulates Vision	4.57	4.50	4.62	4.63	4.68	4.70	4.68	4.70	0.95	None
Fosters the acceptance of goals	5.97	6.02	5.98	5.96	6.05	6.09	5.87	6.03	1.16	None
Intellectual stimulation	5.83	5.62	5.80	5.79	5.80	5.94	5.84	5.81	1.23	None
Provides individual support	5.77	5.66	5.81	5.74	5.75	5.87	5.72	5.69	1.39	None
High performance expectations	5.63	5.63	5.62	5.52	5.59	5.73	5.60	5.53	1.87	None
Provides Appropriate model	6.01	6.16	5.98	5.95	6.09	6.07	6.04	6.06	1.26	None
Contingent reward	5.80	5.95	5.82	5.80	5.80	5.84	5.70	5.83	0.32	None
Contingent Punishment behaviors	4.86	4.49	4.90	4.81	4.66	4.85	5.11	4.80	1.55	None

Note : 1= Victoria ; 2 = Tasmania; 3 = New South Wales ; 4 = Queensland; 5 = South Australia; 6 = Western Australia; 7 = Northern Territory; 8 = Australian Capital Authority

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

No statistically significant differences recorded.

Organizational Culture

Organisational culture was measured by the Organisational Culture Profile (OCP) amended by Sarros, Gray and Densten (2002) from the original by O'Reilly et al. (1991) and Cable and Judge (1997). Sarros, Gray, Densten and Cooper (2005) have reviewed this version in terms of its psychometric properties. The revised version of the OCP has seven 4-item factors as follows (reliabilities are in parentheses): performance orientation (.74), social responsibility (.74), supportiveness (.87), emphasis on rewards (.80), stability (.66), competitiveness (.75), innovation (.80). The higher-order Confirmatory Factor Analysis of the Organizational Culture Profile Factors (χ^2 = 1156.14, df = 506, p = .000; χ^2/df = 2.29; NNFI =.91; RMSEA = .05; CFI = .93; GFI = .90) identified three substantive second order factors (Business, People, and Environment), and seven substantive first order factors (Social responsibility, Stability, Supportiveness, Emphasis on rewards, Innovation, Performance Orientation, and competitiveness).

Table 30
Organizational Culture Profile Confirmatory Factor Analysis

Culture	Mean	SD	No Items	Items	Cronbach	Composite Reliability
Stability	3.49	0.78	4	25,11,5,1	0.67	0.68
Supportiveness	3.62	0.79	4	26,21,17,2	0.81	0.74
Emphasis on reward	3.54	0.83	4	27,25,10,4	0.78	0.69
Competitiveness	3.79	0.74	4	7,13,15,20	0.74	0.81
Performance orientation	3.66	0.71	4	22,18,12,9	0.74	0.68
Social responsibility	**3.81**	0.73	4	23,19,16,6	0.72	0.79
Innovation	**3.45**	0.85	4	3,8,14,6	0.80	0.80

Table 31

Organizational Culture Profile CFA

Culture	Mean	α	ABLS1	*t*	
Social responsibility	3.81	0.72	3.93	-8.17**	↓
Competitiveness	3.79	0.74	3.37	27.67**	↑
Performance orientation	3.66	0.74	4.02	-24.62**	↓
Supportiveness	3.62	0.81	3.70	-4.61**	↓
Emphasis on rewards	3.54	0.78	3.61	-4.27**	↓
Stability	3.49	0.67	3.46	1.99	↑
Innovation	3.45	0.80	3.37	-2.82**	↑

Original response categories for OCP: 1 = Not at all; 2=Minimally; 3=Moderately; 4=Considerably; 5=Very much. **p<.01.

Competitiveness has shown greatest change since ABLS1 (2001), jumping from last to second most characteristic of Australian organizational cultures as perceived by the respondents.

One-sample t-test using ABLS1 mean scores as the reference sample.

As Table 31 shows, the prominent culture for Australian organizations is one of social responsibility (m=3.81, which is between moderate and considerable in extent) followed by competitiveness (3.79) and performance orientation (3.66). The least extensive is an innovative organizational culture (3.45). These findings are similar to ABLS1 (2001) which found that performance orientation (4.02) was the prominent culture, followed by social responsibility (3.93) and supportiveness (3.70). In the current study, competitiveness is more representative of company cultures today and social responsibility and performance orientation have lost some ground (from 3.93 to 3.81 and from 4.02 to 3.66 respectively). The low level of innovation remains a concern. The comparisons between ABLS1 and ABLS3 are statistically significant on every culture dimension apart from stability. This means that the movements in representation of culture attributes, either up (as in competitiveness) or down (as in emphasis on rewards), are the results of real shifts in the thinking and perceptions of managers, and not the results of statistical artefact or anomalie.

Nonetheless, these results are perplexing; how can Australian leaders say their organizations are competitive, but not innovative? It may be a matter of time. That is, in the first instance, when companies strive to be more competitive they try harder, work longer, but fundamentally do the same things in order to not lose ground. In terms of a track race, they're running harder and faster and longer, but still using the old techniques. In some cases, increased competitiveness goes hand in hand with redundancies and cut-backs in operations generally. In comparison, innovation takes a fundamental shift in the way things are done and resourced. It is just possible that as these companies acclimatize to the competitive climate, they'll quickly learn that working harder and longer is not enough to sustain the competitive edge. Instead of now just trying to keep up with their competitors, they'll begin doing things

differently, and running on the inside and closer to the edge to gain lost ground. The difference in effect between competitiveness and innovation is temporal. This lag in innovation catching up to competitiveness will reduce over the next two years as Australian managers begin to find new ways to not only maintain, but also enhance their competitive edge.

Table 32
T-tests for Mean Factor Scores of Organizational Culture Profile Classified by Gender

Factors	Males	Females	T
Stability	3.53	3.38	4.15***
Supportiveness	3.61	3.65	-1.19
Emphasis on rewards	3.56	3.48	1.89
Competitiveness	3.89	3.78	0.65
Performance Orientation	3.66	3.68	-0.69
Social responsibility	3.81	3.80	0.38
Innovation	3.46	3.41	1.27

Original response categories: 1=Not at All; 2=Minimally; 3=Moderately; 4=Considerably; 5=Very much.

***p*≤.05;**p*≤.01; ***p*≤.001**

Male managers recorded a significantly higher score on stability than did female managers, probably due to their greater representation at senior levels of management and therefore having the discretionary power to determine organizational strategic outcomes.

Table 33

Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Age Group (N=2374)

Organizational Culture Profile Factors	Age Group					F	Sig.Diff Groups
	1	2	3	4	5		
	n = 59	n = 437	n = 848	n = 812	n = 218		
Stability	3.42	3.29	3.40	3.59	3.89	29.58***	1-5, 2-4, 2-5, 3-4, 3-5, 4-5
Supportiveness	3.51	3.49	3.54	3.70	3.95	18.10***	1-5, 2,4, 2-5, 3-4, 3-5, 4-5
Emphasis on rewards	3.40	3.45	3.43	3.60	3.94	20.03***	1-5, 2-4, 2-5, 3-4, 3-5, 4-5
Competitiveness	3.75	3.74	3.71	3.84	4.09	13.17***	1-5, 2-5, 3-4, 3-5 4-5
Performance orientation	3.53	3.54	3.54	3.74	3.96	20.02***	1-5, 2-4 2-5, 3-4, 3-5, 4-5
Social responsibility	3.79	3.66	3.71	3.91	4.13	23.27***	1-5, 2-4 2-5, 3-4 3-5, 4-5
Innovation	3.39	3.37	3.33	3.52	3.84	18.88***	1-5, 2-5 3-4, 3-5 4-5

Note : 1= <30; 2 = 30 to 39; 3 = 40 to 49; 4 = 50 to 59; 5 = 60+

Original response categories: 1=Not at All; 2=Minimally; 3=Moderately; 4=Considerably; 5=Very much

***p*≤.05;**p*≤.01; ***p*≤.001**

The older the manager, the higher the levels of all dimensions of organizational culture recorded.

Table 34
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Salary Group (N=2125)

Organizational Culture Profile Factors	Salary Group				F	Sig.Diff Groups
	1 n = 269	2 n = 483	3 n = 688	4 n = 685		
Stability	3.49	3.38	3.44	3.53	3.60*	2-4
Supportiveness	3.56	3.45	3.58	3.73	12.34***	1-4, 2-4, 3-4
Emphasis on rewards	3.39	3.26	3.50	3.74	36.41***	1-4, 2-3, 2-4, 3-4
Competitiveness	3.73	3.60	3.75	3.92	18.57***	1-4, 2-3, 2-4, 3-2, 3-4
Performance orientation	3.59	3.50	3.62	3.77	15.59***	1-4, 2-3, 2-4, 3-2, 3-4
Social responsibility	3.78	3.69	3.78	3.88	6.92***	2-4
Innovation	3.41	3.21	3.39	3.60	20.34***	1-2, 1-4, 2-1, 2-3, 2-4, 3-2, 3-4

Original response categories: 1=Not at All; 2=Minimally; 3=Moderately; 4=Considerably; 5=Very much.

Note : 1= <$60,000; 2 = $85,000-$125,000; 3 = $85,001-$125,000; 4 = $125,101 or more

***p*≤.05;**p*≤.01; ***p*≤.001**

Higher levels of incomes were associated with higher levels of organizational culture, which may be associated with the increased capacity to determine organizational culture the more senior and thereby better remunerated a manager becomes (see Table 36 below).

Table 35
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Educational Level (N=2371)

Organizational Culture Profile Factors	Educational Level						F	Sig.Diff Groups
	1 n=156	2 n=388	3 n=174	4 n=713	5 n=801	6 n=139		
Stability	3.69	3.60	3.53	3.44	3.43	3.46	5.22***	1-4, 1-5, 2-5
Supportiveness	3.73	3.67	3.63	3.63	3.57	3.61	1.60	None
Emphasis on rewards	3.77	3.63	3.64	3.54	3.42	3.55	7.32***	1-5, 2-5
Competitiveness	3.98	3.89	3.85	3.78	3.69	3.92	7.49***	1-5, 2-5, 5-6
Performance orientation	3.84	3.75	3.66	3.66	3.58	3.72	5.65***	1-5, 2-5
Social responsibility	3.98	3.86	3.80	3.79	3.75	3.94	3.90**	1-5
Innovation	3.66	3.59	3.57	3.43	3.32	3.50	8.40***	1-5, 2-5, 3-5

Original response categories: 1=Not at All; 2=Minimally; 3=Moderately; 4=Considerably; 5=Very much.

Note: 1= High School; 2 = Diploma; 3 = Technical; 4 = Bachelor; 5 = Master; 6 = Doctorate

***p*≤.05;**p*≤.01; ***p*≤.001**

In comparison to seniority, the greater the level of education, the less the level of organizational culture recorded (similar to ABLS1). This finding is puzzling, as the differences in the proportions of qualified senior executives compared with less senior managers, while they exist, are not so different to warrant these differences in culture. For instance, 66% of all CEOs have Bachelor, Master, or doctoral qualifications compared with 75% of executive level managers (board members or directors) and 70% of upper middle managers (department executives, plant managers, senior professional staff).

Table 36
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Organizational Level (N=2344)

Organizational Culture Profile Factors	Organizational Level			F	Sig.Diff Groups
	1 n = 745	2 n = 501	3 n = 1098		
Stability	3.76	3.55	3.27	95.35***	1-2, 1-3, 2-3
Supportiveness	4.03	3.70	3.31	219.77***	1-2, 1-3, 2-3
Emphasis on rewards	3.97	3.67	3.19	249.04***	1-2, 1-3, 2-3
Competitiveness	4.10	3.88	3.56	133.36***	1-2, 1-3, 2-3
Performance orientation	3.98	3.74	3.42	165.27***	1-2, 1-3, 2-3
Social responsibility	4.12	3.87	3.58	139.77***	1-2, 1-3, 2-3
Innovation	3.86	3.56	3.13	197.21***	1-2, 1-3, 2-3

Note : 1= <$Top; 2 = Executive; 3 = Upper Middle

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$***$p \leq .001$

See Table 34 above for explanation of these findings, which confirm that seniority goes hand in hand with remuneration and capacity to influence the nature of organizational culture and innovation in the company (see Tables 49, 50, and 51 below). The highest ranked type of organizational culture for top executives (CEOs) was social responsibility, followed by competitiveness, and supportiveness. This is a revealing juxtaposition between socially-acceptable approaches to building cultures that are also seen to be competitive and caring. What now needs examination is if these approaches deliver superior results.

The results need to be treated cautiously as Tables 63, 64 and 66 indicate that older, better remunerated and more senior executives also registered higher levels of social desirability bias than their counterparts. That is, these results suggest that respondents have provided the socially acceptable answer ahead of the true response. Their hearts tell them what "should be" even though their minds tell them "what is." The challenge for executives today is to convert the idealised state of organization leadership, culture, and innovation reported in this study into a real workplace of sustained success.

Table 37
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Years in Current Position (N=2243)

Organizational Culture Profile Factors	Years in Current Position						F	Sig.Diff Groups
	1 n=389	2 n=337	3 n=561	4 n=332	5 n=212	6 n=412		
Stability	3.35	3.32	3.39	3.47	3.67	3.80	24.53***	1-5, 1-6, 2-5, 2-6, 3-5, 3-6, 4-6
Supportiveness	3.49	3.54	3.53	3.63	3.74	3.89	15.30***	1-5,1-6, 2-6, 3-5, 3-6, 4-6
Emphasis on rewards	3.44	3.48	3.42	3.49	3.64	3.82	14.78***	1-6, 2-6, 3-6, 4-6
Competitiveness	3.67	3.73	3.72	3.78	3.89	4.03	12.88***	1-5, 1-6, 2-6, 3-6, 4-6
Performance orientation	3.52	3.57	3.57	3.70	3.77	3.90	16.37***	1-4, 1-4, 1-6, 2-6, 3-5, 3-6, 4-1, 4-6,
Social responsibility	3.68	3.70	3.72	3.84	3.92	4.07	17.70***	1-5, 1-6, 2-5, 2-6, 3-5, 3-6, 4-6,
Innovation	3.33	3.33	3.34	3.43	3.58	3.76	16.96***	1-5, 1-6, 2-5, 2-6, 3-5, 3-6, 4-6

Note: 1= 1yr; 2 = 2 yrs; 3 = 3 to 4 years; 4 = 5 to 6 years; 5 = 7 to 9 years; 6 = 10 yrs +

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Generally, the longer in a current position the higher the level of organizational culture reported, similar to the results on leadership and innovation.

Table 38
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Years as an Executive (N=1919)

Organizational Culture Profile Factors	Years as an Executive				F	Sig.Diff Groups
	1 n = 488	2 n = 593	3 n = 508	4 n = 330		
Stability	3.37	3.41	3.61	3.82	29.98***	1-3. 1-4, 2-3, 2-4, 3-4
Supportiveness	3.52	3.57	3.75	3.92	24.31***	1-3, 1-4, 2-3, 2-4, 3-4
Emphasis on rewards	3.44	3.49	3.65	3.86	22.97***	1-3, 1-4, 2-3, 2-4, 3-4
Competitiveness	3.70	3.76	3.87	4.02	14.66***	1-3, 1-4, 2-4, 3-4
Performance orientation	3.55	3.62	3.78	3.89	21.09***	1-3, 1-3, 2-3, 2-4
Social responsibility	3.70	3.78	3.93	4.08	23.44***	1-3, 1-4, 2-3, 2-4, 3-4
Innovation	3.30	3.44	3.51	3.78	21.93***	1-3, 1-4, 2-4, 3-4

Note : 1= Les than 6 years; 2 = 6 to 12 years; 3 = 13 to 20 years; 4 = More than 21 years

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

As expected, the more the years as an executive, the higher the levels of organizational culture reported.

Table 39
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Number of Employees (N=2313)

Organizational Culture Profile Factors	Number of Employees									F	Sig. Diff. Groups
	1 n = 142	2 n = 201	3 n = 379	4 n = 517	5 n = 458	6 n = 157	7 n = 256	8 n = 63	9 n = 140		
Stability	3.77	3.65	3.60	3.48	3.48	3.43	3.30	3.36	3.25	8.53***	1-4, 1-7, 1-9, 2-7, 2-9, 3-7, 3-9
Supportiveness	4.06	3.96	3.74	3.65	3.62	3.44	3.36	3.42	3.16	23.74***	1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 3-6, 3-7, 3-9, 4-7, 4-9, 5-7, 5-9
Emphasis on rewards	4.00	3.84	3.70	3.53	3.51	3.42	3.23	3.41	3.14	21.25***	1-4, 1-5,1-6, 1-7,1-8, 1-9, 2-4, 2-5,2-6, 2-7, 2-9, 3-7, 3-9, 4-7,4-9, 5-7,5-9
Competitiveness	4.10	4.00	3.95	3.80	3.82	3.68	3.49	3.63	3.50	16.97***	1-4, 1-5,1-6, 1-7,1-8, 1-9, 2-6, 2-7, 2-9, 3-7,3-9, 4-7, 4-9, 5-7, 5-9
Performance orientation	4.04	3.98	3.78	3.64	3.62	3.54	3.40	3.55	3.41	20.40***	1-4, 1-5,1-6, 1-7,1-8, 1-9, 2-4, 2-5,2-6, 2-7,2-8, 2-9, 3-7, 3-9,7-4, 5-7
Social responsibility	4.15	4.05	3.85	3.78	3.83	3.71	3.66	3.63	3.61	10.51***	1-3, 1-4,1-5, 1-6,1-7, 1-8, 1-9, 2-4,2-6, 2-7,2-8, 2-9
Innovation	3.92	3.77	3.70	3.45	3.42	3.35	3.07	3.25		28.33***	1-4, 1-5,1-6, 1-7,1-8, 1-9, 2-4, 2-5,2-6, 2-7,2-8, 2-9, 3-4, 3-5,3-6, 3-7,3-8, 3-9, 4-7, 4-9,5-7, 5-9,6-9

Note : 1= Self Employed (SE) ; 2 = 1 to 4 employees; 3 = 5 to 19 employees; 4 = 20 to 99 employees; 5 = 100 to 499 employees; 6 = 500 to 999 employees; 7 = 1,000 to 4,999 employees; 8 = 5,000 to 9,999 employees; 9 = 10,000 and over.

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Consistent with ABLS1, smaller sized organizations recorded significantly higher scores on all culture dimensions. The message appears to be that in order to produce companies with powerful and innovative cultures, we need to ensure that companies are small to medium in size (500 or fewer employees) with CEOs who are paid well, have been at the business end of things for 10 or more years, and who encourage creative innovations through respect, and the provision of time to pursue creative ideas during the workday.

Table 40
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Years of Company in Australia (N=2107)

Organizational Culture Profile Factors	Years of Company in Australia				F	Sig.Diff Groups
	1 n = 530	2 n = 517	3 n = 441	4 n = 619		
Stability	3.46	3.52	3.54	3.54	1.27	None
Supportiveness	3.82	3.75	3.57	3.48	23.24***	1-3, 1-4, 2-3, 2-4
Emphasis on rewards	3.75	3.70	3.53	3.36	26.96***	1-3, 1-4, 2-3, 2-4, 3-4
Competitiveness	4.02	3.96	3.81	3.60	41.58***	1-4, 1-3, 2-3, 2-4, 3-4
Performance orientation	3.83	3.79	3.62	3.54	22.11***	1-3, 1-4, 2-3, 2-4
Social responsibility	3.87	3.89	3.75	3.82	3.55*	2-3
Innovation	3.74	3.69	3.40	3.17	63.15***	1-3, 1-4, 2-3, 2-4, 3-4

Note : 1= Les than 10 years; 2 = 11 to 25 years; 3 = 26 to 50 years; 4 = 51 years or more

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Apart from stability, companies with 10 or fewer years in Australia recorded higher levels on all culture dimensions compared with companies with 11 or more years establishment in Australia. This finding suggests that length of operation (years) in Australia has a negative impact on the quality of organizational culture in these companies.

Table 41
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Years of Establishment of Company Offshore (N=418)

Organizational Culture Profile Factors	Years of Establishment					F	Sig.Diff Groups
	1 n = 111	2 n = 105	3 n = 81	4 n = 78	5 n = 43		
Stability	3.30	3.43	3.18	3.45	3.53	2.11	None
Supportiveness	3.64	3.56	3.40	3.47	3.54	1.40	None
Emphasis on rewards	3.53	3.60	3.37	3.50	3.56	1.02	None
Competitiveness	3.90	3.92	3.79	3.90	3.71	1.12	None
Performance orientation	3.56	3.67	3.53	3.59	3.69	0.77	None
Social responsibility	3.67	3.79	3.58	3.77	3.77	1.43	None
Innovation	3.62	3.58	3.32	3.43	3.25	2.91*	None

Note : 1= Less than 11 years ; 2 = 11 to 25 years; 3 = 25 to 50; 4 = 51 to 100; 5 = 101 years and more

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Compared with years of company in Australia, where companies with fewer than 10 years establishment in Australia have stronger organizational cultures, there were no statistically significant differences in the culture of companies when categorized by how many years they have been established offshore.

Table 42
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Job Function (N=2005)

Organizational Culture Profile Factors	Job Function Group								F	Sig.Diff Groups
	1	2	3	4	5	6	7	8		
	n = 93	n = 1170	n = 96	n = 126	n = 81	n = 98	n = 161	n = 180		
Stability	3.56	3.59	3.42	3.35	3.24	3.41	3.31	3.44	6.03***	2-5, 2-7
Supportiveness	3.58	3.78	3.54	3.55	3.44	3.49	3.35	3.47	11.97***	2-5, 2-7, 2-8
Emphasis on rewards	3.49	3.69	3.35	3.43	3.26	3.47	3.29	3.44	10.46***	2-3, 2-5, 2-7, 2-8
Competitiveness	3.75	3.90	3.69	3.70	3.65	3.85	3.63	3.77	5.25***	2-7
Performance orientation	3.56	3.78	3.51	3.62	3.49	3.62	3.45	3.56	9.37***	2-7, 2-8
Social responsibility	3.74	3.92	3.78	3.79	3.61	3.63	3.57	3.79	8.20***	2-6, 2-7
Innovation	3.41	3.59	3.32	3.38	3.21	3.47	3.19	3.37	8.22***	2-5, 2-7

Note : : 1= Accounting ; 2 = Administration; 3 = Education; 4 = HRM; 5 = MIS; 6 = Marketing; 7 = Operation; 8 = Other

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Generally, administrators recorded significantly higher levels of organizational culture compared with information systems, education, marketing, and operations executives and personnel.

Table 43
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Organization Sector (N=2359)

Organizational Culture Profile Factors	Organization Sector				F	Sig.Diff Groups
	1 n = 472	2 n = 275	3 n = 1308	4 n = 304		
Stability	3.29	3.31	3.56	3.64	23.25***	
Supportiveness	3.35	3.42	3.72	3.82	40.28***	1-3, 1-4, 2-3, 2-4
Emphasis on rewards	3.11	3.34	3.73	3.53	76.26***	1-3, 1-4, 2-3, 2-4
Competitiveness	3.32	3.68	4.01	3.72	119.29***	1-2, 1-3, 1-4, 2-3, 3-4
Performance orientation	3.39	3.48	3.79	3.71	46.24***	1-3, 1-4, 2-3, 2-4
Social responsibility	3.60	3.65	3.85	4.10	36.88***	1-3, 1-4, 2-3, 2-4, 3-4
Innovation	2.90	3.25	3.70	3.41	121.09***	1-2, 1-3, 1-4, 2-3, 3-4

Note : 1= Government; 2 = Public; 3 = Private; 4 = Non-profit

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

NFPs recorded higher levels of stability, supportiveness and social responsibility than government, public, and private companies. Private companies recorded more rewards, competitive, performance, and innovation-oriented cultures than the other types of companies in this study.

Table 44
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by Organization Type (N=2360)

Organizational Culture Profile Factors	Number of Employees									F	Sig. Diff. Groups
	1	2	3	4	5	6	7	8	9		
	n = 149	n = 107	n = 287	n = 219	n = 271	n = 157	n = 238	n = 174	n = 758		
Stability	3.59	3.69	3.32	3.64	3.46	3.18	3.51	3.52	3.49	7.47***	1-6, 2-3, 2-6, 3-4, 4-6, 6-7, 6-8, 6-9
Supportiveness	3.51	3.67	3.35	3.70	3.60	3.57	3.74	3.54	3.72	7.53***	3-4, 3-7, 3-9
Emphasis on rewards	3.59	3.66	3.13	3.71	3.45	3.48	3.46	3.57	3.67	14.21***	1-3, 2-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-9, 5-9
Competitiveness	3.93	3.94	3.30	3.92	3.75	3.83	3.71	3.93	3.90	22.42***	1-3, 2-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-9,
Performance orientation	3.61	3.75	3.43	3.75	3.59	3.59	3.64	3.58	3.79	8.97***	2-3, 3-4, 3-9, 5-9
Social responsibility	3.70	3.74	3.58	3.92	3.89	3.56	3.99	3.74	3.88	10.21***	3-4, 3-5, 3-7, 3-9, 4-6, 5-6, 6-7, 6-9
Innovation	3.60	3.58	2.91	3.56	3.35	3.58	3.38	3.52	3.59	20.84***	1-3, 2-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-9, 5-9

Note : 1= Retail/Wholesale Trade; 2 = Building/Construction; 3 = Government/Defence/Justice; 4 = Banking/Finance/Insurance; 5 = Education ; 6 = IT/Communications; 7 = Health/Community; 8 = Manufacturing; 9 = Other (Electricity, Gas and Water Supply, Vehicle/Metal, Farming, Textiles/Clothing/Footwear, Transport/Storage, Mining, Cultural/Recreational, and other).

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Companies in the banking/finance sectors recorded the highest and government-related organizations the lowest levels of organizational culture in this study. Further research is warranted to explore the reasons for these low levels of culture in the public sector. It should be recognized however that public sector companies reported the lowest level of social desirability, while government agencies recorded the second highest level of social desirability bias.

Table 45
Analysis of Variance for Mean Factor Scores of Respondents on Organizational Culture Profile Classified by State (N=2341)

Organizational Culture Profile Factors	State								F	Sig.Diff Groups
	1	2	3	4	5	6	7	8		
	n = 556	n = 17	n = 668	n = 594	n = 154	n = 196	n = 23	n = 133		
Stability	3.52	3.78	3.49	3.45	3.45	3.59	3.38	3.32	2.18*	None
Supportiveness	3.64	3.91	3.64	3.57	3.61	3.68	3.66	3.52	1.23	None
Emphasis on rewards	3.54	3.98	3.60	3.48	3.49	3.49	3.37	3.45	2.13*	None
Competitiveness	3.79	3.86	3.87	3.74	3.77	3.77	3.77	3.65	2.41*	None
Performance orientation	3.65	3.80	3.70	3.63	3.62	3.68	3.75	3.60	0.93	None
Social responsibility	3.81	4.08	3.82	3.77	3.84	3.90	3.80	3.68	1.61	None
Innovation	3.47	3.54	3.52	3.37	3.49	3.41	3.49	3.34	1.84	None

Note : 1= Victoria ; 2 = Tasmania; 3 = New South Wales ; 4 = Queensland; 5 = South Australia; 6 = Western Australia; 7 = Northern Territory; 8 = Australian Capital Authority

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

No statistically significant differences.

Innovation

'Support for innovation' (reliability (α)=.92, 16 items) and 'resource supply' (α=.77, six items) (components of 'climate for innovation') were measured by Scott and Bruce's (1994) Climate for Innovation scale. Support for innovation measures the degree to which individuals view the organization as open to change, and resource supply measures the degree to which resources (e.g. personnel, time) are perceived as adequate in the organization (Scott and Bruce, 1994:592).

Confirmatory Factor Analysis of the Climate for Innovation Factors (χ^2 = 659.58, df = 227, p = .000; χ^2/df = 2.91; NNFI =.91; RMSEA = .05; CFI = .92; GFI = .91) identified four substantive factors: support for innovation, resource support, support for creativity (new factor), and non-conformity (new factor). Table 16 provides the means, standard deviations, and reliabilities for the new and existing factors of innovation.

Table 46
Climate for Innovation Scale Confirmatory Factor Analysis

Climate	Mean	SD	No Items	Items	Cronbach	**Composite Reliability**
Non-Conformity	3.63	0.96	4	5r,6r,9r,22	0.84	0.82
Support for innovation	3.50	0.51	4	1,4,7,13	0.76	0.78
Resource support	**3.14**	0.90	5	15,16,18r,19r,21	0.72	0.78
Support for creativity	**3.69**	0.93	4	2,3,17,20	0.81	0.63

Table 47

Climate for Innovation CFA

Climate	Mean	α
Support for creativity	3.69	0.81
Non-conformity	3.63	0.84
Support for innovation	3.50	0.76
Resource supply	3.14	0.72

Original response categories for CI: 1 = Strongly disagree; 2=Disagree; 3=Neither disagree or agree; 4=Agree; 5=Strongly agree.

- Support for creativity – creativity is encouraged and respected by the leadership; adequate time provided to pursue creative ideas
- Non-conformity – similar to creativity – thinking independently is encouraged
- Support for innovation – public recognition of innovative persons; flexible and adaptive organization
- Resource supply – provision of materials and assistance for new ideas

As Table 47 shows, Australian managers indicated that their companies are most supportive of creativity (mean=3.69, but not a strong affirmation where 4=agree and 5=strongly agree) and least supportive of providing sufficient resources for innovation (mean=3.14). These results are consistent when managers are classified by other categories such as by level of education, seniority, and salary. Regardless of the category, the attitude appears to be that "we'll endorse your creative spirit but won't provide the materials and resources to help you achieve your creative endeavours."

Table 48

T-test for Mean Factor Scores of Climate for Innovation Classified by Gender

Factors	Males	Females	T
Support for innovation	3.51	3.45	2.50*
Non-conformity	3.65	3.57	1.83
Resource support	3.18	3.03	3.61***
Support for creativity	3.73	3.57	3.67***

Likert scale: 1=Strongly disagree, 5=Strongly Agree.

*p≤.05;**p≤.01; ***p≤.001

As Table 48 indicates, males reported higher levels of climate for innovation on support for innovation (recognition of innovative persons), resource supply (provision of materials for new ideas), and support for creativity (provision of time to pursue creative ideas).

Table 49
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Age Group (N=2374)

Climate for Innovation Factors	Age Group					F	Sig.Diff Groups
	1	2	3	4	5		
	n = 59	n = 437	n = 848	n = 812	n = 218		
Support for Innovation	3.37	3.46	3.43	3.53	3.71	13.52***	1-5, 2-5, 3-4, 3-5, 4-5
Non-Conformity	3.20	3.53	3.54	3.72	3.98	15.24***	1-4, 1-5 2-4, 2-5, 3-4, 3-5 4-5
Resource support	2.83	2.98	3.03	3.25	3.60	27.06***	1-4, 1-5, 2-4, 2-5, 3-4, 3-5, 4-5
Support for creativity	3.30	3.53	3.58	3.80	4.12	24.32***	1-4, 1-5 2-4, 2-5, 3-4, 3-5 4-5

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= <30; 2 = 30 to 39; 3 = 40 to 49; 4 = 50 to 59; 5 = 60+

,*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Similar to the results on leadership and culture, older executives also registered higher levels on all indicators of innovation. The highest score was on support for creativity (recognizing people and providing flexible workplaces), followed by non-conformity (encouragement of independent thinking). As reported elsewhere, these results need to be treated with caution due to possible social desirability contamination of responses.

Table 50
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Salary Group (N=2125)

Climate for Innovation Factors	Salary Group				F	Sig.Diff Groups
	1 n = 269	2 n = 483	3 n = 688	4 n = 685		
Support for Innovation	3.43	3.35	3.47	3.59	18.60**	1-4, 2-3, 2-4, 3-4
Non-Conformity	3.46	3.36	3.60	3.85	27.91***	1-4, 2-3, 2-4, 3-4
Resource support	3.10	2.89	3.08	3.29	19.74***	1-2, 1-4, 2-3, 2-4, 3-4
Support for creativity	3.58	3.40	3.65	3.87	26.36***	1-4, 2-3, 2-4, 3-4

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= <$60,000; 2 = $85,000-$125,000; 3 = $85,001-$125,000; 4 = $125,101 or more

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Consistent with other results, the higher the salary, the greater the level of innovation reported.

Table 51
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Educational Level (N=2371)

Climate for Innovation Factors	Educational Level						F	Sig.Diff Groups
	1 n=156	2 n=388	3 n=174	4 n=713	5 n=801	6 n=139		
Support for Innovation	3.56	3.53	3.52	3.51	3.45	3.51	1.83	None
Non-Conformity	3.78	3.66	3.66	3.67	3.55	3.61	2.35*	None
Resource support	3.41	3.27	3.22	3.16	2.99	3.14	9.09***	1-5, 2-5, 4-5
Support for creativity	3.84	3.74	3.78	3.72	3.58	3.73	3.66**	None

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note: 1= High School; 2 = Diploma; 3 = Technical; 4 = Bachelor; 5 = Master; 6 = Doctorate

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Consistent with other results, fewer formal qualifications were associated with higher levels of innovation, although statistically significant differences were only reported for resource support.

Table 52
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Organizational Level (N=2344)

Climate for Innovation Factors	Organizational Level			F	Sig.Diff Groups
	1 n = 745	2 n = 501	3 n = 1098		
Support for Innovation	3.74	3.56	3.30	166.75***	1-2, 1-3, 2-3
Non-Conformity	4.16	3.81	3.20	286.01***	1-2, 1-3, 2-3
Resource support	3.59	3.28	2.78	224.44***	1-2, 1-3, 2-3
Support for creativity	4.21	3.84	3.28	280.86***	1-2, 1-3, 2-3

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= <$Top; 2 = Executive; 3 = Upper Middle

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$***$p \leq .001$

Consistent with earlier reported results, senior levels of management were associated with higher levels of innovation. Again, support for creativity and non-conformity were the prominent indicators of innovation, followed by support for innovation and resource supply.

Table 53

Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Years in Current Position (N=2243)

Climate for Innovation	Years in Current Position						F	Sig.Diff Groups
	1 n=389	2 n=337	3 n=561	4 n=332	5 n=212	6 n=412		
Support for Innovation	3.45	3.44	3.44	3.48	3.51	3.66	10.30***	1-6, 2-6, 3-6, 4-6
Non-Conformity	3.52	3.50	3.53	3.64	3.69	3.95	12.56***	1-6, 2-6, 3-6, 4-6
Resource support	2.98	3.03	3.04	3.12	3.25	3.48	17.99***	1-5, 1-6, 2-6, 3-6 4-6
Support for creativity	3.62	3.55	3.58	3.69	3.76	3.99	12.69***	1-6, 2-6, 3-6, 4-6

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note: 1= 1yr; 2 = 2 yrs; 3 = 3 to 4 years; 4 = 5 to 6 years; 5 = 7 to 9 years; 6 = 10 yrs +

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Managers with 10 or more years experience in their current position reported significantly higher levels of innovation compared to all other categories.

Table 54
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Number of Employees (N=2313)

Climate for Innovation	Number of Employees									F	Sig. Diff. Groups
	1 n = 142	2 n = 201	3 n = 379	4 n = 517	5 n = 458	6 n = 157	7 n = 256	8 n = 63	9 n = 140		
Support for innovation	3.74	3.63	3.58	3.50	3.51	3.46	3.28	3.43	3.31	14.00	1-4, 1-5, 1-6, 1-7, 1-9, 2-7, 2-9, 3-7, 3-9, 4-7, 5-7
Non-Conformity	4.15	3.99	3.83	3.66	3.66	3.48	3.26	3.41	2.93	28.40	1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 3-6, 3-7, 3-9, 4-7, 4-9, 5-7, 5-9, 6-9
Resource support	3.71	3.44	3.32	3.15	3.12	3.03	2.77	2.88	2.71	24.04	1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 3-7, 3-9, 4-7, 4-9, 5-7, 5-9,
Support for creativity	4.33	4.05	3.87	3.70	3.68	3.56	3.28	3.51	3.13	30.14	1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 2-4, 2-5, 2-6, 2-7, 2-8, 2-9, 3-7, 3-9, 4-7, 4-9, 5-7, 5-9, 6-9

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : : 1= Self Employed (SE) ; 2 = 1 to 4 employees; 3 = 5 to 19 employees; 4 = 20 to 99 employees; 5 = 100 to 499 employees; 6 = 500 to 999 employees; 7 = 1,000 to 4,999 employees; 8 = 5,000 to 9,999 employees; 9 = 10,000 and over.

p*≤.05;*p*≤.01; *****p*≤.001**

Similar to the findings on organizational culture and leadership, smaller sized organizations reported higher levels of innovation. Combined with the earlier data,

these results suggest that to build transformational and innovative workplace cultures, companies need to enhance the transformational behaviors of their leaders, build socially responsible and supportive workplaces, and provide the organizational flexibility and resources needed to sustain innovation.

Table 55
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Years as an Executive (N=1919)

Climate for Innovation	Years as an Executive				F	Sig.Diff Groups
	1	2	3	4		
	n = 488	n = 593	n = 508	n = 330		
Support for Innovation	3.41	3.48	3.56	3.65	14.96***	1-2, 1-3, 2-4, 3-1
Non-Conformity	3.47	3.65	3.74	3.98	21.01***	1-2, 1-3, 1-4, 2-4, 3-4
Resource support	2.94	3.12	3.27	3.50	30.74***	1-2, 1-3, 1-4, 2-3, 2-4, 3-4
Support for creativity	3.50	3.70	3.82	4.04	26.15***	1-2, 1-3, 1-4, 2-4, 3-4

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= Les than 6 years; 2 = 6 to 12 years; 3 = 13 to 20 years; 4 = More than 21 years

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

More years as an executive were associated with higher levels of innovation.

Table 56
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Years of Company in Australia (N=2107)

Climate for Innovation	Years of Company in Australia				F	Sig.Diff Groups
	1 n = 530	2 n = 517	3 n = 441	4 n = 619		
Support for Innovation	3.59	3.60	3.49	3.42	15.95***	1-3, 1-4, 2-3, 2-4,
Non-Conformity	3.98	3.85	3.55	3.37	52.35***	1-3, 1-4,2-3, 2-4, 3-4
Resource support	3.42	3.32	3.08	2.94	35.15***	1-3, 1-4,2-3, 2-4
Support for creativity	4.00	3.92	3.62	3.46	46.75***	1-3, 1-4,2-3, 2-4, 3-4

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= Less than 10 years; 2 = 11 to 25 years; 3 = 26 to 50 years; 4 = 51 years or more

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Fewer years as a company in Australia were associated with higher levels of innovation. Similar to the findings on culture, this finding suggests that length of operation (years) in Australia is negatively associated with the level of innovation in these companies. A similar trend occurs for leadership, but the differences are not statistically significant (apart from vision) as they are for culture and innovation.

Table 57
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Years of Establishment of Company Offshore (N=418)

Climate for Innovation	Years of Establishment					F	Sig.Diff Groups
	1	2	3	4	5		
	n = 11	n = 105	n = 81	n = 78	n = 43		
Support for Innovation	3.56	3.50	3.40	3.46	3.55	1.33	None
Non-Conformity	3.69	3.74	3.43	3.52	3.59	1.63	None
Resource support	3.25	3.10	3.01	3.14	3.11	0.94	None
Support for creativity	3.80	3.75	3.45	3.67	3.55	2.41*	None

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= Less than 11 years ; 2 = 11 to 25 years; 3 = 25 to 50; 4 = 51 to 100; 5 = 101 years and more

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

No statistically significant differences recorded.

Table 58
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Job Function (N=2005)

Climate for Innovation	Job Function Group								F	Sig.Diff Groups
	1 n = 93	2 n = 1170	3 n = 96	4 n = 126	5 n = 81	6 n = 98	7 n = 161	8 n = 180		
Support for Innovation	3.42	3.59	3.44	3.43	3.33	3.41	3.32	3.48	9.58***	2-5, 2-7
Non-Conformity	3.51	3.85	3.32	3.48	3.26	3.60	3.37	3.49	15.63***	2-3, 3-4, 2-5, 2-7, 2-8
Resource support	3.19	3.31	2.95	2.95	2.86	3.07	2.78	3.07	12.95***	2-3, 2-4, 2-5, 2-7
Support for creativity	3.54	3.89	3.56	3.49	3.34	3.70	3.35	3.59	15.19***	2-4, 2-5, 2-7, 2-8

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : : 1= Accounting ; 2 = Administration; 3 = Education; 4 = HRM; 5 = MIS; 6 = Marketing; 7 = Operation; 8 = Other

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Administrators recorded the highest levels of innovation compared to all other categories.

Table 59
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Organization Sector (N=2359)

Climate for Innovation	Years of Company in Australia				F	Sig.Diff Groups
	1 n = 472	2 n = 275	3 n = 1308	4 n = 304		
Support for Innovation	3.27	3.40	3.60	3.51	45.79***	1-2, 1-3, 1-4, 2-3
Non-Conformity	3.07	3.42	3.84	3.77	90.54***	1-2, 1-3, 1-4, 2-3, 2-4
Resource support	2.66	2.94	3.36	3.10	84.85***	1-2, 1-3, 1-4, 2-3, 3-4
Support for creativity	3.18	3.43	3.90	3.79	87.62***	1-2, 1-3, 1-4, 2-3, 2-4.

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= Government; 2 = Public; 3 = Private; 4 = Non-profit

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Private companies registered the highest levels of innovation followed closely by not for profit organizations, consistent with the findings on leadership and culture.

Table 60

Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Organization Type (N=2360)

Climate for Innovation	Number of Employees									F	Sig. Diff. Groups
	1	2	3	4	5	6	7	8	9		
	n = 149	n = 107	n = 287	n = 219	n = 271	n = 157	n = 238	n = 174	n = 758		
Support for innovation	3.49	3.60	3.29	3.54	3.45	3.51	3.47	3.53	3.56	7.47***	2-3, 3-4, 3-6, 3-8, 3-9
Non-Conformity	3.67	3.86	3.11	3.58	3.55	3.67	3.65	3.68	3.79	14.97***	1-3, 2-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-9
Resource support	3.18	3.30	2.69	3.30	3.04	3.21	3.01	3.28	3.27	14.37***	1-3, 2-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-9
Support for creativity	3.71	3.82	3.20	3.71	3.65	3.73	3.65	3.77	3.84	13.76***	1-3, 2-3, 3-4, 3-5, 3-6, 3-7, 3-8, 3-9

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= Retail/Wholesale Trade; 2 = Building/Construction; 3 = Government/Defence/Justice; 4 = Banking/Finance/Insurance; 5 = Education ; 6 = IT/Communications; 7 = Health/Community; 8 = Manufacturing; 9 = Other (Electricity, Gas and Water Supply, Vehicle/Metal, Farming, Textiles/Clothing/Footwear, Transport/Storage, Mining, Cultural/Recreational, and other).

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Apart from the generic "other" category, the industry types most associated with higher levels of innovation were building construction (support for innovation, non-conformity, resource supply, support for creativity), banking and finance (resource supply), and manufacturing (resource supply and support for creativity). In all cases, government-associated organizations registered the lowest levels of innovation, followed by education and health providers.

Table 61

Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by State (N=2341)

Climate for Innovation	State								F	Sig.Diff Groups
	1 n = 556	2 n = 17	3 n = 668	4 n = 594	5 n = 154	6 n = 196	7 n = 23	8 n = 133		
Support for Innovation	3.51	3.77	3.50	3.45	3.51	3.53	3.52	3.47	1.51	None
Non-Conformity	3.63	4.05	3.71	3.60	3.68	3.53	3.60	3.33	3.40***	None
Resource support	3.13	3.49	3.20	3.11	3.07	3.15	3.37	2.99	1.78	None
Support for creativity	3.70	4.06	3.70	3.66	3.70	3.72	3.70	3.49	1.37	None

Likert scale: 1=Strongly disagree, 5=Strongly Agree

Note : 1= Victoria ; 2 = Tasmania; 3 = New South Wales ; 4 = Queensland; 5 = South Australia; 6 = Western Australia; 7 = Northern Territory; 8 = Australian Capital Authority

*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Generally, all states reported similar levels of innovation.

Research Hypotheses

We examined the relationships among leadership, culture, and climate for innovation as perceived by the respondents and in response to the four research hypotheses underlying this part of the study, namely:

- H1. transformational leadership and organizational culture are positively associated with climate for innovation
- H2. transactional leadership and organizational culture are negatively associated with climate for innovation
- H3. organizational culture mediates the relationship between leadership and climate for innovation
- H4. climate for innovation is related to industry type, location, and size

Tables 62 and 63 show the results of multiple regression analyses for the prediction of innovation by leadership and organizational culture respectively.

Leadership as Predictor

As indicated in Table 62, Support for Innovation **("**This organisation publicly recognises those who are innovative," "Around here, people are allowed to try to solve the same problems in different ways," "This organisation can be described as flexible and continually adapting to change," "In this organisation we tend to stick to tried and true ways") was best predicted by the transformational leadership factor of articulate vision, accounting for 14 percent of the variance in Support for Innovation. The next major predictor was provides intellectual stimulation (β=.06). As a transactional form of leadership, contingent reward was the next predictor at (β =.05). This finding is not surprising as contingent reward has often been cited as a substitute for transformational leadership behaviors (Sarros and Santora, 2001; Yukl, 1999). Negative associations with innovation were found for the demographic variables of size of organization (number of employees), level of seniority/leadership, and organizational level. That is, lower levels of innovation were associated with lower levels of seniority and larger sized organizations. A total of 20 percent of the variance in climate Support for Innovation was accounted for by demographic and leadership factors.

In the main, this trend continued across the remaining three factors of innovation, namely Non-conformity ("The main function of members in this organisation is to follow orders which come down through channels," "Around here, a person can get in a lot of trouble for being different," "The best way to get along in this organisation is to think the way the rest of the group does," "The reward system here benefits mainly those who don't rock the boat"), Resource Support ("Assistance in developing new ideas is readily available," "There are adequate resources devoted to innovation in this organisation," "Lack of funding to investigate creative ideas is a problem in this organisation," "Personnel shortages inhibit innovation in this organisation," "The reward system here encourages innovation"), and Support for Creativity ("Creativity is encouraged here," "Our ability to function creatively is respected by the leadership," "There is adequate time available to pursue creative ideas here," "This organisation gives me free time to pursue creative ideas during the workday"). The greatest amount of variance was accounted for Support for Creativity (R^2=.30). The finding that the transformational leadership factor of high performance expectations was negatively related to the non-conformity dimension of innovation suggests that

managers recognized the need to perform in order to counteract the attitude of resignation associated with non-conformity, which was reverse scored in this study.

These findings support hypothesis one that transformational leadership is positively associated with innovation, and support hypothesis two that transactional leadership is negatively associated with innovation.

Table 62
Multiple Regression Analysis for the Prediction of Climate for Innovation by Background Variables and Leadership (N=2344)

	Support for Innovation	Non-conformity	Resource support	Support for Creativity
Gender	-.02	.02	-.01	-.01
Age	-.02	.00	**.06***	.04
Education	.02	.00	**-.06*****	-.02
Years in position	.02	-.02	.02	-.01
Years as exec	.05	.04	.03	.03
Annual salary	.02	**.07*****	**.08*****	**.05***
Number of employees	**-.08*****	**-.16*****	**-.16*****	**-.17*****
Level of leadership	**-.10*****	**-.21*****	**-.11*****	**-.14*****
Organisational level	**-.17*****	**-.18*****	**-.13*****	**-.17*****
Contingent reward	.05	**.05***	.04	.05
Contingent punishment	.01	-.03	.01	.00
Provides appropriate model	.01	-.01	.04	.00
High performance expectations	.02	**-.08****	.03	.00
Provide individual support	**.06***	**.06***	.04	.03
Intellectual stimulation	.04	.00	-.03	.05
Fosters the acceptance of goals	.02	.03	**-.08****	-.01
Articulates vision	**.14*****	**.10*****	**.23*****	**.20*****
R^2	.21	.27	.26	.30
ΔR^2	.20	.27	.25	.29
F	24.40***	35.49***	33.19***	39.88***

*p≤.05;**p≤.01; ***p≤.001

Culture as Predictor

A major observation is that organizational culture accounts for double the variance in every dimension of innovation than does leadership, apart from non-conformity. Table 63 reports the results. The major predictors respectively were the culture factors of innovation, emphasis on rewards, and supportiveness. When associated with organizational culture, larger sized companies and lower levels of seniority were associated with lower levels of innovation. The message is clear; in order to build innovative companies with strong cultures, create smaller sized organization with senior management committed to leading the initiative.

Table 63
Results of Multiple Regressions for the Prediction of Climate for Innovation Factors by Background Variables, and Organizational Culture Profile Factors for Respondents (N=2344)

	Support for Innovation	Non-conformity	Resource support	Support for Creativity
Gender	**-.04***	-.01	-.03	**-.04***
Age	-.02	.01	**.06****	.04
Education	**.05***	.02	-.03	.02
Years in position	-.02	-.04	-.02	**-.05*****
Years as exec	.02	.02	.01	.01
Annual salary	-.03	.02	.03	-.01
Number of employees	.03	**-.08*****	**-.05***	**-.05****
Level of leadership	-.02	**-.13*****	-.03	**-.06****
Organisational level	**-.07****	**-.09*****	-.03	**-.07*****
Stability	-.01	-.02	.03	-.02
Supportiveness	**.12*****	**.16*****	**.13*****	**.17*****
Emphasis on rewards	**.22*****	**.21*****	**.20*****	**.20*****
Competitiveness	.03	.06	.05	.05
Performance orientation	.05	-.02	.04	.01
Social responsibility	.05	-.01	-.05	.01
Innovation	**.27*****	**.20*****	**.36*****	**.35*****
R^2	.45	.47	.54	.60
ΔR^2	.45	.46	.54	.60
F	83.15***	87.05***	118.62	151.12***

* p <.05; ** p <.01; p <.001

Culture as Mediator

In order to address research hypothesis no. 3 that organizational culture mediates the relationships among leadership and innovation, we conducted a structural equation modelling (SEM) procedure (Tabachnick and Fidell, 2001). Figures 1 to 4 and Tables 64 to 67 report the results of these SEM analyses. While the figures do not show the causality of relationships required to discount or prove the hypothesis, the results nonetheless show emphatic linkages among facets of leadership, culture, and innovation.

For the purpose of this analysis, we first identified the largest section of the entire sample, namely executives reporting from the company level, rather than the business, department, or work group levels. At the company level, all transformational leadership factors were related to every factor of culture in one fashion or another, and every facet of culture (business, environment, and people focused) was related to every dimension of innovation. That is, leaders at the company level were associated with positive links among leadership, culture, and innovation, as shown in the regression Table 64. Here we can see that all aspects of leadership were positively associated with culture except for provides appropriate role model (-0.11, on innovation) and contingent punishment (-.08, on supportiveness). In other words, being a good role model does not necessarily contribute to an innovative work culture, while contingent punishment which relies on sanctions against poor performance would be expected to adversely affect feelings of a supportive work culture. Table 64 also illustrates that all factors of culture are positively related to innovation, apart from stability (-0.l3, on non-conformity). Non-conformity is about being different, so the negative relationship between it and stability is expected. Overall, the structural equation models indicate that culture does mediate the relationship between leadership and innovation. However, some direct links between leadership and innovation are also reported, with the strongest relationship between the factors of provides appropriate role model and support for innovation.

The next step in our analysis was to segment the overall sample of 2,376 respondents into smaller manageable samples, namely into government, public, and non profit sectors. In government sector organizations (Figure 2, Table 65), the transformational leadership factors of individual support and high performance expectations were not associated with company culture or innovation, nor were the transactional factors apart from contingent reward on competitiveness. Further, the environmental components of culture (stability, social responsibility) were not associated with innovation. Therefore in government enterprises, the business and people oriented dimensions of organizational culture were the major connections between leadership and innovation. Similar relationships were found for the public sector (Figure 3, Table 66) and non profit sector (Figure 4, Table 67), although in both of these cases, providing an appropriate role model did not contribute to organizational culture as it did in the government sector and for executives at company level. Rather surprisingly, the business aspects of organizational culture (innovation and competitiveness) were as much associated with innovation outcomes in public and non profit organizations as were the people aspects of culture. These relationships also apply for company level executives and government sector organizations. From these findings, we can assume that traditionally conservative enterprises like public and non

profit sectors have become more competitive in order to innovate and create new initiatives, while still maintaining a focus on the people aspects of their business.

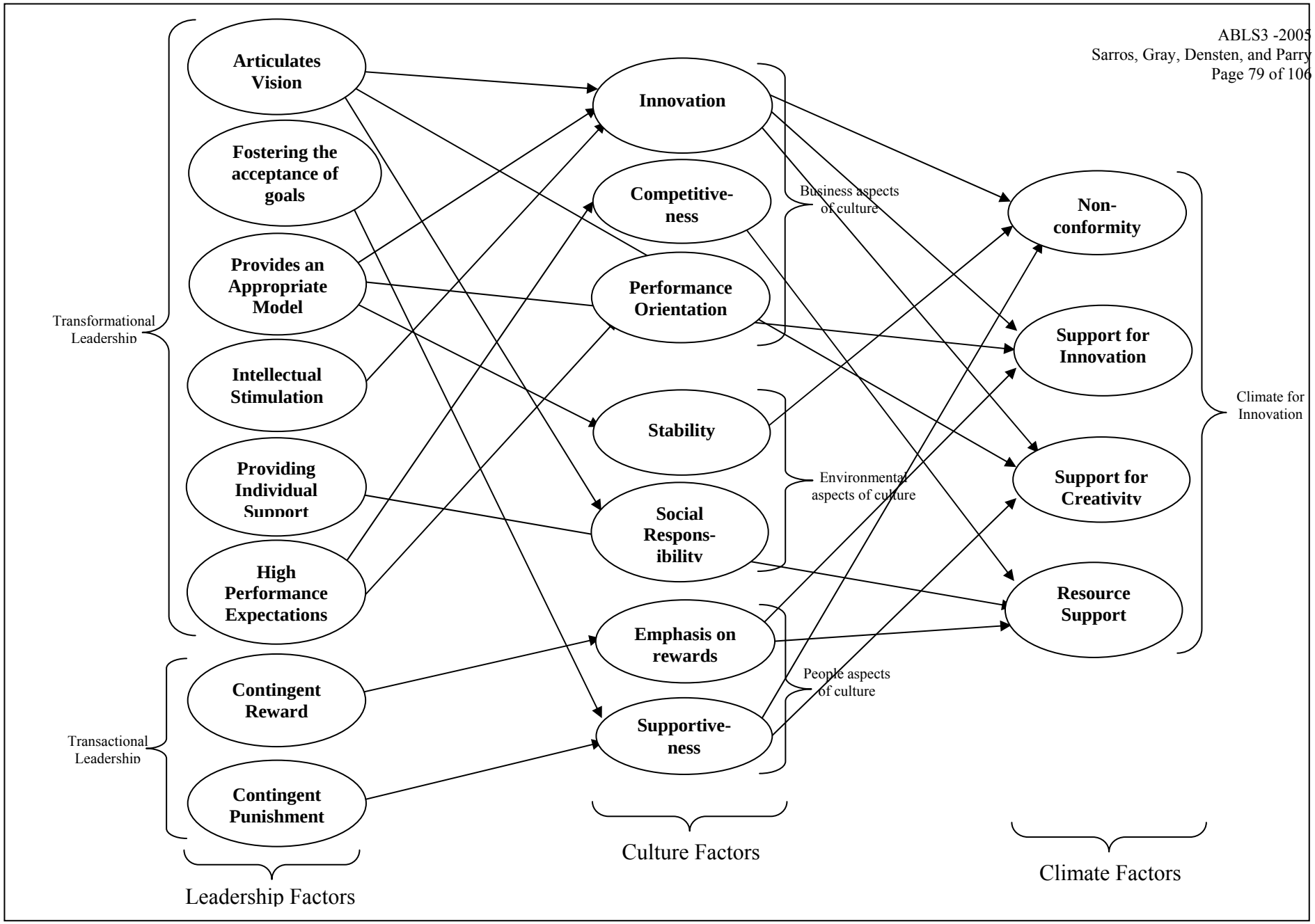

Figure 1: SEM for Leadership, Culture, and climate for Innovation for Respondents at the Company Level (n = 384)

Table 64: Regression Weights for Leadership on Culture, Culture on Climate and Leadership on Climate for Respondents at the Company Level (n=384)

			Regression Weight	S.E.
Leadership on Culture				
Innovation	<---	Intellectual Stimulation	0.05	0.04
Innovation	<---	Provides Appropriate Model	-0.11	0.04
Innovation	<---	Vision	0.14	0.04
Competitiveness	<---	High Performance Expectation	0.13	0.03
Performance Orientation	<---	High Performance Expectation	0.23	0.03
Stability	<---	Provides Appropriate Model	0.17	0.05
Social Responsibility	<---	Vision	0.14	0.03
Emphasis on Rewards	<---	Contingent Reward	0.31	0.04
Supportiveness	<---	Contingent Punishment	-0.08	0.02
Supportiveness	<---	Fosters Acceptance of Goals	0.23	0.03
Culture on Climate				
Non-conformity	<---	Innovation	0.25	0.06
Non-conformity	<---	Stability	-0.13	0.04
Non-conformity	<---	Supportiveness	0.29	0.06
Support for Innovation	<---	Innovation	0.22	0.07
Support for Innovation	<---	Emphasis on Rewards	0.39	0.09
Support for Creativity	<---	Innovation	0.39	0.05
Support for Creativity	<---	Supportiveness	0.28	0.05
Resource Support	<---	Competitiveness	0.45	0.09
Resource Support	<---	Emphasis on Rewards	0.32	0.09
Leadership on Climate				
Support for Creativity	<---	Vision	0.07	0.03
Resource Support	<---	Provides Individual Support	-0.09	0.04
Support for Innovation	<---	Provides Appropriate Model	0.14	0.05

Note. Unstandardized regression weights reported. S.E = standard error. All regression weights are statistically significant at $p < .05$ or better.

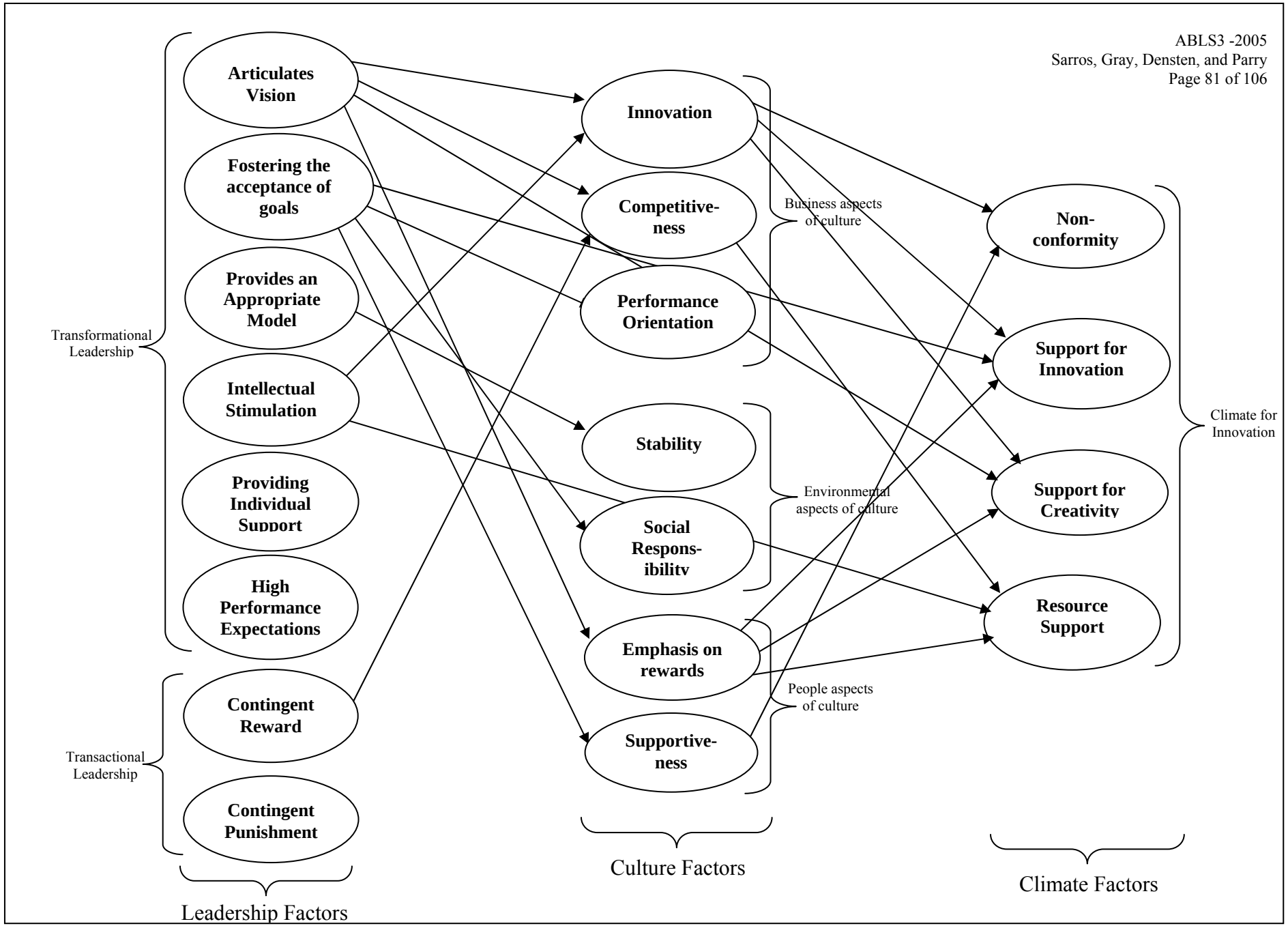

Figure 2: SEM for Leadership, Culture, and climate for Innovation for Respondents in the Government Sector (n = 472)

Table 65: Regression Weights for Leadership on Culture, Culture on Climate and Leadership on Climate for Respondents in the Government Sector (n=472)

			Regression Weight	S.E.
Leadership on Culture				
Innovation	<---	Vision	0.19	0.04
Competitiveness	<---	Contingent Reward	0.14	0.05
Competitiveness	<---	Vision	0.13	0.04
Performance Orientation	<---	Fosters Acceptance of Goals	0.22	0.05
Stability	<---	Provides Appropriate Model	0.15	0.05
Social Responsibility	<---	Fosters Acceptance of Goals	0.15	0.05
Emphasis on Rewards	<---	Vision	0.13	0.03
Supportiveness	<---	Fosters Acceptance of Goals	0.17	0.04
Culture on Climate				
Non-conformity	<---	Supportiveness	0.31	0.05
Non-conformity	<---	Innovation	0.43	0.06
Support for Innovation	<---	Innovation	0.30	0.07
Support for Innovation	<---	Emphasis on Rewards	0.46	0.07
Support for Creativity	<---	Innovation	0.46	0.05
Support for Creativity	<---	Emphasis on Rewards	0.33	0.05
Resource Support	<---	Competitiveness	0.10	0.05
Resource Support	<---	Emphasis on Rewards	0.41	0.07
Resource Support	<---	Innovation	0.23	0.06
Leadership on Climate				
Support for Innovation	<---	Fosters Acceptance of Goals	0.15	0.05
Support for Creativity	<---	Vision	0.13	0.03
Resource Support	<---	Intellectual Stimulation	-0.13	0.05

Note. Unstandardized regression weights reported. S.E = standard error. All regression weights are statistically significant at $p < .05$ or better

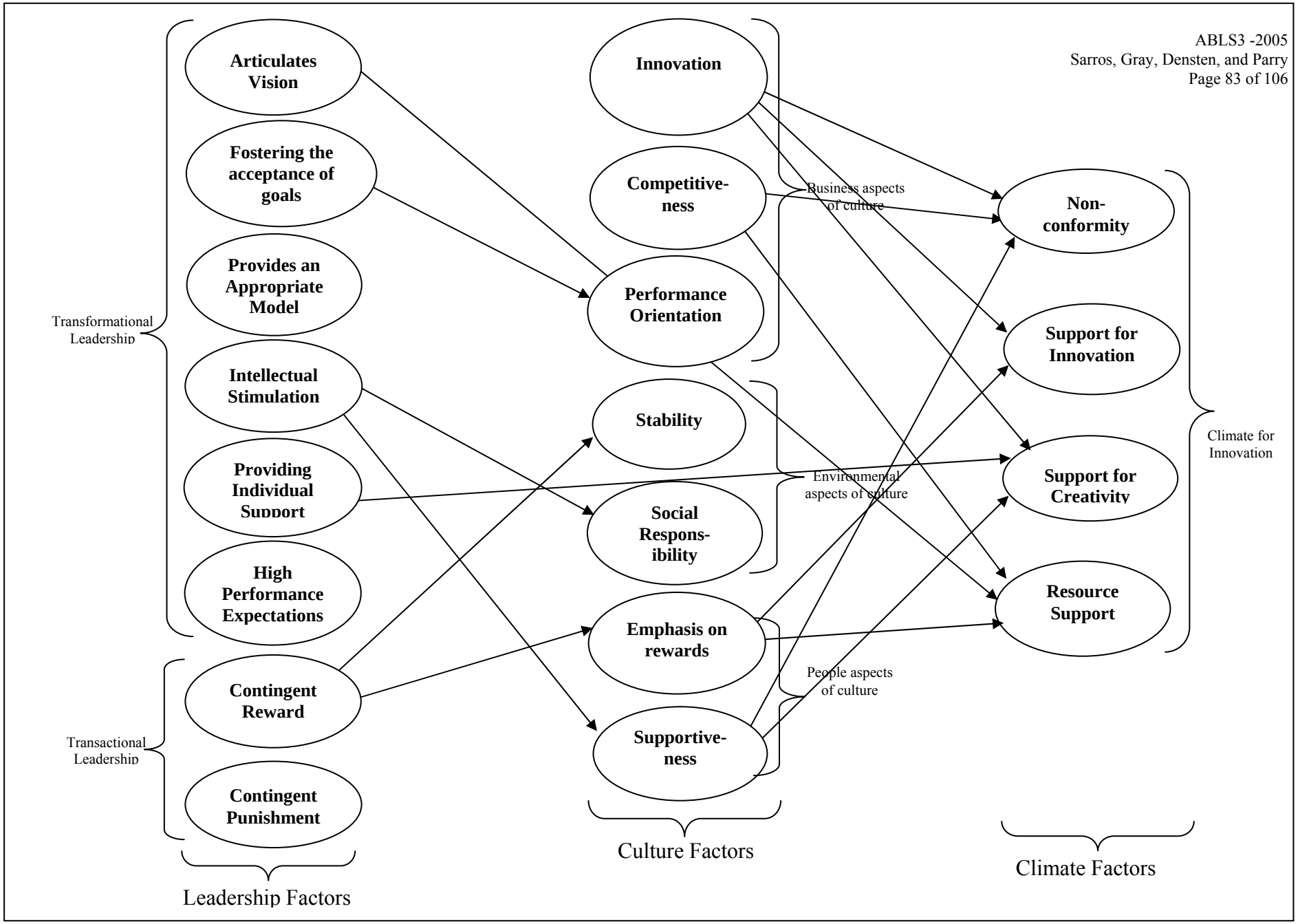

Figure 3: SEM for Leadership, Culture, and Climate for Innovation for Respondents in the Public Sector (n = 275)

Table 66: Regression Weights for Leadership on Culture, Culture on Climate and Leadership on Climate for Respondents in the Public Sector (n=275)

			Regression Weight	S.E.
Leadership on Culture				
Performance Orientation	<---	Fosters Acceptance of Goals	0.08	0.04
Emphasis on Rewards	<---	Contingent Reward	0.21	0.06
Social Responsibility	<---	Intellectual Stimulation	0.16	0.04
Supportiveness	<---	Intellectual Stimulation	0.12	0.04
Stability	<---	Contingent Reward	0.19	0.10
Culture on Climate				
Non-conformity	<---	Innovation	0.60	0.12
Non-conformity	<---	Supportiveness	0.39	0.09
Non-conformity	<---	Competitiveness	-0.32	0.12
Support for Innovation	<---	Innovation	0.28	0.09
Support for Innovation	<---	Emphasis on Rewards	0.46	0.09
Support for Creativity	<---	Innovation	0.59	0.07
Support for Creativity	<---	Emphasis on Rewards	0.35	0.07
Resource Support	<---	Innovation	0.25	0.09
Resource Support	<---	Emphasis on Rewards	0.39	0.09
Leadership on Climate				
Support for Creativity	<---	Provides Individual Support	-0.12	0.04
Resource Support	<---	Vision	-0.12	0.05

Note. Unstandardized regression weights reported. S.E = standard error. All regression weights are statistically significant at $p < .05$ or better.

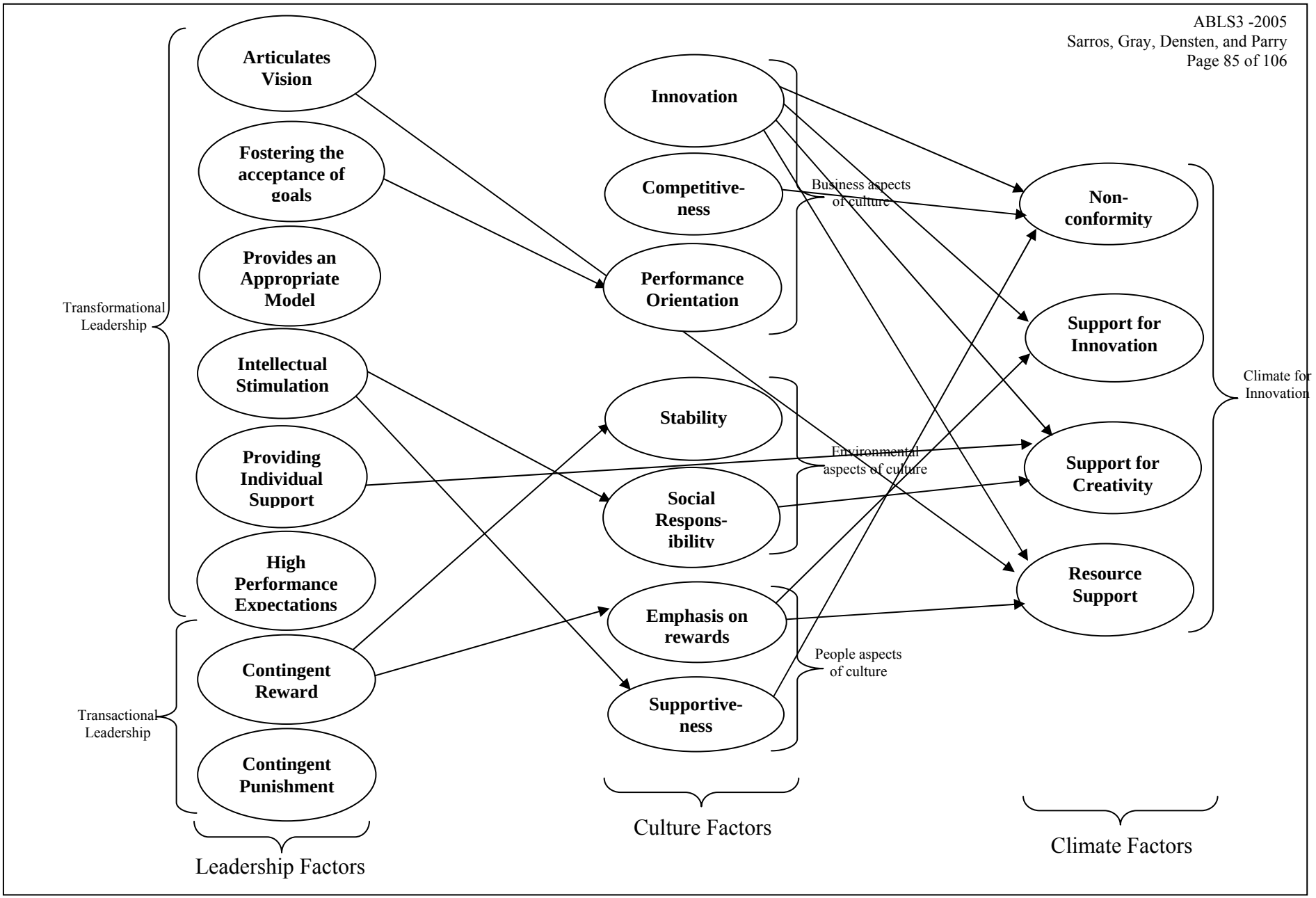

Figure 4: SEM for Leadership, Culture, and Climate for Innovation for Respondents in the Non profit Sector (n = 304)

Table 67: Regression Weights for Leadership on Culture, Culture on Climate, Leadership on Climate, and Climate on Leadership for Respondents in the Non-profit Sector (n=304)

			Regression Weight	S.E.
Leadership on Culture				
Performance Orientation	<---	Fosters Acceptance of Goals	0.08	0.04
Social Responsibility	<---	Intellectual Simulation	0.16	0.04
Stability	<---	Contingent Reward	0.19	0.10
Emphasis on Rewards	<---	Contingent Reward	0.21	0.06
Supportiveness	<---	Intellectual Simulation	0.12	0.04
Culture on Climate				
Non-conformity	<---	Innovation	0.60	0.12
Non-conformity	<---	Supportiveness	0.39	0.09
Non-conformity	<---	Competitiveness	-0.32	0.12
Support for Innovation	<---	Innovation	0.28	0.09
Support for Innovation	<---	Emphasis on Rewards	0.46	0.09
Support for Creativity	<---	Innovation	0.59	0.07
Support for Creativity	<---	Emphasis on Rewards	0.35	0.07
Resource Support	<---	Innovation	0.25	0.09
Resource Support	<---	Emphasis on Rewards	0.39	0.09
Leadership on Climate				
Support for Creativity	<---	Provides Individual Support	-0.12	0.04
Resource Support	<---	Vision	-0.12	0.05

Note. Unstandardized regression weights reported. S.E = standard error. All regression weights are statistically significant at $p < .05$ or better.

Correlations

Table 64 shows the correlations among all key constructs in this study. As shown in Table 64, there were statistically significant correlations for the transformational leadership factor of articulates vision with all dimensions of organizational culture, with the correlations ranging from r=.19 to r=.34. As expected, the weakest correlations were among the transactional leadership factor of contingent punishment and culture. Articulates vision also had statistically significant correlations with every scale of innovation, with the correlations ranging from r= .25 to r= .37.

Even stronger correlations were found among culture and innovation, with the three culture factors of supportiveness, emphasis on rewards, and innovation having the strongest correlations with every dimension of innovation. The culture dimension of stability also was related to innovation, but not to the extent of the other culture factors.

As mentioned throughout this report, the relationships among all key constructs with social desirability and common method variance marker variables was statistically significant, as shown in Table 64. The relationships with social desirability were weaker than for common method variance. Nonetheless, these results suggest that respondents were likely to have contaminated their results by providing the expected response in some cases instead of what they really believed. We recommend that further examination of these relationships is warranted across levels (i.e., management, employees) and industry sectors in order to mitigate the contamination of results.

On a positive note, the findings point the way for what Australian executives believe their work places should look like, even though they may not have achieved these levels of engagement presently.

Table 64: Pearson Correlation Coefficients for Leadership, Organizational Culture, Climate for Innovation, and Common Method Factors

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Articulates vision																				
2	Fosters the accept' of goals	.56**																			
3	Intellectual stimulation	.56**	.52**																		
4	Provide individual support	.37**	.51**	.40**																	
5	High performance expect's	.47**	.48**	.39**	.60**																
6	Provides appropriate model	.48**	.74**	.44**	.48**	.44**															
7	Contingent reward	.40**	.58**	.47**	.49**	.37**	.45**														
8	Contingent punishment	.27**	.26**	.24**	.28**	.48**	.23**	.24**													
9	Stability	.19**	.15**	.10**	.17**	.15**	.15**	.09**	.04												
10	Supportiveness	.34**	.27**	.20**	.23**	.21**	.19**	.19**	.08**	.49**											
11	Emphasis on rewards	.34**	.22**	.19**	.22**	.23**	.19**	.24**	.12**	.47**	.77**										
12	Competitiveness	.31**	.21**	.17**	.21**	.25**	.18**	.17**	.15**	.34**	.62**	.66**									
13	Performance orientation	.33**	.25**	.20**	.23**	.26**	.21**	.20**	.13**	.46**	.72**	.71**	.73**								
14	Social responsibility	.32**	.24**	.21**	.23**	.20**	.18**	.19**	.07**	.58**	.72**	.68**	.62**	.71**							
15	Innovation	.34**	.19**	.19**	.18**	.21**	.17**	.16**	.13**	.27**	.64**	.69**	.78**	.68**	.56**						
16	Support for innovation	.30**	.22**	.22**	.20**	.19**	.18**	.20**	.12**	.31**	.53**	.57**	.49**	.51**	.47**	.54**					
17	Non-Conformity	.25**	.14**	.12**	.13**	.08**	.12**	.12**	.03**	.26**	.56**	.59**	.50**	.49**	.44**	.58**	.51**				
18	Resource support	.33**	.16**	.15**	.16**	.18**	.14**	.14**	.10**	.34**	.61**	.66**	.59**	.59**	.51**	.69**	.55**	.61**			
19	Support for creativity	.37**	.21**	.23**	.18**	.18**	.17**	.18**	.09**	.33**	.65**	.68**	.61**	.61**	.55**	.70**	.72**	.68**	.74**		
20	Social Desirability	.08**	.11**	.04**	.11**	.00	.08**	.05**	-.07**	.14**	.13**	.11**	.04**	.10**	.11**	.06**	.05**	.11**	.09**	.09**	
21	Common Method Variance	.30**	.32**	.22**	.31**	.37**	.35**	.26**	.22**	.13**	.14**	.12**	.12**	.14**	.14**	.10**	.14**	.04	.09**	.13**	.02

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed)

Organization Metaphors

Descriptive Data

A section on the ABLS3 survey allowed respondents to describe their organizations as a colour, animal, machine, and food. Over 2,000 respondents of the 2,376 total sample completed this section of the survey. Some respondents even cascaded the activity throughout their organization. On some occasions however, some respondents found this section "childish," "meaningless," a "waste of time," and "irrelevant."

The main food descriptors of organizations included meat (20%), general (14%), fruits (9%), vegetables (8%), and rice, breads and cereals (8%).

- Meat consisted primarily of steak (47%), hamburger (11%), meat pie (8%), and meat and vegetables (6%).
- The general category included spaghetti and pasta (30%), pizza (20%), paella/tapas (14%), sandwich (8%), and smorgasbord or stir-fry (7% each).
- Fruit metaphors were mainly apple (27%), fruit salad (19%), banana (9%), and orange (7%).
- Vegetables consisted of potato (30%), salad (29%), and tomato (5%).
- Rice, bread and cereals were mainly bread (40%), rice/risotto (23%), and porridge (12%).

Animal descriptors of organizations included wild mammals (42%), domestic mammals (25%), and birds (7%).

- Wild mammals were best represented by lion (22%), elephant (18%), tiger (17%), and panther (9%).
- Domestic animals were best represented by dog (25%), draught horse (23%), cat (13%), cow (8%), and race horse (5%).
- Birds were best represented by eagle (34%), owl (14%), and phoenix (5%).

The main colours respondents chose to describe their organizations, in order of priority, were blue (33%), red (16%), and green (13%).

- Within these main groups, blue organizations were most represented by mild blue (92%) or navy blue (4%) colours.
- Red was represented by burgundy or blood red (94%).
- Green remained green (93%).

Machine descriptors of organizations included cars (17%), transport (16%), industrial (12%) and agricultural (11%).

- Cars included sports and racing cars (13%), or exotic European cars such as Ferraris, BMWs, and Mercedes Benz (19%). The Holden was mentioned by 5% of respondents to this section.
- The eclectic category of transport ranged from aircraft (19%) to steamrollers (13%) and trains (13%) and trucks (11%).
- Industrial metaphors included bulldozer (15%), printing press (9%), conveyor belt (9%), and sausage machine (7%).
- Agricultural descriptors were tractor (27%), harvester (12%), tank (10%), and crane (9%).

Relationships

A comparison in representations of organizations using metaphors was conducted between the top and bottom deciles of respondents on performance orientation (as part of the OCP), innovation (as part of the OCP), and support for innovation (as part of 'climate for innovation'). An example of performance orientation using the food metaphor is presented in Table 65, animals in Table 66, colour in Table 67, and machines in Table 68. Findings are reported here for 'performance orientation', a component of organizational culture (OCP). Metaphors for all organizational culture factors correlate in the vicinity of 0.60. These are similar to the correlations between the factors on the questionnaire. Therefore, we find similar metaphorical symbols for all the factors of organizational culture.

The analysis differentiated between the most performance-oriented organizational cultures and the least performance-oriented organizational cultures. This contrast was found to be the most illuminating about the metaphors that people envisioned for their organizations. The most and least performance-oriented cultures were determined by calculating the upper and lower deciles for each factor on the questionnaire.

The respondents who constituted the top and bottom deciles for 'organizational culture' and 'climate for innovation' were compared. Only 40% of the respondents were in the same decile for both factors. Therefore, in spite of having weak correlation between the two cohorts of respondents, we found high correlation between the metaphors in use. This finding suggests that there is little effect of same-course bias and relatively high inter-rater reliability associated with these findings.

Stronger performing and innovative company cultures were best represented by images of luxury, sleekness, speed, and quality. The most representative metaphors used were: a balanced of fillet beef, fine seafood like caviar and lobster, fruit, vegetables, dessert and "healthy/nutritional/ restaurant/home-cooked" food; sleek, fast, deadly cats like lions, tigers and panthers; the colour blue, and opulent colours like gold and silver; elite sports cars and computers.

Weaker performing and less innovative company cultures were represented by images of constraint, greyness, stolidity, and introspection. The most representative metaphors were: carbohydrates, take-away food, hamburgers, pies and "slop/poison/ mouldy/rotten" food; big, slow, strong animals such as elephant, hippopotamus and rhinoceros, and slow and extinct animals like dinosaurs and turtles; the colours grey/black, beige/white and brown; old, obsolete and malfunctioning machines.

Table 65
Inter-Decile Rating of Food Metaphors for Organisation Performance Orientation

Most performance oriented culture (n = 220)	**Least performance oriented culture (n = 220)**
Most frequent metaphors at the top	
More steak/fillet	
	More carbohydrates
More caviar/lobster/sashimi/smoked salmon/oyster	
	More takeaway or fast food
More fruit	
	More hamburger/pie/meat&veg/steak&chips
More dessert/cake/apple pie/	
Same on vegetables (general)	
More seafood	
"Healthy / nutritional / restaurant / home-cooked" Vs.	"Slop / poison / mouldy / rotten / castor oil"
Same for hot / curry / spicy	
	Lemon / grapefruit
	1 x "eel"
Least frequent metaphors at the top	

Table 66
Inter-Decile Rating of Animal Metaphors for Organisation Performance Orientation

Most performance oriented culture (n = 220)	**Least performance oriented culture (n = 220)**
Most frequent metaphors at the top	
More sleek, fast, deadly cats	
	More big, slow, strong animals
Same for dogs	
	More sloths
More eagles / birds	
	More dinosaur/turtle/tortoise
Some race horses	No race horses or riding horses
More draft horses	
	More mule/ox, rhinoceros
Dolphin	
Cat	
	Snake
Some Australian marsupials	
	Rodents
	Hyena
	Some "mortally wounded" animal
Both had one "phoenix" (probably 'rising from the ashes')	
Least frequent metaphors at the bottom	

Table 67
Inter-Decile Rating of Colour Metaphors for Organisation Performance Orientation

Most performance oriented culture (n = 220)	**Least performance oriented culture (n = 220)**
Most frequent metaphors at the bottom	
Mainly Blue (1/2 of all responses)	Mainly grey/black (1/3 of all responses)
	Much blue
Same for red	
More green	
	More beige/white
More purple	
	More brown
Same for yellow	
More gold / silver	
More orange	
	1 x “dull”
Least frequent metaphors at the bottom	

Table 68
Inter-Decile Rating of Machine Metaphors for Organisation Performance Orientation

Most performance oriented culture (n = 220)	**Least performance oriented culture (n = 220)**
Most frequent metaphors at the bottom	
More elite/sports cars	
	More “old/obsolete/malfunctioning” items
More computers	
Same for ‘household items’	
Same for ‘agricultural/building’ machines	
	More industrial/commercial (misc.)
Same for motor cars	
More engine + aircraft	More tractor + steam engine
Same for cruise ships	
	Sander/lathe
	‘Engine’
“time-machine”	
	“sausage-machine”
	“intensive care”
	“Dalek”
Least frequent metaphors at the bottom	

Common Method Variance and Social Desirability Bias

Table 69

T-test for Mean Factor Scores of Respondents on Marker Variables and Social Desirability by Classified Gender (N = 2376)

Marker Variables and Social Desirability Factors	Males (n = 1732)	Females (n = 644)	T
Common Method Variance[a]	5.51	5.67	-3.83***
Social Desirability[b]	3.23	3.21	0.35

[a] Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree;

[b] Likert scale 1 to 5: 1= Strongly disagree, 2 = Disagree, 3 = Neither, 4= Agree, 5 = Strongly Agree;
*$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Females recorded a higher influence of common method variance (marker variables) cw. males – indicating that some responses are influenced statistically because of self-report bias. Marker variables are also more correlated with leadership, culture and innovation than is social desirability. No statistically significant differences on social desirability, indicating that this form of response is the same across gender. The lower correlation of social desirability with the key constructs (as shown in Table 64, correlation matrix) may mitigate the influence of common method variance.

In each case following, the tables reveal that older, better remunerated, better educated, and more senior executives recorded significantly higher levels of social desirability than other executives. When we consider that this group of executives also recorded higher scores on transformational leadership, culture, and innovation, then these results need to be treated with cautionary discretion. The results tell us that although these Australian managers are aware of the leadership behavior they should model, the types of cultures most important in organizations, and the level of support for innovation required in order to be seen to be doing the right thing, the reality is that many of these observations are exaggerated.

The indications are that respondents may have known they were inflating their responses on items we would want and expect to be representative of good managers. Such actions have been extensively examined under the categories of impression management and self-deception response biases, or respectively, the tendencies to present a false front or to see oneself in a more favourable light (Moorman and Podsakoff, 1992; Zerbe and Paulhus, 1987). These attitudes, in whichever form they manifest themselves, may encourage respondents to more frequently display selective attributes, attitudes, and behaviors in the workplace. Therefore, this recognition that certain behaviors and attitudes are important or seen to be important may be a self-fulfilling prophecy (Eden, 1984; Field, 1989). That is, believing these attitudes are important may serendipitously promote their increased use and display in the

workplace by managers. Indeed, in their study of over 2,000 American adults' values, Fisher and Katz (2000:106) claimed that:

> Associations between measures of SDB [social-desirability bias] and values should be expected because both have a desirability component . . . the degree to which SDB affects a value self-report depends on the value's self-presentation potential.

The more a value is strongly prescribed in a social system, the more likely the relationship between that value and social desirability. This proposition supports our results which show statistically significant, but not strong, associations among social desirability bias and research measures that indicate positive outcomes, such as transformational leadership behaviors, balanced organizational cultures, and innovative organizations. These outcomes suggest a powerful moral and social imperative associated with the "right" and "expected" response (May et al., 2003; Bass and Steidlmeier, 1999; Price, 2002). Fisher and Katz (2000:107) further contend that a significant social desirability bias component in research findings can be taken as evidence of measure validity rather than contamination.

Table 70
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability Classified by Age Group (N=2374)

Marker Variables and Social Desirability Factors	Age Group					F	Sig.Diff Groups
	1	2	3	4	5		
	n = 59	n = 437	n = 848	n = 812	n = 218		
Common Method Variance[a]	5.57	5.49	5.49	5.61	5.68	3.92**	None
Social Desirability[b]	2.91	3.04	3.22	3.30	3.36	9.49***	1-4, 1-5 2-3, 2-4, 2-5

Note : 1= <30; 2 = 30 to 39; 3 = 40 to 49; 4 = 50 to 59; 5 = 60+

[a] Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree;

[b] Likert scale 1 to 5: 1= Strongly disagree, 2 = Disagree, 3 = Neither, 4= Agree, 5 = Strongly Agree; *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 71
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability by Salary Group (N=2125)

Marker Variables and Social Desirability Factors	Salary Group				F	Sig.Diff Groups
	1 n = 269	2 n = 483	3 n = 688	4 n = 685		
Common Method Variance	5.61	5.56	5.54	5.55	0.43	None
Social Desirability	3.08	3.21	3.19	3.30	4.63	1-4

Note : 1= <$60,000; 2 = $85,000-$125,000; 3 = $85,001-$125,000; 4 = $125,101 or more

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$***$p \leq .001$

Table 72
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability Classified by Educational Level (N=2371)

Marker Variables and Social Desirability Factors	Educational Level						F	Sig.Diff Groups
	1 n=156	2 n=388	3 n=174	4 n=713	5 n=801	6 n=139		
Common Method Variance	5.63	5.58	5.51	5.52	5.56	5.59	0.71	None
Social Desirability	3.13	3.16	3.14	3.20	3.30	3.32	2.62*	None

Note: 1= High School; 2 = Diploma; 3 = Technical; 4 = Bachelor; 5 = Master; 6 = Doctorate

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 73
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability Classified by Organizational Level (N=2344)

Marker Variables and Social Desirability Factors	Organizational Level			F	Sig.Diff Groups
	1 n = 745	2 n = 501	3 n = 1098		
Common Method Variance	5.59	5.60	5.51	2.36	None
Social Desirability	3.24	3.34	3.15	8.65***	2-3

Note : 1= <$Top; 2 = Executive; 3 = Upper Middle

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$***$p \leq .001$

Table 74
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability Classified by Years in Current Position (N=2243)

Marker Variables and Social Desirability Factors	Years in Current Position						F	Sig.Diff Groups
	1 n=389	2 n=337	3 n=561	4 n=332	5 n=212	6 n=412		
Common Method Variance	5.53	5.54	5.60	5.53	5.63	5.56	0.59	None
Social Desirability	3.24	3.15	3.24	3.20	3.28	3.23	0.75	None

Note: 1= 1yr; 2 = 2 yrs; 3 = 3 to 4 years; 4 = 5 to 6 years; 5 = 7 to 9 years; 6 = 10 yrs +

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 75
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability Classified by Years as an Executive (N=1919)

Marker Variables and Social Desirability Factors	Years as an Executive				F	Sig.Diff Groups
	1	2	3	4		
	n = 488	n = 593	n = 508	n = 330		
Common Method Variance	5.62	5.56	5.55	5.60	0.74	None
Social Desirability	3.15	3.25	3.25	3.32	2.67*	None

Note : 1= Les than 6 years; 2 = 6 to 12 years; 3 = 13 to 20 years; 4 = More than 21 years

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 76
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Number of Employees (N=2313)

Marker Variables and Social Desirability Factors	Number of Employees									F	Sig. Diff. Groups
	1	2	3	4	5	6	7	8	9		
	n = 142	n = 201	n = 379	n = 517	n = 458	n = 157	n = 256	n = 63	n = 140		
Common Method Variance	5.50	5.42	5.53	5.62	5.65	5.58	5.50	5.45	5.50	2.03*	None
Social Desirability	3.26	3.19	3.19	3.15	3.30	3.33	3.26	3.20	3.21	1.40	None

Note : : 1= Self Employed (SE) ; 2 = 1 to 4 employees; 3 = 5 to 19 employees; 4 = 20 to 99 employees; 5 = 100 to 499 employees; 6 = 500 to 999 employees; 7 = 1,000 to 4,999 employees; 8 = 5,000 to 9,999 employees; 9 = 10,000 and over.

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 77
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability Classified by Years of Company in Australia (N=2107)

Marker Variables and Social Desirability Factors	Years of Company in Australia				F	Sig.Diff Groups
	1 n = 530	2 n = 517	3 n = 441	4 n = 619		
Common Method Variance	5.51	5.53	5.60	5.62	2.13	None
Social Desirability	3.21	3.19	3.20	3.25	0.53	None

Note : 1= Less than 10 years; 2 = 11 to 25 years; 3 = 26 to 50 years; 4 = 51 years or more

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 78
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability Classified by Years of Establishment of Company Offshore (N=418)

Marker Variables and Social Desirability Factors	Years of Establishment					F	Sig.Diff Groups
	1 n = 111	2 n = 105	3 n = 81	4 n = 78	5 n = 43		
Common Method Variance	5.51	5.45	5.54	5.58	5.69	0.65	None
Social Desirability	3.25	3.16	3.16	3.38	3.29	0.88	None

Note : 1= Less than 11 years ; 2 = 11 to 25 years; 3 = 25 to 50; 4 = 51 to 100; 5 = 101 years and more

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 79
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and social Desirability Classified by Job Function (N=2005)

Marker Variables and Social Desirability Factors	Job Function Group								F	Sig.Diff Groups
	1	2	3	4	5	6	7	8		
	n = 93	n = 1170	n = 96	n = 126	n = 81	n = 98	n = 161	n = 180		
Marker Variables	5.45	5.62	5.70	5.40	5.44	5.49	5.51	5.58	2.11	None
Social Desirability	3.14	3.24	3.32	3.35	3.10	3.15	3.21	3.19	1.06	None

Note : : 1= Accounting ; 2 = Administration; 3 = Education; 4 = HRM; 5 = MIS; 6 = Marketing; 7 = Operation; 8 = Other

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 80
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and Social Desirability Classified by Organization Sector (N=2359)

Marker Variables and Social Desirability Factors	Years of Company in Australia				F	Sig.Diff Groups
	1	2	3	4		
	n = 472	n = 275	n = 1308	n = 304		
Common Method Variance	3.54	5.47	5.53	5.78	7.69***	1-4, 2-4, 3-4
Social Desirability	3.28	3.15	3.19	3.33	3.62*	

Note : 1= Government; 2 = Public; 3 = Private; 4 = Non-profit

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 81
Analysis of Variance for Mean Factor Scores of Respondents on Climate for Innovation Classified by Organization Type (N=2360)

Marker Variables and Social Desirability Factors	Number of Employees									F	Sig. Diff. Groups
	1	2	3	4	5	6	7	8	9		
	n = 149	n = 107	n = 287	n = 219	n = 271	n = 157	n = 238	n = 174	n = 758		
Common Method Variance	5.65	5.50	5.46	5.51	5.65	5.41	5.77	5.52	5.53	3.42***	None
Social Desirability	3.08	3.19	3.31	3.07	3.26	3.11	3.32	3.24	3.24	2.51**	None

Note : 1= Retail/Wholesale Trade; 2 = Building/Construction; 3 = Government/Defence/Justice; 4 = Banking/Finance/Insurance; 5 = Education ; 6 = IT/Communications; 7 = Health/Community; 8 = Manufacturing; 9 = Other (Electricity, Gas and Water Supply, Vehicle/Metal, Farming, Textiles/Clothing/Footwear, Transport/Storage, Mining, Cultural/Recreational, and other).

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Table 82
Analysis of Variance for Mean Factor Scores of Respondents on Marker Variables and social Desirability Classified by State (N=2341)

Marker Variables and Social Desirability Factors	State								F	Sig.Diff Groups
	1	2	3	4	5	6	7	8		
	n = 556	n = 17	n = 668	n = 594	n = 154	n = 196	n = 23	n = 133		
Marker Variables	5.55	5.67	5.50	5.56	5.64	5.71	5.77	5.48	1.70	None
Social Desirability	3.24	2.98	3.18	3.16	3.25	3.39	3.24	3.31	1.93*	None

Note : 1= Victoria ; 2 = Tasmania; 3 = New South Wales ; 4 = Queensland; 5 = South Australia; 6 = Western Australia; 7 = Northern Territory; 8 = Australian Capital Territory

Likert scale 1 to 7: 1 = Strongly disagree, 7 = Strongly Agree, *$p \leq .05$;**$p \leq .01$; ***$p \leq .001$

Appendices – Factor Analyses

Appendix One
Factor Structure of Transformational Leadership Scale

Factor / Items
Provides Appropriate Role Model (mean=6.01)
Lead by "doing" rather than simply "telling"
Provide a good model for others to follow
Lead by example
Fosters Acceptance of Goals (5.99)
Foster collaboration among work groups
Encourage employees to be "team players"
Get the group to work together for the same goal
Develop a team attitude and spirit among employees
Contingent Reward (5.82)
Always give others positive feedback when they perform well
Give other special recognition when their work is very good
Commend others when they do a better than average job
Personally compliment others when they do outstanding work
Frequently do not acknowledge others' good performance [reverse scored]
Intellectual Stimulation (5.82)
Challenge others to think about old problems in new ways
Ask questions that prompt others to think
Have stimulated others to rethink the way they do things
Have ideas that have challenged others to re-examine some basic assumptions about their work
Provides Individual Support (5.78)
Act without considering others' feelings [reverse scored]
Show respect for others' personal feelings
Behave in a manner thoughtful of others' personal needs
Treat others without considering their personal feelings [reverse scored]
High Performance Expectations (5.60)
Show that I expect a lot from employees
Insist on only the best performance
Will not settle for second best
Contingent Punishment (4.84)
Indicate my disapproval if employees perform at a level below their level of capability
Show my displeasure when employees' work is below acceptable standards
Let employees know about it when they perform poorly
Reprimand employees if their work is below standard
Point it out to employees when their work is not up to par
Articulates Vision (4.63)
Have a clear understanding of where we are going
Paint an interesting picture of the future of our group
Am always seeking new opportunities for the organization
Inspire others with my plans for the future
Am able to get others committed to my dream

Appendix Two
Factor Structure of Organizational Culture Profile

Factor Items
Social Responsibility (mean=3.81)
Being reflective
Having a good reputation
Having a clear guiding philosophy
Being socially responsible
Competitiveness (3.79)
Achievement orientation
An emphasis on quality
Being distinctive – different from others
Being competitive
Performance Orientation (3.66)
Having high expectations for performance
Enthusiasm for the job
Being results oriented
Being highly organized
Supportiveness (3.62)
Being people oriented
Being team oriented
Sharing information freely
Collaboration
Emphasis on Rewards (3.54)
Fairness
High pay for good performance
Opportunities for professional growth
Praise for good performance
Stability (3.49)
Stability
Being calm
Security of employment
Low conflict
Innovation (3.45)
Being innovative
Quick to take advantage of opportunities
Risk taking
Taking individual responsibility

Appendix Three
Factor Structure of Climate for Innovation Scale

Factor / Items
Support for Creativity (mean=3.69)
Creativity is encouraged here
Our ability to function creatively is respected by the leadership
There is adequate time available to pursue creative ideas here
This organization gives me free time to pursue creative ideas during the workday
Non-conformity (3.63)
The main function of members in this organization is to follow orders which come down through channels [reverse scored]
Around here, a person can get in a lot of trouble for being different [reverse scored]
The best way to get along in this organization is to think the way the rest of the group does [reverse scored]
Support for innovation (3.50)
This organization publicly recognizes those who are innovative
Around here, people are allowed to try to solve the same problems in different ways
This organization can be described as flexible and continually adapting to change
In this organization we tend to stick to tried and true ways
Resource supply (3.14)
Assistance in developing new ideas is readily available
There are adequate resources devoted to innovation in this organization
Lack of funding to investigate creative ideas is a problem in this organization [reverse scored]
Personnel shortages inhibit innovation in this organization [reverse scored]
The reward system here encourages innovation

References

Afsaneh, N. (1993). Integrating leadership and strategic management in organizational theory. *Revue Canadienne des Sciences de l Administration - Canadian Journal of Administrative Sciences, 10*(4), 297-307.

Amabile, T.M. and Gryskiewicz, N.D. (1989). The creative environment scales: work environment inventory. *Creativity Research Journal*, 2, 231-252.

Ancona, D., & Caldwell, D. (1987). Management issues facing new product teams in high technology companies. In D. Lewin & D. Lipsky & D. Sokel (Eds.), *Advances in Industrial and Labor Relations* (Vol. 4, pp. 191-221). Greenwich, CT: JAI Press.

Australian Government (2001). *Backing Australia's Ability: An Innovation Action Plan for the Future*. http://www.innovation.gov.au/iap/index.html

Bass, B.M. (1998a). Leadership in a technology-enabled environment. Personal correspondence, 15 December. Email Bass@compuserve.com.

Bass, B.M. (1998b). *Transformational leadership: Industrial, military, and educational impact*. Mahwah, N.J.: Lawrence Erlbaum.

Bass, B.M. and Avolio, B.J. (1989). *Manual for the Multifactor Leadership Questionnaire*. Palo Alto, California: Consulting Psychologists Press.

Bass, B.M. and Steidlmeier, P. (1999). Ethics, character, and authentic transformational leadership behavior. *Leadership Quarterly*, 10(2), 181-217.

Brown, A. (1992). Organizational culture: The key to effective leadership and organizational development. *Leadership and Development Journal, 13*(2), 3-6.

Cable, D.M. and Judge, T.A. (1997). Interviewers' perceptions of person-organisation fit and organisational selection decisions. *Journal of Applied Psychology*, 82(4), 546-561.

Crowne, D.P. and Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24, 349-354.

Denison, D. R. (1990). *Corporate Culture and Organizational Effectiveness*. New York, NY: John Wiley & Sons.

Donaldson, S.I. and Grant-Vallone, E.J. (2002). Understanding self-report bias in organizational behavior research. *Journal of Business and Psychology*, 17(2), 245-260.

Eden, D. (1984). Self-fulfilling prophecy as a management tool: harnessing Pygmalion. *Academy of Management Review*, 9(1), 65-73.

Field, R.H.G. (1989). The self-fulfilling prophecy leader: achieving the metharme effect. *Journal of Management Studies*, 26, 151-175.

Fisher, R.J. and Katz, J.E. (2000). Social-desirability bias and the validity of self-reported values. *Psychology and Marketing*, 17(2), 105-120.

Isaksen, S.G., Laver, K.J., Ekvall, G., and Britz, A. (2001). Perceptions of the best and worst climates for creativity: preliminary validation evidence for the situational outlook questionnaire. *Creativity Research Journal*, 13, 171-184.

Keating, P. (2001). Personal perspective: Karpin to Sarros. *Management Today*, October, 2.

Kline, T.J.B., Sulsky, L.M. and Rever-Moriyama, S.D. (2000). Common method variance and specification errors: a practical approach to detection. *Journal of Psychology*, 134(4), 401-421.

Kotter, J. (1998). Cultures and coalitions. In R. Gibson (Ed.), *Rethinking the Future; Rethinking Business, Principles, Competition, Control & Complexity, Leadership, Markets and the World*. London: Nicholas Brealey Publishing Ltd.

Kotter, J. P., & Heskett, J. L. (1992). *Corporate Culture and Performance*. New York: The Free press.

May, D.R., Chan, A.Y.L., Hodges, T.D. and Avolio, B.J. (2003). Developing the moral component of authentic leadership. *Organizational Dynamics*, 32(3), 247-260.

Miner, B. (2000). Testing a psychological typology of entrepreneurship using business founders. *Journal of Applied Behavioral Science*, 36(1), 43-69.

Moon, M. J. (1999). The pursuit of managerial entrepreneurship: Does organization matter? *Public Administration Review, 59*(1), 31-43.

Moorman, R.H. and Podsakoff, P.M. (1992). A meta-analytic review and empirical test of the potential confounding effects of social desirability response sets in organizational behaviour research. *Journal of Occupational and Organizational Psychology*, 65(2), 131-149.

Mumford, M.D. and Licuanan, B. (2004). Leading for innovation: Conclusions, issues, and directions. *Leadership Quarterly*, 15(1), 163-171.

Mumford, M.D., Scott, G.M., Gaddis, B., and Strange, J.M. (2002). Leading creative people: orchestrating expertise and relationships. *Leadership Quarterly*, 13, 705-750.

O'Reilly, C.A., Chatman, J. and Caldwell, D.F. (1991). People and organisational culture: a profile comparison approach to assessing person-organisation fit. *Academy of Management Journal*, 34(3), 487-516.

Orchard, L. (1998). Managerialism, economic rationalism and public sector reform in Australia: connections, divergences, alternatives. *Australian Journal of Public Administration, 57*(1), 19-32.

Parker, R., & Bradley, L. (2000). Organizational culture in the public sector: evidence from six organizations. *The International Journal of Public Sector Management, 13*(2), 125-141.

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quarterly, 1*(2), 107-142.

Podsakoff, P.M., Todor, W., Grover, R. and Huber, V. (1984). Situational moderators of leader reward and punishment behavior: fact or fiction? *Organizational Behavior and Human Performance*, 34, 21-63.

Price, T.L. (2002). The ethics of authentic transformational leadership. *Leadership Quarterly*, 14(1), 67-81.

Sarros, J.C., Gray, J.H. and Densten, I.L. (2002). Leadership and its impact on organizational culture. *International Journal of Business Studies*, 10(2), 1-26.

Sarros, J.C., Gray, J.H., Densten, I.L. and Cooper, B. (2005). The organizational culture profile revisited and revised: an Australian perspective. *Australian Journal of Management*, 30(1).

Sarros, J.C. and Santora, J.C. (2001). The transformational-transactional leadership model in practice. *Leadership and Organization Development Journal*, 22(8), 383-393.

Schein, E. H. (1984). Coming to a new awareness of organizational culture. *Sloan Management Review, Winter*, 3-16.

Schein, E. H. (1992). *Organizational Culture and Leadership* (2nd ed.). San Francisco: Jossey-Bass.

Scott, S.G. and Bruce, R.A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580-607.

Shane, S. and Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.

Stoica, M. and Schindehutte, M. (1999). Understanding adaptation in small firms: Links to culture and performance. *Journal of Developmental Entrepreneurship*, 4(1), 1-18.

Tabachnick, B.G., and Fidell, L.S. (2001). *Using multivariate statistics (4th ed.)*. Sydney: Allyn and Bacon.

Valle, M. (1999). Crisis, culture and charisma: The new leader's work in public organizations. *Public Personnel Management, 28*(2), 245-257.

Waldman, D. and Bass, B.M. (1991). Transformational leadership at different phases of the innovation process. *Journal of High Technology Management Research*, 2, 169-180.

West, M., & Farr, J. (1989). Innovation at work: Psychological perspectives. *Social Behavior, 4*, 15-30.

Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *Leadership Quarterly*, 10(2), 285-305.

Zahra, S. Z. (1993). A conceptual model of entrepreneurship as firm behavior: A critique and extension. *Entrepreneurship Theory and Practice*, 17(4), 5-21.

Zahra, S. Z. (1999). The changing rules of global competitiveness in the 21st century. *Academy of Management Executive, 13*(1), 36-42.

Zerbe, W.J. and Paulhus, D.L. (1987). Socially desirable responding in organizational behavior: a reconception. *Journal of Management Review*, 12, 250-264.

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Research Team

James C. Sarros
Judy Gray
Iain Densten
Ken Parry

Research Assistant

Anne Hartican

Research Fellow

Brian Cooper

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