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The Impact of Leadership and Power on Perceptions of Creativity in the Workplace

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Abstract: The objective of this paper is to empirically investigate the impact of leadership and power on perceptions of creativity in the workplace. The paper also investigates the level of prediction on perceptions of creativity in the workplace after having statistically controlled for the predictive effects of the leadership measures. Results indicate that participative, self-management and transformational leadership styles are capable of enhancing employees' autonomy and freedom and provide the necessary resources, goal clarity, intrinsic motivation and organisational encouragement that are conducive to creativity in organisations. The findings also suggest that the leadership style that defines structure and guides followers in a direction of established goals (e.g. initiating structure leadership) increases formal management structure and conservatism within organisations, which in turn impede creativity and innovation. Finally, it was found that the dimension of managerial power does not enhance perceptions of creativity in the workplace after having statistically controlled for the predictive effects of the leadership dimensions. The underlying themes of these findings are discussed.

Keywords: creativity, creatologist, leadership, and power, United Arab Emirates.

1. Introduction

In the information age, organisations must continuously reinvent themselves at a pace, which is consistent with the rapid pace of change in the environment. As a result, the organisations of the 21st century need to continuously innovate in order to sustain their competitive advantage (Kay, 1993). But how can an organisation become more creative and more innovative? A review of the literature suggests that if organisations want to create an innovative climate they should consider three sources of innovation, namely, structural, cultural and human resources (Monge, Cozzens & Contractor, 1992). Kanter (1983) for example suggests that innovative organisations need to adopt a "culture of pride and climate of success". She suggests that structures within organisations must be compatible with culture and argues that bureaucratic structures can stifle creativity and innovation. Moreover, the literature suggests that human resources (HR) systems must not only ensure that employees have the necessary skills but must also motivate their behaviours deemed appropriate for innovation (Cappelli & Singh, 1992). Thus, there is a high level of consensus that employee idea generation and creative thinking is highly dependent upon the organisation's structure, culture and the HR systems (Amabile, 1988).

However, organisational structure, culture and the HR systems of any organisation are highly influenced by leadership and the decisions of management. For example, an empirical research suggests that democratic leadership results to less bureaucratic structures, which in turn create a positive environment for creativity due to increased communication among employees (Politis, 2005a). Moreover, Weese (1996) recognised that there is a significant relationship between transformational leadership and organisational culture.

Although the review of the literature supports that leadership and management practices impact the work environment through their influence on organisational structure, culture and the HR systems, little is known on the direct impact of *leadership* and *power* on *perceptions of creativity* in the workplace, which are conducive to creativity and innovation. Equally unknown is the level of prediction of perceptions of creativity in the workplace after having statistically controlled for the predictive effects of the leadership measures. The goal of this study is to empirically examine the extent to which the factors of managerial power and leadership enhance and/or hinder the perceptions of creativity in the workplace, which in turn enhance/obstruct the creative process in organisations. The study also investigates the level of prediction on perceptions of creativity in the workplace after having statistically controlled for the predictive effects of the leadership measures.

2. Literature review

2.1 Perceptions of creativity in the workplace

In the context of this research, the term "creativity" is defined as the generation of ideas. A review of the literature suggests that individual creativity is influenced by multiple individual-level variables as well as contextual and environmental variables (Amabile, 1988). The focus then of individual creativity lays on the variables of leadership and on the contextual theories of organisational creativity and innovation – the componential theory of Amabile (1988), the interactionist theory of Woodman, Sawyer and Griffin (1993), and the multiple social domains theory of Ford (1996) – all of which include the psychological meaning of environmental events (e.g. perceptions of creativity in the workplace) that largely influences the creative behaviour of employees.

In relation to perceptions of creativity in the workplace, Amabile's (1988) componential model of creativity identifies a number of conceptual work environment factors that are necessary for individual creativity on any given task. These factors are named in the literature as supervisory encouragement (+); work group supports (+); freedom (+); challenging work (+); organisational encouragement (+); sufficient resources (+); workload pressure (–); and organisational impediments (–). (The factors denoted with (+) are referred to as the "stimulant" perceptions of creativity in the workplace, and those denoted with (–) are referred to as the "obstacle" perceptions of creativity in the workplace.) These perceptions are measured by a work environment questionnaire, known in the literature as KEYS (Amabile, 1995). KEYS and the model underlying it focus on individuals' perceptions and the influence of those perceptions on the creativity of their work (Amabile et al., 1996). According to Amabile and colleagues the underlying assumption is that self-report responses to KEYS reveal the "psychological meaning that respondents attach to events in their organisations, their organisational units, and their work groups" (p.1157). Thus, KEYS measure individuals' perceptions on the creativity and innovation of their work.

But the work environment of any organisation is linked to management practices, and leaders can create an environment impacting employees' perceptions of creativity in the workplace (Smith, 1999). Thus, leadership practices and tactics apparently affect people's willingness to engage in, and the likely success of, creative ventures (Mumford et al., 2002).

3. Leadership dimensions

Regarding the relationship between leadership and creativity, a review of the literature revealed that there are at least "certain types of leadership that are related to creativity and innovation in 'real-world' settings" (Mumford et al., 2002: 707). For the purpose of this research these are grouped into the 'newer' self-management leadership style and the more established leadership styles of transformational and transactional leadership, initiating structure and consideration leadership.

3.1 Self-management leadership

Self-management leadership theory has been developed by Manz's (1986). Manz and Sims' (1987) research suggests specific self-management leadership behaviours, which can help and encourage subordinates to develop behaviours for greater autonomy, self-motivation and self-leadership. Manz and Sims (1987) developed the Self-Management Leadership Questionnaire (SMLQ) as a measure of such leader behaviours. The six behaviours tapped by the SMLQ are: encouraging self-observation; encouraging self-goal setting; encouraging self-reinforcement; encouraging self-expectation; encouraging rehearsal and encouraging self-criticism.

A review of the literature suggests that there is a positive and significant relationship between self-management leadership and the "stimulant" perceptions of creativity in the workplace (Politis, 2005b). Moreover, Politis's (2005b) study demonstrated that some dimensions of self-management leadership were negatively related with the "obstacle" perceptions of creativity in the workplace. It is thus reasonable to hypothesise that the same pattern of relationships will emerge from the current study. Specifically:

Hypothesis 1: *Correlations between self-management leadership measures and the 'stimulant' perceptions of creativity in the workplace will be stronger, and more positive, than those with the 'obstacle' perceptions of creativity in the workplace.*

3.2 Transformational and transactional leadership

According to the literature transformational leadership inspires followers to exceed their own self-interest for the good of the organisation and increases the confidence and motivation of followers to obtain performance beyond expectations. On the other hand transactional leadership guides followers in a direction of established goals by clarifying role and task requirements (Bass, 1985). Bass (1985) developed the Multifactor Leadership Questionnaire (MLQ), which measures five leadership factors. The five factors tapped by the MLQ-5 include: *charismatic behaviour, individualised consideration* and *intellectual stimulation*, forming the transformational leadership dimension; *contingent reward* and *management-by-exception (MBE) passive*, forming the transactional leadership dimension.

Although studies examining the effects of charisma on creativity are not widely available, one study, conducted by Politis (2004) found a positive relationship ($\gamma = 0.26$, $\rho < 0.01$) between charismatic leadership and the "stimulant" perceptions of creativity in the workplace. Another study conducted by Jung (2001), examined the effects of transformational leadership in 53 groups, composed of 3 or 4 undergraduates, who were asked to work on brainstorming tasks where transformational and transactional leadership were manipulated via task instructions. Jung found that fluency (e.g. number of ideas produced) and flexibility (e.g. the number of different type of ideas produced) were higher in the transformational, as opposed to the transactional, condition. It is thus reasonable to hypothesise that the same pattern of relationships will emerge from the current study. Specifically:

Hypothesis 2: *Correlations of the 'stimulant' perceptions of creativity in the workplace with transformational leadership measures will be stronger, and more positive, than those with the 'obstacle' perceptions of creativity in the workplace.*

Hypothesis 3: *Correlations of the 'obstacle' perceptions of creativity in the workplace with transactional leadership measures will be stronger, and more positive, than those with the 'stimulant' perceptions of creativity in the workplace.*

3.2.1 Initiating structure and consideration leadership

Initiating structure and consideration leadership began at Ohio State University in the late 1940's. Reddin (1970) asserted that initiating structure and consideration are independent dimensions and Stogdill's (1963) Leader Behaviour Description Questionnaire (LBDQ) measures them. According to Stogdill *initiating structure* refers to the extent to which the leader is likely to define and structure his or her role and those of employees in the search for goal attainment. It includes behaviour that attempts to organise work, work relationships and goals. *Consideration* refers to the extent to which a person is likely to have job relationships that are characterised by mutual trust, respect for employees' ideas and regard for their feelings.

Investigating the impact of initiating structure and consideration on perceptions of creativity in the workplace may provide the barometer to understand the success or failure of creativity and innovation that are either not currently considered important, but which should be. Because Manz and Sims's (1987) and Bass's (1985) scales contain certain themes, such as trust and respect for employees' ideas and feelings, common to those measured by Stogdill's (1963) leadership dimensions, it is reasonable to hypothesise that consideration leadership will be a better predictor of perceptions of creativity in the workplace than initiating structure leadership.

Hypothesis 4: *Correlations of the 'stimulant' perceptions of creativity in the workplace with consideration leadership will be stronger, and more positive, than those with the 'obstacle' perceptions of creativity in the workplace.*

Hypothesis 5: *Correlations of the 'obstacle' perceptions of creativity in the workplace with initiating structure leadership will be stronger, and more positive, than those with the 'stimulant' perceptions of creativity in the workplace.*

3.3 Managerial power

Over the years the French and Raven's (1959) power sources have been most heavily utilised. This research operationalised managerial power by using French and Raven's (1959) power bases of *coercive power*; *expert power*; *legitimate power*; *referent power*; and *reward power*.

A review of the literature suggests that managerial power is positively related to knowledge acquisition attributes (Politis, 2005c). It is thus plausible to assume that the dimensions of managerial power will be predictive variables on perceptions of creativity in the workplace. This connection is expressed in the following hypothesis.

> **Hypothesis 6:** *Correlations of the 'stimulant' perceptions of creativity in the workplace with managerial power will be stronger, and more positive, than those with the 'obstacle' perceptions of creativity in the workplace.*

Finally, French and Raven's (1959) power bases contain dimensions, such as, legitimate power that might manipulate work environment perceptions that influence creativity. For example, legitimate/position power can allocate resources, which in turn can increase creativity (Kanter, 1983). Moreover, it can provide creative freedom and sense of ownership of new ideas, which in turn influence individuals to produce more creative work (Amabile & Gitomer, 1984).

It is thus reasonable to predict that managerial power would increase the level of prediction of the 'stimulant' perceptions of creativity in the workplace, after having statistically controlled for the predictive effects of the leadership dimensions measured by the SMLQ, MLQ and LBDQ scales.

> **Hypothesis 7:** *The statistical prediction of the 'stimulant' perceptions of creativity in the workplace will be increased with the addition of the managerial power factor in the set of predictor variables.*

4. Sample and procedures

4.1 Sample

The sample was drawn from five companies listed in the Department of Economic Development in Dubai, United Arab Emirates. The sample consisted of members of non-unionised employees closely linked to operations of aluminium products, communications industries, electricity and water, petroleum, and public works. All respondents were full-time employees of the participating organisations and volunteered to participate in the study. Questionnaires, written in English, containing items measuring the variables of leadership, managerial power and perceptions of creativity in the workplace were distributed to 216 employees of the five firms. A total of 164 employees returned usable questionnaires; yielding a 75.9 percent response rate.

The majority of the respondents were within the 20-30 age group (76%). Eighty-two percept (82%) of the respondents have had five or less years of work experience. The respondents were 4 percent female and 96 percent male and all had attained a technical school or college qualification taught in the English language. Anonymity was guaranteed and no names or other identifying information was asked.

4.2 Analytical procedure

The proposed hypotheses were tested using covariance structure analysis. Covariance-based structures are exemplified by software packages such as LISREL, EQS and AMOS. The analysis of moment structures (AMOS, version 5) software (Arbuckle 2003) was used for the factor analysis (measurement model) and for the regression analysis (structural model). The combination of factor analysis and regression analysis is known as causal modelling (Hair et al., 1995) or structural equation modelling (SEM). Following the recommendations of Sommer, Bae and Luthans (1995), a measurement model was developed and then, with this held, a structural model. Using confirmatory factor analysis (CFA) the factorial validity of the measurement models was assessed. Given adequate validity coefficients of those measures, the number of indicators in the model was reduced by creating a composite scale for each latent variable (see Politis 2005b).

As a test of the measurement and the structural models, a mixture of fit-indices was employed to assess model fit. The ratio of chi-square to degrees of freedom (χ^2/df) has been computed, with ratios of less than 2.0 indicating a good fit. However, since absolute indices can be adversely affected by sample size (Loehlin, 1992), four other relative indices, the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the comparative fit index (CFI), and the Tucker and Lewis index (TLI) were computed to provide a more robust evaluation of model fit (Tanaka 1987; Tucker & Lewis 1973). For GFI, AGFI, CFI and TLI, coefficients closer to unity indicate a good fit, with acceptable levels of fit being above 0.90 (Marsh, Balla & McDonald 1988). For root mean square residual (RMR) and root mean square error approximation (RMSEA), evidence of good fit is considered to be values less than 0.05; values from 0.05 to 0.10 are indicative of moderate fit and values greater than 0.10 are taken to be evidence of a poorly fitting model (Browne & Cudeck 1993).

5. Results

5.1 Measurement models

5.1.1 Independent variables

Self-management leadership was assessed using Manz and Sims's (1987) 22-item Self-Management Leadership Questionnaire (SMLQ). The theory posits six dimensions of self-leadership behaviour, namely, encouraging self-observation, encouraging self-goal setting, encouraging self-reinforcement, encouraging self-expectation, encouraging rehearsal and encouraging self-criticism). I conducted CFA of all SMLQ items in order to check for construct independence. Based on the results of a CFA supporting five first order factors, the SMLQ items were used to create five first order factors: encouraging self-observation/goal setting (α = 0.87), encouraging self-reinforcement (α = 0.86), encouraging self-expectation (α = 0.80), encouraging self-criticism (α = 0.79), and encouraging self-rehearsal (α = 0.78). (Note: five items were dropped due to cross loading.) The five first order factors were used to create the second order factor of self-management leadership (five first order factors, α = 0.95), which will be used in the path model analysis.

Transformational and *transactional* leadership was assessed using Bass's (1985) 73-item Multifactor Leadership Questionnaire (MLQ–5). The MLQ-5 questionnaire measures two second order leadership styles, namely, transformational leadership (which consists of the attributed charisma, individualised consideration, and intellectual stimulation), and transactional leadership (which consists of the contingent reward and management-by-exception). I conducted CFA of all MLQ items in order to check for construct independence. Based on the results of a CFA supporting five first order factors, the MLQ items were used to create five first order factors: attributed charisma (α = 0.92); individualised consideration (α = 0.84); intellectual stimulation (α = 0.80); contingent reward (α = 0.82); and management-by-exception (α = 0.73). (Note: twelve items of the MLQ were dropped due to cross loading and/or poor loading in the order of, or less than 0.10.) The five first order factors were used to create the second order factor of transformational leadership (three first order factors, α = 0.96), and transactional leadership (two first order factors, α = 0.86), which will be used in the path model analysis.

Consideration and Initiating structure leadership was assessed using Stogdill's (1963) Leader Behaviour Description Questionnaire (LBDQ). I conducted CFA of all LBDQ items in order to check for construct independence. Based on the results of CFA supporting two factors, the LBDQ items were used to create two first order factors: consideration (α = 0.88); and initiating structure (α = 0.70). Seven items were dropped due to cross loading.

Managerial power was assessed using the modified version of Hinkin and Schriesheim's (1989) 22-item power scales as adapted by Nesler et al. (1993). The power scales measure the French and Raven's (1959) power-based taxonomy of coercive, expert, legitimate, referent and reward power. I conducted CFA of all power items in order to check for construct independence. Based on the results of a CFA supporting five first order factors, these items were used to create five first order

factors: coercive power (α = 0.70); expert power (α = 0.79); legitimate power (α = 0.79); referent power (α = 0.81); and reward power (α = 0.76). The five first order factors were used to create the second order factor of managerial power (five first order factors, α = 0.83), which will be used in the path model analysis.

5.1.2 Dependent variables

The *perceptions of creativity in the workplace* are made up of eight subcategories, namely, organisational encouragement, supervisory encouragement, work group supports, freedom, sufficient resources, challenging work, workload pressure and organisational impediments. These were assessed using Amabile and colleagues' (1996) 66-item instrument (KEYS). I conducted CFA of all KEYS items in order to check for construct independence.

I first fitted an eight-factor model to the data, but the CFA results did not support Amabile and colleagues' eight factors. Then, a series of CFAs were performed by considering a hierarchy of competing models, from a simple null model of zero common factors through to one-, two-, three-, four-, five- and six-factor solutions. The CFA results of the competing models suggest that it is appropriate to create six separate factors. The values of GFI, AGFI, CFI and TLI satisfied the recommended value of 0.90 (GFI = 0.88, AGFI = 0.91, CFI = 89, TLI = 0.89), and the values of RMR, and RMSEA fell below the recommended value of 0.10 (RMR = 0.06, RMSEA = 0.08). Thus, the six factor solution was accepted with the first factors being the 'encouragement for creativity' (α = 0.89), which consists of the original factors of organisational encouragement, supervisory encouragement and work group supports. The other factors being the freedom (α = 0.67); sufficient resources (α = 0.76); challenging work (α = 0.82); workload pressure (α = 0.79); and organisational impediments (α = 0.71). (Note: twenty two items were dropped due to cross loading and/or poor loading; these being of the order of, or less than, 0.12.) From the six first order factors the second order factor of the 'stimulant' perceptions of creativity in the workplace (four first order factors, α = 0.81) and the 'obstacle' perceptions of creativity in the workplace (two first order factors, α = 0.68) were created, which will be used in the path model analysis.

In summary, the functional relationships among the variables tested in the present paper are shown in Figure 1.

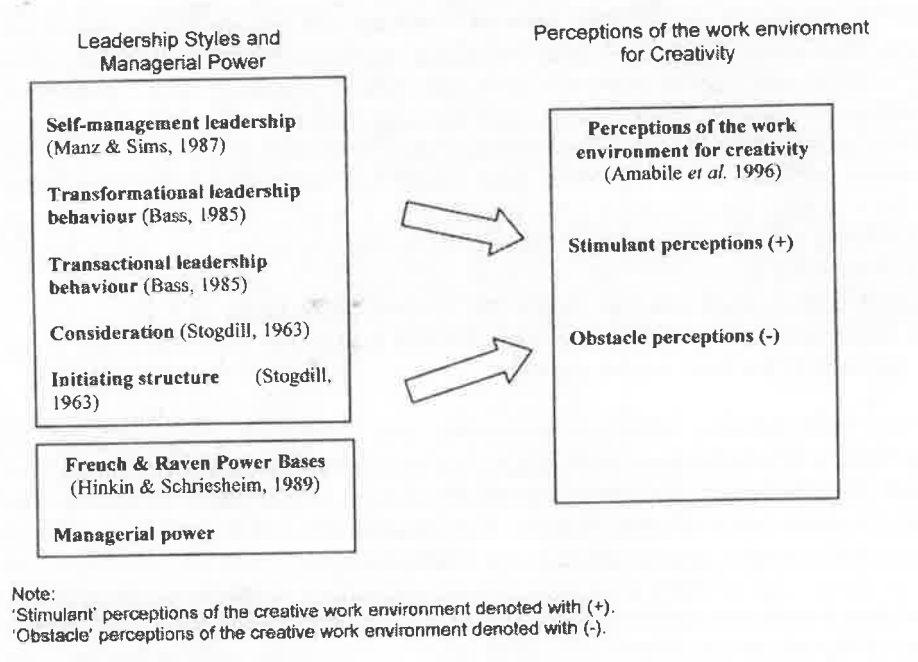

Figure 1: Summary of variables used in the paper

5.2 Path modelling

Using the analytical procedure outlined in Politis's (2005b) study, the computation of the parameters λ and θ was performed. These parameters are used in the path model. Table 1 contains the means, standard deviations, reliability estimates, the regression coefficient λ and measurement error θ estimates.

Once these parameters (regression coefficients (λs) which reflect the regression of each composite variable on its latent variable and the measurement error variances (θs) associated with each composite variable) are calculated, we build this information into the path model to examine the relationships among the latent variables.

Five of the seven hypotheses are supported by this data, for at least some dimensions of the perceptions of creativity in the workplace. As predicted, self-management leadership is strongly and positively related to the 'stimulant' perceptions of creativity in the workplace ($\gamma_1 = 0.25$, $p < 0.001$), whilst the relation with the 'obstacle' perceptions of creativity in the workplace is weaker ($\gamma_2 = 0.16$, $p < 0.05$), hence, supporting Hypothesis 1.

Hypothesis 2 was partially supported by the data of this study, in that transformational leadership is positively related to the 'stimulant' perceptions of creativity in the workplace ($\gamma_3 = 0.17$, $p < 0.05$). The results showed no significant path between transformational leadership and the 'obstacle' perceptions of creativity in the workplace. As predicted, transactional leadership had a positive effect on the 'obstacle' perceptions of creativity in the workplace ($\gamma_5 = 0.19$, $p < 0.05$), while the results showed a weaker positive effect on the 'stimulant' perceptions of creativity in the workplace ($\gamma_4 = 0.10$, $p < 0.10$), hence, supporting Hypothesis 3.

Table 1:Descriptive statistics, reliabilities, λ and θ estimates

Variable	Mean	SD (σ)	Reliability Estimate (α)	Loading	Error variance
				$\lambda = \sigma * \sqrt{\alpha}$	$\theta = \sigma^2 * 1 - \alpha$
Self-management leadership	4.75	1.16	0.95	1.13	0.067
Transformational leadership	2.36	1.02	0.96	1.00	0.042
Transactional leadership	2.35	0.83	0.86	0.77	0.096
Consideration	3.47	0.95	0.88	0.89	0.108
Initiating structure	3.31	0.73	0.70	0.61	0.160
Managerial power	5.84	1.15	0.83	1.05	0.225
Stimulant perceptions (+)	2.68	0.52	0.81	0.47	0.051
Obstacle perceptions (-)	2.73	0.54	0.68	0.45	0.093

The model of Figure 2 contains five leadership dimensions; the variable of managerial power; and the 'stimulant' and the 'obstacle' perceptions of creativity in the workplace.

The analysis revealed that the structural model of Figure 2 fits the data well, with $\chi^2/df = 2.02$; GFI = 0.89; AGFI = 0.90; CFI = 0.93; TLI = 0.88; RMR = .052; and RMSEA = 0.092. Figure 2 displays results of hypotheses testing using SEM. Standardised path estimates (γs) are provided to facilitate comparison of regression coefficients. It should be noted that only significant regression coefficients are reported.

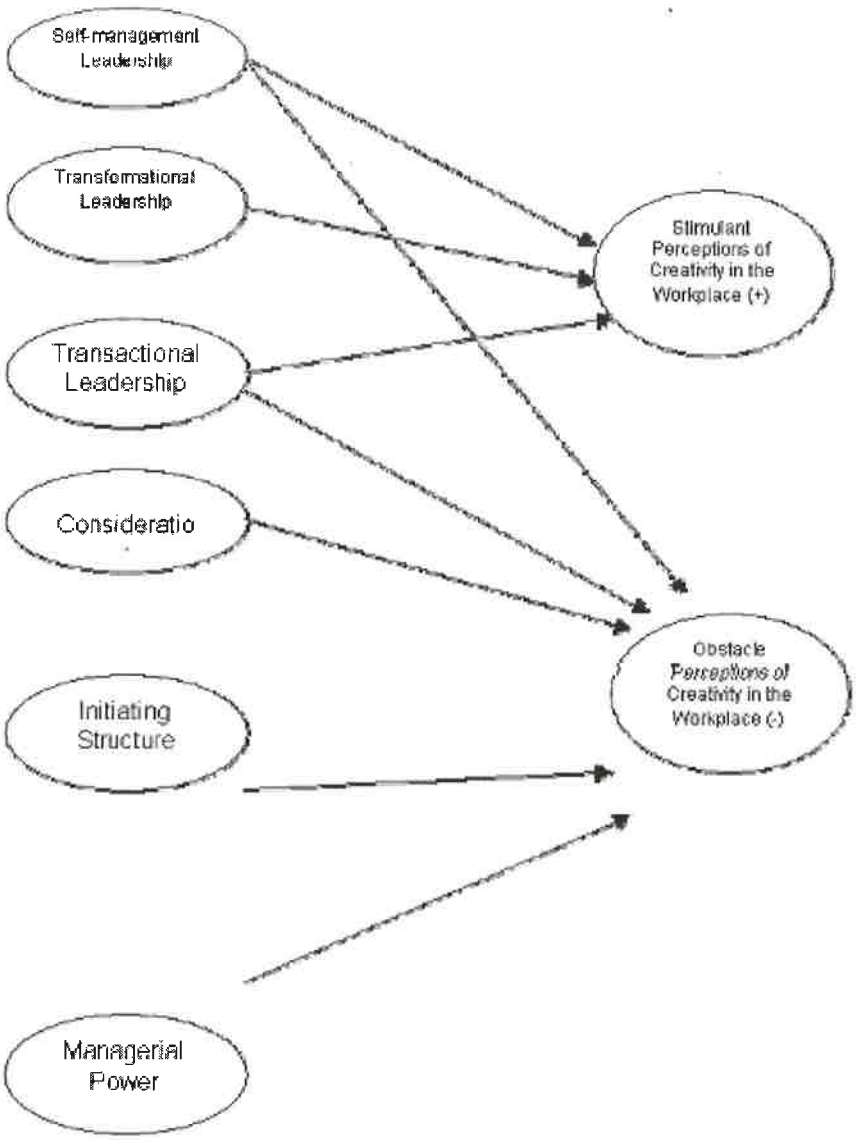

Figure 2: Structural estimates of hypothesised model[α]

Note: [α] Standardised path coefficient; N = 164.
[+] $p < 0.10$, $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. All correlations of exogenous variables were statistically significant at 0.05 level with the exception of managerial power.

Consideration leadership had a positive effect on 'obstacle' perceptions of creativity in the workplace ($\gamma_6 = 0.16$, $p < 0.05$), while the results showed no effect on the 'stimulant' perceptions of creativity in the workplace, providing no support for Hypothesis 4. Moreover, Hypothesis 5 was partially supported by the data of this study, in that initiating structure leadership had a statistically significant positive effect on the 'obstacle' perceptions of creativity in the workplace ($\gamma_7 = 0.26$, $p < 0.001$), while the results showed no significant path between initiating structure and the 'stimulant' perceptions of creativity in the workplace.

The factor of managerial power is positively related to the 'obstacle' perceptions of creativity in the workplace ($\gamma_8 = 0.14$, $p < 0.10$). Moreover, the results showed no significant path between managerial power and the 'stimulant' perceptions of creativity in the workplace; hence, not supporting Hypothesis 6. Alternative models were also examined with either paths added, reversed or removed, but all led to significantly worse model fit.

Finally, the statistical prediction of the 'stimulant' perceptions of creativity in the workplace was not increased with the addition of the managerial power factor in the set of predictor variables; hence, Hypothesis 7 was not supported by the data of this study.

6. Discussion

This study addresses (i) the impact of leadership styles and managerial power on perceptions of creativity in the workplace; and (ii) investigates the level of prediction on perceptions of creativity after having statistically controlled for the predictive effects of the leadership measures.

The key finding of this study is that self-management and transformational leadership are positively related to the 'stimulant' perceptions of creativity in the workplace. In other words, it is the participative, the self-management and the visionary leadership style that is capable of enhancing employees' autonomy and freedom and provide the necessary resources, goal clarity, intrinsic motivation and the organisational encouragement that are conducive to creativity in organisations. We choose to call this new breed of leadership, the '*creatologist*'. The creatologist (e.g. creativity-enabled leader) should be skilled enough to: understand the strategic relationship between creativity/innovation and the business processes and strategies; support and facilitate employees to acquire resources for creativity; provide creative freedom, enthusiasm and support; recognise new ideas and provide a sense of ownership of innovative ideas. These findings, along with those of other scholars (e.g. Amabile et al., 1996; Mumford et al. 2002; Politis, 2005b), suggest that the role of the creativity-enabled leader is especially important in creating the organisational culture, which reinforces reciprocally warm relationships and facilitates dialogue among employees, which in turn leads to a creative climate and innovativeness. Moreover, the creativity-enabled leader must encourage the creation of new ideas and integrate them with the needs of the organisation (Mumford, 2000).

On the other hand, the correlations between transactional and initiating structure leadership and the 'obstacle' perceptions of creativity in the workplace are stronger than those with the 'stimulant' perceptions of creativity. It is implied in these results that the leadership style that defines the organisational structure and guides followers in a direction of established goals enhances conservatism and formal management structures within organisations, which in turn reinforce power-based relationships and one-way monologue, thus blocking dialogue, freedom and learning, and hence decreasing creativity and innovation (Kimberley, 1981). It is possible that leaders with hierarchical attitude (e.g. transactional and initiating structure leaders) were perceived by the current sample as a means of external control, resulting in decreasing the employees' intrinsic motivation necessary for creativity (Amabile, 1988). Besides, the study has clarified which of the leadership styles best predict perceptions of creativity in the workplace.

Finally, it was found that the factor of managerial power was positively related with the 'obstacle' perceptions of creativity in the workplace. Moreover, it was found that the factor of managerial power does not improve perceptions of creativity in the workplace after having statistically controlled for the predictive effects of the leadership dimensions. It is implied in these findings that leaders with traditional vertical thinking using managerial power as a means to justify the ends, may not be constructive in creating the organisational context and culture that is conducive to creativity. More specifically, managerial power results in actions (e.g. employee punishment) that restrict employees' freedom and autonomy in pursuing innovative ideas. This finding, along with those of other scholars (e.g. Barnowe, 1975), suggest that overly close supervision, and, thus, presumably highly detailed work plans, which may be resulted from managerial power, will inhibit the performance of creative employees.

6.1 Limitations and directions for future research

Several limitations of the current study are worth noting. First, although Roberts and Glick (1981) argued that the issue of common methods variance (CMV) is not new and has not slowed research efforts utilising monomethod designs, the cross-sectional nature of the present study renders it vulnerable to problems typically associated with CMV and attributional processes. Thus, future researchers should measure leadership, managerial power and perceptions of creativity using longitudinal data, and/or data from multiple sources.

The second limitation involves implications regarding the causal relationship between leadership, managerial power and the perceptions of creativity in the workplace. Given the cross-sectional nature of the study, causality cannot be tested directly, although the hypotheses imply causation. Granted that theoretical rationale for the proposed relationships was provided and the results indicate that the proposed model is a plausible representation of the relationship between the constructs, future research should examine the causal relationship between the constructs of interest by using experimental or longitudinal methodologies. Other limitations include the use of a relatively undeveloped instrument measuring the perceptions of creativity in the workplace (note: twenty one items were dropped from the measurement model due to cross or poor loading), inability to establish causality, and the relatively small sample size.

References

Amabile, T. M. (1995) *KEYS User's Manual: Assessing the climate for creativity*, Centre for Creative Leadership, P.O. Box 16300, Greensboro, North Carolina, 27438-6300, USA.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J. & Herron, M. (1996) "Assessing the work environment for creativity", *Academy of Management Journal,* Vol 39, pp.1154 - 84.

Amabile, T. M. (1988) "A model of creativity and innovation in organisations", in B. M. Staw and L. L. Cummings (Eds), *Research in Organisational Behaviour,* 10 CT: JAI Press, Greenwich, pp123-67.

Amabile, T. M. & Gitomer, J. (1984) "Children's artistic creativity: Effects of choice in task materials", *Personality and Social Psychology Bulletin,* Vol 10, pp209-15.

Arbuckle, J. L. (2003) *Analysis of Moment Structures (AMOS), User's Guide Version 5.0,* SmallWaters Corporation, Chicago, IL.

Barnowe, J. T. (1975) "Leadership and performance outcomes in research organisations", *Organisational Behaviour and Human Performance,* Vol 14, pp264-80.

Bass, B. M. (1985) *Leadership and performance beyond expectations,* Free Press, NY.

Bass, B. M. (1990) Bass & Stogdills Handbook of Leadership. Theory, research and managerial application, 3rd Ed., New York: Free Press.

Browne, M. W. & Cudeck. R. (1993) "Alternative ways of assessing model fit", in K. A. Bollen & J. S. Long (Eds), *Testing Structural Equations Models,* Sage, Newbury Park, California, pp136-162.

Cappelli, P. & Singh, H. (1992) "Integrating strategic human resources and strategic management", in D. Lewin, O. S. Mitchell & P. Sherer (Eds.), *Research Frontiers in Industrial Relations and Human Resources,* Industrial Relations Research Association, Madison, WI, pp165-92.

Ford, C. M. (1996) "A theory of individual creative action in multiple social domains", *Academy of Management Review,* Vol 21, pp1112-42.

French, J. R. P. & Raven, B. H. (1959) "The basis of social power", in D. Cartwright (Eds.), *Studies in Social Power,* Ann Arbor: University of Michigan, Institute for Social Research, pp150-67.

Hair, J. F., Anderson, R. E., Tathan, R. L. & Black, W. C. (1995) *Multivariate data analysis with readings,* 4th Ed., Prentice Hall, Englewood Cliffs, New Jersey.

Hinkin, T. R. & Schriesheim, C. A. (1989) "Development and application of new scales to measure the French and Raven (1959) bases of social power", *Journal of Applied Psychology,* Vol 78, pp561-67.

Hunt, J. W. (1986) *Managing people at Work,* 2nd Ed., McGraw-Hill, London, UK.

Jung, D. I. (2001) "Transformational and transactional leadership and their effects on creativity in groups", *Creativity Research Journal,* Vol 13, pp185-97.

Kanter, R. M. (1983) *The change masters,* Simon and Schuster, New York.

Kay, J. (1993) *Foundations of corporate success,* Oxford University Press, New York.

Kimberley, J. R. (1981) Managerial innovation. In P. C. Nystrom & W. H. Starbuck (Eds.), *Handbook of Organisational Design,* Oxford University Press, New York, pp84-104.

Loehlin, J. (1992) *Latent variables models,* Erlbaum, Hillside, N.J.

Manz, C. C. (1986) "Self-leadership: Toward an expanded theory of self-influence processes in organisations", *Academy of Management Review*, Vol 11, pp585–600.

Manz, C. C. and Sims, H. P. Jr. (1987), "Leading workers to lead themselves. The external leadership of self-managing work teams", *Administrative Science Quarterly*, Vol 32, pp106–29.

Marsh, H. W., Balla, J. R. & McDonald, R. P. (1988) "Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size", *Psychological Bulletin,* Vol 103, No.3, pp391-410.

Monge, P. R., Cozzens, M. D. & Contractor, N. S. (1992) "Communication and motivational predictors of the dynamics of organisational innovation", *Organisational Science,* Vol 3, pp250-74.

Mumford, M. D. (2000) "Managing creative people: Strategies and tactics for innovation", *Human Resource Management Review,* Vol 10, pp1-29

Mumford, M. D., Scott, G. M., Gaddis, B. & Strange, J. M. (2002) "Leading creative people: Orchestrating expertise and relationships", *The Leadership Quarterly,* Vol 13, pp705-50.

Nesler, M. S., Aguinis, H., Quigley, B. M. & Tedeschi, J. T. (1993) "The effect of credibility on perceived power", *Journal of Applied Social Psychology,* Vol 23, pp1407-25.

Politis, J. D. (2005a) "The impact of transformational and transactional leadership on organisational bureaucracy", in the proceedings of the *European Conference on IS Management, Leadership and Governance,* Blackhorse House, University of Reading, UK, 7-8 July, pp115-24.

Politis, J. D. (2005b) "Dispersed leadership predictor of the work environment for creativity and productivity", *European Journal of Innovation Management,* Vol 8, No.2, pp182-204.

Politis, J. D. (2005c) "The influence of managerial power and credibility on knowledge acquisition attributes", *The Leadership & Organisational Development Journal,* Vol 26, No. 3-4, pp197-214.

Politis, J. D. (2004) "Transformational and transactional leadership predictors of the 'stimulant' perceptions to creativity in organisational work environments", *Electronic Journal of Knowledge Management,* Vol 2, Issue 2, Paper 3, pp23-8. http://ejkm.com/volume-2/v2i2/v2-i2-art3-abstract.htm.

Reddin, W. J., (1970) *Managerial effectiveness*, New York: McGraw-Hill.

Roberts, K.H. & Glick, W. (1981), "The job characteristics approach to task design: A critical review", *Journal of Applied Psychology*, Vol 66, pp193–217.

Smith, G. P. (1999) *The new leader: Bringing creativity and innovation to the workplace*, Saint Lucie Press, ISBN: 1574440349.

Sommer, S., Bae, S-H. & Luthans, F. (1995) "The structure-climate relationship in Korean Organisations", *Asia Pacific Journal of Management*, Vol 12, No.2, pp23-36.

Stogdill, R. M. (1963) Manual for the Leader Behaviour Description Questionnaire – Form XII. Columbus: Bureau of Business Research, Ohio State University.

Tanaka, J. S. (1987) "How big is enough? Sample size and goodness-of fit in structural equations model with latent variables", *Child Development,* Vol 58, pp134-46.

Tucker, L. R. & Lewis, C. (1973) "The reliability coefficient for maximum likelihood factor analysis", *Psychometrika*, Vol 38, pp1-10.

Weese, W. J. (1996) "Do leadership and organizational culture really matter"? *Journal of Sport Management,* Vol 10, No.2, pp197-206.

Woodman, R. W., Sawyer, J. E. & Griffin, R. W. (1993) "Towards a theory of organisational creativity", *Academy of Management Review,* Vol 18, pp293-321.