

Transformational Leadership and Organisational Performance in the Public Healthcare Sector: The Role of Organisational Learning and Intellectual Capital



HADI ABDUL-WAHAB AL-ABRROW*

ABSTRACT

This study aims to investigate the influence of transformational leadership style (TL) on organisational performance (OP) depending on both the organisational learning (OL) and intellectual capital (IC) in the public healthcare sector in the United Arab Emirates (UAE). To accomplish this, a questionnaire survey was used to gather individual-level quantitative data from 189 employees within 10 hospitals located in the United Arab Emirates. The survey data were analysed with the use of structural equation modelling to test for relationships among the main constructs of the conceptual framework of the study, and results demonstrated that transformational leadership has a significant positive effect on organisational performance, and this relationship was moderated by both organisational learning and intellectual capital. Furthermore, the study demonstrated a significant positive relationship among organisational learning, intellectual capital and organisational performance.

Key Words: Transformational leadership; organisational performance; organisational learning; intellectual capital.

INTRODUCTION

Transformational leadership (TL) can be defined as 'the style of leadership that heightens consciousness by the organisation's members of a collective interest and helps them to achieve it' (García-Morales et al., 2008:189). Transformational leadership (TL) has been hailed as highly effective, producing positive effects for individuals, groups and organisational

* Business Administration Department, College of Economic and Administration, University of Basrah

performance (Bass and Avolio, 1994; Bass and Riggio, 2006). This is because TL focuses on both technological and human relations aspects of organisations (Appelbaum et al., 1998), on support and development of individual considerations (Arnold and Loughlin, 2010), and on openness to new ideas (Judge and Bono, 2000; Nana et al., 2010), which will have a positive influence on a successful organisational change programme. Transformational leadership, therefore, motivates both individuals and organisations to be aware of how they are being influenced and in what directions they are being asked to go (Northouse, 2007). The positive effect of transformational leadership on organisational performance (OP) depends on organisational learning (Coad and Berry, 1998; Joo and Park, 2010). Therefore, organisations that are quick to learn and apply organisational learning (OL) more efficiently have the opportunity to gain great rewards in productivity, speed and profitability (Wellman, 2009). Intellectual capital (IC) is also becoming a valuable asset, and it can be shaped as an essential source of competitive advantage (Roos and Roos, 1998; Bontis, 1998). Therefore, management firms should exploit and manage their IC resources in order to maximise their value creation (Peng, 2011).

Alimo-Metcalfe et al. (2008) argue that the biggest question for healthcare organisations, whether public or private, is 'How can organisations increase their individual performance while maintaining their wellbeing and motivation?' A few empirical studies of healthcare organisations in developing countries have discussed the effect of transformational leadership on the organisational performance based on both organisational learning and intellectual capital (Peng et al., 2007; Duggirala et al., 2008; Tuan, 2012). The main question of this study, therefore, is: 'Does transformational leadership style have a significant positive effect on hospital performance based on both organisational learning and intellectual capital in developing countries, namely in the United Arab Emirates (UAE) context?' Because regulatory changes have long been a dominant force in the healthcare sector, the performance indicators adopted by hospitals are varying not only between organisations in the same industry but also in different national contexts. In the UAE, the healthcare sector is the third largest healthcare market in the Middle East and North Africa region. The majority (67 per cent) of the healthcare spending in the UAE is undertaken by the government through the Ministry of Health (Al Masah Capital Management Limited, 2011). By conducting research in the UAE, the purpose of this paper is to investigate the effect of the TL style on OP, based on OL and IC in the healthcare organisations in developing countries, namely in the United Arab Emirates (UAE).

Building on the introduction, which has provided a brief account of research, the remainder of the paper is organised as follows: first, the relevant literature review is discussed and research hypotheses are developed. Second, the research methodology is described. Next, the findings which report on the concept and the hypothesised associations are presented. Finally, the conclusions drawn from the evidence are discussed and directions for future research are identified.

LITERATURE REVIEW

Transformational Leadership

The shift of organisations toward transformational leadership from transactional leadership theory reflected an interest in the perceptions and psychological needs of followers (Chong and Wolf, 2010; McMurray et al., 2010). Transformational leaders gained popularity largely because of their proactive and charismatic qualities (Pounder, 2003; Antonakis et al., 2003), which makes the follower aware of transcendent collective interests, and helps them to achieve extraordinary goals (Antonakis et al., 2003). In addition, TL has the ability to deal constructively with political conflict within an organisation (Fernando et al., 2009).

The TL style is a way not only to identify the needs of the followers, but also to elevate those needs to a higher level of motivation and maturity (Burns, 1978). It is effective in achieving higher levels of progress among subordinates (Bass, 1985). The power of TL comes from two points: focusing on employees as valuable resources (and the organisation's willingness to take responsibility to encourage and promote them) (García-Morales et al., 2008), and the charisma of the leader (Bass, 1985; Antonakis et al., 2003; Ilies et al., 2006; Northouse, 2007). Charisma can be defined as 'a special gift that certain individuals possess that gives them the capacity to do extraordinary things' (Northouse, 2007: 177). A charismatic leader assumes envisioning empathy and empowerment which represent the key components of the TL style which will positively influence his/her followers' need for achievement (Choi, 2006). Ilies et al. (2006: 12) explain the effect of a charismatic leader on his/her followers by saying that 'A charismatic leader will exert authority by appealing to the follower's ideals and values and, to the extent that the goals presented by the leader are in alignment with those values, the externally-set, externally motivating goal would become internalised.'

The transformational leader uses four essential components which influence follower values and aspirations which in turn positively affect their ability to achieve the organisation's goals (Bass, 1985; Northouse, 2007):

- An idealised influence indicated by the charisma of the leader (leaders have a strong influence, including sufficient moral and ethical capabilities, which make them highly respected by their followers)
- Inspirational motivation (by which the leader emphasises motivation and commitment among the followers by using symbols and emotional appeals to focus all followers' efforts to achieve a high level of performance)
- Intellectual stimulation (by which leaders increase followers' awareness of problems and encourage followers to view old and familiar issues from new perspectives)
- Individualised consideration (leaders have to be good supporters of and good listeners to the individual needs of their followers)

Organisational Learning

Organisational learning (OL) is widely discussed in different fields from military readiness (Ron et al., 2006) and information systems (Shepherd et al., 2006) to the education sector (Johnston and Caldwell, 2001), children's services (Orthner et al., 2006) and the United States Geological Survey (Atwood et al., 2010). However, there is little clarity and no agreement about the meaning of OL. Ron et al. (2006) argue that OL is a multi-layered process of retrospective sense-making, detection and correction of error, social comparison, social control, socialisation and bonding. This process should cover individuals, groups and the whole organisation. OL includes learning a new organisational vision, goals, organisational culture, design and technology (Arnold and Loughlin, 2010). Orthner et al. (2006) state that OL is related to the opportunity that is given to people to share data and knowledge from their practical experience with others in their organisation, as well as with persons who may be part of other organisations. OL passes through four stages: knowledge acquisition (internal and external knowledge), distribution, interpretation and organisational memory (Perez Lopez et al., 2005). Organisational learning, therefore, covers two perspectives: behavioural by way of modifying behavioural patterns to respond to some immediate situation or experience, and cognitive by helping people to learn by imitating and observing others (Yeo, 2003).

The relationship between organisational learning and a learning organisation is one of integration and coexistence. To be effective as a learning organisation there is a need for a deep learning cycle and recognition that it will take time (Gorelick, 2005). Thus, learning orientation is characterised by transfer of learning from individuals to groups, commitment to learning, openness to the outside world, overall commitment to knowledge, systems for developing learning processes, and mechanisms for renewing the organisation (Mavondo et al., 2005).

Organisational learning may occur at three levels: individual, group and organisational. At the individual level, the intuiting process takes place. At the group level, the interpreting and integrating processes are developed. Finally, the institutionalising process is the last stage in the organisational learning process (Ordonez de Pablos, 2004). Many authors have also discussed single- and double-loop learning. Single-loop learning is appropriate for an incremental change strategy and for transactional organisations, while double-loop is appropriate for a new and radical change strategy and for organisations that have exhibited a relationship with market style (Chaston et al., 2000; Ordonez de Pablos, 2004; Firestone and McElroy, 2004). Accordingly, single-loop learning is the most general model of action, while a double-loop model is proposed as providing feedback and more effective decision making (Argyris, 1976).

Intellectual Capital

The concept of intellectual capital (IC) is essential for public as well as private organisations in improving their effectiveness and efficiency (Bontis, 2004). Intellectual competency is more than skill alone (Kanungo and Misra, 1992; Lloyd and Hartel, 2010). Kanungo and

Misra (1992) identified six key differences between competencies and skills. These distinctions suggest that competencies that are more generic can be applied to a range of tasks or situations, while skills that are more specialised can be applied to specific tasks or situations. Lloyd and Hartel (2010), on the other hand, define intercultural competencies as a set of skills, knowledge and attitudes that are used when interacting with culturally diverse team members. Three essential components which are interrelated to each other are represented as the main concepts of intellectual capital:

1. Human capital represents the competencies, skills, capabilities, commitment, know-how, tacit experiences and overall knowledge-base of individuals in an organisation (Bontis and Serenko, 2009; Bontis, 1998; Birasnav et al., 2011). Human capital is important for an organisation because it is a source of innovation and strategic renewal (Bontis, 1998), which includes competence (i.e. skills and education), attitude (i.e. the behavioural components of employees' work), and intellectual agility (i.e. the innovation ability of employees) (Marr et al., 2004).
2. Structural capital focuses on the mechanisms and structures of the organisation that can help support employees to deploy their maximum intellectual performance, which, in turn, positively reflects on the overall business performance (Bontis, 1998).
3. Customer capital focuses on knowledge of marketing channels and customer relationships. This is the main theme of customer capital (Bontis, 1998).

Organisational Performance

Measuring healthcare performance has become an essential but challenging task for private and public hospitals (Peng et al., 2007; Rivers and Glover, 2008). However, despite systematic attention being paid to the issue, progress in healthcare organisations is still slow and mistakes continue to occur compared with other industrial or service organisations, even in high-quality healthcare systems such as those in the UK (Storey and Buchanan, 2008). Therefore, managers in healthcare organisations should give priority to critical resources and performance measurements in practice (Peng et al., 2007) by assessing how patients feel about the quality and cost of care they receive in a healthcare organisation, which, in turn, positively reflects on patient satisfaction. Measuring satisfaction also serves as an important tool for quality audit and improvement in all types of healthcare organisations (Rivers and Glover, 2008). Typically, organisational performance can be measured financially and non-financially. In the current study, non-financial performance measures were used because within public healthcare sector organisations financial performance is not appropriate as the sole measure of performance outcomes (Leggat et al., 2011). Furthermore, non-financial performance measures such as customer satisfaction have more of a strategic vision (Kanji, 2002; Kantabutra and Avery, 2005). They have flexibility and the ability to take into account soft aspects related to empowerment, trust, continuous improvement, commitment and job satisfaction (Saad and Patel, 2006).

HYPOTHESIS DEVELOPMENT

The Relationship between Transformational Leadership and Organisational Performance

Extant research has examined the relationship between transformational leadership and organisational performance (Bass et al., 2003; De Groot et al., 2000; Judge and Piccolo, 2004; Burke et al., 2006; Wang et al., 2011). These positive and integrated results hold for different organisational levels and criteria, e.g. group performance (Sosik and Megerian, 1999; Dvir et al., 2004; Dionne et al., 2004), follower behaviour and motivation (Boerner et al., 2007; Barbuto Jr, 2005), empowerment (Ozaralli, 2003; Krishnan, 2005), commitment (Arnold et al., 2001) and innovation (García-Morales et al., 2008; Michaelis et al., 2010).

TL has a positive effect on internal people (employees) by enhancing organisational citizenship behaviour (Boerner et al., 2007), empowering the employees and helping them to have more trust in the leader, which, in turn, positively affects both their satisfaction and their performance (Bartram and Casimir, 2007). The effective leader must be caring towards the internal people; reducing fear and increasing trust will positively affect organisational performance (Bhatnagar et al., 2010). As well as this, TL has a positive effect on followers' self-efficacy beliefs (Pillai and Williams, 2004; Jung and Sosik, 2002), shared vision, team commitment (Dionne et al., 2004), organisational culture (Xenikou and Simosi, 2006), organisational polices (Vigoda-Gadot, 2007) and emotional intelligence (Lindebaum and Cartwright, 2011), which, in turn, have a positive effect on organisational performance. The ability of an organisation to enhance its performance will depend on the preparation of a suitable climate. This climate is fostered by the existence of TL, which enables the articulation of leadership as a process fully integrated into the organisation (García-Morales et al., 2008). Based on the above discussion, the current study will propose that idealised influence (charisma), inspirational motivation, intellectual stimulation and individualised consideration, which represent the main characteristics of TL, will have a positive effect on organisational performance:

H₁: Transformational leadership will have a positive effect on organisational performance.

The Relationship between Transformational Leadership and Organisational Performance Based on the Organisational Learning Level

The relationship between transformational leadership and organisational learning is integrated (Cooksey, 2003; Trautmann et al., 2007; Atwood et al., 2010). TL is considered a source of evolution and diffusion of organisational learning by integrating the capacities of leaders and followers, a multiplicity of world views and numerous potential interpretations of systematic and contextual feedback which can be exploited for future learning (Cooksey, 2003). Furthermore, TL is valuable to learning based on its ability to offer specific strategies that are necessary to promote and sustain the learning process, which, in turn, will enable the organisation to create an environment of learning, adapting and long-term change (Berson and Avolio, 2004; Trautmann et al., 2007; Atwood et al., 2010). TL also has a vision which is associated with organisational culture, thereby improving innovation (Sarros et al., 2011; Bartram and Casimir, 2007) and improving emotional intelligence

by establishing quality relationships which will positively impact turnover intentions and job satisfaction (Jordan and Troth, 2011). A transformative leader plays a key role as a catalyst, mentor, facilitator and trainer in learning capability (García-Morales et al., 2006), which has a positive influence on followers' performance (Bartram and Casimir, 2007). Organisational learning also has a positive impact on organisational performance by increasing the employees' individual competencies, skills and knowledge, which are necessary both for their job requirements and for the goals and mission of the organisation (Yeo, 2003). Furthermore, successful organisational learning implementation will depend on how to link learning practices with continuous performance improvement (Song et al., 2009).

Thus, the integrated relationship between TL and OL will motivate employees by facilitating their work through the learning process and essential components of OL, namely continuous learning, inquiry and dialogue, team learning and an embedded system which will, in turn, positively affect their satisfaction with the leader and performance.

Based on the above discussion, the following hypotheses are proposed:

H₂: The effect of transformational leadership on organisational performance will be mediated by organisational learning.

H₃: Organisational learning has a positive effect on organisational performance.

The Relationship between Transformational Leadership and Organisational Performance Based on Intellectual Capital

Organisations with a high level of intellectual capital will also have a high level of performance (Bontis, 1998). The reason is that intellectual capital is a strategic performance measure which contributes to organisational performance where achieving and sustaining competitive advantage is viable (Bontis, 2001). Leadership style is the foremost antecedent construct in intellectual capital, especially human capital, by direct path to both the retention of key people and value alignment, and the reduction of human capital duplication via knowledge sharing (Bontis and Fitz-enz, 2002). Therefore, TL requires much effort in finding possible ways to increase the contribution of the human capital pool in improving organisational financial performance (Birasnav et al., 2011) by focusing on an individual employee's ability, innovative behaviour, salary progression and status (Rafferty and Griffin, 2004; Wayne et al., 1999). Furthermore, organisations should train their managers toward adopting a TL style to motivate them to focus on the human capital and other capital development processes, and augment their potential to direct this capital development to achieve or sustain competitive advantage (Birasnav et al., 2011). The current study also assumes that the three types of intellectual capital (human, structural and customer (relational) capital) are interdependent and should be integrated into organisational knowledge strategy, which, in turn, will have a positive influence on organisational performance (Bontis and Fitz-enz, 2002; Chen et al., 2004; Ordóñez de Pablo, 2003; Marr et al., 2004). Thus, employees who are highly competent (human capital) will be able to understand the customers' needs, and they will develop customer capital to keep their loyalty, and both

human and customer capital will affect structural capital, which, in turn, has a positive effect on business performance (Bontis et al., 2000).

Based on the above discussion, the following hypotheses are proposed:

H₄: The effect of transformational leadership on organisational performance will be mediated by intellectual capital.

H₅: Intellectual capital has a positive effect on organisational performance.

The Relationship between OL and IC

The two concepts, OL and IC, are integrated, where IC is considered as a stock unit of OL flows (Bontis, 1998), and OL is implicit in all three types of IC (human, structural and customer capital) (Chen et al., 2004). IC, especially human capital, is positively influenced by the educational level of staff members and their overall satisfaction (Bontis and Fitz-enz, 2002). Organisations, therefore, must take into consideration the importance of sharing the human capital of staff members through organisational learning (Bontis, 1998; Chen et al., 2004). When organisations succeed in developing and diffusing their organisational learning they will create a form of intellectual capital that is difficult for other competitors to imitate (Lennon and Wollin, 2001).

Based on the above discussion, the following hypothesis is proposed:

H₆: Organisational learning has a positive effect on intellectual capital.

METHODOLOGY

Research Setting

Standards of health care are considered to be generally high in the UAE, resulting from increased government spending during strong economic years. The UAE now has forty public hospitals, compared with only seven in 1970. The Ministry of Health is undertaking a multimillion-dollar programme to expand health facilities and hospitals, medical centres and a trauma centre in the seven emirates (Library of Congress, 2007). The UAE government spent an estimated \$8 billion in 2010 and 24 per cent of the 2011 federal budget on social and healthcare development. Total healthcare spending is projected to nearly double by 2014, raising the sector's contribution from 2.8 per cent of GDP to 3.4 per cent of GDP respectively (Deloitte, 2011). Thus, the UAE is now ranked forty-third out of 174 industrial and developing countries in the latest UN Human Development Report (Ontario Ministry of International Trade and Investment, Representative Office for the Gulf Cooperation Council Region, 2009).

The public healthcare sector in the UAE was selected as the research setting for this study as the healthcare sector has long been characterised as a highly knowledge-intensive sector (Peng et al., 2007). Furthermore, the public healthcare sector in the United Arab Emirates is considered one of the best in the Arab Gulf region.

Sample

In order to accomplish the objective of the current study, the sample was drawn from staff members at public hospitals in the UAE. 240 questionnaires were sent by email to staff members who were working in the healthcare sector. A total of 197 completed questionnaires were received. Due to the inadequacy of the answering pattern and insincere manner of responses, eight were eliminated from the final pool of questionnaires, resulting in 189 questionnaires that were deemed valid for hypotheses testing.

Many researchers have shown that with a good model and multivariate normal data a reasonable sample size is $n \geq 100$ cases (Firth et al., 2004; Barnes et al., 2011), although there are examples in the literature that use smaller samples. For example, MacCallum and Austin (2000) found that about 18 per cent of the studies that have been published in psychological research journals in recent years used structural equation modeling (SEM) with samples of fewer than 100 individuals. Shook et al. (2004) found that many extant studies have obtained significant results despite insufficient sample sizes by using SEM model. More generally, Loehlin (1992) reports the results of Monte Carlo simulation studies using confirmatory factor analysis models. After reviewing the literature, he concludes that for this class of model with two to four factors, the investigator should plan on collecting at least 100 cases, with 200 being better (if possible), especially when data are normally distributed. In order to assess the assumed normality a one-sample Kolmogorov-Smirnov test was performed; the results from the K-S test report a non-significant result ($p > 0.05$), indicating normality (Pallant, 2005). The results from this test can be found in Table 1.

Table 1: Results from the One Sample Kolmogorov-Smirnov Test

| | Transformational Leadership (TL) | Organisational Learning (OL) | Intellectual Capital (IC) | Organisational Performance (OP) |
|------------------------|----------------------------------|------------------------------|---------------------------|---------------------------------|
| N | 189 | 189 | 189 | 189 |
| Kolmogorov-Smirnov Z | 0.584 | 0.882 | 0.725 | 0.783 |
| Asymp. Sig. (2-tailed) | 0.671 | 0.885 | 0.586 | 0.487 |

A chi-square test is the most common fit measure, especially with moderate samples (e.g. 100 to 200; Tabachnick and Fidell, 1996). This was also used to evaluate how well the structural model fits the data. The hypothesised model showed an acceptable fit of data based on the fit indices ($\chi^2 = 28.8723$, $df = 27$ ($p > 0.05$)), root mean square error of approximation (RMSEA) = 0.032, goodness-of-fit index (GFI) = 0.092, the normed fit index (NFI) = 0.085, and comparative fit index (CFI) = 0.091.

Measurements

Transformational Leadership

A multifactor leadership questionnaire (MLQ) is the most widely used method to measure the transformational leadership style in the organisational sciences field (Tejeda et al., 2001). Three items for each of the four aspects – idealised influence, inspirational motivation, intellectual stimulation and individualised consideration – were used to measure TL (Bass and Avilio, 2000). On a five-point Likert scale ranging from 1 (not at all) to 5 (frequently, if not always), respondents were asked to reflect on their perception of the influence of TL on organisational performance in their hospital.

Organisational Learning

Studies by Song et al. (2009), Alegre and Chiva (2008) and Basim et al. (2007), were used in developing the organisational learning variables that consist of four dimensions which represent the main dimensions of organisational learning in this research. These dimensions are: continuous learning, inquiry and dialogue, team learning, and embedded system. Two items were selected for each dimension based on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Intellectual Capital

Human, structural and customer capital were used as dimensions of intellectual capital based on the studies by Bontis (1998), Chen et al. (2004) and Peng et al. (2007). Each dimension of intellectual capital was measured by three items based on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Performance Measure

The organisational performance in the healthcare sector was measured by two dimensions: patients' focus and employees' focus. The items were adopted from studies in the healthcare sector, namely those of Anantharaman (2008) and Peng et al. (2007). These items were measured on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

DATA ANALYSIS

Measurements Model (Reliability and Validity)

The internal consistency (Cronbach's alpha) and composite reliability (Fornell and Larcker, 1981; Raykov, 2004) were used to measure the reliability of each measure. Composite reliability can overcome the limitations of Cronbach's alpha by offering a better estimate of variance shared by the respective indicators (Raykov, 2004). The average variance extracted (AVE), on the other hand, was used to assess the convergent validity of each scale (Fornell and Larcker, 1981). As can be seen from Table 2, the Cronbach's alpha and composite reliability values of all four scales were greater than 0.70, which indicate they were reliable (García-Morales et al., 2008). The AVE values for the four scales were above 0.50, which give an indication of convergent validity of all scales (Fornell and Larcker, 1981; García-Morales et al., 2008). The AVE can be used to assess discriminant validity by assessing the

AVE for each construct variable that should be greater than the square correlation within all other construct variables (Fornell and Larcker, 1981).

Table 2: Cronbach's Alpha and Composite Reliability Values of Scales

| Scale | Cronbach's Alpha | Composite Reliability | Average Variance Extracted (AVE) |
|-----------------------------|------------------|-----------------------|----------------------------------|
| Transformational Leadership | 0.83 | 0.87 | 0.78 |
| Organisational Learning | 0.77 | 0.81 | 0.67 |
| Intellectual Capital | 0.79 | 0.83 | 0.75 |
| Organisational Performance | 0.72 | 0.77 | 0.63 |

After examining the reliability and validity for each construct, a two-step model approach to structural equation modelling (SEM) was used. It involved evaluating the measurement models followed by evaluating the structure model. Confirmatory factor analysis (CFA) was used to evaluate OL, CI and OP, which represented the main components of the conceptual framework of this paper. AMOS 18 software was used to evaluate whether the hypothesised model fit the sample data and to compute parameter estimates (Chan et al., 2007). Chi square root (χ^2) means square error of approximation (RMSEA), goodness-of-fit index (GFI), the normed fit index (NFI) and comparative fit index (CFI) were used to evaluate the fit model. These measures were selected because they represent the most popular measures of fit for SEM analysis (Chan et al., 2007). Table 3 summarises the fit result for all four scales.

Confirmatory factor analysis of TL should be $\chi^2 = 21.09$, with a degree of freedom of 13 ($p > 0.05$). RMSEA = 0.06, GFI = 0.066, NFI = 0.069 and CFI = 0.067, all of which indicate an acceptable fit. Moreover, the confirmatory factor analysis demonstrates a reasonable fit of the data to the fifteen-factor measurement model of organisational learning on several criteria ($\chi^2 = 112$, $df = 24$ ($p > 0.05$)), RMSEA = 0.078, GFI = 0.084, NFI = 0.083 and CFI = 0.081), which indicates an acceptable fit model.

The structural equation model (SEM) of intellectual data should be $\chi^2 = 27$, $df = 17$ ($p > 0.05$), RMSEA = 0.072, GFI = 0.074, NFI = 0.075 and CFI = 0.077. The SEM model of the organisational performance data also showed $\chi^2 = 13$, $df = 7.6$ ($p > 0.05$), RMSEA = 0.062, GFI = 0.069, NFI = 0.070 and CFI = 0.073, which indicate that both the IC and OP models demonstrate a good fit to the data.

Table 3: Fit Indices for the Measurement Models

| Measures | χ^2 | Df | RMSEA | GFI | NFI | CFI |
|-----------------------------|----------|-----|-------|-------|-------|-------|
| Transformational Leadership | 21.09 | 13 | 0.06 | 0.066 | 0.069 | 0.067 |
| Organisational Learning | 112 | 24 | 0.078 | 0.084 | 0.083 | 0.081 |
| Intellectual Capital | 27 | 17 | 0.072 | 0.074 | 0.075 | 0.077 |
| Organisational Performance | 13 | 7.6 | 0.062 | 0.069 | 0.070 | 0.073 |

Descriptive Statistics and Correlations

Descriptive statistics and correlations are displayed in Table 4. Results indicate that all of the relationships among the main components of the conceptual framework are significant at the 0.01 level. The correlations among the study variables model range from 0.366 (intellectual capital and organisational learning) to 0.507 (organisational learning and organisational performance). Means and standard deviations are also shown in Table 4. Furthermore, these results provide an indication to support the discriminant validity of the scales. As can be seen in Table 4, the AVE for each construct variable is greater than the square correlation within all other construct variables. This gives an indication that each construct shares greater variance with its own block of measures than with other constructs representing a different block of measures (Fornell and Larcker, 1981).

Table 4: Means, Standard Deviations, and Intercorrelations among Variables

| Variables | M | SD | TL | OL | IC | OP |
|----------------------------------|-------|-------|--------|---------|--------|----|
| Transformational Leadership (TL) | 3.730 | 0.705 | | | | |
| Organisational Learning(OL) | 3.421 | 0.611 | 0.440* | | | |
| Intellectual Capital (IC) | 3.810 | 0.722 | 0.411* | 0.366* | | |
| Organisational Performance (OP) | 3.317 | 0.641 | 0.387* | 0.507** | 0.312* | |

* $p < 0.05$; ** $p < 0.01$

Test of the Hypotheses

In accordance with the path coefficients which are shown in Table 5 and Figure 1, all hypotheses were supported. A positive effect on the organisational performance by transformational leadership was supported (H_1) ($\beta = 0.57$, $p < 0.001$). Hypothesis 2, which proposed that the effect of transformational leadership on performance would be mediated by organisational learning, was supported ($\beta = 0.49$, $p < 0.001$). In the same way, all other hypotheses were supported: organisational learning has a positive effect on organisational performance (H_3) ($\beta = 0.39$, $p < 0.001$); transformational leadership has a positive effect on organisational performance when intellectual capital mediates between them (H_4) ($\beta = 0.28$, $p < 0.003$); intellectual capital has a positive effect on organisational performance (H_5) ($\beta = 0.36$, $p < 0.001$); and organisational learning has a positive effect on intellectual capital (H_6) ($\beta = 0.27$, $p < 0.004$).

Table 5: Estimation Results of the Conceptual Model

| Path | Hypotheses | Estimate | P Value | Results |
|---------|------------|----------|---------|-----------|
| TL → OP | H_1 | 0.57 | *** | Supported |
| TL → OL | H_2 | 0.49 | *** | Supported |
| OL → OP | H_3 | 0.39 | *** | Supported |

(Continued)

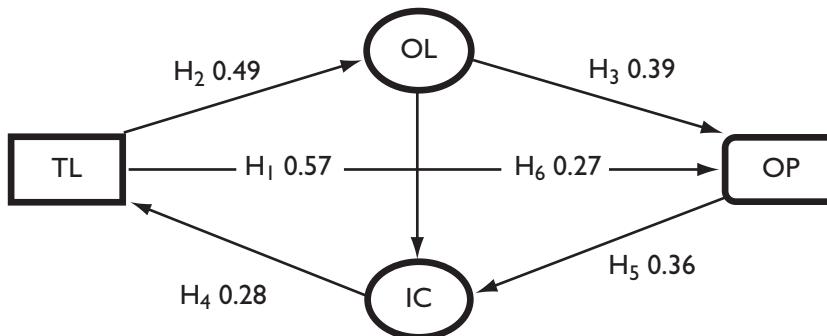
Table 5: (Continued)

| Path | Hypotheses | Estimate | P Value | Results |
|---------|----------------|----------|---------|-----------|
| TL → IC | H ₄ | 0.28 | ** | Supported |
| IC → OP | H ₅ | 0.36 | *** | Supported |
| OL → IC | H ₆ | 0.27 | ** | Supported |

*** Regression is significant at 0.001 level (pb. 0.001)

** Regression is significant at 0.01 level (pb. 0.01)

Figure 1: Hypothesised Structure Model of the Relationship between Transformational Leadership (TL), Organisational Learning (OL), Intellectual Capital (IC) and Organisational Performance (OP)



DISCUSSION AND CONCLUSION

This paper investigates the effect of the TL style on OP, based on OL and IC in the health-care organisations in developing countries, namely in the United Arab Emirates (UAE). The result of this study showed that the transformational leadership style enhances and supports organisational performance in the public healthcare sector in the UAE (H₁). This finding is consistent with studies by Gil et al. (2005) and Alimo-Metcalfe et al. (2008). Alimo-Metcalfe et al. (2008) investigated the impact of engaging leadership, namely transformational leadership style, on performance, attitudes to work and wellbeing at work. In the healthcare sector in England the study by Alimo-Metcalfe and his colleagues found a positive relationship between transformational leadership and performance involving job satisfaction, motivation to achieve and motivation to achieve beyond expectations (Alimo-Metcalfe et al., 2008). The result of this present study shows that transformational leadership style can improve organisational performance in the UAE by focusing on satisfaction for both employees and patients, which echoes results of previous studies (Rivers and Glover, 2008; Leggat et al., 2011).

The second contribution of this study is that it identified the effect of organisational learning as a moderating factor which connects the relationship between transformational leadership and organisational performances. Previous studies have investigated

either the direct effect between transformational leadership and organisational learning (Coad and Berry, 1998; Trautmann et al., 2007; Atwood et al., 2010) or the direct effect between organisational learning and organisational performance (e.g. Alegre and Chiva, 2008). However, few studies have investigated organisational learning as a mediating factor between transformational leadership and organisational performance except that by García-Morales et al. (2008), which was carried out in the industrial sector, not in the public healthcare sector. The current study, therefore, examined both the effect of organisational learning as a moderating factor of the relationship between transformational leadership and organisational performance (H_2) and the direct effect of organisational learning on organisational performance (H_3). The results of the study demonstrated that organisational learning completely mediates the relationship between transformational leadership and organisational performance (H_2). TL, therefore, has direct effects on organisational performance depending on the level of organisational learning in the healthcare organisation. Organisational learning is committed to TL by offering essential capabilities that are necessary to improve the organisational performance (García-Morales et al., 2008). Furthermore, when employees feel inspired to greatness by the head of the organisation, they will be more inclined to implement a learning approach and thus build skills and competence that would enable greater subsequent performance (Ilies et al., 2006). On the other hand, results also show that organisational learning has a positive effect on organisational performance (H_3). This is because the high level of organisational learning will be associated with high levels of continuous learning, inquiry and dialogue, team learning and an embedded system (Alegre and Chiva, 2008; Joo and Park, 2010). Furthermore, OL includes learning a new organisational vision and goals, organisational culture, organisational design and technology (Appelbaum et al., 1998), which positively influences employees' motivation, commitment and empowerment (Orthner et al., 2006), which, in turn, positively influences organisational performance.

The third contribution of this study is that it examines both the effect of intellectual capital as a mediating factor which connects the relationship between transformational leadership and organisational performance (H_4) and the direct relationship between intellectual capital and organisational performance (H_5). Bryant (2003) examined the role of organisational knowledge (knowledge creating, knowledge sharing and knowledge exploiting) as a mediating factor which connects the relationship between both transformational and transactional leadership and organisational performance. However, this was only theoretical and was not empirically tested. On the other hand, Zhu et al. (2005) only examined human capital as a mediating factor of the relationship between the transformational leadership style and organisational performance, namely absenteeism and sales average in Singapore. The current study extended prior research by focusing on three types of intellectual capital (human, customer and structural) as mediating factors of the relationship between TL and OP. The study found that intellectual capital partially mediates the relationship between transformational leadership and organisational performance (H_4). The transformational leader with conceptual competence looks at the organisation as more than the sum of its parts. The focus is holistic by concentrating on the entire picture and not just the individual parts of the puzzle (Guo and Anderson, 2005) and by focusing

on human, customer and intellectual capital, which will, in turn, positively affect their performance. On the other hand, the study found that intellectual capital has a direct positive effect on organisational performance (H_5), which indicates that measuring and strategically managing intellectual capital may in fact become the most important managerial activity for driving and improving organisational performance (Bontis and Serenko, 2009). The managers in the healthcare organisations therefore give a priority to intellectual capital in order to improve organisational performance (Peng et al., 2007).

The fifth and last contribution of this study is that it investigated the relationship between organisational learning and intellectual capital (H_5). The results showed that organisational learning has a positive effect on intellectual capital. This is because the organisation often seeks to increase its intellectual capital, especially human capital, by enhancing its learning strategy (Bontis, 1998; Lennon and Wollin, 2001) and offering formal training and development programmes (Bontis and Serenko, 2009).

Implications and Limitations

Given the consistent interactions between transformational leadership and organisational performance in the healthcare organisation, the study concludes that transformational leadership is an effective style to enhance both the employees' satisfaction and patients' satisfaction, which will, in turn, positively influence the organisational performance. Therefore, public healthcare organisations should focus on selecting, training and promoting individuals in different levels of the organisation especially for upper-level managerial positions as such individuals are more likely to become transformational leaders (Wang et al., 2011). Furthermore, this study was aware of mediators, namely organisational learning and intellectual capital, as essential factors to enhance the application of transformational leadership and then improve organisational performance. Thus, this study suggests that healthcare organisations should be aware that the effect of transformational leadership style and its influence on organisational performance will depend greatly on the amount of investment in both organisational learning and intellectual capital.

The main limitation of this study is that its data were gathered from a single source (a questionnaire survey). Only one source of data may not give valid information, especially in this type of study. Furthermore, the survey data were collected at only one time; consequently, common method variance may exist. Accordingly, future research should seek to overcome these limitations by using different sources of data about the main aspects of the conceptual model. Future research should also explore the differences in applying the transactional leadership style between public and private healthcare organisations.

REFERENCES

Alegre, J. and Chiva, R. (2008) 'Assessing the Impact of Organizational Learning Capability on Product Innovation Performance: An Empirical Test', *Technovation*, 28, pp. 315-26.

Alimo-Metcalfe, B., Alban-Metcalf, J. and Bradley, M. (2008) 'The Impact of Engaging Leadership on Performance, Attitudes to Work and Wellbeing at Work: A Longitudinal Study', *Journal of Health Organization and Management*, 22, pp. 586-98.

Al Masah Capital Management Limited (2011) *MENA Healthcare Sector Report*, 22, available from: <http://almasahcapital.com/uploads/report/pdf/report_22.pdf>, accessed 17 June 2012.

Anantharaman, R.N. (2008) 'Provider-Perceived Dimensions of Total Quality Management in Healthcare', *Benchmarking: An International Journal*, 15, pp. 693-722.

Antonakis, J.J., Avolio, B. and Sivasubramanian, N. (2003) 'Context and Leadership: An Examination of the Nine-Factor Full-Range Leadership Theory Using the Multifactor Leadership Questionnaire', *Leadership Quarterly*, 14, pp. 261-95.

Appelbaum, S.H., St-Pierre, N. and Glavas, M. (1998) 'Strategic Organizational Change: The Role of Leadership, Learning, Motivation and Productivity', *Management Decision*, 36, pp. 289-301.

Argyris, C. (1976) 'Single-Loop and Double-Loop Models in Research on Decision Making', *Administrative Science Quarterly*, 21, pp. 363-75.

Arnold, K.A., Barling, J. and Kelloway, E.K. (2001) 'Transformational Leadership or the Iron Cage: Which Predicts Trust, Commitment and Team Efficacy', *Leadership & Organization Development Journal*, 22, pp. 315-20.

Arnold, K.A. and Loughlin, C. (2010) 'Individually Considerate Transformational Leadership Behaviour and Self Sacrifice', *Leadership & Organization Development Journal*, 31, pp. 670-86.

Atwood, M.A., Mora, J.W. and Kaplan, A.W. (2010) 'Learning to Lead: Evaluating Leadership and Organizational Learning', *Leadership & Organization Development Journal*, 31, pp. 576-95.

Barbuto Jr, J. (2005) 'Motivation and Transactional, Charismatic, and Transformational Leadership: A Test of Antecedents', *Journal of Leadership & Organizational Studies*, 11, pp. 26-40.

Barnes, B.R., Yen, D. and Zhou, L. (2011) 'Investigating Guanxi Dimensions and Relationship Outcomes: Insights from Sino-Anglo Business Relationships', *Industrial Marketing Management*, 40, pp. 510-21.

Bartram, T. and Casimir, G. (2007) 'The Relationship between Leadership and Follower In-Role Performance and Satisfaction with the Leader: The Mediating Effects of Empowerment and Trust in the Leader', *Leadership & Organization Development Journal*, 28, pp. 4-19.

Basim, N.H., Sesen, H. and Korkmazyurek, H. (2007) 'A Turkish Translation, Validity and Reliability Study of the Dimensions of the Learning Organization Questionnaire', *World Applied Sciences Journal*, 2, pp. 368-74.

Bass, B.M. (1985) 'Leadership: Good, Better, Best', *Organizational Dynamics*, 13, pp. 26-40.

Bass, B.M. and Avolio, B.J. (1994) *Improving Organizational Effectiveness through Transformational Leadership*, Thousand Oaks, CA: Sage.

Bass, B.M. and Avolio, B.J. (2000) *MLQ: Multifactor Leadership Questionnaire - Technical Report, Leader Form, Rater and Scoring Key for MLQ (Form 5x-Short)*, Redwood City, CA: Mind Garden.

Bass, B.J., Avolio, B., Jung, D.J. and Berson, Y. (2003) 'Predicting Unit Performance by Assessing Transformational and Transactional Leadership', *Journal of Applied Psychology*, 88, pp. 207-18.

Bass, B.M. and Riggio, R.E. (2006) *Transformational Leadership*, Mahwah, NJ; London: Lawrence Erlbaum Associates.

Berson, Y. and Avolio, B.J. (2004) 'Transformational Leadership and the Dissemination of Organizational Goals: A Case Study of a Telecommunication Firm', *Leadership Quarterly*, 15, pp. 625-46.

Bhatnagar, J., Budhwar, B., Srivastava, P. and Saini, D.S. (2010) 'Organizational Change and Development in India: A Case of Strategic Organizational Change and Transformation', *Journal of Organizational Change Management*, 23, pp. 485-99.

Birasnav, M., Rangnekar, S. and Dalpati, A. (2011) 'Transformational Leadership and Human Capital Benefits: The Role of Knowledge Management', *Leadership & Organization Development Journal*, 32, pp. 106-26.

Boerner, S., Eisenbeiss, S.A. and Griesser, D. (2007) 'Follower Behavior and Organizational Performance: The Impact of Transformational Leaders', *Journal of Leadership & Organizational Studies*, 13, pp. 15-26.

Bontis, N. (1998) 'Intellectual Capital: An Exploratory Study that Develops Measures and Models', *Management Decision*, 36, pp. 63-76.

Bontis, N. (2001) 'Assessing Knowledge Assets: A Review of the Models Used to Measure Intellectual Capital', *International Journal of Management Reviews*, 3, pp. 41-60.

Bontis, N. (2004) 'National Intellectual Capital Index: A United Nations Initiative for the Arab Region', *Journal of Intellectual Capital*, 5, pp. 13-39.

Bontis, N., Chong Keow, W. and Richardson, S. (2000) 'Intellectual Capital and Business Performance in Malaysian Industries', *Journal of Intellectual Capital*, 1, pp. 85-100.

Bontis, N. and Fitz-enz, J. (2002) 'Intellectual Capital ROI: A Causal Map of Human Capital Antecedents and Consequents', *Journal of Intellectual Capital*, 33, pp. 223-47.

Bontis, N. and Serenko, A. (2009) 'A Causal Model of Human Capital Antecedents and Consequents in the Financial Services Industry', *Journal of Intellectual Capital*, 10, pp. 53-69.

Bryant, R.E. (2003) 'The Role of Transformational and Transactional Leadership in Creating, Sharing and Exploiting Organizational Knowledge', *Journal of Leadership & Organizational Studies*, 9, pp. 32-44.

Burke, C.S., Stagl, J.C., Klein, G.F., Goodwin, G.F., Salas, D. and Halpin, M. (2006) 'What Type of Leadership Behaviors Are Functional in Teams? A Meta-Analysis', *Leadership Quarterly*, 17, pp. 288-307.

Burns, J.A. (1978) *Leadership*, New York: Harper & Row.

Chan, F., Lee, G.K., Lee, E.J. and Allen, C.A. (2007) 'Structural Equation Modeling in Rehabilitation Counseling Research', *Rehabilitation Counseling Bulletin*, 51, pp. 44-57.

Chaston, I., Badger, B. and Sandler-Smith, E. (2000) 'Organizational Learning Style and Competences: A Comparative Investigation of Relationship and Transactionally Oriented Small UK Manufacturing Firms', *European Journal of Marketing*, 34, pp. 625-40.

Chen, J., Zhu, Z. and Yuan Xie, H. (2004) 'Measuring Intellectual Capital: A New Model and Empirical Study', *Journal of Intellectual Capital*, 5, pp. 195-212.

Choi, J. (2006), 'A Motivational Theory of Charismatic Leadership: Envisioning, Empathy, and Empowerment', *Journal of Leadership and Organizational Studies*, 13, pp. 24-43.

Chong, E. and Wolf, H. (2010) 'Factors Influencing Followers' Perception of Organisational Leaders', *Leadership & Organization Development Journal*, 31, pp. 402-19.

Coad, A.F. and Berry, A.J. (1998) 'Transformational Leadership and Learning Orientation', *Leadership & Organization Development Journal*, 19, pp. 164-72.

Cooksey, R.W. (2003) "Learnership" in Complex Organisational Texture', *Leadership & Organization Development Journal*, 24, pp. 204-14.

De Groot, S.K., Kiker, D.S. and Cross, T.C. (2000) 'A Meta-Analysis to Review Organizational Outcomes Related to Charismatic Leadership', *Canadian Journal of Administrative Sciences*, 17, pp. 356-71.

Deloitte (2011) *2011 Survey of the UAE Healthcare Sector: Opportunities and Challenges for Private Providers*, December, available from: <<https://www.deloitte.com/assets/Dcom-Lebanon/Local%20Assets/Documents/Consulting/Consulting%20Healthcare%20-publication%20FV2.pdf>>, accessed 17 June 2012.

Dionne, S.D., Yamarino, F.J., Atwater, L.E. and Spangler, W.D. (2004) 'Transformational Leadership and Team Performance', *Journal of Organizational Change Management*, 17, pp. 177-93.

Duggirala, M., Rajendran, C. and Anantharaman, R.N. (2008) 'Provider-Perceived Dimensions of Total Quality Management in Healthcare', *Benchmarking: An International Journal*, 15, 693-722.

Dvir, T., Kass, N. and Shamir, B. (2004), 'The Emotional Bond: Vision and Organizational Commitment among High-Tech Employees', *Journal of Organizational Change Management*, 17, pp. 126-43.

Fernando, M., Beale, F. and Geroy, G.D. (2009) 'The Spiritual Dimension in Leadership at Dilmah Tea', *Leadership & Organization Development Journal*, 30, pp. 522-39.

Firestone, J.M. and McElroy, M.W. (2004) 'Organizational Learning and Knowledge Management: The Relationship', *The Learning Organization*, 11, pp. 177-84.

Firth, L., Mellor, D., Moore, K. and Loquet, C. (2004) 'How Can Managers Reduce Employee Intention to Quit?', *Journal of Managerial Psychology*, 19, pp. 170-87.

Fornell, C. and Larcker, D.F. (1981) 'Evaluating Structural Equation Models with Unobservable Variables and Measurement Error', *Journal of Marketing Research*, 18, pp. 39-50.

García-Morales, V.J., Llorens-Montes, F.L. and Verdú-Jover, A.J. (2006) 'Antecedents and Consequences of Organizational Innovation and Organizational Learning in Entrepreneurship', *Industrial Management & Data Systems*, 106, pp. 21-42.

García-Morales, V.J., Matías-Reche, F. and Hurtado-Torres, N. (2008) 'Influence of Transformational Leadership on Organizational Innovation and Performance Depending on the Level of Organizational Learning in the Pharmaceutical Sector', *Journal of Organizational Change Management*, 21, pp. 188-212.

Gil, F., Rico, R., Alcover, C.A. and Barrasa, A. (2005) 'Change-Oriented Leadership, Satisfaction and Performance in Work Groups: Effects of Team Climate and Group Potency', *Journal of Managerial Psychology*, 20, pp. 312-28.

Gorelick, C. (2005) 'Organizational Learning vs the Learning Organization: A Conversation with a Practitioner', *The Learning Organization*, 12, pp. 383-8.

Guo, K.L. and Anderson, D. (2005) 'The New Health Care Paradigm: Roles and Competencies of Leaders in the Service Line Management Approach', *Leadership in Health Services*, 18, pp. xii-xx.

Ilies, R., Judge, T. and Wagner, D. (2006) 'Making Sense of Motivational Leadership: The Trail from Transformational Leaders to Motivated Followers', *Journal of Leadership & Organizational Studies*, 13, pp. 1-21.

Johnston, C. and Caldwell, B. (2001) 'Leadership and Organisational Learning in the Quest for World Class Schools', *International Journal of Education Management*, 15, pp. 94-102.

Joo, B. and Park, S. (2010) 'Career Satisfaction, Organizational Commitment, and Turnover Intention: The Effects of Goal Orientation, Organizational Learning Culture and Developmental Feedback', *Leadership & Organization Development Journal*, 31, pp. 482-500.

Jordan, P.J. and Troth, A. (2011) 'Emotional Intelligence and Leader Member Exchange: The Relationship with Employee Turnover Intentions and Job Satisfaction', *Leadership & Organization Development Journal*, 32, pp. 260-80.

Judge, T.A. and Bono, J.E. (2000) 'Five-Factor Model of Personality and Transformational Leadership', *Journal of Applied Psychology*, 85, pp. 751-65.

Judge, T.A. and Piccolo, R.F. (2004) 'Transformational and Transactional Leadership: A Meta-Analytic Test of Their Relative Validity', *Journal of Applied Psychology*, 89, pp. 755-68.

Jung, D.I. and Sosik, J.J. (2002) 'Transformational Leadership in Work Groups: The Role of Empowerment, Cohesiveness, and Collective-Efficacy on Perceived Group Performance', *Small Group Research*, 33, pp. 313-36.

Kanji, G.K. (2002) 'Performance Measurement System', *Total Quality Management*, 13, pp. 715-28.

Kantabutra, S. and Avery, G.C. (2005) 'Sustainable Leadership at Siam Cement Group', *Journal of Business Strategy*, 32, pp. 32-41.

Kanungo, R.N. and Misra, S. (1992) 'Managerial Resourcefulness: A Reconceptualization of Management Skills', *Human Relations*, 45, pp. 1311-32.

Krishnan, V.R. (2005) 'Transformational Leadership and Outcomes: Role of Relationship Duration', *Leadership & Organization Development Journal*, 26, pp. 442-57.

Leggat, S.G., Bartram, T. and Stanton, P. (2011) 'High Performance Work Systems: The Gap between Policy and Practice in Health Care Reform', *Journal of Health Organization and Management*, 25, pp. 281-97.

Lennon, A. and Wollin, A. (2001) 'Learning Organisations: Empirically Investigating Metaphors', *Journal of Intellectual Capital*, 2, pp. 410-22.

Library of Congress - Federal Research Division (2007) *Country Profile: United Arab Emirates (UAE)*, July, available from: <http://lcweb2.loc.gov/frd/cs/profiles/UAE.pdf>, accessed 17 June 2012.

Lindebaum, D. and Cartwright, S. (2011) 'Leadership Effectiveness: The Costs and Benefits of Being Emotionally Intelligent', *Leadership & Organization Development Journal*, 32, pp. 281-90.

Lloyd, R. and Hartel, C. (2010) 'Intercultural Competencies for Culturally Diverse Work Teams', *Journal of Managerial Psychology*, 25, pp. 845-75.

Loehlin, J. C. (1992) *Latent Variable Models*, Hillsdale, NJ: Lawrence Erlbaum Publishers.

MacCallum, R.C. and Austin, J.T. (2000) 'Applications of Structural Equation in Psychological Research', *Annual Review of Psychology*, 51, pp. 201-226.

McMurray, A.J., Pirola-Merlo, A. and Sarros, J.C. (2010) 'Leadership, Climate, Psychological Capital, Commitment, and Wellbeing in a Non-Profit Organization', *Leadership & Organization Development Journal*, 31, pp. 436-57.

Marr, B., Schiuma, G. and Neely, A. (2004) 'Intellectual Capital - Defining Key Performance Indicators for Organizational Knowledge Assets', *Business Process Management Journal*, 10, pp. 551-69.

Mavondo, F.T., Chimhanzi, J. and Stewart, J. (2005) 'Learning Orientation and Market Orientation: Relationship with Innovation, Human Resource Practices and Performance', *European Journal of Marketing*, 39, pp. 1235-63.

Michaelis, B., Stegmaier, R. and Sonntag, K. (2010) 'Shedding Light on Followers' Innovation Implementation Behavior: The Role of Transformational Leadership, Commitment to Change, and Climate for Initiative', *Journal of Managerial Psychology*, 25, pp. 408-29.

Nana, E., Jackson, B. and Burch, G.S. (2010) 'Attributing Leadership Personality and Effectiveness from the Leader's Face: An Exploratory Study', *Leadership & Organization Development Journal*, 31, pp. 720-42.

Northouse, P.G. (2007) *Leadership, Theory and Practice*, fourth edition, Thousand Oaks, CA: Sage Publications.

Ontario Ministry of International Trade and Investment, Representative Office for the Gulf Cooperation Council Region (2009) *Health Sector Report*, 2 January, available from: <http://www.sse.gov.on.ca/medt/ontarioexports/Documents/English/Health_Market_Report_for OMIT.pdf>, accessed 17 June 2012.

Ordonez de Pablos, P. (2003) 'Intellectual Capital Reporting in Spain: A Comparative View', *Journal of Intellectual Capital*, 4, pp. 61-81.

Ordonez de Pablos, P. (2004) 'Measuring and Reporting Structural Capital: Lessons from European Learning Firms', *Journal of Intellectual Capital*, 5, pp. 629-47.

Orthner, D.K., Cook, P., Sabah, Y. and Rosenfeld, J. (2006) 'Organizational Learning: A Cross-National Pilot-Test of Effectiveness in Children's Services', *Evaluation and Program Planning*, 29, pp. 70-8.

Ozaralli, N. (2003) 'Effects of Transformational Leadership on Empowerment and Team Effectiveness', *Leadership & Organization Development Journal*, 24, pp. 335-44.

Pallant, J. (2005) *SPSS Survival Manual*, Maidenhead: Open University Press.

Peng, T.A. (2011) 'Resource Fit in Inter-Firm Partnership: Intellectual Capital', *Journal of Intellectual Capital*, 12, pp. 20-42.

Peng, T.A., Pike, S. and Roos, G. (2007) 'Intellectual Capital and Performance Indicators: Taiwanese Healthcare Sector', *Journal of Intellectual Capital*, 8, pp. 538-56.

Perez Lopez, S., Montes Peon, J.M. and Vazquez Ordas, C.J. (2005) 'Human Resource Practices, Organizational Learning and Business Performance', *Human Resource Development International*, 8, pp. 147-64.

Pillai, R. and Williams, E.A. (2004) 'Transformational Leadership, Self-Efficacy, Group Cohesiveness, Commitment, and Performance', *Journal of Organizational Change Management*, 17, pp. 144-59.

Pounder, J.S. (2003) 'Employing Transformational Leadership to Enhance the Quality of Management Development Instruction', *Journal of Management Development*, 22, pp. 6-13.

Rafferty, E. and Griffin, L.A. (2004) 'Dimensions of Transformational Leadership: Conceptual and Empirical Extensions', *Leadership Quarterly*, 15, pp. 329-54.

Raykov, T. (2004) 'Behavioral Scale Reliability and Measurement Invariance Evaluation Using Latent Variable Modeling', *Behavior Therapy*, 35, pp. 299-331.

Rivers, P. and Glover, S.H. (2008) 'Health Care Competition, Strategic Mission, and Patient Satisfaction: Research Model and Propositions', *Journal of Health Organization and Management*, 22, pp. 627-41.

Ron, N., Lipshitz, R. and Popper, M. (2006) 'How Organizations Learn: Post-Flight Reviews in an F-16 Fighter Squadron', *Organization Studies*, 27, pp. 1069-89.

Roos, G. and Roos, J. (1998) 'Measuring Your Company's Intellectual Performance', *Long Range Planning*, 30, pp. 413-26.

Saad, M. and Patel, B. (2006) 'An Investigation of Supply Chain Performance Measurement in the Indian Automotive Sector', *Benchmarking: An International Journal*, 30, pp. 3-25.

Sarros, J.C., Cooper, K. and Santora, J.C. (2011) 'Leadership Vision, Organizational Culture, and Support for Innovation in Not-For-Profit and For-Profit Organizations', *Leadership & Organization Development Journal*, 32, pp. 291-309.

Shepherd, M.M., Tesch, D.B. and Hsu, J.S. (2006) 'Environmental Traits that Support a Learning Organization: The Impact on Information System Development Projects', *Comparative Technology Transfer and Society*, 4, pp. 196-218.

Shook, C.L., Ketchen, D.J., Hult, G.T. and Kacmar, M.K. (2004) 'An Assessment of the Use of Structural Equation Modeling in Strategic Management Research', *Strategic Management Journal*, 25, pp. 397-404.

Song, J.H., Joo, B. and Chermack, T.J. (2009) 'The Dimensions of Learning Organization Questionnaire (DLOQ): A Validation Study in a Korean Context', *Human Resource Development Quarterly*, 20, pp. 43-64.

Sosik, J.S. and Megerian, L.E. (1999) 'Understanding Leader Emotional Intelligence and Performance: The Role of Self-Other Agreement on Transformational Leadership Perceptions', *Group & Organization Management*, 24, pp. 367-90.

Storey, J. and Buchanan, D. (2008) 'Healthcare Governance and Organizational Barriers to Learning from Mistakes', *Journal of Health Organization and Management*, 22, pp. 642-51.

Tabachnick, B.G and Fidell, L.S (1996) *Using Multivariate Statistics*, New York: Harper Collins.

Tejeda, M.J., Scandura, T.A. and Rajnandini, P. (2001) 'The MLQ Revisited: Psychometric Properties and Recommendations', *Leadership Quarterly*, 12, pp. 31-52.

Trautmann, K., Maher, J. and Motley, D.G. (2007) 'Learning Strategies as Predictors of Transformational Leadership: The Case of Nonprofit Managers', *Leadership & Organization Development Journal*, 28, pp. 269-87.

Tuan, L.T. (2012) 'Clinical Governance: A Lever for Change in Nhan Dan Gia Dinh Hospital in Vietnam', *Clinical Governance: An International Journal*, 17, pp. 223-47.

Vigoda-Gadot, E. (2007) 'Leadership Style, Organizational Politics, and Employees' Performance: An Empirical Examination of Two Competing Models', *Personnel Review*, 36, pp. 661-83.

Wang, G., Courtright, S.H. and Colbert, A.E. (2011) 'Transformational Leadership and Performance across Criteria and Levels: A Meta-Analytic Review of 25 Years of Research', *Group & Organization Management*, 36, pp. 223-70.

Wayne, J., Liden, R.C., Kraimer, M.L. and Graf, I.K. (1999) 'The Role of Human Capital, Motivation and Supervisor Sponsorship in Predicting Career Success', *Journal of Organizational Behavior*, 20, pp. 577-95.

Wellman, J. (2009) *Organizational Learning: How Companies and Institutions Manage and Apply Knowledge*, New York: Palgrave Macmillan.

Xenikou, A. and Simosi, M. (2006) 'Organizational Culture and Transformational Leadership as Predictors of Business Unit Performance', *Journal of Managerial Psychology*, 21, pp. 566-79.

Yeo, R. (2003) 'Linking Organisational Learning to Organisational Performance and Success: Singapore Case Studies', *Leadership & Organization Development Journal*, 24, pp. 70-83.

Zhu, W., Chew, I.K. and Spangler, W.D. (2005) 'CEO Transformational Leadership and Organizational Outcomes: The Mediating Role of Human-Capital-Enhancing Human Resource Management', *Leadership Quarterly*, 16, pp. 39-52.

Copyright of Irish Journal of Management is the property of Irish Journal of Management and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.