Research Article

Testing Bass & Avolio Model of Leadership in Understanding ERP Implementation among Bruneian SMEs

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Abstract

The leadership style of Chief Executives Officers’ (CEO) in adoption and implementation of e-business technologies especially within the context of small and medium enterprises (SMEs) have received increasing acceptance in the recent years. This study investigates sixty CEOs’ leadership style towards adoption of Enterprise Resource Planning (ERP) systems among Bruneian SMEs. The study used the Multi-leadership Questionnaire (MLQ) from Bass and Avolio (1995) to measure the leadership style. The results confirm that CEOs’ transformational leadership (TRFL) style is significant towards adoption of ERP system. The results were discussed and some recommendations were made for the further research.

Keywords: Transformational Leadership Style, Transactional Leadership Style, ERP, SMEs, Brunei Darussalam

Introduction

Right from the early days of information technology (IT) diffusion and adoption research, the research has been profoundly conducted to find out the factors that are significant to adopting IT innovations. In this concern, several of the organizational (Iacovou et al., 1995 and Scupola, 2003), environmental (Iacovou et al., 1995 and Scupola, 2003) and technological factors have been studied by researchers (Scupola, 2003 and Iacovou et al., 1995).

However, in recent years another variable “leadership style” from the organizational behaviour (OB) has been introduced in the information systems (IS) research domain, and has been a focus of researchers within the context of SMEs (Waldman et al., 2001; Ke and Wei, 2008). The focus has been shifted from managers to the leader and champions of innovation and with that a new
breed of leadership has emerged (Cope and Waddell, 2001).

In classic studies, leadership behaviour is a factor that has been found to be significant determinant of organizational productivity and change (Almaraz, 2009), organization success (Harlow, 1998), organizational climate (Lubbert, 1995), organizational culture (Ogbonna and Harris, 2000). In this concern we agree with the connotation made by Ke and Wei, (2008) that organizational culture can be consciously designed and manipulated by leadership.

The IS literature suggests that a leader's vision, attitude and behavior are critical for employee's perception of IT innovation and thus its adoption outcomes (Purvis et al., 2001). In the context of ERP implementation, leadership is consistently found to be the most important factor leading to the success of ERP implementation (Ke and Wei, 2008). In this paper, the definition of SMEs is adapted after Yap et al., (1992) where size of greater than fifty employees to less than 250 employees is treated as medium organization. The size of less than fifty employees is treated as small organizations. Similarly, in this study ERP covers the following definition. ERP Systems have been defined as "comprehensive, packaged software solution that integrate the complete range of a business' processes and functions in order to present a holistic view of the business from a single information and IT architecture" (Gable, 1998).

ERP as a type -3 IS innovation and has strategic relevance for the firm because of its integration with main or core business processes they could lead to firm's performance and success at a later stage. It has been found that the implementation of an effective ERP system can bring both strategic (Nah et al., 2007) and operational (Nicolaou, 2004) benefits to the organizations in today's competitive business environments. However, many organizations fail to reap the potential benefits from the investment in ERP project (Booth and Philip, 2005).

This paper is divided into four sections: The next section presents the review of the literature focusing on foundation of leadership, and studies linking leadership style with IT adoption in general and ERP in particular. This is followed by research design. The remainder of the paper presents the analysis, a discussion of the results and finally the paper concludes with the limitations and practical implications of this research.

**Review of Literature**

*Foundations of Leadership Theories*

Leadership is viewed as "the particular act in which a leader engages during the course of directing and coordinating the work of his group members" (Fiedler, 1967). An early work was started at the Ohio State University by Stodgill (1981) to obtain descriptions of leader behaviors that could be classified into more general categories or classes of behavior. The Ohio State University leadership studies resulted in the leader behavior description questionnaire measuring two dimensions of leader behavior. The first one is labelled as 'initiating structure' and second one as 'consideration structure'. Stodgill (1981) reported that both consideration and initiating structures were found to be related more to job satisfaction than to high productivity.

*Leadership Style*

Shifting from various classical leadership styles, traits and behaviors, researchers began concentrating on finding other styles of leadership. They are classified as the transactional (TRXL) and transformational (TRFL) approaches. Bass (1985) on the basis of Burn's (1978) ideas of transactional and transformational political leaders was among the first who made an attempt to deliberate on the characteristics of TRFL. Bass and Avolio (1995) developed an instrument, a MLQ-multi-factor questionnaire, to capture responses on both the TRXL and TRFL styles.
According to Burns, (1978) TRXL leaders motivate their followers by exchanging rewards for the services rendered. Kuhnert and Lewis, (1987) summarized TRXL leaders as giving followers things they want in exchange for things leaders want. Bass et al., (1996) describe TRXL leadership style as being based on traditional bureaucratic authority and legitimacy. Bass (1990) describes the TRXL leaders’ relationship with subordinates as having three phases: (1) He recognizes what subordinates want to get from their work and ensures that they get what they want based upon their satisfactory performance. (2) Rewards and promises of rewards are exchanged for employee’s efforts, and (3) the leader responds to his employee's immediate self-interest through the completion of the work.

According to Yukl, (1998), transformational (TRFL) leaders build commitment to the organization's objectives and empower followers to achieve those objectives. TRFL approaches to leadership have long been advocated as productive and evidence suggests that TRFL practices do contribute to the development of capacity and commitment (Leithwood et al., 1999). In another study, Sarros and Santora, (2001) concluded that staff reports of leaders' behaviors in terms of three components of TRFL: charisma, individualized consideration and intellectual stimulation. A Leaders' TRFL style shows a positive correlation with variables such as: job satisfaction, staff turnover and professional achievement.

Studies examining the effects of TRXL and TRFL number in the hundreds (Bass, 1998) and continue today. Many of those have found more positive outcomes related to TRFL (Waldman et al., 2001). In their meta-analysis, of research articles on leadership style, approach and dimension in journal single database from 1998 to 2011, Iqbal et al., (2012) found that TRFL and TRXL were widely studied in order to identify the best possible way of leaders to interact with their followers.

Organizational Adoption of IT and Leadership Style

According to Fichman, (2004) Diffusion of Innovation (DOI) (Rogers, 1995) serves as the most widely cited theoretical framework, although other theories such as Structuration Theory (Walsham and Han, 1991) and Network Theory (Walsham, 1997) have also been used to explain IT adoption intentions in organizational settings. Most of the studies are further categorized by environmental factors such as competitive pressure, supplier pressure (Thong, 1999), size of the business (Yap et al., 1992), and technological factors such as perceived benefits (Iacovou et al., 1995). Most recently, studies focused on the strategic importance of EC (Drew, 2003), and the organizational factor-impact of perceived strategic value of EC by managers of SMEs on the adoption decision of EC (Grandon and Pearson, 2003, Seyal, 2009).

The studies are limited in the context of CEO/CIO leadership style with the technology adoption (Thite, 1999). However, researchers have found the leadership style and its relative importance in the IT function in general (Onan and Gambil 2001). If we consider the historical perspective, the early work of Thong and Yap (1995) and Thong (1999) has not only pointed out the relative importance of organizational variables in the adoption of technology, but also found the significance of the owner/managerial attribute towards IT innovations. It is believed that CEO of the SMEs has a major role in the business decision making and act as catalyst to decide on the major IT innovation and the major variable investigated are CEOs’ IT knowledge, prior training attitudes towards IT innovations (Thong and Yap, 1995) and personality of the CEOs (Harris, 1999). Thong (1999) in his study found the CEO’s IT knowledge and innovativeness in IT adoption significant.

On the other hand empirical evidence advocates that CEOs in SMEs are not IT knowledgeable and this ignorance is further treated as one of the barriers in IT adoption. Cragg and King (1993) found that owner managers/CEOs of SMEs lack IT knowledge
and this also discourages other members in the organizations from exploring further IT opportunities. The studies by Thong and Yap (1995) and Thong (1999) provide a theoretical background for the later works on the CEO’s role in identifying new technological opportunities. Therefore, management support is crucial for IT adoption (Thong and Yap, 1995, Chau, 2001 and Scupola, 2003). Iacovou et al., (1995) further pointed out that role of CEO and top management is a significant variable in investing in IT and e-Commerce within the context of SMEs. Sarros and Santora, (2001) studied the leadership styles among Australian businesses by using Bass and Avolio (1995) multi-factor questionnaire and found that most of the Australian Executives exercise a mixed blend of both transactional and transformational style of leadership.

However, in the past, some studies focused on the leadership attributes of CEOs towards the EC adoption. Lewin and Stephens (1994) proposed an integrated model in which CEO background, attitudes and demographics (along with external and internal factors) influences organizational innovativeness. Feeny and Willcock, (1998) stressed on the importance of leadership as a core IS capability. They studied the Chief Information Officers’ (CIO) leadership style and found it to exploit IT resources. Onan and Gambil (2001) conducted a survey and concluded that leadership was the number one desired trait in the CIO for large companies.

Scupola (2003) explored the leadership styles in e-Commerce adoption among Australian SMEs and found that consultative leadership was significant in e-Commerce adoption. Similarly, Almaraz (2009) in his study of effective change leadership styles among SMEs found that visionary leadership style was strongly linked with the organizational change success. Seyal et al., (2012) in their pioneering Brunei-based work studied 250 CEOs’ leadership style towards adoption of EC within Bruneian SMEs. They used Bolman & Deal’s leadership frames to measure the leadership style and found that paired leadership frames (human and symbolic) were significant predictors of EC adoption which further equate to the TRFL style. Iyengar (2007) examined leadership style in the light of the TRFL theory and its impact on organizational level variables such as CIO role effectiveness and IT ambidexterity and individual level variables such as Leader-Member Exchange (LME) and the subordinate job satisfaction.

Results indicated that TRFL was the strongest predictor of LME relationship that in turn leads to job satisfaction. Khan et al., (2009) conducted a study among 296 top executives from the telecommunication sector in Pakistan and found that all facets of TRFL are significant to organizational innovation except idealized influences. In another study by Imran et al., (2011) in Pakistan, and concluded that TRFL style was positively related with the innovative work behavior. Chen et al., (2012) investigated the relationship between TRFL with technological innovations among 102 Taiwanese small business units. The results indicate that transformational leadership behaviours promote technological innovation at strategic business units.

Leadership in the Context of ERP Implementation

Although the literature is full of studies on leadership style especially linking TRFL with the e-business, as mentioned above and on job satisfaction (Mihalcea, 2012), however, limited studies are available on CEOs’ leadership style on ERP adoption or implementation. Bucker (2009) in his document checklist for successful ERP systems, wrote, “Leadership is one of the most critical factors in the successful implementation of ERP. In our surveys over the last nineteen years of working with and interviewing high performance companies, each of these companies had a senior manager or CEO - a champion of new business system implementation” (Bucker, Inc. www.bucker.com).

Willcock and Sykes (2000) found that CEO/CIO should be visionary leaders in order
to successfully implement ERP in the organization. Chu (2003) studied the impacts of TRFL leadership on the ERP project team work quality and member satisfaction and found that TRFL style had positive effect on ERP team work quality and member satisfaction. Huang (2010) examined the impact of top managers on ERP implementation. Result further confirmed improvement in ERP system quality. Ke and Wei (2008) examined as how leadership affects ERP implementation by fostering the desired organizational implementation success. This was positively related with organizational culture and leadership style, and was conducive to ERP implementation. Huang et al., (2011) studied 368 Taiwanese companies by linking CEOs leadership style on organizational performance through successful ERP system. In conclusion, the majority of the previous studies, either on various IT features or confined especially to ERP implementation as cited above have linked and confirmed the TRFL with ERP implementation. In fact, the instrument used to measure the leadership style is composed of both the TRXL and TRFL. However, we are of the strong opinion that if we design the study based on the Bass and Avolio (1990) instrument then we should include both the TRFL and TRXL styles to avoid any bias. In this respect, our work is unique as it considers both important leadership styles among CEOs in finding the suitability of the more prevailing style that is deemed suitable in measuring ERP implementation among Bruneian SMEs.

**Research Methodology**

**Design of Instrument**

In the context of OB, there are two types of instruments generally used to assess the leadership attributes. One is the Bass and Avolio, (1995) instrument and the second one covering four frames of categorizing leadership behaviours is the Bolman and Deal (1997) instrument. However, in line with the objective of the study, the Multifactor Leadership Questionnaire (MLQ) from Bass and Avolio was selected to conduct the research. The original questionnaire is 45-items, on a 5-point Likert-type scale with anchors labelled as 1 = not at all to 5 = always. The MLQ is used to evaluate how frequently, or to what degree, individuals believe they engage in thirty-two specific behaviors toward their subordinates. The MLQ consists of twelve factors. Nine factors are used to measure components of style, while the other three factors are outcome measures from the leadership style. Of the nine leadership measures, five are transformational factors and three are transactional factors and one is a non-transacational attribute. However, in this study, we excluded the three outcomes measures and retained seven attributes five to measure transformational, and two for measuring the transactional style. The one outcome variable from transactional attribute, and one non-transacational attribute were taken from the construct because of lowest corrected item total (> than .30). Table 1 provides the details. Although shorter version of MLQ-X5 is available, but was not used because of being very short and could not contribute in study design. Part B of the questionnaire captures the data about the demographic profile covering organizational characteristics, such as, age, gender, and number of years of experience as CEO, educational qualifications, type of ERP system used and implementation details.

**ERP Implementation:** The definition and item measuring dependent variable, ERP implementation, was adapted and modified by Venkatesh and Davis (2000) regarding satisfaction of ERP output quality and items measuring ERP success quality by Chung (2007) on a five-point Likert scale starting with 1 = “strongly disagree” to the 5 = “strongly agree”. The construct output quality includes the items that measure the quality of ERP system output. Whereas, ERP success/quality defines the items capture responses on the degree of the quality of ERP system and getting users’ satisfaction of ERP systems with in fulfilling the business’s need.

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Sample

Data for the study was collected in December 2012 by means of the questionnaire. The questionnaire captured the respondent’s demographic profile: gender, age, and experience as CEO or owner of the business, type of business, commencement of business, technology infrastructure, and type of web used by the business, number of employees and up to what extent business has implemented ERP. The behavior perceptual items were measured on a five-point scale representing a range from “Never” to “Frequently if not always”. As for the Leadership style perceptual items were measured from “Least” to “Best”. Every effort was made to ensure an effective response rate; with the use of phone calls, covering letters and responsive questionnaires. A random sample of 100 small and medium enterprises was compiled from a key business directory of Brunei (Goldpages, 2011). The sampling plan is based on purposive sampling techniques. This technique is selected based on the knowledge of population (SMEs who have implemented ERP), and the purpose of the study (Czaja and Blair, 1995). A questionnaire survey was conducted on CEOs/owners/managers in 100 small and medium enterprises those who were found to implemented ERP systems, however, a total of seventy valid responses were obtained who said that they have implemented an ERP system. For further scrutiny, it was revealed that ten out of seventy SMEs are at an initial stage of ERP adoption so we excluded them from our valid sample listing. Sixty responses were, however, further used on the basis of a judgemental sampling technique to enhance representativeness.

Instrument Reliability and Validity

Several techniques were used to assess the reliability and to assess the face, construct and convergent validity of the instrument. Cronbach (1951) alpha (α) was used to assess the reliability. In order to ascertain face validity, an initial questionnaire, after routine editing, was given to a panel of experts (Academics, HR practitioners and business leaders). They were asked to assess the questionnaire and very few comments, in fact, were received and only some minor changes were required to enhance the clarity. Table 3 shows the reliability coefficients and convergent validity for the various constructs.

Table 1: Pearson Correlations and AVE Table for Discriminant Validity

<table>
<thead>
<tr>
<th></th>
<th>IB</th>
<th>IM</th>
<th>IS</th>
<th>IC</th>
<th>CR</th>
<th>MBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized Behavior (IB)</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inspirational Motivation (IM)</td>
<td>.764</td>
<td>0.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual Stimulant (IS)</td>
<td>.589</td>
<td>.535</td>
<td>0.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualized Consideration (IC)</td>
<td>.735</td>
<td>.716</td>
<td>.779</td>
<td>0.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contingent Reward (CR)</td>
<td>.777</td>
<td>.704</td>
<td>.613</td>
<td>.692</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Management by Exception (MBE) Active</td>
<td>.756</td>
<td>.667</td>
<td>.473</td>
<td>.624</td>
<td>.646</td>
<td>0.58</td>
</tr>
</tbody>
</table>

All correlations are significant at the 0.01 level (2-tailed) except with * not significant at p>.01. Diagonal represents average variance extracted in bold.
Campbell and Fiske (1959) propose two types of validity: convergent and discriminating validity. Convergent validity is measured by an average variance extracted for each construct during the reliability analysis that should be 0.5 (50%) or better (Igbaria and Iivari 1995). Tables 1 and 2 show the reliability values for the various constructs with variance extracted in diagonal. After filtering and to further analyse for convergent and discriminating validity of these six constructs, the principal component method with varimax rotation was used to assess the variance explained. In general results show that both validities are satisfied. The result for discriminant validity is provided in Table 2.

### Table 2: Reliability & Validity Analysis

<table>
<thead>
<tr>
<th>Constructs</th>
<th>No of original items</th>
<th>No of items retained</th>
<th>Alpha value (.60 and above)</th>
<th>Mean</th>
<th>Variance explained &lt;.50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized Attribute</td>
<td>4</td>
<td>3</td>
<td>(construct removed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idealized Behaviour</td>
<td>4</td>
<td>3</td>
<td>.78</td>
<td>3.02</td>
<td>.56</td>
</tr>
<tr>
<td>Inspirational Motivation</td>
<td>4</td>
<td>4</td>
<td>.81</td>
<td>2.92</td>
<td>.63</td>
</tr>
<tr>
<td>Intellectual Stimulant</td>
<td>4</td>
<td>3</td>
<td>.70</td>
<td>2.93</td>
<td>.51</td>
</tr>
<tr>
<td>Individualized Consideration</td>
<td>4</td>
<td>2</td>
<td>.75</td>
<td>3.29</td>
<td>.68</td>
</tr>
<tr>
<td>Transformational style</td>
<td></td>
<td></td>
<td></td>
<td>3.04</td>
<td></td>
</tr>
<tr>
<td>Contingent Reward</td>
<td>4</td>
<td>4</td>
<td>.71</td>
<td>2.93</td>
<td>.57</td>
</tr>
<tr>
<td>Management by Exception</td>
<td>4</td>
<td>3</td>
<td>.73</td>
<td>2.88</td>
<td>.58</td>
</tr>
<tr>
<td>Transactional style</td>
<td></td>
<td></td>
<td></td>
<td>2.90</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Results

Data obtained from the survey were analysed using descriptive statistics, factor analysis as well as correlation analysis by using SPSS version 19.

#### Background Profile

The background data of individual CEOs consists of a majority, (59%) are males within the age group of 36-40 years and possesses 6-10 years of experience. The majority of the respondents are from wholesale/retail business sector with a total number of employees ranging from 10-50.

The respondents were asked to assess their responses on all twenty-two items pertaining to the various leadership attributes on five point Likert scale; 1= not at all agree to 5=fully agreed. However, for the measuring of leadership style only six out of nine constructs were used. After the analysis it was found that 86% of the respondents have TRFL style with a mean of 3.04 compared with a mean of 2.90 for TRXL among the CEOs of SMEs.

In line with the principles of multivariate data analysis, we conducted a zero-order correlation between the various leadership constructs as shown in Table 1. The correlation provides directional support for the predicted relationship and shows that collinearity among all the independent variables is moderate so as not to affect the regression analysis.

#### Regression Analysis

The relationship between the CEOs leadership style and ERP implementation was
investigated by conducting regression analysis. Prior to the testing for regression analysis, we conducted a zero order correlation between the constructs as shown in Table 1. Multi-collinearity was examined by analysing each independent variable's variance inflation factor (VIF). Multi-collinearity problem did not appear to exist as VIF value of each variable was much less than 10 (Hair et al., 1998). Normality of the data was confirmed by taking out the outliers by using SPSS procedure Mahalanobis distance plots. The result of regression analysis is presented in Table 3 as below. The model has statistically significant F-ratio and possesses moderate explanatory power as indicated by $R^2$ coefficient that shows that 34% of the variance in ERP implementation is explained by these six independent variables. From Table 3, it is further evident that two out of four components of transformation leadership such as ‘inspirational motivation’ and ‘individual consideration’ are significant predictors of ERP implementation.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta</th>
<th>t-statistic</th>
<th>p-value</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized behavior</td>
<td>-.065</td>
<td>-.415</td>
<td>.681</td>
<td></td>
</tr>
<tr>
<td>Inspirational motivation</td>
<td>.382</td>
<td>2.94</td>
<td>0.04*</td>
<td>Significant</td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>-.285</td>
<td>-1.736</td>
<td>.090</td>
<td></td>
</tr>
<tr>
<td>Individual consideration</td>
<td>.413</td>
<td>6.27</td>
<td>0.01*</td>
<td>Significant</td>
</tr>
<tr>
<td>Contingent reward</td>
<td>.089</td>
<td>.493</td>
<td>.625</td>
<td></td>
</tr>
<tr>
<td>Management by exception</td>
<td>0.09</td>
<td>1.35</td>
<td>.08</td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable: ERP Implementation, $R^2 = 34\%$, $F = 6.23$-statistically significant

Discussion

At the outset, the present study analyses the suitability of MLQ for the local environment. The original instruments measure 45-items grouped into twelve various attributes of three broad categories of leadership style: transformational, transactional and laissez-faire. Surprisingly, twenty-two items on two constructs were found applicable to the CEOs of Bruneian SMEs. For the purpose of the study we have excluded the laissez-faire style the least one used. The first construct, Idealized Attribute covering four items on leaders attribute displaying sense of power and confidence and instilling pride in others has to be dropped from the study due to the lowest corrected total-item correlation and variance, indicating the non-suitability of this construct to the CEOs.

The second construct that was dropped from this study is Passive Management-by-Exception, indicating the use of punishment and other measures to correct deviations from expected performance, is also not applicable to the CEOs. It may be due to the reason that this study covers the non-government SMEs and local businesses are not functioning under a bureaucratic environment and therefore, a more collective and team-work operational environment prevails in the industry. In assessing the leadership style, the study revealed, after the analysis of the data that CEOs exhibit a multiple leadership style: a combination of both TRXL and TRFL. However, a majority of 86% of the respondents scored higher on TRFL leadership with a mean of 3.04 than the TRXL style which scored a mean of 2.90 on the scale of 1 to 5. There exists a significant statistical difference in the mean of these two types ($t= -2.65$, p<.05) indicating the dominance of TRFL.

The study results has confirmed that two dimensions of TRFL style i.e., ‘individualized consideration’ and ‘inspirational motivation’ are significant predictors of ERP implementation within the context of
Bruneian SMEs. Individualized consideration deals with the fundamental leadership behaviour of treating individuals as important contributors to the workplace. Leaders who use this style of leadership show consideration for their workers' needs and are prepared to encourage and coach them to achieve organizational objectives.

In summary, the key indicators include encouragement, caring for and coaching of individuals. Therefore, leaders using the individual consideration style can reap the benefits from ERP implementation as ERP success in fact, helps management to capitalize on the organizational benefits especially enhancing productivity. It is further noted that CEO's support and clear vision have a critical impact on the ERP implementation process (Huang, 2010). The findings support Huang (2010) and Yukl (1998) who suggested that employees would be more satisfied with leaders who are both considerate and supportive than with leaders who are either indifferent or hostile towards subordinates.

The second important TRFL style that emerged from this study is “inspirational motivation” leadership behavior. The leader, who use this leadership behavior set high standards, communicate their ideas and vision to their workers in a clear way and encourage workers to develop beyond the routine practice in such a manner that both the workers and the organization grow and develop together. In summary, key indicators for inspirational motivation are organizational vision, providing challenges for workers, encouragement and giving workers autonomy. They use emotions to motivate the staff. This ability could inspire team members and indirectly affects members’ satisfaction with the leader.

Our findings are contrary to Chu (2003) who found that charismatic and intellectual stimulation behaviour of leaders who engage with ERP implementation influence team members' satisfaction with their leaders. This might be due to the fact that his study included ERP project leaders instead of CEOs as the sampling frame. The role of the project leader, however, is limited for the life cycle of the ERP project. The CEO's role, on the contrary, is symbolic for the overall functioning of the SMEs. Our findings partially support lyengar (2007) who found that all the attributes of TRFL are significant for organizational innovation except individualized consideration and idealized influences. Results support Khan et al., (2009), and Imran et al., (2011) findings that all TRFL attributes are significant for organizational innovation.

In general, although we did not measure organizational culture, we partially agree with Ke and Wei (2008) who asserted that organizational culture is conducive to ERP implementation which is triggered by ERP top management’s direct effect on leadership. They asserted that TRFL behaviour is more effective in the technology adoption phase while TRXL is more effective in implementation phase and mixed leadership style is more effective for assimilation and extension phase. This might be true for a larger economy like China where the research is basically conducted. Secondly, the focus of the main business is large organizations and not the SMEs. Thirdly, their study provided a framework and no empirical evidence could further validate the framework. In the presence of these three assertions it is difficult to get support within our environments. Our work otherwise concluded that TRFL style is more suitable for ERP implementation among Bruneian SMEs.

The plausible reason for this finding might be found within the roots of Bruneian national culture. The functioning of Bruneian SMEs is normally controlled by their CEOs and because of relatively smaller size and other inherited technical, economical and operational impediments, the relationship between the CEOs and other operational and administrative staffs is direct. Secondly, although not measured directly, the national culture, we agree with Hofstede (1980), that the Bruneian culture is dominated by power distance and collectivism rather than individualism. So, CEO transformational abilities have more potential with ERP
technology implementation which is more of a teamwork process.

Conclusion

The study has fulfilled its objectives and some interesting findings emerged regarding the leadership style of CEOs among Bruneian SMEs. Although a statistically significant difference exists in both transformational and transactional types of leadership, more CEOs practise the TRFL style. However, the high mean score gives some indication that TRFL style is practised more frequently. Previous researchers suggested that transformational leaders are associated with technology adoption, implementation organizational change and innovation. This is also true for the ERP implementation process within SMEs. TRFL is based upon personal values and beliefs of the leaders, it therefore leads to a strong desire to adopt IT at all levels of the organization where it could provide competitive advantages.

In the context of Bruneian SMEs, TRFL should be blended with the TRXL so as to introduce business practices in a somewhat rigid way for the employees using the new ICT features. However, the TRFL should inspire the CEOs to believe in themselves through the process of strategic planning of the business setting and to adopt various IT/IS features to implement the vision and share in equally the use of new ICT tools in restructuring business processes at each stage of technology integration. As with ubiquitous and pervasive computing, a new wave of technology will replace the traditional brick-and-mortar business practices to a brick-and-click approach to the total virtual environments. In order to cope with drastic changes with the business process reengineering (BPR) for the SMEs to prepare for new challenges there needs to be an extensive retraining of these CEOs to accept the changing role of leadership. This process of change both in TRFL and TRXL styles will ensure an everlasting change through effective implementation.

By examining the effects of leadership style at the organizational level, our results have served to develop a comprehensive understanding of leadership style especially in deploying IT/ICT resources. It also provides useful insights to researchers and practitioners and they can use this study as a step forward for further refining their future endeavours.

Limitations: The study is not free from its weaknesses. The small sample size itself is not very rewarding and it is mostly because of the reason that ERP is very new and expensive technological advancement and majority of the SMEs are not yet ready to adopt it. Secondly, all data on leadership behavior for this study came from a self-report survey conducted in all the SMEs only in one district at a single point in time. It is possible that common method variance influences the results and that data collected on different times or through different methodologies could produce different results.

Recommendations: The study has brought the evidence of TRFL leadership style that prevails among CEOs of the Bruneian SMEs and is directional in nature. Therefore, precautions should be taken while generalizing the results. The study supports the previous researches to some extent on the relevancy of TRFL leadership style, but we cannot recommend that only CEOs with TRFL leadership should be selected. Since, this is the first study of its kind conducted in Brunei with small sample size, the future endeavours with more sample size could bring some significant results and especially longitudinal studies with other ASEAN countries especially in Singapore and Malaysia could further add to knowledge.

References


Questionnaire

Part A: Demographics

1. Gender:
   - Male
   - Female

2. Age group:
   - Below 25
   - 26 - 30
   - 31 - 35
   - Above 51

3. Educational Level
   - A-Level/ND
   - Professional qualification
   - HND
   - Masters and above
   - First degree

4. Job title
   - CEO/President
   - COO (Chief Operating Officer)
   - Director
   - General Manager
   - Senior executives

5. Total no of employees
   - Less than 10
   - 10-50
   - 51-100
   - Above 100

6. No of years of experience in the business
   - Less than year
   - One to five year
   - Six to 10 years
   - More than 10 years

7. Your Main Business Area (Type of Business):
   - Wholesale/retail
   - Banks/insurance
   - Hotel/Food & Catering
   - Travel/shipping/movers
   - Printing/publishing
   - Construction
   - General marketing
   - Services-based (such as IT, legal, health)
8. Up to what extent your business is using ERP? □ 1 □ 2 □ 3 □ 4 □ 5

9. What types of ERP technologies you have in your organization?
- Microsoft
- Oracle E-business
- Oracle People Soft
- SAP business one
- SAP R/3
- EPICOR
- ERP (in-house)

10. Types of applications using ERP
- Customer enquiry /CRM
- Order entry
- Order tracking and Billing
- Sales/Marketing including Budgeting
- Business planning
- Human resources

11. What is your current level of satisfaction with the ERP technology adoption?
- Very much satisfied
- Satisfied to some extent
- Not sure or average
- Dissatisfied to some extent
- Absolutely dissatisfied

Part B: Leadership Style

Use the following rating scale:

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>Once in a while</td>
<td>sometimes</td>
<td>fairly often</td>
<td>frequently if not always</td>
</tr>
</tbody>
</table>

Directions: This questionnaire is adapted after Bass and Avolio and designed to help you describe your leadership style as you perceive it. Please answer all items on the questionnaire by circling the appropriate response on the rating scale from 0 to 4 the format is given below. The word “others” in question may mean your peers, clients, direct reports staff, and/or all of these individuals. If an item is irrelevant, or if you are unsure or do not know the answer leave the answer blank.

1. I provide others with assistance in exchange for their efforts
2. I re-examine critical assumptions to questions whether they are appropriate
3. I fail to interfere until problems become serious
4. I focus attention on irregularities, mistakes, exceptions and deviations
5. I avoid getting involved when important issues arise
6. I talk about my most important values and beliefs
7. I am absent when needed
8. I seek differing perspectives when solving problems
9. I talk optimistically about the future
10. I instill pride in others for being associated with me

11. I discuss in specific terms who is responsible for achieving performance targets
12. I wait for things to go wrong before taken action
13. I talk enthusiastically about what needs to be accomplished
14. I specify the importance of having a strong sense of purpose
15. I spend time teaching and coaching
16. I make clear what one can expect to receive when performance goals are achieved
17. I show that I am a firm believer in "If it isn’t broke, don’t fix it"
18. I go beyond self-interest for the good of the group
19. I treat others as individuals rather than just as a member of a group
20. I demonstrate that problems must become chronic before I take action
21. I act in ways that build others’ respect for me
22. I concentrate my full intention on dealing with mistakes, complaints, and failures
23. I consider the moral and ethical consequences of decisions
24. I keep tracks of all mistakes
25. I display a sense of power and confidence
26. I articulate a compelling version of the future
27. I direct my attention toward failures to meet standards
28. I avoid making decisions
29. I consider an individual as having different needs, abilities, and aspirations from others
30. I get others to look at problems from many different angles
31. I help others to develop their strengths
32. I suggest new ways of looking at how to complete assignments
33. I delay responding to urgent questions
34. I emphasize the importance of having a collective sense of mission
35. I express satisfaction when others meet expectations
36. I express confidence that goals will be achieved
37. I am effective in meeting others’ job-related needs
38. I use methods of leadership that are satisfying
39. I get others to do more than they expected to do
40. I am effective in representing others to higher authority
41. I work with others in a satisfactory way
42. I heighten others’ desire to succeed
43. I am effective in meeting organizational requirements
44. I increase others’ willingness to try harder
45. I lead a group that is effective