

An Exploratory Study of Malaysian Technology-based Firms Leadership Styles

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Abstract

Leaders are effective when they are able to determine the success or failure of a firm. In a recent study on leadership styles within technology-based firms, three leadership styles have been identified; transformational, transactional and ambidextrous leadership. The present study is conducted to determine the level of leadership styles of technology-based firms in Malaysia based on these three styles. A survey was conducted on 46 technology-based firms in Malaysia. The findings revealed that all constructs of leadership styles were found to be significant. Practical implications are discussed and suggestions for future research are made.

Keywords: Ambidextrous leadership, technology-based firms, transactional leadership, transformational leadership.

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1.0 INTRODUCTION

Leaders are a dynamic sources of managerial success and able to sustain competitive advantage (Yildirim and Serhat, 2011). Leadership refers to the process of how to influence people and guiding them to achieve organisational goals (Northouse, 2007). Firm's effectiveness would differ when leaders apply different leadership styles in the organization (Nahavandi, 2002). Effective leaders are important because they are one of the factors that determine the success or failure of a group, organisation or even a whole country (Fiedler, 1996). With today's stiff competition, studying leadership style is important to identify suitable styles to be adopted by firms (Glantz, 2002). A study conducted by Rosing, Frese and Bausch (2011) indicated three leadership styles were found within technology company. These styles are transformational, transactional and ambidextrous.

Growing economies are now looking at high-technology sectors such as bio-technology, nano-technology, ICT and many more as these are the main source of future economic development (Cooper, 2006). It has also been highlighted that technology firm have an impact on economic growth, job opportunities and many innovations (Massa & Testa, 2008). However, to a certain level, limited studies have been taken on technology-based firms as their main focus (Majid, Ismail & Cooper, 2011; Ajagbe *et al.*, 2012).

Transformational leadership involves inspiration and charisma. It involves leaders to come up with strategic and clear

vision and communicate it effectively with their subordinates (Bass, 1985). The main components of transformational style are idealized attributes, idealized behavior, inspirational motivation, individualized consideration and intellectual stimulation. Robbins (2003) defined transactional leadership as directing and stimulating followers in accordance to stated goals by explaining their role and work requirement. Bass (1985) and Bass and Avolio (2004) classifies transactional style into two main components; contingent reward and management by exception in two forms; active and passive. Ambidextrous leadership refers to a combination of both transformational and transactional leadership where leaders are capable of simultaneously exploiting existing competencies and exploring new opportunities (Schreuders and Legesse, 2012). It is important for technology firm to be aware in balancing between exploration and exploitation to ensure firm's success (Rosing, Frese and Bausch, 2011).

Though many researches have been studying leadership styles, the majority concentrated in manufacturing and services sector (Yang, 2008; Yildirim and Serhat, 2011; Arham and Muenjohn, 2012). No researches specifically in Malaysia looked into leadership styles in technology-based firms. Thus, the present study is important as it aim to determine the level of leadership styles within technology-based firms in Malaysia. This paper consists of four parts. The first section of this paper provides a brief overview of leadership styles followed by research methodology, results and finally discussion and conclusion were presented.

■ 2.0 RESEARCH METHOD

In determining the level of leadership styles of technology-based firms in Malaysia, quantitative research method was adopted. Since there is no available database for technology-based firms in Malaysia, a list was obtained from an agency which has been set up by Malaysian government in overseeing the development of technology-based firms and at the same time involves in providing financial assistance to technology-based firms. This study used random sampling as each individual in the population has an equal probability of being selected (Creswell, 2003). As emphasized by Leedy and Ormrod (2005), random sample is utilized when the characteristics of the sample represent the characteristic of total population. A sample of 138 technology-based firms was considered for the purpose of this study. According to Roscoe's (1975) rule of thumb, a sample size between 30 and 500 is sufficient. The respondents were either the owner/managers due to their knowledge and expertise in terms of operation and direction of the firm. Furthermore, owners/managers are the most informed individuals about the firms' overall operational activities (Yang, 2008).

A self-reporting instrument was developed for this study containing a total of 41 items representing leadership styles and business background. The leadership style items were adapted from the Multifactor Leadership Questionnaire (MLQ) by Bass and Avolio (2004). To facilitate coding and data interpretation, the scaling format were measured on five-point Likert scales ranging from 1= not at all, 2= once in a while, 3= sometimes, 4= frequent and 5=very frequent. The choice of 5-point Likert scale is to reduce confusion among respondents and to ensure decision is made much more swiftly compared to 7-point scale. Besides, these choices clearly identify the agreement, neutrality and disagreement.

A cover letter was prepared to explain the purpose of the online questionnaire to the respondents together with the 41 itemed questionnaires. A total of 138 questionnaires were distributed for the study. Respondents were notified to participate in the survey via email and were given two weeks to complete the questionnaire. After two weeks, a reminder letter was given through email to those who have not responded, together with the extension of the new dateline for submission. After numerous attempts, 109 questionnaires were returned but 63 were removed due to incomplete and missing data. Only 46 questionnaires were found to be usable for this study which represent approximately 33% response rate.

Data obtained were analyzed through the SPSS statistical program. Reliability analysis was conducted to identify the constructs of leadership styles. As this is an exploratory study, a t-test is performed to test the data in order to see types of leadership styles preferred by technology-based firms. In this case, the mean leadership styles are 3. Test results with p-values <0.05 will indicate that the null hypotheses should be rejected. The hypothesis is as follows:

H_0 : the population mean is less than 3

H_a : the population mean is more than 3.

■ 3.0 RESULTS

A general background of companies participated in this study is shown in Table 1. The profile of the company includes the sectors, size of the company, cluster and locality of the business. From the total surveyed, 79.6 percent are technology-based firms in manufacturing sector while 20.4 percent is in services sector. The respondents were heavily from small enterprises

with 81.6 percent (N=37), followed by medium enterprises, 10.3 percent (N=4) and large enterprises, 8.1 percent (N=5). Majority of the technology-based firms locality are in the central region (69.4 percent), southern region (14.3 percent), northern region (10.2 percent) and eastern region (6.1 percent). The Cronbach's alpha value for overall leadership styles representing 37 items is 0.864. It indicates that the high Cronbach's alpha value are within the acceptable level as stated by Nunnally (1978) and Pallant (2001), where value above 0.7 is considered reliable.

Table 2 presents descriptive analyses for the items of all the three leadership styles. Results of the study show the mean ranging between 4.28 and 1.98 respectively. For transformational style, the highest mean is talk enthusiastically about what needs to be accomplished (m= 4.28) while the lowest is express confidence that goals are difficult to achieve (m=2.87). The highest mean for transactional style is express satisfaction when expectations are met (m=4.20) and interfere before problems become serious (m=1.98) has the lowest mean. The mean for ambidextrous style is highest for commits to improve quality and lower cost (m=4.28) and lowest mean for constantly surveys existing customers' satisfaction (m=3.57). All items measuring leadership styles is significant except two items. The mean pessimistic about the future (m=3.22) and express confidence that goals are difficult to achieve (m=2.87) was not significantly different from the hypothesized value of 3 where the significance values are $p = .268$ and $p = .445$ respectively. Thus, at the significance level (0.05), we cannot reject the null hypothesis.

Table 3 presents the descriptive analyses for one sample t-test for the three constructs of leadership styles. The three constructs (transformational, transactional and ambidextrous) show positive mean ranging from the highest with ambidextrous (m=3.966), followed by transformational (m=3.928) and transactional (m=3.314) which is slightly higher than our population mean of 3. All the three constructs are significant resulting for full support of the hypotheses.

Table 1 Companies profile

		Frequency	Percentage
Sectors	Manufacturing	36	79.6
	Services	10	20.4
Size of company	Small	37	81.6
	Medium	4	10.3
	Large	5	8.1
Industry Cluster (can have more than one)	Bio-technology	14	25
	Industrial Product	8	14.3
	Electronics & Electrical	10	19.6
	Others	24	41.1
Business location	Northern region	5	10.2
	Central region	32	69.4
	Southern region	7	14.3
	Eastern region	2	6.1

Table 2 One-sample T-test for itemized leadership styles

Items	Mean	Sig	Decision
Transformational Leadership			
Leads by example	4.04	0.000	Reject H ₀
Act in ways that build respect from others	4.07	0.000	Reject H ₀
Display sense of power and confidence	4.09	0.000	Reject H ₀
Specify a strong sense of purpose	4.09	0.000	Reject H ₀
Talk about beliefs and value	3.91	0.000	Reject H ₀
Pessimistic about the future	3.22	0.268	Do not reject H ₀
Talk enthusiastically about what needs to be accomplished	4.28	0.000	Reject H ₀
Articulate compelling vision of the future	4.02	0.000	Reject H ₀
Express confidence that goals are difficult to achieve	2.87	0.445	Do not reject H ₀
Encourage creativity in work assignments	4.04	0.000	Reject H ₀
Seek different perspectives in problem solving	4.13	0.000	Reject H ₀
Look at problems only from one angle	4.09	0.000	Reject H ₀
Spend time teaching and coaching others	3.80	0.000	Reject H ₀
Ignore the feelings of others	4.17	0.000	Reject H ₀
Help others develop their strength	4.09	0.000	Reject H ₀
Transactional Leadership			
Specifically discussed who is responsible for achieving performance targets	3.76	0.000	Reject H ₀
Communicate clearly on rewards when goals are achieved	3.80	0.000	Reject H ₀
Express satisfaction when expectations are met	4.20	0.000	Reject H ₀
Focus attention on irregularities, mistakes, exceptions, and deviations from standard	3.67	0.000	Reject H ₀
Full concentration given in dealing with mistake, complaints and failures	4.00	0.000	Reject H ₀
Necessary to track all mistakes	3.67	0.000	Reject H ₀
Focus on failures to meet standard	3.48	0.002	Reject H ₀
Interfere before problems become serious	1.98	0.000	Reject H ₀
Allow things to go wrong before any taking action	2.20	0.000	Reject H ₀
Actions taken before problems become chronic	2.02	0.000	Reject H ₀
Ambidextrous Leadership (AL)			
Looks for novel technological ideas by thinking “outside the box”	3.98	0.000	Reject H ₀
Base firm success on the ability to explore new technologies	4.02	0.000	Reject H ₀
Creates products or services that are innovative	3.98	0.000	Reject H ₀
Looks for creative ways to satisfy customers’ needs	4.13	0.000	Reject H ₀
Aggressively ventures into new market segments	3.98	0.000	Reject H ₀
Actively targets new customer groups	3.83	0.000	Reject H ₀
Commits to improve quality and lower cost	4.28	0.000	Reject H ₀
Continuously improves the reliability of products and services	4.11	0.000	Reject H ₀
Increases the levels of automation in its operations	3.78	0.000	Reject H ₀
Constantly surveys existing customers’ satisfaction	3.57	0.000	Reject H ₀
Fine-tunes what firm offers to keep current customers satisfied	4.04	0.000	Reject H ₀
Penetrates more deeply into existing customer base	3.89	0.000	Reject H ₀

Table 3 One-sample T-test for leadership styles dimensions

Dimension	Mean	Significant	Decision
Transformational Style	3.928	0.000	Reject H ₀
Transactional Style	3.314	0.000	Reject H ₀
Ambidextrous Style	3.966	0.000	Reject H ₀

Table 4 One-sample T-test for overall leadership styles

Variable	Mean	Significant	Decision
Leadership Styles	3.762	0.000	Reject H ₀

Table 4 depicts the overall leadership styles. The mean of the variable leadership for this particular sample of technology-based firms are 3.762 which statistically significantly different from the test value of 3. We would conclude that leadership styles of this technology-based firms is significantly different from the hypothesized value of 3 and H₀ is rejected.

4.0 CONCLUSION

The main objective of this study was to determine the level of dimensions of leadership styles in the context of technology-based firms in Malaysia. The study has revealed that leadership styles; transformational style, transactional style and ambidextrous style seem to be applicable to technology-based firms in Malaysia. This is consistent with study done by Schreuders and Legesse (2012) where these styles have been found within technology-based firm. In fact, a study conducted by Marmaya *et al.* (2011) found that transformational and transactional leadership styles are prevalent among Malaysian managers. Furthermore, the results imply that ambidextrous style seems to be the key to leadership styles for technology-based firm. In a comparison of three different leadership styles (N= 46), ambidextrous leadership has the highest mean (m=3.966) followed by transformational and transactional leadership (m=3.928 and m=3.314).

Similar results have been obtained by Bass and Avolio (2004) with transformational leadership (m=2.85) has a higher mean compared to transactional leadership (m=2.27). This is in line with studies by Yang (2008) that the mean for transformational leadership is higher than transactional leadership with mean=3.00 and mean=2.68. In another study by Rumani, Ramesh and Jayakrishnan (2010) on 300 managers, they found that leaders in public sector organization in India do have both transformational and transactional behaviors with the mean values of 2.92 and 2.83. All these studies supports that transformational leadership is more effective than transactional leadership as suggested by Gardner and Stough (2002)

Few limitations have been identified from this study. As this current study only focus on technology-based firms in Malaysia, similar study may reflect different results in other parts of the world. Moreover, since this study is an exploratory study, the results of this study do not represent the whole of Malaysian technology-based firms. It is only a reflection on a small fraction of the total population. Therefore cross regional study should be considered for future research. Realizing the importance of leadership in any organization, the styles adopted by leaders is important in ensuring the success of a firm and they should take the initiative to improve their leadership styles.

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