Leadership in Innovation: Lessons from Malaysia's Multimedia Super Corridor (MSC)

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Abstract

This paper reports the preliminary findings of a study examining the impact of leadership on innovation among Small and Medium Enterprises (SMEs) within Malaysia’s Multimedia Super Corridor (MSC). Leadership style has a profound impact on how an organization adapts to the changes in its environment. The ability of the leader to select the best strategy suited to his or her style will enhance the innovativeness of the organization. This paper discusses the findings from a pilot study that provides insights and lessons for both enhancing our understanding of the managerial task environment of innovation intensive SME, as well as possible implications effecting the future development of the MSC and similar initiatives like it.

Keywords: Innovation, Leadership, Small and Medium Enterprises, Strategy.

INTRODUCTION

Innovation is recognised as having a positive impact on the productivity of a country (Crosby, 2000). It is also generally accepted that innovation is an important factor in the growth and prosperity of firms (Janszen, 2000). The level of innovation is found to be the key for growth and employment creation in small and medium enterprises (SMEs) (North & Smallbone, 2000). A business environment which is becoming increasingly dynamic, complex and unpredictable environment (Coopers & Lybrand, 1997) further necessitates the need to innovate successfully. This is due to the increasingly rapid technological change and associated market instability as well as increasing demands from customers for new and better products (O’Regan & Ghobadian, 2006). The failure to address these issues would result in decreasing competitiveness and resilience of the firms in facing the onslaught of global competition.

It is argued that the entrepreneur’s attitude and orientation is often the key to innovativeness within the small firm (Chandler et al., 2000). His or her ability to provide practical, insightful, and innovative solutions to problems is crucial in creating the firm’s competitive advantage (Mazzarol, 2002; Battacharya, 2006). As leader, the entrepreneur is often referred to as the firms’ locus of control (Daily, 2001), where he or she is responsible in developing strategic decision making in selecting the most appropriate strategy to ensure that the firm is innovative. Previous research suggests that leadership plays an important role in innovation (Cummings & Oldham, 1997; Oldham & Cummings, 1996). At the same
time, the ability of senior level managers to develop an appropriate strategy would also enhance their firms’ performance and competitiveness (Papadakis, & Barwise, 2002).

Souitaris (2001) contends that most of the empirical research on the influence of innovation has been carried out in industrialised developed nations. He argues that it is rather inappropriate to use findings from innovation studies undertaken in technologically advanced countries to explain innovative behaviour in countries with a less developed technological base. Hadjimolis and Dickson, (2000) suggest that a study like this it would provide a better understanding of how SMEs in developing nations innovate despite the challenges they face. More importantly, it also provides the opportunity to look into the role of leaders in Malaysian SMEs in influencing their firms’ innovativeness and how they devise appropriate strategy to improve the level of innovativeness. The overall aim of this paper is to demonstrate that it is critical for the managers of small firms to realise that their leadership styles and strategy selection impact their firms’ long term survival and competitiveness.

AIMS OF THE RESEARCH

While the literature suggests that leadership is one of the important determinants of innovation (Damanpour, 1991), there is a lack of research investigating its impact on innovation (Mumford et al, 2002). It is important to fill this gap in order to provide a proper understanding as to the role of leaders in achieving innovation. This research also focuses on SMEs as these play an important role in the economies of most countries including Malaysia (SMIDEC, 2006). The literature deals primarily with large firms and gives less attention to high growth smaller organizations (Sexton and Smilor, 1997). Unlike their larger counterparts, small firms often display different strategic decision making processes (Shrader et al, 1998). Research into the relationship between leadership, strategy and innovation in SME is therefore likely to fill an important gap in the existing base of knowledge.
This paper reports the findings of an exploratory study into the relationship between leadership and innovation within small firms, and to investigate the impact of strategy on the level of innovation. The research questions that the study was seeking to address were:

1. Do leaders play a role in influencing the innovation activity within small firms?
2. Does strategy selection impact the innovation activity within small firms?

**INNOVATION AND SME**

Innovation is a multidimensional construct that can involve new or significant improvements to products or processes, and can be technological or administrative in nature (Cooper, 1998). Innovation has been identified as either radical or disruptive and discontinuous in nature, or incremental imitative and evolutionary (Garcia & Calantone, 2002). Due to its multidimensional characteristics, innovation can include a new product or service, a new production process technology, a new structure or administrative system, or a new program (Damanpour, 1991). For the purposes of this study innovation can be defined as the development and successful implementation of a new or improved product, service, and technology and work process or market condition, directed towards gaining a competitive advantage (De Jong and Brouwer, 1999). It is imperative that innovation becomes the strategic competitive advantage for SMEs to grow because it enables them to compete in domestic and global markets (Hitt et al, 2001).

There are numerous definitions of SME, but for the purposes of this study an SME may be defined as a business enterprise that has fewer than 250 employees and an annual turnover less than EURO 50 million (OECD, 2004). It has been the engine to economic growth in the 21 Asia Pacific Economic Cooperation (APEC) economies (APEC, 2005). The development of diverse and competitive SMEs is crucial for creating economic resilience and contributing towards growth (UNDP, 2007). Economic growth in developed countries such as Japan, Korea, Taiwan and many others, was significantly enhanced by SME activities where their contribution to GDP/total value added in recent years has ranged from 50% in Korea, 55.3% in Japan, 57.0% in Germany, 60% in China and 47.3% in Malaysia (Md Aris, 2006).
A recent study by the Organization for Economic Cooperation and Development (OECD) demonstrated that small innovative firms, especially young ones, play a key role in ensuring the vitality of regional and national innovation systems, and thus raises the growth potential of the 30 OECD economies (OECD, 2001). The same phenomenon also applies to Malaysia where there is a positive correlation between the innovation activities taken by SMEs and their contribution to that country’s economy (MDeC, 2004). It is in this country context that the current study was undertaken.

LEADERSHIP AND INNOVATION

Research on the determinants of innovation has identified several factors involving individual, group and organizational level variables (Damanpour, 1991; Souitaris, 2001; Mumford et al, 2002). At the individual level, personality, technical knowledge, expertise, motives, and the supervisor’s feedback style are known to play an important role in stimulating innovation while assignment structure, communication types, and assignment autonomy are important at the group level. Similarly, organizational level variables, such as strategy, organizational structure, culture and climate, and resources have a substantial effect on innovation (Scott & Bruce, 1994).

Since leadership in small organizations has been identified as the central element in influencing the firm’s competitive advantage, he or she is increasingly becoming an important determinant of innovation (West et al, 2003). Jung, Chow & Wu (2003) suggest that a leader has the ability to influence innovation in the firm through introducing new ideas into an organization, setting specific goals, and encouraging innovation initiatives from subordinates. The literature highlights that the leader’s characteristics (e.g. education, background, attitude, and personality) play an important role in influencing innovation (Tushman & Nadler, 1986; Howell, 1993; Storey, 2000; Jung, 2001; Jung et al, 2003).

An influential leadership concept is the full-range leadership theory (FRLT) which presents transformational leadership and transactional leadership (Bass, 1985, 1998; Avolio, 1999; Avolio, Bass, & Jung, 1999). Transformational leadership encompasses four factors namely inspirational motivation idealized influence (attributed) idealized influence (behaviour) and intellectual stimulation. Meanwhile,
Transactional leadership consists of factors like contingent reward leadership and management by exception (active) and management by exception (passive).

The combination of these behavioural components is recognized as improving performance and innovation among the followers within organizations especially in relation to transformational leadership (Bass & Yammarino, 1992; Jung, 2001; Sosik, Kahai & Avolio, 1998). Pawar and Eastman (1997) suggest that transformational leaders are associated with certain environmental conditions – complexity, uncertainty, and novelty of the work – that involve constant changes. For example, Jung et al (2003) in their study of 32 Taiwanese companies in the electronics/telecommunications industry found a direct and positive relationship between the firms’ organizational innovation and the leadership style of the Chief Executive Officer (CEO). Transformational leadership provides vision and actively stimulates their employee’s intellectually while providing empowerment and a supportive environment for the pursuit of innovation. However, a firm’s innovativeness is moderated by its management’s choice of goals, strategies for growth and competitive intensity (Engelland & Summey, 1999).

**LEADERSHIP, STRATEGY AND INNOVATION**

Strategy is a process through which firms pursue the creation of a sustainable competitive advantage that can ensure increased financial performance and long term survival (Hunt, 2000). In order to be competitive, all firms regardless as to whether they operate in the same industry or not will respond differently to their environment (O’Regan & Ghobadian, 2005). Some will adopt a strategy based on their traditional strengths, while other will take more risk by becoming adventurous leading the market that they operate in. Small firms however manage strategy differently from large its large counterparts (Mazzarol & Reboud, 2006). Bhide (1994) contended that small firms lead by entrepreneurs usually practice informality in planning strategy by constantly adapting to their external environment. Their strategy formulation is characterised by being ‘emergent’ rather than systematically planned (Mintzberg, 1994).
A leader’s role is to provide a strategic posture to the organization that he or she leads (e.g., Gupta & Govindarajan, 1984; Miller and Toulouse, 1986). This is particularly so in small firms where there are fewer constraints on leaders in terms of the firm’s structure complexity and systems. The smaller the size of the firm also increases the leaders’ managerial discretion (Finkelstein & Hambrick, 1996), which can exert a distinct influence on organizational processes and outcomes (e.g., Daily & Johnson, 1997). Markides (2000) argues that the essence of strategy is for leaders to make choices on three critical issues: i. whom to target as customers; ii. what to offer these customers; and iii. how to do all this. These three issues are critical because they become the parameters within which employees are free to operate experiment and innovate.

Due to the dynamic nature of competition in the external environment, the ability of business leaders to develop an appropriate strategy may enhance their firms’ performance and long term survival. Even though small firms are usually associated with informality and spontaneity in their strategy, there is evidence that they take a strategic approach (O’Regan & Ghobadian, 2005). This can affect their reaction to the external environment. This reaction can be categorised according to strategic orientation which is defined by Manu & Sriram (1996, p. 79) as “how an organization uses a strategy to adapt and/or change aspects of its environment for a more favourable environment”.

Miles and Snow (1978) proposed a strategic typology containing four main strategy orientations that are important in addressing three basic problems facing most firms: i) the organization’s competitiveness in the market (entrepreneurial problem); ii) the deployment of resources to achieve the competitiveness (engineering problem); and iii) the administration to implement all these actions (administrative problem). The four main orientations are: i. Prospector, ii. Analyser, iii. Defender, and iv. Reactor.

According to Miles and Snow (1978), prospectors devote more resources to entrepreneurial tasks, monitoring evolving trends in the marketplace, and new product development, and are led by a dominant coalition that possesses an expertise in marketing and R&D. Prospector firms welcome and thrive in innovative, dynamic environments, maximizing new opportunities where they are likely to be first to the
market and exploit the opportunity, hence, they have a higher tolerance for risk and are flexible and adapt to necessary changes. In contrast, Miles and Snow (1978) described Defender organizations as those that focus on engineering tasks, place a high priority on improvements in efficiency, and prefer stability and status quo. Instead of venturing aggressively, they concentrate on their strength and try to improve it so that they are capable to improve the efficiency and capability of their existing product.

Analysers are hybrid in nature, where they combined Prospector and Defender characteristics. In stable product-market domains, Analysers emphasise production and strive for improved efficiency. In more turbulent product markets they closely monitor key competitors and adopt only those innovations which appear to have strong market potential. They behave like Defenders in the more stable areas and like Prospectors in the more turbulent areas and their organizational structures and processes are a combination of those found among Prospectors and Defenders. Thus, by implementing either one these strategic orientations, the leaders can influence their firms’ level of innovation and competitive edge.

**METHODOLOGY OF THE RESEARCH**

**The Questionnaires and Measures**

Leadership within the firm was measured using a 32-item scale from the Multifactor Leadership Questionnaire (MLQ) developed by Bass & Avolio (1997). All four theoretically distinctive behavioural components of transformational leadership which consists of idealized influence, inspirational motivation, intellectual stimulation and individualized consideration were estimated through MLQ. The three behavioural components of transactional leadership; e.g. contingent reward, management by exception (active) and management by exception (passive); were also measured.

Innovation was measured using a scale developed by Soutar and McNeill (1993) of organizational innovativeness. These items measure the level of innovation activity in the firms by examining the frequency, type, success, importance and impact of innovation. Finally, the strategic orientation of the firm was estimated by a multi-item scale developed by Segev (1987). The multi-items approach used allows the attributes of each strategic orientation typology to be conceptualised. Each
concept was divided into the basic components where they were individually evaluated. The study used managerial perceptions because they play an important role in influencing the strategic behaviour of the firms (O’Regan & Ghobadian, 2006). It is consistent with earlier studies conducted related to innovation (i.e. Jung et al, 2003; Howell & Avolio, 1993)

The Sample

This was a pilot study involving 32 small information and communication technology (ICT) firm’s operating within the Malaysia’s Multimedia Super Corridor (MSC) status. The MSC is a corridor developed by the Malaysian government to be the hub of the ICT industry in Malaysia. The firms within the MSC have been given certain privileges by the government of Malaysia including tax relief, access to grants, training development and few more. They come from several ICT industrial niche areas including software and hardware development, content development and multimedia, and internet businesses. The database from which the sample of firms was acquired is held by Malaysia’s Multimedia Development Corporation (MDeC), the government agency responsible in coordinating and monitoring these firms. A questionnaire was posted to the CEO of each firm after they had given their consent to participate in this first stage of the research.

RESULTS

Descriptive Results from the Survey

Seventy two percent of the respondents were CEOs or senior managers who owned either all or some of the equity in the firm. Their average age was 43 years old with the oldest at 63 and the youngest at 32. Eighty-eight percent were below 50 years of age. In terms of work experience, 81 percent of them have 10 or more working experience in the industry. Lastly, the respondents are largely from diverse education background with 12 of them were from an ICT background, 10 from management and 8 from engineering with the rest comprising marketing, physical sciences, social sciences and other education background. The majority of them have some bachelor degree (67 %), followed by those having some
postgraduate qualification (31%) and the rest some college education. The average age of each firm was 8.3 years old. All of them had fewer than 250 employees with an average of 40 employees. The largest firm employs 125 employees while the smallest employs only 4 employees. On average, they have around 5 people in their top management team where the range of top managers is between 2 people to 16 people.

Using the multi-item scale of Segev (1987) the firms were classified into three strategic orientations based on the original typology proposed by Miles and Snow (1978); prospector, analyser and defender. Half the firms were categorized as Prospectors, 28 percent as Analysers and 22 percent as Defenders. By utilising the MLQ in measuring and determining leadership style, it is interesting to note that almost all of the managers (31) were classified as transformational in behaviour and only one (1) was found to be transactional. Finally, the level of innovation of the firms as measured by the Soutar & McNeil (1993) scale has found that 28 percent of the firms have a high level of innovation, 38 percent have medium level of innovation and 34 percent have low level of innovation.

**Leadership and Innovation**

Correlation analysis was used to establish the relationship the leadership styles and the level of innovativeness achieved by the firms. It indicated a small positive correlation at the 0.05 level between both leadership styles and the level of innovativeness. Transformational leadership displays a higher positive correlation than transactional leadership (Table 1). This suggests that leadership styles may play a positive role in influencing the level of innovation activity in small firms.

**Table 1: Factor correlation matrix – leadership and innovation**

<table>
<thead>
<tr>
<th></th>
<th>Transformational</th>
<th>Transactional</th>
<th>Innovativeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformational</td>
<td>1</td>
<td>1.52</td>
<td>2.22</td>
</tr>
<tr>
<td>Transactional</td>
<td>1.95</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>1.44</td>
<td>2.71</td>
<td>1</td>
</tr>
</tbody>
</table>
Strategy and Innovation

In addition to understanding the relationship between leadership and innovation, correlation analysis was also used to establish the relationship between strategic orientation and innovation. It indicated a significant and positive correlation between Prospector and Analyser firms with respect to the level of innovation activity undertaken by these firms (Table 2). This is not surprising because the correlation between the types of strategic orientation is significantly positive, which indicates that both share some similar characteristics that encourage innovation to happen. Meanwhile, Defender firms show a negative correlation with innovation which is consistent with the theories originally postulated by Miles and Snow (1978).

Table 2: Factor correlation matrix – strategy and innovation

<table>
<thead>
<tr>
<th></th>
<th>Prospector</th>
<th>Analyser</th>
<th>Defender</th>
<th>Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prospector</td>
<td>1</td>
<td>3.70*</td>
<td>-2.97</td>
<td>3.91*</td>
</tr>
<tr>
<td>Analyser</td>
<td>3.70*</td>
<td>1</td>
<td>1.41</td>
<td>3.97*</td>
</tr>
<tr>
<td>Defender</td>
<td>-2.97</td>
<td>1.41</td>
<td>1</td>
<td>-0.76</td>
</tr>
<tr>
<td>Innovation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level.

DISCUSSION

This paper has outlined some early findings from a pilot study of the role of leadership in innovation activities within small firms in the MSC. As might be expected from a cross-section of firms drawn from a dedicated technology precinct, the sample firms were all small and relatively immature in their development. Most of them were highly innovative and their senior leadership was characterised by being relatively young, highly educated and with a strong track record and depth of experience in the industry. The profiles of these senior managers and their firms confirmed the technology entrepreneurship and innovation typologies proposed elsewhere in the literature (Rizzoni, 1991; Jones-Evans, 1995; Autio &
Lumme, 1998). It is not surprising that high growth SMEs require strategies like Prospector and Analyser (O’Regan & Ghobadian, 2005) that follow aggressive new product development (NPD) led strategies with the top management team possessing not only strong technical competencies, but also strong marketing competencies (McDougall, Covin, Robinson & Herron, 1994). The need to balance the technical and marketing issues within the NPD and commercialisation process has been highlighted in the literature (Huang, Soutar & Brown, 2002; Lee & O’Connor, 2003). Managers from small firms who are engaged in commercialisation of new technologies need to be competent in project management from a technical perspective (Salomo, Weise & Gemunden, 2007), however they also need to be capable of leading their teams in change and communicating these ideas to customers (Zahay & Griffin, 2004). The top management team within such firms needs to be balanced with a good cross section of functional skills (Weinzimmer, 1997). Given the focus of the MSC precinct it was not surprising to find that ICT and engineering dominated their educational training and contributed to their deep understanding of the industry.

CONCLUSION

Preliminary analysis of the three strategic orientation typology categories suggests some interesting data about the nature of the inter-relationship between the three variables namely leadership innovation and strategy. While no concrete conclusion can be given at this stage, it is noteworthy that most CEOs were technologists rather than people with marketing or wider management experiences. Their transformational leadership style is unsurprising given their focus on new technology and innovation. However, their ability to successfully commercialise their ideas may require a strong transactional leadership style during the implementation process. At the same time, the ability of the leaders to select appropriate strategy will enhance their firms’ innovativeness. This is because it will allow them to anticipate and react properly to the changes in their industry. It is anticipated that when the larger scale of data collection started during the second stage, more understanding about these relationships can be uncovered.
REFERENCES


Jung DI, Chow C & Wu A (2003) The role of transformational leadership in enhancing organizational innovation: Hypothesis and some preliminary findings The Leadership Quarterly 14: 525-544


