

ENHANCING AND SUSTAINING ORGANIZATIONAL INNOVATIVE PERFORMANCE THROUGH TRANSFORMATIONAL LEADERSHIP

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ABSTRACT This paper reports the findings of a study examining the influence of leadership in enhancing and sustaining innovation performance among small and medium enterprises (SMEs) within Malaysia's Multimedia Super Corridor (MSC). Data were collected from 87 respondents who are the top managers of the SMEs asking about their leadership styles, their firms' strategic orientation and innovation performance. Partial Least Squares (PLS) Structural Equation Modelling (SEM) were utilized to test the research framework. Transformational leadership was found to have a significant influence on the firms' innovation performance. Subsequently, whilst the study found that product innovation was able to further enhance the firms' innovation performance, prospector strategic orientation was found not to have similar influence on the firms' innovation performance. The findings from this study provide a valuable insights and lessons on the importance of leadership, particularly transformational leadership and the tangible aspect of product innovation, in driving the firms' innovative performance. Hence, it is crucial for managers of an innovation intensive SME operating in dedicated corridor like MSC to be aware of their leadership style and its impact of their firms' survival.

KEYWORDS: leadership, product innovation, prospector strategic orientation, innovation performance

1.0 INTRODUCTION

Innovation is recognized as having a positive impact on the productivity of a country. It is also generally accepted that innovation is an important factor in the growth and prosperity of firms [1]. The level of innovation is also found to be the key for growth and employment creation in SMEs [2]. Thus, the need to innovate successfully is assuming greater importance due to the increasingly rapid technological change and associated market instability as well as increasing demands from customers for new and better products [3].

As the leader of the firm, the entrepreneur is often referred to as the locus of control of the firm [4], where he or she is responsible in developing strategic decision making in selecting the most appropriate strategy to ensure that the firm is innovative. His or her ability to provide practical, insightful, and innovative solutions to problems is crucial in creating the firm's competitive advantage [5,6]. Empirical evidences have shown that leadership plays an important role in innovation [7] [8]. At the same time, the ability of leaders and senior level managers to develop an appropriate strategy would also enhance their firms' performance and competitiveness[9].

As such, the aim of this study is to investigate the role of leadership in influencing the level of firms' innovation performance among. A research framework was developed where transformational leadership was posited as having direct influence on the firms' innovation performance. It was also suggested that the types of innovation and strategic orientation undertaken by the firms will mediate the relationship between leadership and their innovation performance.

2.0 LITERATURE REVIEW

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 [10]. Mumford & Licuanan [11] and Jung Chow & Wu [12] argue that the leader has the

ability to influence innovation in the firm through introducing new ideas into an organization, set specific goals, and encourage innovation initiatives from subordinates. The literature has pointed out that the firm's leader characteristics (e.g. education, background, attitude, and personality) play an important role in influencing innovation [13 -17].

2.1 Transformational Leadership and Innovation

Transformational leadership is said to possess a combination of positive behavioural components recognised as improving performance and innovation among the followers within organisations [18 - 20]. It encompasses four factors namely inspirational motivation idealized influence (attributed) idealized influence (behaviour) and intellectual stimulation [21].

It is suggested that transformational leaders are associated with certain environmental conditions such as complexity, uncertainty, and novelty of the work, which involve constant changes that are a suitable environment for innovation to prosper [22]. Conceptually a transformational leadership style displays behaviour that creates an environment conducive for innovation to prosper [23].

As such, transformational leadership provides vision and actively stimulates their employee's intellectually while providing empowerment and a supportive environment for the pursuit of innovation. From an innovation perspective, technological product innovation involves the commercialization of a new product with significantly improved performance characteristics. At the same time, it is also more open to the facilitation of unconventional and innovative thinking and working processes that might lead to new knowledge and technology, so fundamental to a firm's innovation [24]. Not only that, product innovation requires significantly more external, market oriented behavior present in transformational leadership to prosper.

Based on these arguments, the following hypothesis are formulated:

H1: Transformational leadership is positively related to the firms' innovation performance.

2.2 Leadership and Strategic Orientation

A leader's role is to provide a strategic posture to the organization that he or she leads [25] [26]. 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 [27]. This is particularly so in small firms where there are fewer constraints on leaders in terms of the firm's structure complexity and systems.

Even though small firms are usually associated with informality and spontaneity in their strategy, there is evidence that they take a strategic approach [12]. This can affect their reaction to the external environment. This reaction can be categorized according to strategic orientation which is defined by Manu & Sriram [28] as "how an organization uses a strategy to adapt and/or change aspects of its environment for a more favorable environment".

Hence, there is 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) [29]. The four main orientations are: i. Prospector, ii. Analyzer, iii. Defender and iv. Reactor.

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 [29]. They 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 higher tolerance for risk and are flexible to adapt necessary changes.

Based on these arguments, the following hypotheses are formulated:

H2: Transformational leadership is positively related to (a) product innovation and (b) prospector orientation strategy.

H3: Firms' focus on (a) product innovation and (b) prospector orientation strategy is positively related to the firms' innovation performance.

3.0 METHODOLOGY

4.0

2.3.1 Sample and Procedure

Data collection employed a cross-sectional survey of 500 firms operating in the MSC. The study used single respondents involving the Chief Executive Officer or the most senior manager in the firms' with responsibility for the strategic direction of their firm. 87 respondents participated in the study, which yielded a 17.4% response rate, a common rate of response in this kind of study (provide reference). Managerial perceptions were solicited because these people play an important role in influencing the strategic behavior of the firm [30]. This approach is

consistent with earlier studies conducted related to innovation [12] [14].

Seventy percent of the respondents were CEOs or senior managers who owned either all or some of the equity in the firm. Their average age is 43.5 years old with the oldest at 62 years old and the youngest at 25. The average working experience is of the respondents is 16.2 years where 55 percent of them have less than 15 years working experience in the industry. 64 percent of them were mainly from technical background where 31 respondents from an ICT and 25 from engineering background. The rest of the respondents had an education background in marketing, physical sciences, social sciences and others. 45 percent had bachelor degrees followed by 41 percent having postgraduate qualification while the rest had some college education.

The average age of each firm was 8 years old. All of them had fewer than 250 employees with an average of 40 employees. The largest firm employs 250 employees while the smallest employs only 2 employees. On average, they have around 4.5 people in their top management team (TMT) where the range of top managers is between 1 people to 16 people.

2.3.2 Measures

Leadership within the firm was measured using a 32-item scale from the Multifactor Leadership Questionnaire (MLQ) developed by [31]. Product innovation was measured using a scale developed by Soutar and McNeill [32] of organisational innovativeness which looks into types of innovation activities undertaken by the firm. Strategic orientation was estimated by a multi-item scale developed by [33]. The multi-items approach used allows the attributes of each strategic orientation typology to be conceptualized. Finally, innovation performance construct was developed from multiple sources to cover the area of product and process innovation success [34 - 38].

2.3.3 Data Analysis

The data were initially analyzed using the Statistical Package for the Social Sciences (SPSS Version 19.0 for Windows) in extracting the descriptive understanding of the researchers' profile. Next, the data were analyzed using Partial Least Squares (PLS) Structural Equation Modelling (SEM), which is a second generation of multivariate analyses. PLS is a technique also known as a "soft modelling" technique. It was developed to address the challenges posed by "hard modelling" technique such as obtaining large enough samples, finding empirical support for nascent theory, and meeting a rigid assumptions of the statistical techniques [20]. Recent advances in the advances of statistical software packages like SmartPLS and PLS-Graph and also better understanding among researchers about its functionality as well as advantages has seen this technique increasingly being adopted by group and organisation researchers [14].

2.4 Findings

2.4.1 Measurement Component

The assessment of the measurement model composed of the examination three important elements. It started by the examination of the individual item reliability. This is done

Table 1: Inter-correlations among constructs (n=87 firms)

Item	1	2	3	4
Transformational Leadership	0.783			
Product Innovation	0.640	0.854		
Prospector Orientation Strategy	0.263	0.197	0.790	
Innovation Performance	0.566	0.340	0.263	0.826

Table 2: Initial Assessment: Factor loadings, weights, composite scale reliability, and average variance extracted for assessing construct validity

Construct	Item	Factor Loading	Weight	ICR	AVE
1. Transformational Leadership	IC	0.663	0.146	0.886	0.613
	IIA	0.676	0.190		
	IIB	0.839	0.263		
	IS	0.903	0.373		
	IM	0.806	0.270		
2. Product Innovation	PDN1	0.806	0.209	0.930	0.730
	PDN2	0.846	0.231		
	PDN3	0.855	0.248		
	PDN4	0.886	0.230		
	PDN5	0.875	0.253		
3. Prospector Orientation Strategy	PROSP1	0.893	0.673	0.832	0.625
	PROSP3	0.774	0.468		
	PROSP5	0.692	0.053		
4. Innovation Performance	INPERF10.857	0.143		0.951	0.682
	INPERF20.843	0.117			
	INPERF30.722	0.128			
	INPERF40.790	0.123			
	INPERF50.829	0.135			
	INPERF60.852	0.147			
	INPERF70.841	0.140			
	INPERF60.833	0.141			
	INPERF70.855	0.137			

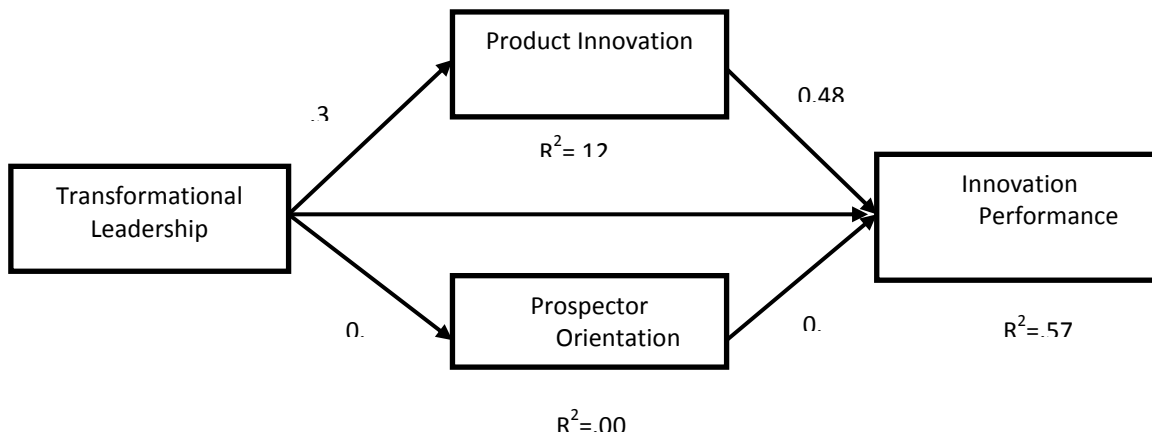


Figure 1: Results of PLS analysis

by examining the loadings of items with their associated construct. The rule of thumb is to accept loadings of greater than .60, or above to ensure adequate reliability [39]. Next internal consistency was investigated where Fornell and Larcker's [40] measure is used to determine the constructs internal consistency. A level of .70 was adapted as a modest level of reliability due to the exploratory nature of this research [41]. The Average Variance Extracted (AVE) measure [40] is recommended to be above .50, implying that 50 per cent or more variance of the indicators is accounted for. Finally, the discriminant validity which refers to the level of differentiation of supposedly different constructs was determined. An appropriate level of discrimination can be assumed if a construct shares more variance with its own measures than with other constructs in a model [42].

Application of these criteria led the researchers to retain 5 items for transformational leadership (individualized considerations, idealized influence (attribute & behavior), intellectual stimulation and inspirational motivation), 5 items for product innovation, 3 items for prospector orientation strategy and 9 items for support for innovation performance. Two items from prospector orientation strategy failed to achieve a factor loading of 0.60 and were subsequently dropped. Table 1 demonstrates that each construct's square root measure is greater than the correlation between them thus confirming the discriminant validity of each construct.

Values on the diagonal represent the square root of the average variance extracted. Values off the diagonal are correlations between constructs.

Table 2 presents the factor loadings, the composite scale reliabilities and average variance extracted (AVE) for indicators of the lower-order constructs that contained two or more items.

2.4.2 Structural Component

Results of the PLS analysis are shown in Fig. 1. Due to the small sample size of 87 companies, the researcher used a relatively lenient criterion of 10% for statistical significance in the current study. Consistent with Hypothesis 1, transformational leadership was significantly and positively related to innovation performance ($b = 0.395$, $p < .10$). Transformational leadership also was significantly and positively related to product innovation ($b = 0.340$, $p < .001$) and prospector orientation strategy ($b = 0.06$, $p < .001$), thus supporting Hypotheses 2a and 2b. Hypothesis 3 was also supported. Both product innovation (Hypothesis 3a: $b = 0.48$, $p < .001$) and prospector orientation strategy (Hypothesis 3b: $b = 0.15$, $p < .001$) were, as predicted, significantly and positively related to innovation performance.

CONCLUSION

The study has tested the direct and mediated effect of leadership styles on firms' innovation performance. Our results suggest that there is a direct and positive effect of transformational leadership style on firms' innovation performance and a simultaneous emphasis that on product innovation and prospector orientation strategy. Both product

innovation and prospector orientation strategy are also appearing to have a strong influence on innovation performance.

From a practice perspective, these findings highlight the need for senior managers to fit their leadership styles and behaviors to the task environment in which their firms operate. Senior managers like the CEO have sufficient authority to select and influence some of the variables, such as the types of innovation activities that mediate the link between their leadership styles and organizational innovation. As a result, it amplifies the effects of their leadership styles and behaviors [44], 1997; [26] [45].

The present study provides a unique insight into the importance of process innovation for small firms to produce successful new products. Even though the creation of product innovation is known as an ill-defined venture [47], the small size of the firm makes it unavoidable to do away with the prospector orientation strategy because it can very well determine their innovation performance [45].

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