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FIRM CHARACTERISTICS, COMPETITIVE STRATEGIES, ENVIRONMENT AND BUSINESS PERFORMANCE: SURVEY EVIDENCE FROM MALAYSIAN SMES

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ABSTRACT

This article focuses on small and medium-sized enterprises (SMEs) from the strategic management perspective. This article is based on the findings of a sample survey that examined the general relationships between firm characteristics, competitive strategies, environment and business performance of SMEs in the Malaysian manufacturing sector.

The sample consisted of 100 SMEs from different industries. The empirical findings suggested different patterns of competitive strategies and performance relations as well as the relationships between firm characteristics, environment and the business performance of the SMEs surveyed.

ABSTRAK

Artikel ini menumpukan kepada perniagaan kecil dan sederhana (PKS) dari perspektif pengurusan strategik. Artikel ini berdasarkan penemuan kajian sampel yang mengkaji perkaitan umum antara ciri-ciri firma, strategi persaingan, persekitaran dan prestasi perniagaan dalam perniagaan kecil dan sederhana di sektor pembuatan di Malaysia.

Sampel merangkumi 100 perniagaan kecil dan sederhana dari pelbagai industri. Penemuan empirikal menyarankan bahawa terdapat perbezaan antara strategi berdaya saing dengan prestasi dan juga hubungan antara ciri-ciri firma, persekitaran dan prestasi perniagaan bagi perniagaan kecil dan sederhana yang ditinjau.

INTRODUCTION

Strategic management is widely accepted as good business practice. Strategic management is concerned with organisation, management and environment. Through the strategic management process, management of organisations direct, mould, and relate their organisations to the business environment in order to improve their performance.

The literature suggests that previous theoretical and empirical contributions to strategic management mainly focused on large firms. Surprisingly, strategic management in SMEs has received only minimal attention in the small business research literature.

However, recently, researchers are acknowledging the suitability and applicability of strategic management in SMEs (Wheelen & Hunger, 1993 & 1995; Scarborough & Zimmerer, 1996 & 1998; David, 1993 &1999).

Despite the increase in knowledge in the area of strategic management, not much of this management discipline has been utilised by researchers in investigating SMEs. In Malaysia, research which examines SMEs from various aspects of strategic management is still very rare (Sim, 1991; Sim & Yap, 1997).

In an attempt to narrow this research gap, this article focuses on SMEs from the strategic management perspective. More specifically, this article reports the findings of a sample survey that empirically examined the relationships between firm characteristics, competitive strategies, environment and business performance of SMEs in the Malaysian manufacturing sector.

THE RESEARCH PROBLEM

The increased research interests on strategic management results from the growing evidence that indicates effective strategic management can help improved organisational performance. According to these studies, companies that practised strategic management improved their performance (Wood & Laforge, 1979; Rue & Holland, 1989; Kotha & Nair, 1995).

In Malaysia, previous research on strategic management has mainly concentrated on large manufacturing firms (Sulaiman, 1993; Sim & Yap, 1997; Abdullah, 1998). Yet, SMEs now account for more than 80 percent of the total numbers of firms in the manufacturing sector in Malaysia (National Productivity Corporation, 1996).

Further, the literature also reveals that little is known about the behavioural differences of SMEs competing in an industry and the means by which they build their competitive advantage as well as develop strategies to achieve superior performance (Bamberger, 1990; Thomas & Ramaswamy, 1991; Chen & Hambrick, 1995).

There is, therefore, a need for more empirical studies that examine strategic management in SMEs. Empirical research on this area would not only provide more evidence on the impact of strategic management on the performance of SMEs in the Malaysian context, but would also be of great benefit for SMEs striving to be more competitive.

A better understanding of strategic management is of great value to owner-managers of SMEs. With better understanding of strategic management, owner-managers of SMEs can formulate and implement effective strategies based on their strategic capabilities and the environment to improve their performances as well as overcome problems, constraints and attain sustained growth.

OBJECTIVES OF THE STUDY

The purpose of this study was to examine the relationships between firm characteristics, competitive strategies, environment and the performance of SMEs. More specifically, the objectives of this study were:

1) to determine the relationship between firm characteristics and the perfor mance of SMEs;

2) to determine the effect of competitive strategies on the performance of SMEs; and

3) to determine the relationship between environment and performance of SMEs.

DEFINITIONS OF TERMS

Small and medium-sized enterprises (SMEs) in this study refer to manufacturing firms employing between 10 and 300 full time employees and have been in operation for at least three years.

Competitive strategies refer to the patterns of action taken or manner in which a firm relates as well as competes in its external environment. The six competitive strategies adopted in this study are: low cost, product differentiation, niche, growth, harvest, and vertical integration.

Firm characteristics refer to: age of firm, number of owners, organisational structure (complexity, formalisation and centralisation), technological complexity of product and process, initial capital, and number of employees.

Environment refers to the uncertainty of a firm's external task environment and the intensity of competition that affect its business activities. The external task environment of a firm includes its competitors, customers, suppliers, regulators, and associations. The intensity of competition refers to the degree of competition in price, product, technology, distribution, manpower and raw materials.

Business performance is measured in terms of firm's average growth and the business performance composite index (BPCI). Sales, assets, gross profit, employment, equity, return on sales (ROS), return on investment (ROI) and return on asset (ROA) are used to assess the SMEs performances measures. The BPCI is derived from the mean values of ROS, ROI and ROA (BPCI=ROS+ROI+ROA/3).

THE LITERATURE

The literature indicates that strategic management is applicable and relevant to SMEs as it is to large enterprises. The adoption of strategic management to investigate the performance of SMEs requires the identification as well as the understanding of the appropriate variables that are both important and relevant to this field of study. Based on the literature, this study identified the following variables.

Firm Characteristics

Jennings (1994) claimed that the success of an individual firm will be affected by factors such as firm characteristics. Previous studies have found that SMEs differ from each other in structure, in management style and sophistication, in stage of development and in performance (Bracker, 1982; Churchill & Lewis, 1983; Bracker & Pearson, 1986; Khan & Manopichetwattana, 1989; Lafuente & Salas, 1989; Birley & Westhead, 1990; & Carson, 1991).

Competitive Strategies

There appears to be much agreement in the strategic management literature on the important role of strategy in organisations. Rue and Holland (1989) noted that management of organisations used competitive strategies to outline the fundamental steps that they plan to follow in order to accomplish their objectives.

Previous empirical research on the relationship between competitive strategy and performance of large firms provide strong evidence that suggest competitive strategies are associated with performance (Lee, 1987).

In the context of SMEs, Giglierano (1987) noted that small firms that adopted effective types of competitive strategies seem to achieve better performance outcomes than other strategy types. According to Giglierano, effective competitive strategies in SMEs depended on the type of business as well as the products they manufactured.

Kim and Choi (1994) suggested in selecting the choice of competitive strategy, managers in SMEs must not only consider the industrial situations, but also their organisational capabilities.

Using the Porter's three generic competitive strategies (low cost, differentiation and focus), Schroeder, Congden and Gopinath (1995) indicated the linkage between the generic strategies and manufacturing technology.

Mosakowski (1993) concluded that firms that adopted focus and differentiation strategies performed better than firms that do not use these strategies.

In developing six competitive strategies (harvest, build, cashout, niche, climber and continuity) for businesses in consumer markets and four (low commitment, growth, maintenance and niche) in industrial markets, Galbraith and Schendel (1983) concluded that only the build competitive strategy (consumer), growth (industrial) and niche (both) appeared appropriate.

In summary, the strategic management literature suggests that competitive strategies are associated with improved performance. The literature suggests that different firms in different environments adopt different competitive strategies. Further, it indicates that firms that adopt particular competitive strategies seem to achieve better performance outcomes than other strategy types.

Although the literature suggests firms adopt various competitive strategies, these strategies can be defined in terms of Porter's (1980) or Galbraith and Schendel's (1983) dimensions. Despite the relevance of the generic business strategies developed by Porter (1980) and Galbraith and Schendel (1983), few studies have examined them in the context of SMEs.

Accordingly, this study adopts the following six common types of competitive strategies: three of Porter's generic strategies (low cost, differentiation and focus); growth and harvest strategy of Galbraith and Schendel (1983); and vertical integration strategy of David (1993). In the context of SMEs, vertical integration is also appropriate. This is because vertical integration strategy focuses on the resources of a firm. As suggested earlier, a firm gains its competitive advantage from its resources and it will generally use this advantage to develop its strategy.

Environment

Most of the strategic management literature emphasises on the important relationship between organisations and their environment (Dess & Rasheed, 1991). Like large scale enterprises, the basic decisions for an SME are those pertaining to its nature and relationship to its environment. Furthermore, the business environment within which an SME functions is constantly changing. Some changes affect the products and services being offered by a particular firm (Broom & Longenecker, 1975). Only by detecting these changes through a strategic approach can threats be avoided and opportunities be exploited.

Griffin (1987) and Robbins (1996) described an organisation's environment as being comprised of those institutions or forces (such as suppliers, customers, competitors, government) that can potentially affect the organisational's performance.

Business Performance

The primary objective of business organisations adopting effective strategic management process is improved business performance. Ruin (1999) noted that the organisational effectiveness is related to the concept of organisational objectives which represent the mission and the purpose of the organisation. As such, effectiveness is associated to organisation's performance at attaining those objectives.

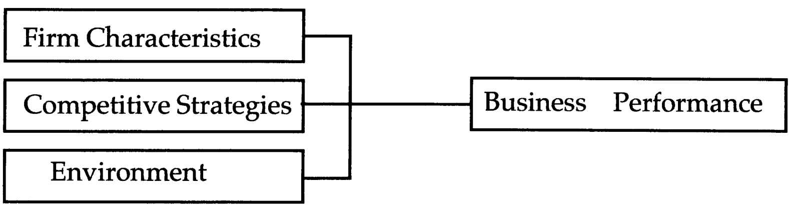
The literature suggests that research should adopt multiple measures in order to capture more fully the dimensions of organisational performance (Lee, 1987). In this study, business performance as the dependent variable was measured by using average and growth performance measures (average rate, average rate of growth) and the business performance composite index.

THE RESEARCH FRAMEWORK

The literature appears to suggest relationships exist between firm characteristics, competitive strategies, environment and business performance. Firm characteristics such as firm age, number of owners, organisational structure (complexity, formalisation and centralisation), technological complexity of product and process, initial capital, and number of employees are assumed to be related to business performance.

In addition, different firms adopt different competitive strategies in order to outline the fundamental steps that they plan to follow in order to accomplish their objectives. The literature also suggests the linkage between environment and business performance, and that environment is a major determinant of performance. The following presents the theoretical framework of this study.

Figure 1
Research Model



The following hypotheses have been developed for this study:

H1: The firms characteristics are positively related to SMEs performance.
H2: The performance of the SMEs will vary according to the choice of competitive strategies they adopt.
H3: The environment is negatively related to SMEs performance.

METHODOLOGY

The 548 sample firms for this study were selected from the listings obtained from the Labour Department. The owners and managers of the 548 firms were contacted by telephone. Through telephone conversation, the participation of the owners and managers were requested and confirmed. Subsequently, the interviews were held at the earliest possible time. In most of the cases, the interviews were held the following day.

Using structured questionnaires, the data was gathered through face-to-face interviews with owners-managers of the SMEs selected. Of the 548 firms contacted, 100 completed the interviews (response rate of 18.2%).

Of the 100 respondents interviewed, 60 were owners as well as Managing Directors or Chief Executive Officers. Another 20 respondents were owner-managers, and only three owners were not managers. The remaining 17 respondents were employed managers.

Measurements

Competitive Strategies

The competitive strategies were operationalised by using Porter's low cost, product differentiation and niche strategies; Galbraith and Schendel's growth and harvest strategies; and David's vertical integration strategy.

Structured questions containing brief descriptions of each of the six competitive strategies were used to measure the competitive strategy variable in this study. By using a five-point numerical scale response mode ranging from "not applicable" to "most applicable," respondents were requested to choose only one of the six competitive strategies which was most applicable to their firm.

Environment

The uncertainty of environment was measured in terms of the firms ability to predict their competitors, customers, suppliers, regulators and associations (Griffin, 1987; Robbins, 1996). The responses were recorded on a five-point numerical scale ranging from "unpredictable" to "most predictable". The respondents were asked to indicate the degree of predictability of each type of environment.

The intensity of competition was measured based on competitive forces such as price competition, product competition, technological competition, distribution, manpower and raw materials (Porter,1980). The respondents were asked to indicate the degree of intensity of each competitive force on a five-point interval scale ranging from "none" to "very intense competition".

Business Performance

Business performance was measured by using average and growth performance measures (average rate, average rate of growth) and the business performance composite index (Lee, 1987). Actual figures of dollar sales volume, the amount of assets, equity, and the number of employees, ROI, ROS and ROA over a three to five-year period were adopted. The ROI, ROS and ROA were operationalised as follows:

THE RESULTS

The following table presents the characteristics of the 100 firms in the survey.

Table 1

The Respondent Firms Characteristics

Firm Characteristics (n=100)	**Frequency**	**Percent**	**Mean**	**SD**	**Range**
Legal Form:	10	10.0			
Sole Proprietorship	7	7.0			
Partnership	83	83.0			
Private Limited			4.00	6.88	1 – 60
Number of owners:	10	10.0			
One	41	41.0			
Two	14	14.0			
Three	16	16.0			
Four	15	15.0			
5-10	4	4.0			
More than 10			61.00	65.72	10 – 300
Number of Employees:	63	63.0			
10-50	17	17.0			
51-100	13	13.0			
101-150	3	3.0			
151-200	1	1.0			
201-250	3	3.0			
251-300					1,000-
Initial Capital:	35	35.0			1,000,000.00
Less than 50,000	21	21.0			
50,001-100,000	17	17.0			
100,001-500,000	27	27.0			
More than 500,000			6.00	10.00	1 – 77
Number of Products Made and Sold:	32	32.0			
One product	15	15.0			
Two products	11	11.0			
Three products	10	10.0			
Four products	23	23.0			
5-15 products	9	9.0			
More than 15					
Dollar Value of Sales:	42	42.0			
Less than 1 million	30	30.0			
1-3 million	6	6.0			
3-5 million	4	4.0			
5-7 million	18	18.0			
More than 7 million			13.00	10.92	4 – 72
Age of Firms (years):	28	28.0			
3-5	17	17.0			
6-8	22	22.0			
9-11	5	5.0			
12-14	6	6.0			
15-17	4	4.0			
18-20	18	18.0			
More than 20					

Source: Survey, 1997

a) return of investment (ROI) = net profit / total investment
b) return on sales (ROS) = net profit / total sales
c) return on assets (ROA)= net profit / total assets

The average growth performance measures were derived by adding the annual figures of (dollar sales volume, the amount of assets, the amount of equity, and the number of employees, ROI, ROS and ROA) for over a three to five year period and divided by three or five.

The average growth performance measures were computed by taking the average percentage change in the performance measures (sales volume, the amount of assets, the amount of equity, and the number of employees, ROI, ROS and ROA) for over a three (1994 -1996) to five year period (1992-1996).

The rate of change of each of the performance measures was computed by taking the difference between two years and divided by the earlier year, resulting in each performance measure having four figures (i.e. 1992 and 1993; 1993 and 1994; 1994 and 1995; and 1995 and 1996). The average rate of growth of each of the measures was derived by dividing the total growth rate from 1992 to 1995 by four.

In additon to considering the average and growth performance measures, this study employed the business performance composite index (BPCI) as the means values of ROI, ROS, and ROA (Lee, 1987). The BPCI was operationalised as follows:

$$BPCI = (ROI + ROS + ROA) / 3$$

Hypotheses Testing

The correlation analysis was used to test Hypotheses 1 and 3. Tables 2 and 3 present the results of the correlations between the firm characteristics, environment and the average and growth performance measures.

As suggested in Table 2, the correlations between the firm characteristics (number of owners, complexity, product technology, initial capital, and number of employees) and average performance measures (sales, assets, employment and ROS) were significant. As indicated in the above Table 2, the correlations between the perceived uncertainty of environment and the average performance measures were not significant. However, the correlations between the intensity of competition and average ROI and ROA were significant, while the correlation between the intensity of competition and the other average performance measures were not significant.

Table 2
Correlations Between the Firm Characteristics, Environment and Average Performance Measures

Independent Variables:	Sales	Asset	Gross Profit	Employ-ment	Equity	ROS	ROI	ROA
Firm Characteristics:								
Firm age	.12	.15	-.19	-.02	.41**	.14	-.06	-.06
Number of owners	-.23*	.30*	-.09	.09	.02	.16	-.09	-.09
Organisational Structure:								
Complexity	.27***	.22**	.06	.59**	.09	.35**	.06	.06
Formalisation	.04	.10	-.11	.25**	.14	.21	.07	.06
Centralisation	.10	-.19	-.26*	-.06	.10	-.08	-.01	-.01
Technology:								
Product	.22**	.32**	.10	.28**	.12	.25**	-.07	-.07
Process	.22	.39**	.06	.42**	.18	.39**	-.09	-.09
Initial capital	.61**	.23**	-.09	.47*	.54**	.36**	-.04	-.04
Number of employees	.39**	.35**	.17	-	.20	.42**	-.03	-.03
Environment:								
Uncertainty	-.12	-.08	.07	.06	-.05	-.12	- .13	-.13
Intensity of competition	.05	.11	-.12	.00	.02	.02	-.23**	-.23**

***p<.01, **p<.05, *p<.10

The following Table 3 shows the results of the correlations between firm characteristics, environment and the growth performance measures. In general, the correlations between firm characteristics and the growth performance measures were not significant. The correlations between the perceived uncertainty of environment and the growth performance measures were also not significant.

Table 3
Correlations Between the Firm Characteristics and Growth Performance Measures

Independent Variables:	Sales	Asset	Gross Profit	Employ-ment	Equity	ROS	ROI	ROA
Firm Characteristics:								
Firm age	-.12	-.19	-.25**	-.11	.00	-.15	-.05	.02
Number of owners	.14	-.10	-.10	-.07	-.05	.04	-.01	-.05
Organisational Structure								
Complexity	.14	-.18	.08	.05	-.12	.18	.23***	.05
Formalisation	.00	-.16	.02	.08	-.13	.16	.13	.02
Centralisation	-.15	.09	-.23**	-.14	-.19	-.14	-.14	-.16
Technology:								
Product	.12	-.09	.22**	.30**	-.14	.15	.10	.00
Process	.14	-.17	.14	.26*	.01	.20**	.21**	-.08
Initial capital	-.07	-.13	-.05	-.06	-.08	.14	.31***	-.09
Number of employees	.30**	-.17	.23*	-	.12	.36**	.37**	.05
Environment:								
Uncertainty	.14	-.01	.13	.05	-.05	.02	-.03	.11
Intensity of competition	-.31**	.03	-.16	.04	.08	-.24**	-.23**	-.24**

***p<.01, **p<.05, *p<.10

As indicated in the above Table 3, the correlations between the perceived intensity of competition and growth of sales, ROS, ROI, and ROA were significant, while the correlations between the perceived intensity of competition and the other growth performance measures were not significant.

The following Table 4 indicates the results of the correlations between the firm characteristics, environment and the composite business performance index (BPCI). The results indicated that there were significant relationships between firm age, number of owners, complexity of organisational structure, process technology, initial capital, and number of employees and the BPCI.

However, the results of the correlations between the formalisation and centralisation of the organisational structure, product technology, environment and the BPCI were not significant.

Table 4
Correlations Between the Firm Characteristics, Environment
and the Business Performance Composite Index.

Independent Variables:	**Business Performance Composite Index (BPCI)**
Firm Characteristics:	
Firm age	.21*
Number of owners	.26**
Organisational structure:	
Complexity	.33***
Formalisation	.19
Centralisation	-.04
Technology:	
Product	.19
Process	.32***
Initial capital	.25**
Number of employees	.44***
Environment:	
Uncertainty	-.09
Intensity of competition	-.00

***p<.01, **p<.05, *p<.10

The analysis of variance (ANOVA) was employed to test Hypothesis 2. The following Tables 5, 6, and 7 indicate that the performances of SMEs varied with the choice of competitive strategies they adopted.

The results of the ANOVAs indicate significant differences in the performances (average rate of growth in ROS, ROI and ROA) of the SMEs that adopted the four different competitive strategies. The results of the ANOVAs for the other performance measures did not indicate any significant difference among the four competitive strategies.

Table 5
One-Way ANOVA of Strategy Types By ROS Growth

Variable:	Mean	F Ratio	Significance F	Duncan
Strategy Types:		3.8		
Low cost*	17.0			.05
Differentiation*	20.2		.01	
Niche	22.3			
Growth*	26.1			

* Indicate significant difference

Table 6
One-Way ANOVA of Strategy Types By ROA Growth

Variable:	Mean	F Ratio	Significance F	Duncan
Strategy Types:		4.8	.01	.05
Low cost	-8.5			
Differentiation*	6.6			
Niche	7.6			
Growth*	10.4			

* Indicate significant difference

Table 7
One-Way ANOVA of Strategy Types By ROI Growth

Variable:	Mean	F Ratio	Significance F	Duncan
Strategy Types:		2.8	.04	.05
Low cost*	1.0			
Differentiation*	2.1			
Niche	2.6			
Growth*	2.6			

* Indicate significant difference

DISCUSSIONS AND IMPLICATIONS

The findings of this study provide some empirical support for the relationships between firm characteristics, competitive strategies, environment and business performance of SMEs in the Malaysian manufacturing sector.

The findings suggest that firm characteristics such as age of firm, number of owners, complexity of organisational structure, process technology, initial capital, and number of employees are positively related to the SMEs performance.

The findings of the present study also indicate the differences in performance for SMEs that adopted low cost, differentiation, niche and growth strategies. These findings appear to support the general notion that the performance of firms vary with the types of competitive strategies that they adopt.

Additionally, the findings of the present study provide the evidence that suggests uncertainty of environment and intensity of competition are negatively related to the SMEs performance.

In general, the empirical findings of the present study offer the following managerial implications for SMEs in Malaysia.

First, the findings of this study suggest a direction for the relationship between firm characteristics and business performance. The positive relationships between firm age, number of owners, complexity of organisational structure, process technology, initial capital, and number of employees and performance suggest the adoption of competitive strategies alone is not enough for SMEs to be effective. SMEs, particularly new firms, should strive to adopt those firm characteristics that are positively associated with business performance.

Second, this study also shows the important role of competitive strategies in accomplishing organisational objectives. This study supports the notion that different firms adopt different competitive strategies. The findings indicate differences in their performance as a result of adopting different competitive strategies. This finding suggests that SMEs should focus on their capabilities as well as environment when formulating and implementing their competitive strategies.

Third, the negative relationship between the intensity of competition and performance suggests that SMEs in a competitive environment must work harder to acquire the needed resources and sharpen their skills than those in a less competitive industry.

CONCLUSION

This study has provided empirical evidence suggesting different patterns of competitive strategies and business performance relations as well as the relationships between firm characteristics, environment and the business performance of SMEs in the Malaysian manufacturing sector. However, given the small sample, the drawing of any conclusion from this study should be done with caution. In view of this, more empirical research is, therefore, needed and will be particularly useful in providing evidence to support the general notion that strategic management can help improve the performance of firms, specifically the SMEs in the Malaysian manufacturing sector. Future research could replicate this study with larger samples and other strategic variables relevant to SMEs. Such efforts would help in further increasing our understanding of strategic management in SMEs.

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