1

DETERMINING THE MODERATING EFFECT OF ENVIRONMENT ON THE BUSINESS STRATEGY-PERFORMANCE RELATIONSHIP IN MALAYSIAN SMES

Mohd Khairuddin Hashim
School of Management Universiti Utara Malaysia
Syed Azizi Wafa
School of Business and Economic Universiti Malaysia Sabah
Mohamed Sulaiman
School of Management Universiti Sains Malaysia

Abstrak

Previous research that examined environment as a moderator between business strategy-performance linkage has mainly focused on large firms. Little research exists that investigate this relationship in small and medium-sized enterprises (SMEs). This study empirically examines environment as the moderator of the relationship between business strategy and performance of 100 SMEs in the Malaysian manufacturing sector. The findings of this study suggest that not only does the performance of SME vary with the choice of the business strategies they adopted, but the relationship between business strategy and the performance of SMEs is moderated by the environment.

Key Word : Business Strategy, Performance Relations Ship, Malaysian, SMES

INTRODUCTION

Businesses of all sizes practice some form of strategic management. Businesses use strategic management to formulate as well as implement strategy in order to compete successfully. Sharplin (1985) stressed that strategic management is applied for the purposes of moulding, directing and relating an organisation effectively to its environment. Furthermore, Cauwenbergh and Cool (1982) considered strategic management as the most critical element of the management of organisations because it explains success and survival to a large extent.

The literature indicates that much of the research on strategic management that focuses on business strategies, environment and organisational performance suggests business strategy and environment can influence organisational performance (Venkatraman and Prescott, 1990; Lee, 1987; Rue and Holland 1989; Hitt and Ireland, 1985 and 1986; and Prescott, 1986).

However, the literature reveals that few studies have adequately addressed the issue of environment as a moderator (Prescott, 1986; and Li and Simerly, 1998). Furthermore,

most of previous empirical research that examined the relationships between business strategy, environment and performance have mainly focused on large firms (Hofer and Schendel, 1978, Wood and Laforge, 1979; and Kotha and Nair, 1995). Surprisingly, little research exists that investigate these relationships in small and medium-sized enterprises (Hashim and Abdullah, 2000; Sim and Yap, 1997 and Sim, 1991). The purpose of this study is to address this concern.

THE LITERATURE

Environment

Defining organisational environment is not an easy task. Different researchers have used different approaches, definitions and dimensions of environment in their studies to determine its influence on organisational performance. According to Drucker (1977), environmental influences such as economic forces can set limits to what management can do as well as create opportunities for management's action. However, they do not by themselves determine what a business is or what it does. As such, a business enterprise does not only have to identify these forces and manage them, but also adapt itself to the forces of the environment.

In the context of the contingency framework, many authors (Venkatraman and Prescott, 1990; Hitt et. al, 1982; Prescott, 1986; Hitt and Ireland, 1985 and 1986; and Hofer, 1975) considered environment as one of the important contingency factors. Porter (1980 and 1985), Griffin (1987), Robbins (1992 and 1996) described environment as those institutions or forces (such as suppliers, customers, competitors, government regulatory agencies, public pressure) outside the organisation, but over which the organisation has little control, and that these forces can potentially affect the organisation's performance.

Duncan (1972) defined environment as the physical and social factors that occur outside an organisation which are relevant in the decision-making process of the managers and are often characterised based on levels of dynamism, heterogeneity, and /or complexity.

However, according to Lenz (1980), there is no widely held consensus concerning how organisational environment should be assessed and which aspects of the environment affect performance. Lenz noted that empirical studies generally employ two methods. The first method, which is usually taken along two dimensions such as from stable to shifting and from homogeneous to heterogeneous which, uses perceptual measures to assess environmental complexity and uncertainty. The second method uses relatively objective measures to assess the relevant environmental factors such as demographic trends that can influence the goal attainment of an organisation.

Using the contingency approach, several empirical studies have provided the evidence that suggest environments are major determinants of performance in large firms. Lenz (1980), Stanwick and Pleshko (1995), Porter (1980 and 1985), Golden et. al (1995) and Manu and Sriram (1996) found that environment has strong influence on performance in large firms.

At the same time, Li and Simerly (1998), Venkatraman and Prescott (1990), Hitt et. al (1982), Prescott (1986), Hitt and Ireland (1985 and 1986), and Hofer (1975) found that organisational performance (success) depends upon a contingent relationship between business strategy and environment.

In further supporting this view, Miller and Friesen (1983) stressed that organisations must not only change, avoid or control their structure to deal with additional information processing requirements caused by dynamic, hostile or complex environments, but also they must review their strategy-making processes to fit environment, structure and strategy. However, in the aggregate, empirical studies have not provided support for the relationships between business strategy, environment and performance in SMEs (Kim and Choi, 1994; Shane and Kolvereid, 1995; Kotha and Nair, 1995; Chowdhury and Lang, 1996; Chen and Hambrick, 1995). A key limitation of past studies is that they failed to consider the broader issue of the environment, specifically the degree to which environment moderates the business strategy-performance relationship in SMEs.

Business Strategy

The strategic management literature emphasises on the important role of business strategy in both large and small firms (David, 1994 and 1999, Wheelen and Hunger, 1995 and 1999, and Rue and Holland, 1989). Firms use business strategy to outline the fundamental steps that they plan to follow in order to accomplish their objectives.

The literature indicates that organisations can have a single strategy or many strategies, and that these strategies are likely to exist at three levels: corporate level strategies (such as grand or master strategies); business level strategies (competitive strategies); and functional level strategies. Although the literature suggests that strategies are developed at the three different levels, theoretical and empirical studies of the relationship between strategy and organisational performance have mainly emphasised on business strategy (Lee, 1987).

Previous empirical research on the strategy/performance relationship has mainly focused on large firms. These studies provide strong evidence that suggests business strategies are associated with the performance of large firms (Hofer and Schendel, 1978, Wood and Laforge, 1979; Lee, 1987; and Kotha and Nair, 1995). Although most of the empirical studies centre upon large firms, a small body of research indicates that business strategy can also influence the performance of smaller firms.

In the context of SMEs, Giglierano (1987) noted effective business strategies depended on the type of business as well as the products they developed. Giglierano claimed that SMEs that adopted particular business strategies seem to achieve better performance. Forrest (1990) observed that small firms have to develop new strategies to react to the changing nature of business as reflected in such factors as increasing competition, both national and international, the increasing internationalisation

of markets, and new global competitors.

Dollinger and Golden (1992) examined four collective strategies (confederate, conjugate, agglomerate and organic) and found agglomerate and organic collective strategies to be the most frequently employed strategies among small businesses. In another study, Baird, Lyles and Orris (1994) proposed international strategy for small firms and found that the international strategy is positively related to return on sales, but negatively related to growth.

In an attempt to study the strategic behaviour of small firms, Kim and Choi (1994) found innovativeness, efficiency and versatility as the three most successful strategy types. However, the authors stressed that in selecting the choice of strategic focus, managers in SMEs must consider the industrial environment. Porter (1980) noted that a firm can gain its competitive advantage by producing value to its customers. Porter emphasised that a firm can gain its competitive advantage by performing the chain of strategically important activities (such as production, marketing, sales, service, human resource management, technology development, procurement activities) cheaply or better than its competitors. Porter concluded that business strategies based on these activities are known as generic strategies.

Furthermore, according to Porter, the three generic business strategies are low cost, differentiation and focus (niche). In a low cost strategy, the firm attempts to reduce cost and increase profit as well as sales by using economies of scale, scope and technology. In a differentiation strategy, the firm emphasises on developing ways to make products appear unique and different. Finally, in a niche (focus) strategy, the firm focuses on product development and marketing efforts in a particular market segment that the firm has a cost or differentiation advantage.

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. In addition, Mosakowski (1993) found that entrepreneurial firms that adopted focus and differentiation strategies performed better than firms that do not use these strategies.

In developing six business 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 strategy type (consumer), growth (industrial) and niche (both) appear appropriate.

Although the literature suggests firms adopt various business strategies, several of these can be defined in terms of Porter's or Galbraith and Schendel's dimensions. Despite the relevance of the generic business strategies developed by Porter, and Galbraith and Schendel, 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 (1994).

Performance

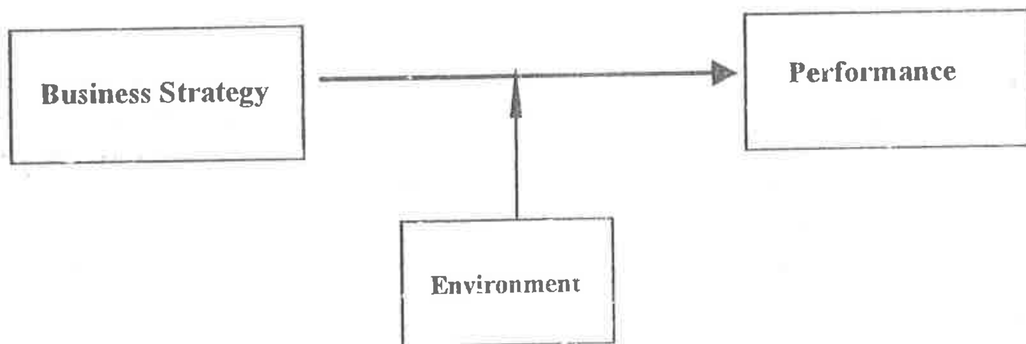
Although, many studies have found that different companies in different countries tend to emphasise on different objectives, the literature suggests financial profitability and growth to be the most common measures of organisational performance.

Nash (1993) claimed that profitability is the best indicator to identify whether an organisation is doing things right and hence profitability can be used as the primary measure of organisation success. Further, Doyle (1994) pointed profitability as the most common measure of performance in western companies. Profit margin, return on assets, return on equity, return on sales are considered to be the common measures of financial profitability (Robinson, 1982; Galbraith and Schendel, 1983). Abu Kassim et. al (1989) found sales, sales growth, net profit and gross profit were among the financial measures preferred by the Malaysian manufacturing firms.

THE CONTINGENCY FRAMEWORK

In line with previous studies, the theoretical framework developed in this study is based on the contingency approach. The contingency framework states that the performance (success) of a particular firm depends on how well it is able to deal with the contingency factors (situational) such as the environment. The following Figure 1 presents the research model of the study.

Figure 1: The Research Model



Relationship Between Business Strategy and Performance

The contingency framework proposes that developing an effective strategy should

begin by first understanding and knowing the firm's environment. In line with the concept of alignment in the contingency approach, the model suggests that business strategy must be aligned to the environment if the organisation is to perform well. A firm that adopts a business strategy that fit with its environment tends to perform well. A different organisation within a different environment will require a particular business strategy. Organisations with a business strategy that does not fit the environment will perform poorly and need to change the business strategy.

Environment as a Moderator

The contingency framework views that organisations must adapt to their organisational environment in order to survive and prosper. Organisational environment is believed to be able to influence organisational performance. This is because the dynamics of the environment create uncertainties for organisations. Uncertainties of the organisational environment are threats to an organisational performance. If a firm is to be rational, it must strive to reduce uncertainties. The contingency approach suggests that a firm can reduce the uncertainties by changing its activities and the way it operate. To do so, organisations are demanded to develop strategies that will match or fit the uncertain environment.

In order to test the proposed relationships between business strategy, environment and performance, this study developed the following hypotheses.

1. The performance of SMEs will vary with the choice of business strategy adopted.
2. The environment (uncertainty of environment and intensity of competition) will moderate the relationship between business strategy and the performance of SMEs.

METHODOLOGY

Procedure and Sample

The list of SMEs operating in Northern Malaysia was obtained from the Malaysian Labour Department. A total of 748 firms were listed in the directory. All of them were contacted by telephone and their participation was requested from their owners/managers. A total of 100 firms confirmed their participation. Using a structured questionnaire, the data for the study were collected through personal face-to-face interviews with the owners and managers of the selected SMEs.

Measurement

Environment. This study used dynamism (uncertainty of environment) and hostility (intensity of competition) as the two dimensions to assess the organisational environment of SMEs. The uncertainty of environment referred to the five forces (competitors, customers, suppliers, regulators and associations) that are likely to influence a business organisation The degree of uncertainty of these five forces were recorded on a five-point numerical scale ranging from "predictable" to "most unpredictable".

The intensity of competition referred to the competitive factors (price competi-

tion, product competition, technological competition, competition in distribution, manpower, and raw materials) that can affect all firms in an industry as well as the profitability of the industry. The response for the intensity of competition was measured on a five-point numerical scale ranging from "none" to " very intense competition".

Business Strategy. Business strategy was operationalised by using Porter's three generic strategies of low cost, product differentiation and niche; Galbraith and Schendel's growth and harvest strategies; and David's vertical integration strategy. These business strategies were selected because the literature indicates most of them have been widely adopted in previous studies. Furthermore, by adopting these business strategies, the findings of this study can used to compare with previous studies. Structured questions containing brief descriptions of each the six business strategies were used to measure the business strategies in this study. By using a five-point numerical scale response mode ranging from "least applicable" to "most applicable", respondents were requested to indicate one of the six business strategies that was most applicable to their firm. Each respondent was instructed to choose only one of the descriptions that best describe the business strategy the firm was adopting.

Performance. This study evaluated performance by using the actual figures of dollar sales volume, the amount of assets, the amount of equity, the number of employees, return on investment (ROI), return on sales (ROS) and return on assets (ROA) over a three to five-year period. The ROI, ROS and ROA were operationalised as follows:

a. ROI = net profit/total equity
b. ROS = net profit/total sales
c. ROA = net profit/total assets

The average performance measures were derived by adding the annual figures of (dollar sales volume, the amount of assets, the amount of equity, the number of employees, ROI, ROS and ROA) for over a three to five year period and divided by three or five. The growth (average rate) 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 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 for 1992 to 1995 by four.

In addition, this study adopted the business performance composite index (BPCI) as the mean values of ROI, ROS and ROA (Lee, 1987). The BPCI was operationalised as:

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

Background of the Sample Firms

Firms from fourteen industries were represented in this study. A majority of

these firms (close to 50%) were however from the Food, Textile, and the Furniture Industry. Around 90% of the firms have more than one owner, and 83% were registered as Private Limited companies. The six. Capitalisation ranged from $1000.00 to $11 million. The mean dollar value of sales for 1996 was $4,967,610 million.

Of the 100 firms studied, 30 firms adopted the differentiation strategy (3%),

Table 1. Mean and Standard Deviation of the External Environment Variables

Environment Variables:	Mean	SD
1. Uncertainty of environment:		
i. Competitors	3.330	1.092
ii. Customers	3.620	.896
iii. Suppliers	3.660	1.133
iv. Regulators	3.230	1.043
v. Associations	3.020	1.054
2. Intensity of Competition:		
i. Price	3.960	1.188
ii. Product	3.660	1.148
iii. Technological	3.190	1.080
iv. Distribution	2.940	1.355
v. Manpower	3.560	3.560
vi. Raw materials	2.530	1.381

Table 2. Means and Standard Deviation of the Average and BPCI Performance Measures

Performance Measures:	Mean	SD	Minimum	Maximum
1. Average:				
a. Sales	4,001,472.4	9,643,946.24	43,333.33	82,000,000
b. Assets	1,434,254.0	2,564,154.18	26,000.00	17,600,000
c. Employment	51.79	55.75	6.67	270
d. Equity	1,012,571.4	2,609,547.93	32,000.00	18,400,000
e. ROS	0.13	0.17	000	1.58
f. ROI	1.00	2.79	-0.03	20.75
g. ROA	0.33	0.51	0.00	3.83
2. BPCI	0.49	1.08	-0.01	[illegible]

mean number of employees was 61 workers with a standard deviation of 65.72. The mean age of the firms was 13 years and the mean number of products made was 26 firms (26%) adopted the low cost strategy, 17 firms (17%) adopted the growth strategy, 18 firms (18%) adopted the niche strategy, six (6%)firms adopted the harvest strat

egy, and the remaining three (3%) firms adopted the vertical integration strategy.

In relation to the responses concerning the environment, it can be observed in Table 1 below that the environment was perceived as leaning towards unpredictable and the intensity of competition in most functions as moderate.

The means and standard deviations (SD) scores of the average and the BPCI performance measures of the firms surveyed are as shown in Table 2.

THE RESULTS

Testing of Hypothesis 1

The ANOVA was used to test Hypothesis 1. The procedure is used to determine whether the performances of the SMEs vary with the choice of business strategy they adopt. The results of the ANOVAs in Tables 3, 4, and 5 indicate statistically significant differences in the performance (BPCI, growth in ROI and ROA) of the SMEs that adopted the different business strategies. The results of the ANOVAs for the other performance indicators were not statistically significant.

As shown in Table 3, the results indicate that at .04 significant level, the F-value for the business performance composite index (BPCI) is 2.96, providing support for Hypothesis 1. This result suggests that there are significant differences in the mean BPCI between the different strategy types adopted by the SMEs surveyed. The Duncan Multiple Range test indicates that the means for niche strategy (mean=0.11) and differentiation strategy (mean=0.26) are the ones that are low on BPCI and are significantly different.

Table 3. One-Way ANOVA of Business Strategy By BPCI

Variable:	Mean	F Ratio	Sign. F	Duncan
Business Strategy		**2.96**	**0.0370**	**0.5**
Niche	**0.1106**			
Differentiation	**0.2625**			
Growth	**0.4960**			
Low Cost	**1.0225**			

Table 4 presents the results of the ANOVA analysis between the business strategies and the growth of ROI that are statistically significant. At .04 significant level, the F-value for growth in ROI is 2.93, providing support for Hypothesis 1. This result indicates that there are significant differences in the mean growth in ROI among the SMEs that adopted the different business strategies in the study. The Duncan Multiple Range test indicates that the mean for differentiaion strategy (0.20) is the one that is low on growth in ROI

and is significantly different.

The results in Table 5 indicate that the ANOVA between the business strategies and the growth in ROA are statistically significant. At .03 significant level, the F-value for growth in ROA is 3.193. This result provides support for Hypothesis 1. This result suggests that there are significant differences in the mean growth in ROA among the SMEs that adopted the different business strategies. The Duncan Multiple Range test indicates that the means for differentiation strategy (0.49), niche strategy (1.1) and low cost strategy (1.67) are the ones that are low on growth in ROA and are significantly different.

Table 4. One-Way ANOVA of Business Strategy By ROI Growth

Variable:	Mean	F Ratio	Sign. F	Duncan
Business Strategy		2.9297	0.0437	0.5
Niche	-0.835			
Differentiation	0.2028			
Growth	2.31			
Low Cost	2.5942			

Testing of Hypothesis 2

Hypothesis 2 states that the relationship between strategy types and the performance of SMEs is moderated by environment (uncertainty of environment and intensity of competition).

Hypotheses 2 was tested by using the multiple regression with interaction term. This method is used to yield a conservative estimate of the moderating effects environment has on the relationship between business strategy and the performance of SMEs. The equation for the moderated regression model is as follows:

$Y = A + BX + CZ + DXZ$, where

- Y = the dependent variable (average and growth performance and BPCI)
- X = the independent variable (business strategy)
- Z = the moderator variable (environment)
- XZ = the interaction term

The purpose of the moderated analyses is to determine if adding the interaction term increases the explanation of variance (R2) significantly. The results of the regression analysis for uncertainty of environment are presented in the following Table 6. The change in R2 from the restricted regression model (without moderator variable) to the full regression model (with moderator variable) is statistically significant at $p<0.05$ for some the performance measures (as for sales, equity, growth sales, growth ROS, growth ROA and growth ROI). The changes in R2 for

the other performance measures are not statistically significant. The results of the R2 that are statistically significant provide some support for Hypothesis 2.

The results of the multiple regression analysis suggest that uncertainty of environment does moderate the relationship significant. The statistically significant results provide some support for Hypothesis 2. The results in Table 7 suggest that the relationship between business strategy and performance (as for growth sales, growth gross profit, growth ROS, growth ROA and growth ROI) varies with

Table 5. One-Way ANOVA of Business Strategy By ROA Growth

Variable:	Mean	F Ratio	Sign. F	Duncan
Strategy Types:		**3.1933**	**0.0292**	**0.5**
Differentiation	**0.4908**			
Niche	**1.0985**			
Low cost	**1.6654**			
Growth	**5.9710**			

between business strategy and some of the performance measures, namely sales and equity (average performance) and growth sales, growth ROS, growth ROA and growth ROI). These results suggest that the relationship between business strategy and performance (as for sales, equity, growth sales, growth ROS, growth ROA and growth ROI) varies with the uncertainty of environment faced by the SMEs surveyed.

Table 7 displays the results of the regression analysis for the intensity of competition. The change in R2 from the restricted regression model (without moderator variable) to the full regression model (with moderator) is statistically significant at $p<0.05$ for some the growth performance measures (growth sales, growth gross profit, growth ROS, growth ROS and growth ROI). The results for the other performance measures were not the intensity of competition faced by the SMEs surveyed.

DISCUSSIONS AND CONCLUSIONS

in general, the findings of the study indicate that the three generic strategies (low cost, differentiation, and niche) developed by Porter are not only relevant to large firms, but also SMEs. These findings appear to concur with studies conducted by Dess and Davis (1984) and Robinson and Pearce (1983). Both these studies found empirical evidence that suggest SMEs adopted different strategies. In addition, the studies discovered that SMEs that adopted certain business strategies were more viable for certain industrial environments.

This study hypothesized that the moderating effect for environment might occur on the business strategy-performance

relationship. The results of the empirical tests supported this hypothesis. Tables 6 and 7 present the results of the multiple regression analyses for business strategy, only two are most influential. These are sales (the change in R2 from 0.07 to 0.44 percent, at p<0.00) and equity (the change in R2 from 0.08 to 0.35 percent, at p<0.00).

Table 6: Uncertainty of Environment as Moderator

Dependent Variable	Without Moderator (R2)	Sig F	With Moderator (>R2)	Sig F
a. Average:				
Sales	0.07	0.51	0.44	0.00*
Assets	0.04	0.84	0.09	0.94
Employment	0.03	0.89	0.07	0.96
Equity	0.08	0.34	0.35	0.00*
Gross Profit	0.06	0.57	0.24	0.14
ROS	0.02	0.95	0.12	0.85
ROA	0.06	0.68	0.09	0.95
ROI	0.06	0.68	0.09	0.95
b. Growth:				
Sales	0.09	0.29	0.30	0.03*
Assets	0.05	0.67	0.10	0.90
Employment	0.03	0.89	0.05	0.99
Equity	0.09	0.28	0.14	0.68
Gross Profit	0.02	0.85	0.15	0.34
ROS	0.18	0.03*	0.55	0.00*
ROA	0.23	0.04*	0.40	0.03*
ROI	0.20	0.03*	0.32	0.04*
c. BPCI	0.02	0.91	0.10	0.86

environment and their interactions. The moderating effects were in the expected direction for environment (uncertainty of environment and intensity of competition) with regard to the performance of the SMEs

For uncertainty of environment, the results suggested that among the dependent variables (average performance), Without the environment variable as the moderator, the business strategy accounted for seven and eight percent of the variance in sales and equity (average performance) respectively. Adding the moderator (uncertainty of environment) resulted in the significant change in R2 to 44 and 34 percent, respectively.

Significant findings were also found for the growth performance measures (sales, ROS, ROA, and ROI). The business strategies accounted for nine, 18, 23 and 20 percent of the variance in growth sales, growth ROS, growth ROA, and growth ROI without the interaction terms, respectively. However, adding the interaction terms resulted in the variance to increase to 30 (at p<0.03), 55 (at p<0.00), 40 (at p<0.03) and 32 percent (at p<0.04), respectively.

The results also suggest the existence of the moderating effect of intensity of competition on the business strategy-performance relationship. The results indicate that among the dependent variables (growth performance), five are influential. These are growth sales (change in R2 from 0.09 to 0.49 percent, at p<0.00), growth gross profit (change in R2 from 0.02 to 0.27 percent, at p<0.01), growth ROS (change in R2 from 0.18 to 0.55

Table 7. Intensity of Competition as Moderator

Dependent Variable	Without Moderator (R2)	Sig F	With Moderator (>R2)	Sig F
a. Average:				
Sales	0.07	0.51	0.09	0.91
Assets	0.04	0.84	0.10	0.91
Employment	0.03	0.89	0.17	0.52
Equity	0.08	0.34	0.17	0.50
Gross Profit	0.06	0.57	0.24	0.14
ROS	0.02	0.95	0.07	0.98
ROA	0.06	0.68	0.20	0.43
ROI	0.06	0.68	0.20	0.43
b. Growth:				
Sales	0.09	0.29	0.49	0.00*
Assets	0.05	0.67	0.07	0.98
Employment	0.03	0.89	0.06	0.98
Equity	0.09	0.28	0.14	0.68
Gross Profit	0.02	0.85	0.27	0.01*
ROS	0.18	0.03*	0.55	0.00*
ROA	0.23	0.04*	0.55	0.00*
ROI	0.20	0.03*	0.40	0.00*
c. BPCI	0.02	0.91	0.07	0.97

percent, at p<0.00), growth ROA (change in R2 from 0.23 to 0.55 percent, at p<0.00) and growth ROI (change in R2 from 0.20 to 0.40, at p<0.00). However, the results for the average performance measures and the BPCI are not statistically significant.

Taken together, these results seem to suggest that the environment variable does moderate the relationship between business strategy and the performance of the SMEs studied and that business strategy alone is not able to explain the differences in performance of the SMEs. The evidence suggests that the relationship between business strategy and performance of SMEs vary with the environment variable (uncertainty of environment and intensity of competition) and that appropriate business strategies may lead to better performance under conditions of greater environment uncertainty and intensity of competition.

These findings support the argument made by strategic management theorists that environment is a key contingency factor. This evidence is also in line with the general view that in order to survive in the business environment, firms need to develop and implement business strategies that can cope with the forces in the environment such as those related to threats of entry, substitution, bargaining power of suppliers and competitors (Porter, 1980). Furthermore, according to the contingency theory, firms should formulate and implement business strategy based on their environment. The contingency theory states that the success of a particular firm depends on how well it is able to deal with situational factors such as environment.

These current findings also add support to the previous studies that suggest environment as a moderator variable. Studies by Bouton et. al (1982), Hitt, Ireland and Palia (1982), Fredrickson (1984), Fredrickson and Mitchell (1984), Hitt and Ireland (1986), L and Simerly (1998) also reported the moderating effect of environment on the relationship between business strategy and performance in large firms.

REFERENCES

Abu Kasim, Nor Aziah, Minai, Badriyah and Chun, Loo Sin . 1989. "Performance Measures in Malaysia-T State of the Art". Malaysian Management Review, Vol. 24: 3-9

Baird, Inga S., Lyles, Majorie A. and Orris, J.B. 1994. "The Choice of International Strategies By Sm Businesses". Journal of Small Business Management, January: 48-59.

Boulton, W., W. Lindsay, S. Franklin, and L. Rue 1982. "Strategic Planning: Determining the Impact Environmental Characteristics and Uncertainty". Academy of Management Journal, Vol.5: 500-5

Cauwenbergh, Andre Van and Cool, Karel 1982. "Strategic Management in a New Framework". Strate Management Journal, Vol.3: 245-264.

Chen, Ming-Jer and Hambrick, Donald C. 1991. "Speed, Stealth, and Selective Attack: How Small Fir Differ from Large Firms in Competitive Behaviour". Academy of Management Journal, Vol.38, N 453-482.

Chowdhury, Shamsud D. and Lang, James R 1996. "Turnaround in Small Firms: An Assessment of Efficie Strategies". Journal of Business Research, Vol.36: 169-178.

David, Fred R. 1994. "Concepts of Strategic Management". 4th edn. New York: Macmillan Publishing Compa

David, Fred R. 1991. "Concepts of Strategic Management". 7th edn. New York: Macmillan Publishing Company.

Dess, G.G. and Davis, P.S 198). Porter's 1980."Generic Strategies as Determinants of Strategic Group Membership and Organisational Performance", Academy of Management Journal, Vol.27, No.3: 467-488.

Dollinger, Marc J. and Golden, Peggy A. 1992. "Interorganisational and Collective Strategies in Small Firms: Environmental Effects and Performance". 'ournal of Managemen,. Vol.18, No.4: 495-715.

Doyle, Peter 199). Setting Business Objectives and" Measuring Performance". European Management Journal, Vol. 12, No.2: 123-132.

Drucker, Peter F.1977. "People and Performance: The Best of Peter Drucker on Management". London: Heinemann Limited.

Duncan, R. 1972. "Characteristics of Organisational Environments and Perceived Environmental Uncertainty". Administrative Science Quarterly, Vol.17: 313-327.

Forrest, Janet E. 1990. "Strategic Alliances and the Small Technology-Based Firm". Journal of Small Business Management, July: 37-45.

Frederickon, J.W. 1984. "The Comprehensiveness of Strategic Decision Processes: Extension, Observations, Future Directions". Academy of Management Journal, Vol. 27: 399-423.

Frederickon, J.W. and T.R. Mitchell 1984. "Strategic Decision Processes: Comprehensive and Performance in an Industry with an Unstable Environment". Academy of Management Journal, Vol. 27: 445-466.

Galbraith, Craig and Schendel, Dan 1983. "An Empirical Analysis of Strategy Types". Strategic Management Journal, Vol.4: 153-173.

Giglierano, Joseph J. 1987. "The Relationship Between Founders' Prior Experience, Strategy Making Style, Strategy and Performance in New Technical Firms". Published PhD Dissertation. The Ohio State University.

Griffin, Ricky W. 1987." Management". 2nd edn. Boston: Houghton Mifflin.

Hashim, Mohd Khairuddin, Abdullah, Mat Saad 2000. "Development of SMEs: Research Issues and Agenda". In Abdullah and Bakar (eds). Small and Medium Enterprises in Asian Pacific Countries. New York: Nova Science Publishers, Inc.

Hitt, Michael A. and Ireland, R. Duanne 1985. "Corporate Distinctive Competence, Strategy, Industry and Performance". Strategic Management Journal, Vol. 6: 273-293.

Hitt, Michael A. and Ireland, R. Duanne 1986. "Relationships Among Corporate Competencies, Diversification Strategy, Corporate Structure and Performance". Journal of Management Studies, July: 401-416.

Hitt, Michael A. and Ireland, R. Duanne and Palia, K,A. (1982). "Industrial Firms' Grand Strategy and Functional Importance: Moderating Effects of Technology and Uncertainty". Academy of Management, Vol.25, No. 2: 265-298.

Hofer, C.W. and D.E. Schendel 1978. "Strategy Formulation: Analytical Concepts". St.Paul: West Publishing.

Kim, Youngbae and Choi, Youngrok 1994. "Strategic Types and Performance of Small Firms in Korea. International Small Business" Journal, Vol.13, No.1: 13-23.

Kotha, S and Nair A. 1995. "Strategy and Environment as Determinants of Performance: Evidence from the Japanese Machine Tool Industry". Strategic Management Journal, Vol.16, No.7: 497-518.

Lee, Jooh 1988." A Comparative Study of the Relationship Between Strategy and Business Performance: Industrialised Countries and Newly-Industrialising Countries". Published PhD Dissertation. University of Mississippi.

Lenz, R.T. 1980. "Environment, Strategy, Organisational Structure and Performance: Patterns in One Industry". Strategic Management Journal, Vol.1: 209-226.

Li, Mingfang, and Simerly, Roy L. 1998. "The Moderating Effect of Environmental Dynamism on the Ownership and Performance Relationship". Strategic Management Journal, Vol. 19: 169-179.

Manu, Franklyn A. and Sriram, Ven 1996. "Innovation, Marketing Strategy, Environment, and Performance". Journal of Business Research, Vol.35:79-91.

Miller, Danny and Friesen, Peter H. 1983. "Strategy-Making and Environment: The Third Link. Strategic" Management Journal, Vol.4: 221-235.

Mosakowski, Elaine 1993. "A Resource-Based Perspective on the Dynamic Strategy-Performance Relationship: An Empirical Examination of the Focus and Differentiation Strategies in Entrepreneurial Firms". Journal of Management, Vol.19, No.4: 819-839.

Nash, Michael 1984." Managing Organisational Performance". San Francisco: Jossey-Bass Publishers.

Porter, Michael E. 1980." Competitive Strategy", New York: The Free Press.

Porter, Michael E. 1985. "Competitive Advantage", New York: The Free Press.

Prescott, John E.1986." Environments as Moderators of the Relationship Between Strategy and Performance". Academy of Management Journal, Vol.29 (2): 329-346.

Robbins, Stephen P. 1992. "Organisational Behaviour". 5th edn. New Jersey: Prentice Hall.

Robbins, Stephen P. 1996. "Organisational Behaviour". 7th edn. New Jersey: Prentice Hall.

Robinson, Richard B. Jr. 1982." The Importance of "Outsiders" in Small Firm Strategic Planning". Academy of Management Journal, Vol.25 (1): 80-93.

Robinson, Richard B. Jr and Pearce II, John A. 1983. "Planned Patterns of Strategic Behaviour and Their Relationship to Business-unit Performance", Strategic Management Journal, Vol. 9: 43-60.

Rue, Leslie W. and Holland, Phyllis G.1989." Strategic Management: Concepts and Experience". 2nd edn. New York: McGraw Hill.

Schroeder, Dean M. , Congden, Steven W. and Gopinath, C. 1995. "Linking Competitive Strategy and Manufacturing Process Technology". Journal of Management Studies, Vol.32, No.2 9: 163-189.

Shane, Scott and Kolvereid Lars 1995. "National Environment, Strategy, and New Venture Performance: A Three Country Study". Journal of Small Business Management, Vol.33, No.2: 37-50.

Sharplin, Arthur 1985. "Strategic Management". New York: McGraw-Hill Book Co.

Sim, A.B. 1991 "Turnaround for Small Businesses- A Synthesis of Determinants for Action Research, With Reference to Malaysia". Malaysian Management Review, Vol.26 (3) December: 15-22.

Sim, A.B. and Yap, Teoh Hai 1997. "Strategy Types in Malaysian Industrial Companies. Malaysian Management Review", Vol.32 (4) December: 1-10.

Stanwick, Peter A. and Pleshko, Larry P. 1995. "Relationships of Environmental Characteristics, Formalised Planning, and Organisational Design to Performance". The International Journal of Organisational Analysis, Vol.3 (2) April: 175-197.

Venkatraman, N and Prescott, John E. 1990." Environment-Strategy Coalignment: An Empirical Test of Its Performance Implications". Strategic Management Journal, Vol. 11: 1-23.

Wheelen, Thomas L. and Hunger, David J. 1999. "Strategic Management and Business Policy". Massachusetts: Addison-Wesley Publishing Company.

Wood, D. Robley Jr. and LaForge, R. Lawrence. 1979. "The Impact of Comprehensive Planning on Financial Performance". Academy of Management Journal, Vol.22 (3): 516-526.