University Publication Centre (UPENA)

Journal of International Business and Entrepreneurship

Volume 15 No. 2 July 2010 ISSN 0128-7494

Journal of International Business and Entrepreneurship Vol. 15 No. 2, 57-74, 2010

Redefining Critical Capabilities for Business Performance of Malaysian Manufacturing SMEs

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ABSTRACT

There are many factors plaguing the performance of small businesses in general. However, not many studies have been done to ascertain particular capability as important and significant in influencing the business performance of particular industry. Both qualitative and quantitative research approaches were used in the study. The former was undertaken via focus group interview to solicit new information as well as unravel other factors deemed necessary for business success. The outcome of this focus group analysis led to the development of the research framework and the research instrument. Data were gathered from 290 SMEs through a proportionate sampling design from the 6 top industries representing the manufacturing sector via a nationwide survey. Descriptive and regression analysis were run to ascertain and examine relationships amongst variables. SMEs reportedly admitted to the need of innovation capabilities to drive business performance. Furthermore both quality system and technical capabilities were more prevalent for

ISSN 0128-7494

manufacturing SMEs in influencing business success compared to other capabilities like finance and management that hold true historically. This study has provided the evidence for manufacturing entrepreneurs to migrate from financial dependence to innovation dependence for business success. The findings may provide a new research avenue like defining innovative characteristics/competencies required of SMEs as a driver for success. On policy implication the government may want to develop niche innovation strategies for small businesses instead of relying on "one strategy fits all businesses" policy.

Keywords: *Small and medium Enterprises, Malaysian Manufacturing SMEs, innovation capabilities, business performance.*

Introduction

SMEs accounted for 99% (518,996) of the total business establishments (523,132) in Malaysia, but contributed only 47% (RM405 billion) of the total output (SME Annual Report 2005, NEAC). This outcome reflects the huge gap between the SMEs' output per establishment and that of the large enterprises (RM0.8 million versus RM127 million). Malaysia adopts a common definition of SMEs (Table 1) to facilitate identification of SMEs in the various sectors and sub-sectors. This definition helps to facilitate the Malaysian Government to formulate effective development policies, support programs as well as provision of technical and financial assistance.

Table 1: Categories of SMEs in the Manufacturing Sector

Sector	Category	Definition
Manufacturing, manufacturing related services and agro-based industries	1. Micro Enterprises	Sales Turnover less than RM250,000 OR less than 5 employees
	2. Small Enterprises	Sales Turnover between RM250,000 to less than RM10 million OR employees between 5 - 50
	3. Medium Enterprises	Sales Turnover between RM10 million to RM25 million OR employees between 51 - 150

Source: National Development of SMEs Council 2005

An enterprise is considered an SME in the manufacturing sector based on the Annual Sales Turnover or number of full-time employees as shown below in Table 2. In Malaysia, 7.2% (39,219) of the total establishments are manufacturing SMEs.

Table 2: Profile of SME Establishments

Size	Manufacturing	Service	Agriculture	Total
Micro	20,952	360,912	29,985	411,849
Small	14,955	78,917	1,618	95,490
Medium	1,959	9,175	523	11,657
Total SMEs	**37,866**	**449,004**	**32,126**	**518,996**
Large	1,353	2,512	271	4,136
Total Establishments	**39,219**	**451,516**	**32,397**	**523,132**
SME % of total Established	7.2	85.9	6.1	99.2

Source: Malaysian Statistical Department

There are 37,866 SMEs in the manufacturing sector and the top 6 being in textile and apparel, food and beverages, metal and metal products, furniture, rubber and plastic and wood and wood products. About half of the SMEs in the sector are micro enterprises, followed by small (39.5%) and medium (5.2%) enterprises. Even though they make up a big percentage of the total establishments their contribution is only 47% of the total output. This study therefore seeks to (1) examine factors critical to small businesses in specific sectors, (2) investigate critical factors that may need to be redefined particularly for SMEs in the manufacturing sector in impacting their business performance and (3) suggest strategic directions that should be taken when formulating initiatives as measures to assist in the development of SMEs in Malaysia.

Theoretical Discussion

Bank Negara Malaysia has conducted a number of case studies (Bank Negara SME Survey, 2001) and found that although the SMEs were from different industries, all the enterprises shared common critical success factors, namely:

- Sound management capability and integrity;
- Sound business culture and entrepreneurial spirit;
- Prudent financial management;

- High quality products and services;
- Good program for human resource development;
- Strong support from financial institutions in terms of lending and advisory services;
- Strong marketing strategies, including good network with suppliers.

In another study by Abdul Rahman, Ismail, Kamaruddin and Roslan, (2000), empirical tests have shown that 'innovation' and 'formalization of process/ procedures' significantly contributed to the success of entrepreneurs. It was also found that associations such as the Malay Chamber of Commerce proved to be instrumental in moderating the success of its members' businesses.

It is noticeable that a number of researches had been carried out on the local SMEs particularly to address the various factors contributing to their success and failures. Previous studies conducted, identified recurring problems faced by SMEs that range from lack of capital and credit facilities, shortage of skilled workers, shortage of raw materials, inadequate infrastructure, lack of managerial and technical expertise, marketing constraints and knowledge to limited application of new technology (Hashim and Wafa, 2001; Ismail, 2002)

To further address and confirm these problems, further research particularly focusing on the challenges faced by the SMEs in a globalised environment had been carried out and highlighted by Ting (2004), and Wan (2003) amongst others. These resources commonly identified lack of access to loans, limited adoption of technology, lack of human resources, competition from MNCs, low productivity, lack of managerial capabilities, poor access to management and technology, and heavy regulatory burden as factors impeding success. In this rapidly changing world of globalization, it is argued that there will be a high possibility that Malaysian SMEs will be wiped out if they do not increase their competitiveness (Ting, 2004).

Research carried out over the last decade generalized the outcomes of factors impacting the performance of small businesses, leaving a gap when examining factors critical to small businesses in specific sectors. Whilst it may be true that knowledge is gained and may be applied to future situations on an individual level, however there is no evidence to suggest that analysis of an individual (or business) is applicable to another. Watson, Hogarth-Scott and Wilson, (1998. p.218) have identified the huge accumulation of research attempting to define clear characteristics shared by the owners of small businesses which effect their success, but concluding however that there is no simple pattern (Watson et al.,1998, p. 222).

The subject of success factors in small businesses has become more popular in recent years amongst business researchers and entrepreneurs, each attempting to provide a definitive formula for success (Beaver, 2002). Success is often viewed in terms of growth or profitability, but this becomes more complicated when trying to determine the factors that lead towards it. It is

important to recognize that while a common measure of success in business is still to be defined, there are some general factors found to influence the success potential of businesses (Beaver, 2002; Alsbury, 2001). Research has sometimes simplified the definition of success as being equivalent to continue trading and failure equivalent to cease trading (Watson et al., 1998). However, by adopting business continuation as the basis of success, conventional theorists held the assumption that profitable entrepreneurs decide to stay in business and those making a loss decide to exit. Furthermore, it is quite feasible that the decision whether or not to stay in business is not forced to arise as a result of profit, but could be due to the characteristics of the entrepreneur.

Many researchers (Curran, Stanworth and Watkins, 1986; Beaver, 2002) tried to define the characteristics of a successful entrepreneur. It is said that enterprise reflects individual personality and behavior of the entrepreneur, their commitment and vision being central to the success of business (Hill and McGowan, 1999). Hodgetts and Kuratko (1992) suggested that the entrepreneurial characteristics or traits that contribute to small business success are to do with technical and mental ability, human relation skills, high achievement drive and creativity. They also found that setting up a business for "positive reasons" such as to be independent, to be creative and to do enjoyable work is associated with survival of the small firm while those setting up for "negative reasons" such as to exploit a market opportunity, or meet a perceived service need, reduced the probability of survival. Likewise according to Nandram (2002) in order to be successful, the entrepreneur must have a combination of attributes and skills including being goal-oriented, decisive, pragmatic, resolute, flexible and self-confident.

Argenti (1976) argued that the most commonly cited cause of business failure is "poor management" and claimed that the most problems affecting SMEs are related to lack of managerial capability in owner-managers of SMEs. Managers require basic skills to establish organizational goals and determine appropriate strategies to achieve these goals. It is not only access to finance or the availability of capital that leads to competitiveness, it is how SMEs manage their scarce resources (financial, human, and material), market complexities and changes, as well as opportunities and threats in the environment (Temtime, 2002). Studies showed the widespread adoption of advanced practices in the areas of human resource management, strategic planning and operations management in a wide sample of small companies in Europe and Italy respectively and indicated positive effect of advanced practices on operational and business performance.

In the technical aspects amongst small businesses, a number of studies have recognized the importance of adopting a managerial approach in SMEs, like the possibility of transferring advanced management practices developed in large companies to SMEs. For example, some works highlight the enabling and critical factors for the adoption of operations management practices such

as just in time (Garsombke and Garsombke, 1989) within the context of small companies.

Most of the abovementioned studies on technology in SMEs also discuss the peculiarities in adopting management practices by SMEs, and the numerous barriers that hinder the adoption of such practices. Firstly, SMEs' competencies are generally concerned with technical and production aspects rather than with management, organization and customer service. This is mainly due to the specific attitudes of the owner or the key persons within the company. Competitive success is thus typically sought through excellence in production. A second factor is the concentration and low formalization of the decision processes in small companies. Decisions are generally made either by owner of the company or by a chosen few, often family members, on the basis of intuition and personal experience (Tonarnatzy and Fleisher, 1990). Clearly in this context the use of formalized approaches to decision making or strategic planning seems to have little room. For similar reasons, a managerial approach is not coherent with the typical learning processes of small firms, mainly based on learning by doing which is an effective way to transfer the competencies of small companies – i.e. technical and production skills and know-how – while it is less suited to transfer managerial knowledge and practices.

Innovation according to Gaynor (2002) is a management discipline which focuses on the organization's mission, searches for unique opportunities, determines whether they fit the organization's strategic direction, defines the measures of success, and continually reassesses opportunities, adding further that innovation does not require genius, but it does require a system-wide dedication to pursue unique opportunities. Drucker (1998) on the other hand is very explicit in stating that innovation is work rather than genius; successful innovation requires hard, focused, and purposeful work. Innovation has been a dominant factor in maintaining worldwide competitiveness. It fuels organizational growth, drives future success, and is the engine that allows businesses to sustain their viability in a global economy. Drucker succinctly stated that every organization needs one core competency: innovation (Gaynor, 2002; McDermott and Sexton, 1998).

Innovation pressures apply to large companies as well as SMEs (Vrakking and Cozijnsen, 1997). Scholars have noted that SMEs are often more fertile than larger firms in terms of innovation (Afuah, 1998). Their comparative advantages over large firms in innovation are their flexibility and speed of response (Acs and Audretsh, 1990; Dodgson, 1993). As a result, SMEs generally make a valuable economic and social contribution because of their innovative capacities. Previous studies on the relationship between innovation and organizational performance indicated mixed results, some positive, some negative, and some showed no relationship at all (Capon et al., 1990; Chandler and Hanks, 1994; Li and Atuagene-Gima, 2001).

Damanpour (1990) argued that the association between innovation and firm performance depends on the performance measurement and the characteristics of a given organization. That is, the utilization of objective or subjective performance indicators such as sales or self-reported performance may lead to different research results. In addition, different types or different combinations of innovations may also result in divergent organizational performance. A study by Nkongolo-Bakenda et al. (2010) indicate that size, international experience, innovation and distinctiveness have a direct influence on the degree of internalization by SMEs whilst Therin (2010) in his study found that organizational learning, innovation and company performance indicate a positive relationship.

SMEs are often suppliers of goods and services to larger organizations. Increasingly, they have felt the impact of the quality programs imposed on them. The lack of product quality from SMEs adversely affects the competitive ability of the larger organizations. Because of this reason, the larger companies have insisted that their small suppliers adopt Total Quality Management (TQM) of their own (Barrier, 1992; Ghobadian and Gallear, 1996). The spread of TQM among large firms has also changed how business is conducted, they have screened and settled on fewer suppliers who can deliver better and better quality (Barrier, 1992). TQM is thus more than a way for SMEs to improve the quality on their products and services. It may well be the key to survival.

Financial capabilities can be defined as the capacity to deploy financial resources by using various organizational processes (Amit and Shoemaker, 1993). In the rapidly changing business environment, these capabilities need to be dynamic (Teece and Pisano, 1994), i.e new knowledge about finance is continuously generated to renew and change the resource base when necessary (Eisenhardt and Martin, 2000). One main concern is the source of finance expertise that will allow the firm to achieve that level of competitive advantage desired in the marketplace. Rapid globalization is expected to put extremely high pressure on organizing financial resources for a faster, deeper, and more expensive global commitment and small businesses are no exception.

Based upon the literature discussed above, the research framework for this study is depicted below in Figure 1 and the definition used for the capabilities undertaken for this research follow suit.

Figure 1

a. Entrepreneurial traits reflects individual personality and behavior of the entrepreneur
b. Management capability refers to the ability to determine appropriate strategies to achieve these goals
c. Technical capability examines enabling and critical factors for the adoption of operations management practices
d. Innovation capability depicts system-wide dedication to pursue unique opportunities
e. Quality systems capability refers to strategies to improve the quality of products and services
f. Financial capability focuses on how companies manage records
g. Formalization looks at strategic planning

Methodology

The study commenced with 6 focus group interviews with 6 CEOs of manufacturing SMEs from the furniture, clothing and textile, wood and wood products, rubber and plastics, metal and food and beverages industries. These interviews were aimed at obtaining respondents' impressions, interpretations, and opinions regarding their administration, management and operations. The focus group interviews were undertaken to strengthen the formulation of the survey questions, which were conducted through the dissemination of questionnaires. A group discussion on the critical issues pertaining to the sustainability of SME's was deemed important in order to gauge the broad area of vital parameters which will shed insight into the continued existence or otherwise of SME's in Malaysia. By conducting focus group interviews, it allows for the serendipitous flow of new ideas among the group members and therefore aid in obtaining valuable insights from the snowballing effects of the discussions.

The outcome of the focus group interview provided us with the dimensions and items for questions appropriate for executing the field survey by means of administering a set of questionnaire. The SMEs registered under Small and Medium Industry Development Corporation (SMIDEC) was used as the sample frame in this study. The data collection was targeted accordingly to geographic zones in Perlis (North), Selangor (West), Pahang (Central), Johor (South), Kelantan (East) and Sabah (East Malaysia). The number of SMEs required for this survey was governed by the requirement that the final sample should have an effective sample size for the variables in study i.e. 384 SMEs (Krejcie and Morgan (1970) and Cohen (1969) in Sekaran, 2003). A total of 290 questionnaires were personally collected making it a response rate of 76%. Pilot test involving 12 companies (2 from each industry) was conducted and discrepancies found in the pilot testing were modified accordingly.

Findings

Focus Group Interview

There were a lot of issues that surfaced during the interview and these included factors that drive the CEO's achievement initiatives, management issues, policy matters, interpretation of success as well as the kind of help that is required. Some of the factors that drive CEOs to achieve include (1) the desire to be known, (2) the 'no turning back' syndrome, (3) passion, survival and sustaining power, and (4) support from suppliers.

Management issues on the other hand focused more on matters pertaining to human resources, ranging from the difficulty of obtaining local employees, high attrition rate of trained workers, getting the right people to do the right job and with matching salary to poor support from the relevant government bodies and agencies in helping them promote their products.

With regards to policy matters, small business owners are disappointed that changes to policies are often not communicated and there is no proper channel for dissemination of information. In addition, execution and enforcement of these policies are poor.

In relation to measures of success, whilst some say product or service acceptance itself is an indicator of success, others indicated ISO certifications, product-market niche, hypermarket penetration, and 40-50% control of the market share. Malaysian manufacturing SMEs need help particularly in branding and marketing as well as export how-to. The problems of securing seed-funding for business start-ups in addition to getting government loans and grants have surfaced many times during the discussion. SMEs have also voiced out their need for a one-stop center that will simplify the dealing process with the government.

Industry and State Profile

A total of 290 companies were sampled across six industries. Food industry consists of 27.2% (79) companies, furniture 19% (58), metal 18.3 % (50), rubber and plastics 12.4% (37), textile 33% (34), and wood 34% (32). Respondents were categorized into states in Malaysia with Selangor having the highest number of respondents at 40.3% (117), Johor 37.2% (108), Kelantan 5.9% (17), Pahang 5.2% (15), Kedah 3.4% (10) and Sabah 7.9% (23). Selangor was chosen as the biggest respondents in relation to the number of SME's available in the state. Each state was chosen as a representative of the region proportionately, Selangor for central, Johor for South, Kelantan and Pahang for eastern, Kedah for north and Sabah for East Malaysia.

Out of the total number of respondents, 84.5% (245) are males and 14.8% (43) are females. The number of respondents in the age range of 21-30 is 4.5%

(13), 31-40 is 26.6% (77), 41-50 is 43.1% (125) and above 50 is 25.2% (73). In terms of number of years of involvement in business, 12.1% (35) have been involved in business less than 5 years, 22.4% (65) between 6-10 years, 24.1% (70) between 11-15 years, 23.4% (68) between 16-20 years and 17.6% (51) have been involved in business for more than 20 years. Comparatively, 17.2% (50) of the companies are less than 5 years old, 24.5% (71) are 6-10 years old, 23.1% (67) are 11-15 years old, 21.4% (62) are 16-20 years old and 23.4% (39) are more than 20 years old. Majority of the company owners have secondary education at 43.8% (127), 19.7% (57) have primary education whilst 36.2% (105) have college/university education. A majority of the company owners interviewed originate from Selangor and Johor with 26.9% and 39% respectively.

Reliability Analysis

Table 3 depicts the reliability analysis for all 8 factors studied.

Table 3: Reliability Analysis between Factors

Variables	No of items	Items Deleted	Cronbach
DEPENDENT VARIABLE			
Overall Business Performance (OBP)	8		0.891
INDEPENDENT VARIABLES			
Technical Capability (TEC)	7		0.906
Innovation Capability (INVC)	8		0.892
Entrepreneurial Traits (ENTC)	5		0.871
Management Capability (MGTC)	9		0.840
Financial Capability (FINC)	5		0.813
Quality Systems Capability (QSYS)	5		0.803
Formalized Structure (FORM)	2		0.705

All factors reported Cronbach alphas greater than 0.6, which is acceptable for any exploratory study (Hair et al., 1998).

Correlation Analysis

Correlation analysis was conducted to describe the strength and direction of linear relationship between two variables, hence in this study, is to examine the strength of associations between the seven capabilities (IV) and the overall business performance (DV) of the firm. Pearson product moment coefficient was used in this case and the results are illustrated below.

Table 4: Correlation Analysis between Firm Capabilities and Firm Performance (N = 290)

	ENTREP	MGTC	TECHC	INNOVC	QSYST	FINC	FORM	OBIZP
ENTREP	1.00							
MGTC	0.515**	1.00						
TECHC	0.526**	0.528**	1.00					
INNOVC	0.460**	0.549**	0.681**	1.00				
QSYST	0.484**	0.456**	0.735**	0.614**	1.00			
FINC	0.212**	0.410**	0.073	0.247**	0.003	1.00		
FORM	0.532**	0.611**	0.414**	0.411**	0.365	0.358**	1.00	
OBIZP	0.261**	0.196**	0.456**	0.433**	0.458**	0.042	0.096	1.00

** Correlation is significant at the 0.01 level (2-tailed).

From the correlation table above, it can be seen that amongst the seven firm capabilities, technical (0.456), innovation (0.433) and quality system (0.458) capabilities are moderately associated with overall business performance while entrepreneurial traits (0.261) and management capabilities (0.196) are weakly associated with the overall business performance, and they are all significant at the 0.01 level. Ironically financial capability is not at all associated with business performance.

Regression Analysis

Multiple regression analyses were performed to determine the significance of the influence of seven (7) predictors (entrepreneurial traits, management capability, technical capability, innovation capability, quality system capability, financial capability and formality) on Business Performance (criterion).

Testing of direct relationships of the seven (7) elements was conducted on business performance. The following results were obtained and shown in Table 5.

The results indicated that when Business Performance was regressed on the seven variables (predictors); Technical Capability, Innovation Capability, Quality System Capability and Formality were found to have significant relationships with Business Performance. This means that these variables have a direct influence to determine the success of Business Performance. The other variables namely Entrepreneurial Traits, Management Capability, and Financial Capability did not seem to influence Business Performance. Interestingly, formality shows a reversed relationship, indicating that business performance will be impacted if the structure of SMEs is less formal. As a whole, the model shows that the predictors explained 29% of the variance in Business Performance.

Table 5: Linear Regression Analysis for Business Performance on Predictors

	Criterion: Business Performance	
	β	*p*
Predictors		
Entrepreneurial Traits	0.05	0.43
Management Capability	-0.13	0.09
Technical Capability	0.19**	0.03
Innovation Capability	0.28**	0.00
Quality System Capability	0.23**	0.00
Financial Capability	0.04	0.50
Formality	-0.16**	0.02
R2	0.29	

Note. N = 290; *p < .05, **p < .01

Discussion and Conclusion

This study attempts to (1) examine factors critical to small businesses in specific sectors, (2) investigate critical factors that may need to be redefined particularly for SMEs in the manufacturing sector in impacting their business performance and (3) suggest strategic directions that should be taken when formulating initiatives as measures to assist in the development of SMEs in Malaysia. The 7 capabilities were empirically tested to examine if they were significant in influencing the business performance. These factors were entrepreneurial traits, management capability, technical capability, innovation capability, quality system capability, financial capability, and formality.

In general, the results reported that technical, innovation, quality system capability, and formalization had significant influence in determining business performance of in particular manufacturing SMEs. Entrepreneurial traits and management capability do not seem to influence and impact business performance. This is because entrepreneurs can be made and being enterprising can happen at any point in a dynamic environment. Incidentally how they manage their company will never become constant. Subsequently this will have some effect on their level of creativity, persistence, achievement, risk propensity and locus of control. For small businesses characterized by small number of employees, simple strategies, systems and processes, and constrained by funding, policies and capacity, the CEO, Manager and owner are all rolled into one entrepreneur.

Ironically financial capability (managing/documenting accounts) also does not seem to influence business performance, although this has always been a perceptual fact. A plausible reason (for this study) is because a majority of these

ompanies is categorized as private limited who practically engages company cretaries and rely on their in house accountants or financial controllers to anage their accounts.

For the government and relevant bodies, managing SMEs successfully quires an entirely different approach. Their challenge would be to understand e competence and capability requirement of different categories of SMEs at 'ts different life cycle and formulate appropriate strategies that would allow em to prosper. Formulating strategies to attract and encourage SMEs to vest a certain percentage of their sales in training for competency and apability building (e.g. Human Resource Development Fund – HRDF) itself is challenge for the relevant parties. Consecutively, training providers must be ble to design, support and facilitate training requirements suited for them. ccordingly, shortage of and hindered access to qualified personnel is another ajor problem, which this research is in support of, hence there must be easures developed by the relevant authorities in addressing this issue that d been plaguing the small businesses for decades.

Technical capability is another critical success factor for SMEs. Technical pability deals with the ability to manage machines, materials, methods and chnologies, manpower skills, quality, and production capacity, factors crucial r manufacturing businesses. Only a small percentage of Malaysian SMEs are o advanced manufacturing technologies, since a majority are centered towards dium and low technologies with a significant number operating manually. For majority of SMEs, technologies are particularly seen as a tool to aid nufacturing rather than a strategic weapon to compete globally. Hence scanning r emerging technologies, investing in related technologies (hard and soft), ilding required competencies and training for technology adoption are given condary emphasis, although funding are provided by the government relating technology initiatives.

Innovation, quality and formality also contribute to business performance. r continued success and survival, SMEs need to consistently innovate their iness activities and improvise their products to meet the demands of their nsumers and render their competitors irrelevant. This innovation capability is nsidered another critical success factor since it deals with engaging in mething new" all the time to keep up with the constant change in tastes and ferences of the market. For instance, the drinking straw business would have n its decline if not for improvised bended straws. Subsequently we have nessed how, many companies discontinue operations because of their ility to consistently innovate and timely invent new products or diversify eir business.

With issues relating to health and safety on discussion tables of late, alized production and control processes become another factor crucial for all businesses as they are linked to quality directly. The presence of SOPs, r sales service, certifications like ISO, HCCP, and GMP are testimonials to the

seriousness and compliance of SMEs regarding quality initiatives. Furthermore markets are convinced and more receptive to products and companies that carry labels of these sorts. Whether it is management, innovation, quality systems, technical, finance or even regarding entrepreneurial traits, a formal approach to doing business requires documentation and produces a system. Furthermore, having a system in place provide access to information for continuous improvements and thus becomes the basic foundation of quality management, even if some other schools of thought advocate that business performance will be impacted if the structure of SMEs is less formal.

Collaborative efforts for product design and development with other external parties such as their customers, suppliers and research bodies are also commendable initiatives since small businesses are constrained in ideas and funding. Given the fact that SMEs are notoriously slow to invest in R&Ds on the basis that they lack relevant expertise, technical capabilities, innovative ideas and quality initiatives, these capabilities can always be obtained and synergized through the proper channels.

Several aspects of this study require further exploration. One issue is in relation to other entrepreneurial traits and the financial assistance that can actually contribute towards the business performance of SMEs. At present entrepreneurial traits examined include only (1) perseverance and sustainability, (2) creativity and innovativeness, (3) risk propensity, (4) locus of control and (5) drive for achievement and success. Other traits that could be examined would be dynamism, ethics and religiosity, or even political connectivity. Relatively it would be good to be able to demarcate the various types of entrepreneurial traits and to test each trait individually on its contribution to business performance.

A related pursuit is to explore a more detailed understanding of the types of financial assistance that owner-manager need to assist his/her business. In general it was found that SMEs owner-manager have difficulty in getting financial assistance at the initial start-up period of their businesses due to the fact that financial institutions require them to have collaterals – which at this beginning stage was quite impossible for some companies. Some SMEs owner-manager actually choose not to get financial assistance relating difficult and tedious process hence resulting to the use of their own money from personal savings or/ and borrow from relatives, evident by the responses given by a majority of the owners-managers interviewed and surveyed. Having to resort to other alternatives is also an innovative initiative.

In conclusion, given the sample of 290 companies actually willing to be interviewed, the drawing of any conclusion from this study should be done with caution. Many SMEs were not willing to cooperate in this study citing reasons that include busy schedules, repeated surveys with no potential benefits, and just not interested amongst others. In view of this, future research could replicate this study with larger sample sizes and focusing on technology-based

manufacturing SMEs with an attempt to identify other business practices and capabilities that are more relevant and applicable to them. Such efforts would help in further increasing our understanding of the business practices that can influence the business performance of SMEs, also tailor make strategies and measures that can benefit them.

References

Abdul Rahman, S., Ismail, N., Kamaruddin, Z. and Roslan, R. (1999). Critical Factors of Success or Failures of Bumiputera Entrepreneurs. Unpublished report, the Malay Chamber of Commerce.

Acs, Z.J. & Audretsch, D.B. (1990). *Innovation and Small Firms*, The MIT Press, Cambridge

Afuah, A. (1998). *Innovation Management: Strategies Implementation and Profits*. New York: Oxford University Press.

Alsbury, A. (2001). In Jay, R. Series Ed. (Eds), *Quick Answers to Small Business Questions*, London: Prentice-Hall..

Amit, R. & Schoemaker, P.J.H. (1993). Strategic and organizational rent, *Strategic Management Journal*, 14(1), 33-46.

Argenti, J. (1976), Corporate Collapse: *The Causes and Symptoms*. London: McGraw-Hill.

Bank Negara SME Survey (2001). Status and Performance of Small and Medium Enterprises.

Barrier, M. (1992). Small firms put quality first, *Nation's Business*. May, 22-32.

Beaver,G. (2002). *Small Business, Entrepreneurship and Enterprise Development*, Harlow: Pearson Education.

Capon, F.J.U. & Hoening, S. (1990). Determinants of financial performance: a meta-analysis, *Management Science*, 36(10), 1143-59.

Chandler, G.N. & Hanks, S.H. (1994). Market attractiveness, resource-based capabilities, venture strategies, and venture performance, *Journal of Business Venturing*, 9(4), 331-49.

Curran, J., Stanworth, J. & Watkins, D. (1986). The Survival of the Small Firm, Vol. 1. *The Economics of Survival and Entrepreneurship*. Aldershot: Gower Publishing.

Damanpour, F. (1996). Organizational complexity and innovation: developing and testing multiple contingency models, *Management Science*, 42, 693-716.

Dodgson, M. (1993). *Technological collaboration in Industry: Strategy, Policy and Internationalisation in Innovation*, London: Routledge.

Drucker, P.F. (1998). The discipline of innovation, *Harvard Business Review*, 76(6), 149-57.

Eisenhardt, K. M. & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21 (10/11), 1105-1121.

Garsombke, T. W. & Garsombke, D. J (1989). Strategic implications facing small manufacturers: The linkage between robotization, computerization, automation and performance. *Journal of Small Business Management*, 27(4), 34-44.

Gaynor, G. H. (2002), *Innovation by Design: What it takes to Keep Your Company on The Cutting Edge*, AMACOMN American Management Association, New York, NY,.

Ghobadian, A. & Gallear, D.N. (1996). Total quality management in SMEs, *Omega*, 24(1), 83-106.

Hair, J. F., Anderson, R. E, Tatham, R. I. & Black, W. C. (1998). Multivariate data analysis, (5th ed). New Jersey, USA: Prentice Hall International Incorporation.

Hashim, M. K. & Wafa, S. A. (2001). Firm characteristics, competitive strategy, environment and business performance: Survey evidence from Malaysian SMEs. *Jurnal Analysis*, Jun.

Hill, J. & Mc Gowan, P. (1999). Small business and enterprise development, questions about research methodology, *Entrepreneurial Behaviour and Research*, 5(1), 5-18.

Hodgetts, R.M. & Kuratko, D.F. (1992). Effective Small Business Management, 4th ed., Harcourt Brace Jovanovih, San Diego, FL.

Ismail, N. (2002). Technology adoption strategies amongst SMEs in Malaysia. Unpublished thesis, Science University Malaysia, Malaysia

Li, H., & Atuagene-Gima, K. (2001). Product innovation strategy and the performance of new technology ventures in China, *Academy of Management Journal*, 44(6), 1123-34.

McDermott, B. & Sexton, G. (1998). Sowing the seeds of corporate innovation, *The Journal for Quality & Participation*, 21(6), 18-23.

National Economic Action Council (NEAC) (2005). *SME Annual Report.*

Nandram, S.S. (2002). Behavioural attributes of entrepreneurial success and failure: new perspectives gained from critical incident technique, *Proceedings of the Small Business and Entrepreneurship Development Conference – Theoretical and Emphirical Advances*. In International Entrepreneurship, The University of Nottingham, 15-16 April, European Research, Shipley, 321-330.

Nkongolo-Bakenda, J-M., Anderson, R., Ito, J. & Garven, G. (2010). Structural and competitive determinants of globally oriented small and medium sized enterprises: An empirical analysis. *Journal of International Enterpreneurship*. 8 (1), 55-68.

Sekaran, U. (2003). Research Methods for Business: A skill building approach. India: Wiley & Sons.

Teece, D. J and Pisano, G. (1994). The dynamic capabilities of firms: An introduction, *Industrial and Corporate Change*, 3 (3), 537-556.

Temtime, Z.T. (2002). The planning behaviour of SMEs in developing economies: a preliminary investigation, *African Journal of Finance and Management*, 11(1), 36-42.

Therin, F. (2010). Learning for innovation in high-technology small firms. *International Journal of Technology Management*, 50 (1), 64-74.

Ting, O. K. (2004). SMEs in Malaysia: Pivot points for change. Retrieved from http://www.mca.org.my, [Date retrieved: 16 December 2010]

Tornatzky, L. G. & Fleischer, M (1990). *The process of technological innovation*. Lexington Books, Lexington, MA.

Vrakking, W.J. & Cozijnsen, A.J. (1997), Monitoring the quality of innovation processes and innovation successes. In Hassey, D.E. (Eds), *The Innovation Challenge*, John Wiley & Sons, Chichester, 25-49.

Wan, S. D. (2003). The implication of e-financing: Implications for SMEs. *Bulletin on Asia-Pacific Perspective* 2003-2004. New York: United Nations.

Watson, K., Hogarth-Scott, S. & Wilson, N. (1998). Small business start-ups: success factors and support implications, International *Journal of Entrepreneurial Behaviour and Research*, 4(3), 217-38.