

A Study on Factors Affecting the Performance of SMEs in Malaysia

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Abstract

In Malaysia, despite SMEs' have a significant contribution to the economy, they have not been given adequate attention as the various researchers have been biased towards larger and listed enterprises in Malaysia. So, this study aims to investigate the factors affecting the performance of SMEs in the manufacturing sector in Malaysia. The Contingency Theory developed by Fiedler (1964) was used to support this research. Based on the data collected from 300 SMEs in the Malaysian manufacturing sector, the results showed that there is a significant negative relationship between ineffective entrepreneurship as well as inappropriate human resource management (HRM) and the performance of SMEs. On the other hand, the results also proved that there is a significant positive relationship between the use of marketing information as well as the application of information technology and the performance of SMEs. In short, this study found out that the use of marketing information can influence the performance of SMEs at the highest.

Keywords: SMEs, Performance of SMEs, Contingency theory and performance of SMEs.

1. Research Overview

Small and Medium Enterprise Corporation Malaysia (SME Corp. Malaysia) classified Small and Medium Enterprises (SMEs) based on the yearly sales turnover or quantity of full-time workers. On the other hand, the performance of small businesses is defined as their capability to lead to the creation of employment and wealth by business start-up, survival and sustainability (Sandberg, Vinberg, & Pan, 2002). In line with the SME annual report 2010/2011, SMEs represented approximately 99.2% of the entire business formations in Malaysia in 2010. Performance of SMEs is crucial as they will transform Malaysia into a high-income and knowledge-based economy through their contribution to the national GDP. Despite their important contribution to exports, employment and economic growth, the total number of SMEs has decreased from 17,157 firms in 2010 to 16,893 firms in 2011 according to the SME information provided by the Department of Statistics of Malaysia. In addition, even though there is successful historical evidence regarding the development of SMEs in Malaysia, the development of the SMEs in East Malaysia such as Sabah is slower compared to Peninsula Malaysia. A search of the literature on SMEs in Malaysia reveals that there is a gap in the study

which examines the factors affecting performance of SMEs in Malaysia. A study was conducted by Zindiye (2008) on the SMEs in the manufacturing industry of Harare in Zimbabwe. However, this may not be directly generalized to the SMEs in Malaysia as the structure of industry, culture and norms in Malaysia may be different from that in other countries. Thus, similar studies should be extended to other industries and other regions to help generalize the findings.

2. Literature Review

Contingency theory has been widely used in researches on measuring the performance and effectiveness of an organization and it claims that there is no optimum method to systematize a firm and the organization structure of the company (Fiedler, 1964). In other words, contingency theory argues that the most appropriate structure for an organization is the one that best fits a given operating contingency, such as technology (Woodward, 1965; Perrow, 1970) or environment (Burns & Stalker, 1961; Lawrence & Lorsch, 1967). As every company faces its own set of internal and external constraints as well as special environmental incidents that effect in distinctive levels of environmental uncertainties, there is no one optimal organization design for every company because every company has different organizational culture and different perspective towards risk.

2.1. Effective Entrepreneurship

According to Talaiaand Mascherpa (2011), the entrepreneurial team demographics such as level of education and size of Entrepreneurial Team have a positive relationship in the determination of performance of SMEs. Fairoz, Hirobuni, and Tanaka (2010) found that there were positive correlations among proactiveness and EO with business performance.

H1: There is a negative relationship between ineffective entrepreneurship and performance of SMEs in the manufacturing industry in Malaysia.

2.2 Appropriate Human Resource Management

A research by Adnan, Abdullah and Ahmad (2011) indicated that HRM practices did have some effects on Malaysian firm bottom line performance. Islam and Siengthai (2010) found that most of the core processes of HRM, namely, recruitment and selection, performance appraisal, training and development, as well as compensations have a momentous and positive impact on firm performance.

H2: There is a negative relationship between inappropriate human resource management (HRM) and performance of SMEs in the manufacturing industry in Malaysia.

2.3 Use of Marketing Information

A research has been conducted by Cacciolatti, Fearne, and McNeil (2011) indicated that SMEs that make good use of structured marketing information presented a higher probability of growth. The research of Mahmoud (2011) concluded that the higher the level of market orientation, the greater the level of performance in Ghanaian SMEs. The study of Keh, Nguyen, and Ng (2007) showed that there was a positive relationship between information utilization and the firm performance.

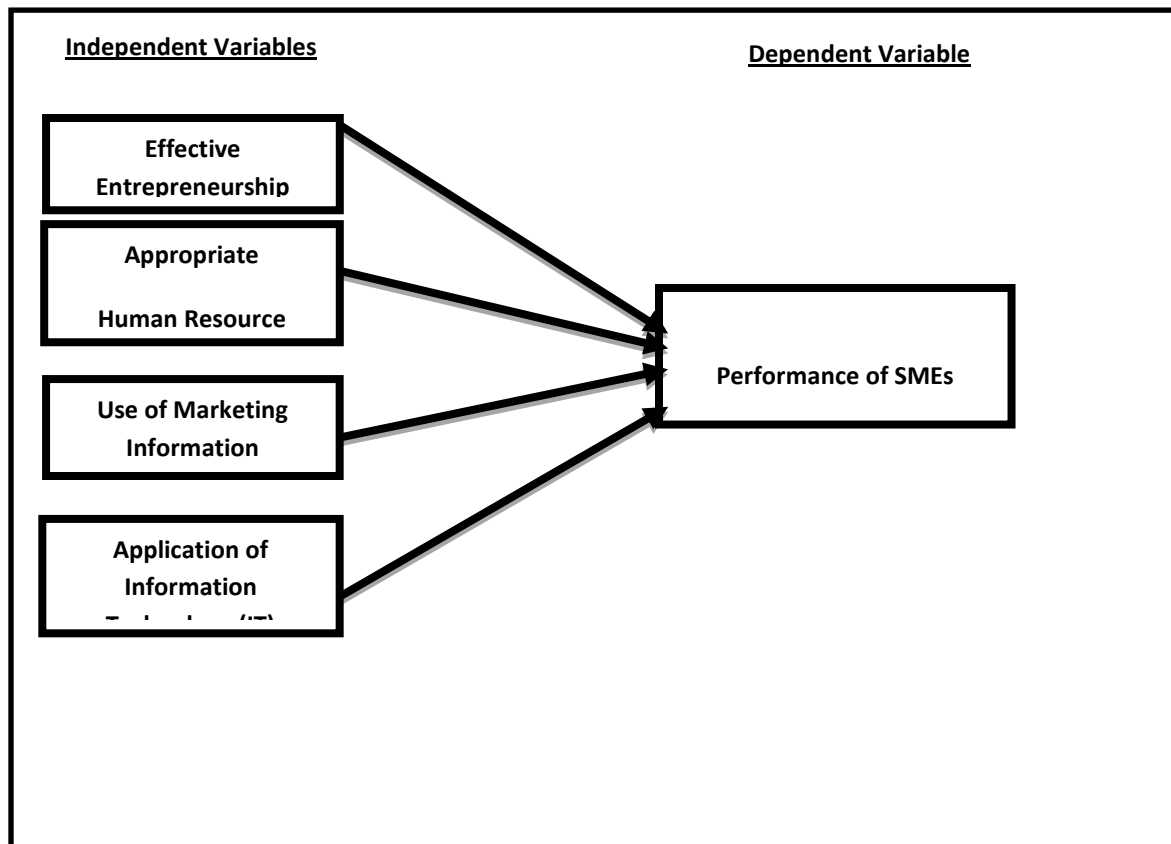
H3: There is a positive relationship between the use of marketing information and performance of SMEs in the manufacturing industry in Malaysia.

2.4 Application of Information Technology

Apulu and Latham (2011) found that the competitiveness of SMEs will be increased through adopting Information and Communication Technology. Subrahmanya, Mathirajan, and Krishnaswamy (2010) summed up that those SMEs which have technological innovation have a higher growth compared to the SMEs which are not creative in the sales turnover, investment and job.

H4: There is a positive relationship between application of information technology (IT) and performance of SMEs in the manufacturing industry in Malaysia.

Figure 1: The Framework of Relationship between IV and DV



Adapted from: Indarti & Langenberg (2004) and Erdil & Ayse (2010).

3. Methodology

Descriptive study was carried out to ascertain the implication of each independent factor towards the performance of SMEs in Malaysia. A total of 300 sets of questionnaires were forwarded via email to the randomly selected SMEs in manufacturing industry all over Malaysia.

The questionnaire consisted of 36 questions. All of the questions will be in likert scale of 1 until 5 with 1 as strongly disagree and 5 as strongly agree.

According to the Malaysian SMEinfo, there are 16,884 firms, which are categorized into different business sectors. This research narrowed down the focus on Manufacturing (include Agro Based) and Manufacturing Related Services sectors, which comprise of 7443 SMEs and 44% of all business sectors.

Among the 300 sets of questionnaires that were distributed randomly to the SMEs in the manufacturing industry, there was a successful return of 219 sets. Nevertheless, only 209 sets were usable due to 10 sets of incomplete questionnaires. Hence, a 69.7% of respond rate was successfully achieved.

A pilot test involving 25 respondents was performed in order to evaluate the reliability of dependent and independent variables. Based on Table 1, the result indicated that all of the variables were acceptable as the Cronbach's Alpha was more than 0.70 (Nunally, 1978).

Table 1: Reliability Test

Variables	Construct	Cronbach's Alpha	Number of Items
Dependent Variable	Performance of SMEs	0.822	8
Independent Variable 1	Effective Entrepreneurship	0.822	5
Independent Variable 2	Appropriate Human Resource Management (HRM)	0.717	5
Independent Variable 3	Use of marketing information	0.716	5
Independent Variable 4	Application of Information Technology	0.846	5

Source: Developed for the research

Data was analyzed and interpreted by using Statistical Package for Social Science (SPSS) computer software program. In addition to descriptive statistic, Pearson's Product Moment Correlation Coefficient (PMCC) and Multiple Linear Regression Analysis were employed. Before applying this analysis, the validity and reliability of the research questionnaire were examined using the values of Cronbach's Alpha.

4. Data Analysis

4.1 Normality Test

Table 2: Summary of Skewness and Kurtosis

	N		Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
	Valid	Missing				
EE 1	209	0	-.469	.168	.886	.335
EE 2	209	0	.284	.168	-.947	.335
EE 3	209	0	-.581	.168	-.198	.335
EE 4	209	0	-.117	.168	-.409	.335
EE 5	209	0	-.470	.168	-.201	.335
HR 1	209	0	-.775	.168	3.442	.335
HR 2	209	0	-.338	.168	-.585	.335
HR 3	209	0	-.651	.168	.153	.335
HR 4	209	0	-.448	.168	-.276	.335
HR 5	209	0	-.149	.168	-.405	.335
MI 1	209	0	-.607	.168	.400	.335
MI 2	209	0	-.452	.168	.256	.335
MI 3	209	0	-.456	.168	-.046	.335
MI 4	209	0	-.516	.168	.242	.335
MI 5	209	0	-.813	.168	.497	.335
IT 1	209	0	-.125	.168	.700	.335
IT 2	209	0	-.447	.168	.930	.335
IT 3	209	0	.359	.168	-.843	.335
IT 4	209	0	-.630	.168	3.738	.335
IT 5	209	0	.359	.168	-.843	.335
PS 1	209	0	-1.097	.168	1.257	.335
PS 2	209	0	-.365	.168	-.225	.335
PS 3	209	0	-.833	.168	.606	.335
PS 4	209	0	-.628	.168	.358	.335
PS 5	209	0	-.817	.168	.624	.335

PS 6	209	0	-.919	.168	.583	.335
PS 7	209	0	-.442	.168	-.070	.335
PS 8	209	0	-.833	.168	.606	.335

Source: Developed for the research

Where, PS = Performance of SMEs
 EE = Effective Entrepreneurship
 HR = Appropriate Human Resource Management
 MI = Use of Marketing Information
 IT = Application of Information Technology

Table 2 displays the values of skewness and kurtosis for all the independent and dependent variables of this research. Firstly, the results exhibit that the value of skewness for all the independent variables ranges from -1.097 to 0.359. In contrast, the kurtosis for all the variables is ranging from -0.947 to 3.738. Based on the result, it is clearly shown that all the independent variables and dependent variables are acceptable in terms of normality. This is because the value of skewness and kurtosis for all the variables conform to the rule of thumb where all the value is less than two and seven respectively (West, Finch & Curran, 1995).

4.2 Reliability Test

Table 3: Results of Reliability Test: Cronbach's Alpha

Variables	Construct	Cronbach's Alpha	Number of Items
Dependent Variable	Performance of SMEs	0.755	8
Independent Variable 1	Effective Entrepreneurship	0.703	5
Independent Variable 2	Appropriate Human Resource Management (HRM)	0.609	5
Independent Variable 3	Use of marketing information	0.692	5
Independent Variable 4	Application of Information Technology	0.829	5

Source: Developed for the research

Armstrong and Foley (2003) suggested that "the closer Cronbach's alpha is to 1.00, then, the more reliable the scale". Nunnally et al., (1994) also stated that a value for Cronbach's alpha coefficient greater than 0.60 is considered acceptable. This rule of thumb is further supported by Ferketich (1991) who recommended that corrected item-total correlations should range between 0.30 and 0.70 for a good scale. In conclusion, all reliability coefficients as shown in Table 3 have exceeded the minimum acceptable level of 0.60 as suggested by Nunnally et al., (1994) and Ferketich (1991). Therefore, this indicates that the items used in the construct are reliable and consistent.

4.3 Demographic Profile of the Respondents

Table 4: Demographic Profile of the Respondent

Category	N	Percentage (%)
<u>Gender</u>		
Male	155	74.2
Female	54	25.8
<u>Race</u>		
Malay	62	29.7
Chinese	112	53.6
Indian	32	15.3
other	3	1.4
<u>Age</u>		
25 years or less	3	1.4
26-35 years	37	17.7
36-45 years	85	40.7
46 years or above	84	40.2
<u>Marital Status</u>		
Single	66	31.6
Married	143	68.4
<u>Highest Education Completed</u>		
Diploma	93	44.5
Degree	106	50.7
Master	2	1.0
Doctorate	0	0
Other	8	3.8
<u>Length of Time with Organization</u>		
2-5 years	48	23.0
5-10 years	108	51.7
10-20 years	43	20.6
20 years above	10	4.8

Monthly Income		
RM 2000 or less	20	9.6
RM 2000-RM 4000	87	41.6
RM 4000-RM 6000	75	35.9
RM 6000 or greater	27	12.9
Job Position		
Managing Director	11	5.3
R&D Manager	42	20.1
New Product Development Manager	30	14.4
Project Manager	34	16.3
Other	92	44.0
Total Respondents	209	100

Source: Developed for the research

As can be seen in Table 4, most respondents (74.2%) are male. Majority of the respondents (53.6%) is Chinese while another 40.7% of the respondents are in the age bracket of 36 to 45 years. A total of 68.4% of the respondents are married. As regards their education, the vast majority of the respondents (50.7%) are degree holders. A large percentage (51.7%) of the respondents has five to ten years of working experience with their current organization. Most of the respondents (41.6%) have an income of RM 2000 to RM 4000 per month. Lastly, a majority of respondents (44.0%) are holding lower level positions in the current organization.

4.4 Pearson's Correlation Analyses

Table 5: Pearson Correlation Matrix

		PS	EE	HR	MI	IT
Pearson Correlation	PS	1.000	.131	.174	.637	.306
	EE		1.000	.461	.358	.372
	HR			1.000	.514	.121
	MI				1.000	.126
	IT					1.000
Sig. (1-tailed)	PS	.	.030	.006	.000	.000
	EE		.	.000	.000	.000
	HR			.	.000	.041
	MI				.	.035
	IT					.
N	PS	209	209	209	209	209
	EE	209	209	209	209	209

	HR	209	209	209	209	209
	MI	209	209	209	209	209
	IT	209	209	209	209	209

Source: Developed for the research

According to Hair, Black, Anderson and Tatham (2006), the correlation coefficient between each pair of independent variables in the Pearson’s correlation should not exceed 0.90. This is because the data may be suspected to have serious collinearity problem if the correlation value exceeds 0.90 (Hair et al., 2006). In Table 5, the highest correlation coefficient is 0.637 which is between the use of marketing information and performance of SMEs and is still less than 0.90. Hence, it is assumed that there is no multicollinearity problem in this research.

4.5 Multiple Linear Regression Analysis

The Multiple Linear Regression Analysis reported that the coefficient of determination R square = 0.515 which indicates that 51.5 % of the variation in the dependent variable can be explained by all the independent variables in this research.

Based on the summary of analysis of variance (ANOVA), it is found that F statistic is at 54.047. This shows that there is a statically significant relationship between the set of five variables. The findings also show that all the independent variables are significant related to the dependent variable as all the four independent variables meet the rule of thumb where the p-value is less than 0.05. The use of marketing information has the most influence to the performance of SMEs at the coefficients of correlation (beta) of 0.674. In a nutshell, this model can significantly represent the relationship of independent variables with the performance of SMEs.

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.069	.289		3.702	.000
	EE	-.153	.054	-.169	-2.845	.005

	HR	-.150	.055	-.167	-2.743	.007
	MI	.674	.052	.746	12.947	.000
	IT	.356	.063	.296	5.618	.000

Source: Developed for the research

a. Dependent Variable: PS

Table 6 shows that all the independent variables are significant related to the dependent variable as all the four independent variables met the rule of thumb where the p-value is less than 0.05. Then, an unstandardized coefficient linear equation is formulated:

$$\text{Performance of SMEs} = 1.069 - 0.153EE - 0.150HR + 0.674MI + 0.356IT$$

Where, $R^2 = 0.515$

N = 209

EE = Effective Entrepreneurship

HR = Appropriate HRM

MI = Use of Marketing Information

IT = Application of IT

By evaluating the unstandardized coefficients linear equation formed above, it is found that each independent variable has varied relative importance of association with the dependent variable.

The use of marketing information has the most influence with the coefficients of correlation (beta) of 0.674. Next, it is followed by the application of IT with beta of 0.356, appropriate HRM with beta of -0.150 and lastly effective entrepreneurship with beta of -0.153. In short, the value of coefficients of correlation shows that the performance of SMEs can be improved by maximizing the utilization of marketing information

5. DISCUSSION, CONCLUSION AND IMPLICATIONS

5.1 Discussion

From this research study, it is found out that there is a significant negative relationship between ineffective entrepreneurship and performance of SMEs in the manufacturing industry in Malaysia. This study found out that an effective entrepreneurship with skills and experiences will lead to a higher innovation as well as competitiveness in the business performance of SMEs, and an ineffective entrepreneurship will lead to bad performance of SMEs. This result supports prior researches such as Fairoz et al., (2010) and Talaia et al.,(2011).

The result shows that there is a significant negative relationship between inappropriate HRM with performance of SMEs. This is consistent with the findings of past researches in the context of appropriate HRM affect the performance of SMEs such as Adnan et al., (2011) and Islamet al., (2010). This is supported by a number of researches where they argue that HRM practices and performance research have common attributes as well as contradictions (Boselie, Dietz, & Budhwar, 2005; Wall & Wood, 2005; Katou & Budhwar, 2006).

The result also indicates that there is a significant positive relationship between use of marketing information and performance of SMEs. This result is supported by studies carried out by Keh et al., (2007) and Cacciolatti et al., (2011), where they found that the good use of marketing information by the organization can lead to a higher probability of growth and enhance the competitiveness as well as a better decision making process.

In the research, application of IT is found to have a significant positive relationship with increased performance of SMEs in Malaysia. This result is consistent with the prior researches' findings (Levy & Powell, 2000) where an application of information technology will enhance the overall performance of SMEs in Malaysia. The adoption of IT will assist an organization in storing information as well as communicating with customer, suppliers and business partner who will facilitate business transaction. As a result, it will lead to a better performance in reducing the operating expenses as a whole.

In conclusion, effective entrepreneurship, appropriate HRM, use of marketing information and application of information technology do have a significant impact on the performance of SMEs in Malaysia whereas the use of marketing information has the strongest relationship among the four variables in affecting the organization performance SMEs in the manufacturing industry in Malaysia.

5.2 Managerial Implications

One major implication from this research is that the findings will give the existing, new or potential entrepreneurs of SMEs in the manufacturing industry an optimal understanding about the factors that will affect their business performance. This is to ensure that their business continue to grow and ultimately help to support the development of economy in Malaysia.

The results of this study provide clues for recommending strategic behavior of SMEs to be utilized as a basis for benchmarking and improvement for SMEs in manufacturing industry in Malaysia. Firstly, entrepreneurs should have sufficient prior work experience and education on the well-being of SMEs to search for the most favorable growth opportunities within the market. SMEs should react proactively in the application of the latest technologies and programs since the application of IT is momentous in this new era. Additionally, the use of integrated marketing information and appropriate human resource might also have a consequential impact on SMEs' growth probabilities. In addition, firms should also be aware of the threats which might harmfully affect the business and try to safeguard against them proactively. Each firm should pay attention to customer and supplier relations, personnel, quality, flexibility, and planning.

5.3 Theoretical Implications

This study is important as Contingency Theory can be applied by the SMEs in order to help the SMEs' business entrepreneurs to adopt structural innovation in the daily operation of their business. This will ultimately lead to improvement, effectiveness and efficiency in the management of their business.

It is supported by the research conducted by Pasanen (2003), where the results found that most of the successful SMEs were characterized by qualities such as innovativeness, specialization and networking in their daily operations. Another research carried out by Jouirou et al., (2004) showed there should be a match between an organization's system and its strategy in order to enhance the performance.

An appropriate organizational practice will depend on the specific circumstances of the organization since there is no universally appropriate system which applies equally to all organizations according to Contingency theory. Thus, SMEs need to demonstrate a high degree of innovation in designing the strategies and organizational practices as well as coordinating with the conditions of the external environment to gain competitive advantage in this industry. For instance, it is essential for the entrepreneurs of SMEs to have an innovative skill to tackle the unpredictable circumstances or conduct things in a different way.

This research also proposed a new integrated model that is useful as there is lack of study on the factors affecting the performance of the SMEs in manufacturing industry to expand the knowledge regarding the factors affecting SME performance and their mutual connections.

5.4 Limitations and Recommendations

There are a few limitations encountered in the study. The first limitation is the findings of study were merely obtained for manufacturing sector only. Therefore, more effort should be devoted to study the factors affecting the performance of SMEs in Malaysia for different sectors, such as mining and quarrying, services, construction, as well as primary agriculture. The second limitation is that the study used four specific independent variables only. Future researchers can increase the independent variables or add moderating variables to the study in order to enhance the results. Besides, the research is conducted based on cross-sectional study which tends to give rise to a few problems such as difficulties to make causal inference. Longitudinal research is recommended for future research that allows researchers to look at changes over time. Another limitation is that respondents may have bias towards the questionnaires provided and due to the different background and different level of experience they may answer the questions based on their own perceptions. Future researchers can expand their researches by expanding the sample size in study that could enhance the variety of perceptions.

5.5 Conclusion

In conclusion, this study has achieved its research objectives. The hypotheses development, theoretical framework and research design were designed to achieve the research objectives. In this study, there are four determinants that significant to affect the performance of small and

medium enterprises (SMEs). Based on the results, effective entrepreneurship, appropriate human resources management, use of marketing information, and application of information technology are significant related to the performance of the companies. The constructs that have strongest positive relationship with Performance of the SMEs are the use of marketing information and application of information technology followed by appropriate human resources management and effective entrepreneurship.

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