

Perceptions of IT Knowledge among SMEs Operators in Malaysia

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Abstract

The perception of the importance of IT entrepreneurs plays a vital role in influencing the business performance. Positive perception of the importance of IT knowledge is a necessary approach in achieving and determining the adoption of the business marketing goals. This study was carried out to find out the IT knowledge among small and medium industries (SMIs) in Malaysia. The research has seen the perception of SMEs and their views on IT knowledge. The study involved 285 SME businesses throughout the state which are registered with SMIDEC using a random sampling method. A total of 102 (35.7%) questionnaires were used for this study. This study found that the respondents gave a positive perception of the IT knowledge among the small and medium industries and gave many benefits either directly or indirectly to their business. The findings of this study could be used by academicians to study importance of the IT knowledge among the small and medium industries and provide advisory service to SME entrepreneurs who are enthusiastic about online marketing.

Keywords: perceptions, SMEs, knowledge of IT

1. Introduction

By the 21st century, the global economy is increasingly moving towards a form of knowledge economy. Information Technology (IT) has become the medium for the communication of information between individuals, companies or countries. Thus it may be said that information technology or IT creates relationships between people and the information that they need and use through the technology of computers to process information. Hence, knowledge of IT in SMEs will explain the level of knowledge of computer technology of SMEs and to what extent and how they use technology to obtain information to manage business dealings.

In this regard a positive perception will have a positive impact in performing IT. The knowledge on perception of IT by SMEs plays a vital role in influencing the performance of an enterprise. Usually positive perceptions reflect technical knowledge of IT firms in implementing the goals and business objectives to be achieved, particularly in management and marketing sectors. Perception of the importance of IT knowledge will make the entrepreneur proactive, capable of identifying opportunities, diligent, capable of finding information, having a high awareness of quality, commitment to duty, efficient, systematic planning, creative problem solving, self-confident, assertive, confident in the ability of others and possessing a dominant strategy.

An entrepreneur who is knowledgeable in IT and capable in ICT is important in the world of global trade because of increasing competitiveness and resilience is a major goal for the 9th Malaysia Plan (9MP). As such, one of the priorities is to develop competitive SMEs that are resilient, equipped with sound capability and innovation, as well as managerial and business skills. The use of e-marketing can also be a major determinant in the development process to enhance the value chain for SMEs in particular to market their products more proactively.

E-marketing is one marketing alternative which involves the use of information technology. Using it can help increase sales and value-added services and customer satisfaction in terms of open access to product information. Therefore SMEs should know the role of IT and ICT, especially e-marketing in improving and expanding markets for their products. Basic skills such as using e-mail, will lead to an increased use of ICT, that is, e-marketing, e-commerce as well as e-business.

A Report on the United Nations Development Programme (2007), stated that most SMEs lack experience in marketing products and do not provide special provisions for promoting their products. The reluctance among SMEs to participate in e-commerce arises at two levels. At one level, firms are not convinced of the benefits of e-commerce. SME owners are convinced that their traditional customers are sufficiently numerous and will remain loyal to them, making it unnecessary to experiment with e-commerce. Others are willing to consider switching only if their own customers and suppliers make the switch before them. Thus, many SMEs do not seem to have appreciated fully the new opportunities that e-commerce will generate; rather they view it as merely replacing current modes of doing business. At another level, obstacles to adopting e-commerce relate to factors such as the lack of trained staff, the lack of capital and apparent failure after a brief period of experimentation, and reservations regarding the security of e-transactions. The lack of awareness of government incentives to support the adoption of new technology suggests that the mechanisms to publicize these incentives are faulty or lack coverage. Similarly, a study conducted by Bank Negara Malaysia (2005) also found that SMEs face several challenges, among which (i.) Marketing and promotion strategies are limited, (ii.) Access to local and foreign markets is limited and (iii) constraints and technology management capabilities.

This research is carried out based on several reasons. First, knowledge of IT is a significant factor in the development of SMEs because it helps to develop the business. Expected results of this study can provide knowledge and awareness of SME entrepreneurs on the importance of IT to improve productivity to expand the market for their products in developing their businesses and thus contribute to the GDP of the country. Secondly, the result of this study indirectly provides employment opportunities for ICT graduates to use their expertise and knowledge in helping SMEs in line with the state government's objective to make this state an ICT hub. Finally, this study contributes to existing literature and provides an opportunity for further academic study to pursue IT knowledge and the use of e-marketing among SMEs.

2. Literature Review

2.1 Definition of Small Medium Enterprises

Several studies were reviewed in the preparation of this paper. For example, the study of Harper (1984) defines the SME business in accordance with the number of employees, annual sales, capital and capital cost of each area. According to Miller and Kirschstein (1988), SME business includes efforts to produce income such as selling fruits and vegetables, clothing, woodwork and steel, electrical and mechanical repairs, fabric manufacturing and food service.

Minoo and Charles (2003) study the economic development and rural micro-businesses. This study is accompanied by businesses from the retail sector, service and small manufacturing business in which ownership is different from individual ownership, partnership, family and co-operative ownership. This study emphasizes the various categories of critical resources such as expertise, finance, logistics, security, and examines the importance of gender to the business and its impact on the life expectancy and the success of micro-businesses in rural areas. The results showed expertise in business such as marketing, strategic planning and finance, followed by the technical resources that are critical to the success and sustainability of rural micro businesses.

Many agencies define SMEs according to various criteria they are based on annual sales, number of employees and shareholders. However, the definition by the Small Medium Enterprise Development Council (SMIDEC), Malaysian SMEs in the manufacturing sector (including agro-based) is an enterprise/industry by the number of full-time employees not exceeding 150 or with annual sales turnover of not more than RM 25 million. Specific definition is divided into three categories as in Table 1 below.

Table 1. Definitions of MSMEs in Malaysia

Category	Micro-enterprise	Small enterprise	Medium enterprise
Manufacturing (including agro-based) and MRS	No. of full-time employees: Less than 5	No. of full-time employees: Between 5 and 50	No. of full-time employees: Between 51 and 150
	Annual Sales Turnover: Less than RM250,000	Annual Sales Turnover: Between RM250,000 and less than RM10 million	Annual Sales Turnover: Between RM10 million and RM25 million.
Services, primary agriculture and information and communication Technology (ICT)	No. of full-time employees: Less than 5	No. of full-time employees: Between 5 and 19	No. of full-time employees: Between 20 and 50
	Annual Sales Turnover: Less than RM200,000	Annual Sales Turnover: Between RM200,000 and less than RM1 million	Annual Sales Turnover: Between RM1 million and RM5 million

Source of Data: National SME Development Council (2005), SME Annual Report

2.2 IT Knowledge among SME Enterprises

This study focuses on the knowledge of IT among SMEs. Currently the website is one of the most popular components of internet to get information through the use of graphic, audio and video (Kalakota and Whinston, 1996) through the website, a method of pre-effective marketing, SME entrepreneurs can widely disseminate information to clients and customers and give them the opportunity to select the information that attracts their attention.

To use website for marketing purposes requires a good knowledge. This is because the positive perceptions and high levels of knowledge will contribute to effective implementation. Many studies done by researchers found that the use of E-commerce among the operators are encouraging but it is still a new level. This is caused by several factors such as level of barrier in knowledge of IT, educational level of operators, the type of business, high costs and the allocation provided etcetera.

The study conducted by Mansor and Amri Abidin (2010) on the management of SMEs in Kelantan found that the use of the Internet or E-commerce is very little in its business dealings. The study also revealed that the majority of entrepreneurs in Kelantan are not using the latest technology such as computers in business operations and have a little knowledge on IT. They also find it difficult to be exposed on the progress of technology.

This condition generally occurs not only in Kelantan, but according to A Hamid and Baharun (2004), in most other SMEs in Malaysia who are still far behind in using the Internet in business transactions. This may explain the knowledge of IT among SMEs in Malaysia as relatively low. The level of IT usage in Perak is still low in many sectors and similar trends also occurred for new or long operated industries (Mansor and Abdul Manap, 2006). In this regard a more proactive disclosure should be taken by relevant parties such as businesses with the status of the Multimedia Super Corridor (MSC) to clarify the importance of Internet for communication and information in enhancing their business (Hashim and Hamid 2004).

The level of IT knowledge in senior management level should also be higher than the subordinate level (Kotelnikov and Su, 2007). This is because the high degree of knowledge in higher level will contribute to the implementation at ground level whether touse the website, e-commerce, or e-business in business dealings. According to Martin and Matlay (2001), Figure 1, the increased use of IT to explain how the level of IT knowledge influences the level of implementation success in business. In accordance to Figure 1, it is clear there is a positive relationship between profitability and the level of development and sophistication of business change through the use of ICT. At the initial stage, the use of e-mail was the most basic use of ICT, followed by

the use of the website to develop the level of E-commerce and E-business which has been changing the business landscape in a wide range of networking with other businesses, through the application of ICT.

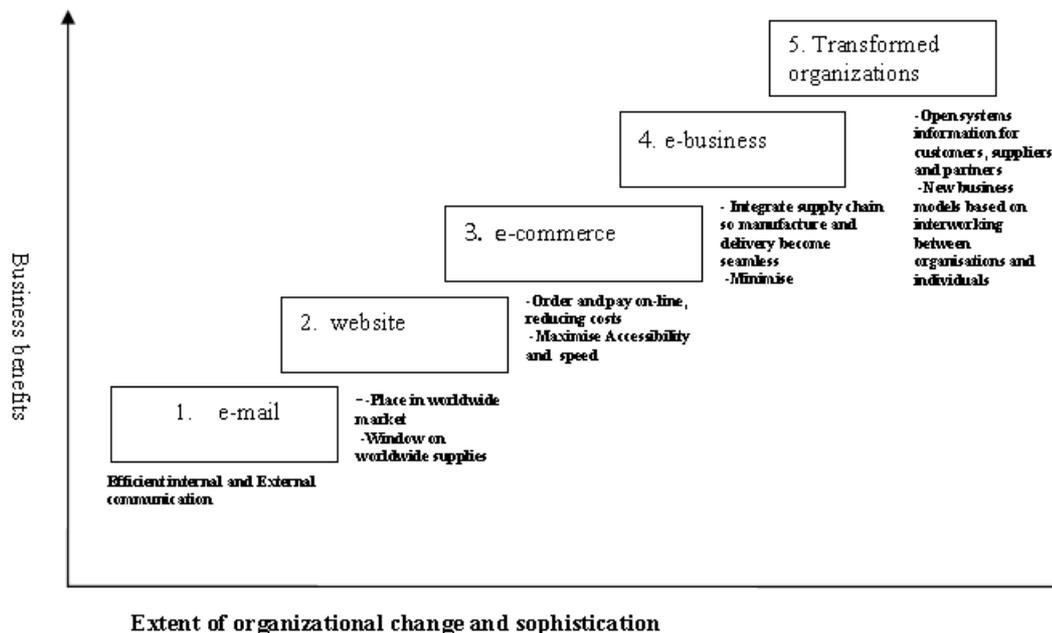


Figure 1. Model of e-adoption ladder adapted from Cisco led information age partnership study on e-commerce in small business (Martin and Matlay, 2001)

In general, local SMEs realized the importance of ICT for their business. However, they do not know how to fit the special operations to use the Internet. In this regard the potential of the internet as a way of marketing has been widely studied but there are only few studies on the effectiveness and impact of its use (Turban et al, 2004; Wise and Morrison, 2000; Kling 1994). The study conducted by Tan and Eze (2008), found that business transactions via the internet using either e-commerce or e-business is quite popular among SMEs in Malaysia. This is because the goal of every business is different and will affect the use of the Internet itself as well as lack of knowledge on the importance of IT in business.

The discussion of previous studies clearly shows that attitude and perception is important in determining the success of a business. Every entrepreneur should have a positive attitude and perception of factors besides capital factors, experience, moral support to business type, business location and so on.

3. Methodology

3.1 Selection of Study Area

The study involved 285 SME businesses throughout the states which are registered with SMIDEC using simple samples (convenient sampling). However, only 102 (35.7%) of the returned questionnaires can be used for the purpose of this study.

3.2 Research Instruments

Questionnaire for this study consists of two parts as follows:

- i) Part A: Demographic Questionnaire for SMEs
- ii) Part B: Questionnaire on IT Knowledge among SMEs

3.2.1 Section A: Demographic Questionnaire on SME Operators

This section contains 10 questions pertaining to the respondents including gender, age, marital status, race, education, business location, age of business, annual sales, number of employees and type of business using a closed question format (close ended question) that required the respondent to answer a statement by choosing a scale that is determined. This method is suitable and easy to be answered, reduces interview biasness, and faster to administer. This method also provides high uniformity of response and ultimately facilitates data processing (Kinnear and Taylor, 1996).

3.2.2 Section B: Survey of IT Knowledge among SMEs

This section involved seven questions to collect data on the use of IT among SMEs which involved knowledge of IT, IT courses attended, qualifications in IT and IT learning opportunities.

During the interviews conducted, a set of questionnaires were used to record information. Questionnaires developed for this research by the researchers matched the questions with some previous studies and used the Likert scale (1=extremely disagree to 5=strongly agree). Information from this questionnaire was transferred and analysed using the Statistical Package for Social Science (SPSS 17.0). Cronbach coefficient alpha was used to test for validity. This questionnaire has been tested for their suitability through a pilot test conducted on the 20 operators. Once analysed with SPSS, the results showed that the value of alpha (Cronbach) is 0.65 which is "Moderately reliable" (Thomas R. Black, 1999).

4. Findings

In analysing the perception of IT knowledge, a total of 285 operators were identified and interviewed throughout the state. However, only 102 (35.7%) of the questionnaires can be used for the purpose of this study. This section presents the results of the study on the profile of SME entrepreneurs and businesses, the business location, age of business, annual sales, number of employees and types of businesses and their products marketed abroad.

4.1 Profile of Small Medium Enterprises

4.1.1 Business Location

In reference to Table 2, a total of 102 questionnaires were analysed and 58.8% of the businesses were located in the city. 33.3% of the businesses were in the town and the rest (7.9%) lived in rural areas. Results showed that SME businesses are highly concentrated in urban areas compared to rural areas. This is in tandem with the business registration numbers in SMIDEC and many facilities and needs of SME businesses in urban areas.

Table 2. Demographic analysis of respondents (n=102)

Variable		Variable percentage (%)
Location	City	58.8
	Town	33.3
	Rural	7.9
Types of Business	Car accessories	1.0
	Food	38.2
	Clothing	9.8
	Retail	3.9
	Pharmacy	2.0
	Home decoration	2.0
	Engineering	6.9
	Cosmetics	2.0
	Advertising	1.0
	Printing	2.0
	Furniture	2.9
	Services	6.9
	Health Products	10.8
	Factory Manufacturing	3.9
Manufacturing/ construction	6.9	
Age of Commerce	Under 5 years	37.3
	6 - 10years	28.4
	Exceed 10 years	34.3
Number of Employees	Less than 5 people	32.4
	Between 5 -50 people	48.0
	Between 50– 150 people	19.6
Annual Sales	Less than RM250 Thousand	42.2
	RM250 Thousand- RM10 MILLION	42.2
	RM10 MILLION- RM25 MILLION	15.7
Market	Yes	24.5
Overseas	No	75.5

4.1.2 Type of Business

Most SME businesses (38.2%) conduct food based businesses as their major business followed by health products (10.2%). Among other types of businesses are apparel (9.8%), and services, engineering and manufacturing/ construction (6.9%). Type of business, types of food-based businesses is a logical domain for residents in densely populated urban areas as the work required such services to facilitate the flow of everyday life.

4.1.3 Age of a Company

It was found that 37.3% of the businesses which were below 5 years dominated the SME businesses, followed by businesses more than 10 years (34.3%) and finally the SME businesses between the period of 6 to 10 years (28.4%). According to Gray & Gray, (1994), if a business is unable to continue operations beyond the initial period and it expanded within five years, it can be concluded that this business has been successful.

4.1.4 Number of Employees

The results showed that the majority of SME businesses (48%) have employees between 5 to 50 people. According to the definition of SMEs related to the number of employees, SME businesses in the state are categorized as small majority. This was followed by micro-industry workers with less than 5 people (32.4%). While the average industries were 19.6%, the SME businesses in the state were categorised as small and micro.

4.1.5 Annual Sales

84% of the SME businesses achieved a turnover of less than RM10 million per annum and only 15.7% had sales of more than RM10 million. Once again, when viewed on the definition of SMEs under the category of annual sales, the majority of SME businesses was small and micro. The study also found that the majority of businesses of SMEs were micro and small-sized with less than 50 employees and annual sales gained less than RM10 million. It marketed the products for domestic use only.

4.2 Perception Analysis of SME Entrepreneurs on IT Knowledge

Analysis of this section is related to the perception of SMEs on IT knowledge. Perception of entrepreneurs in this study refers to the level of its own evaluation of IT in their business knowledge. There were seven statements made on IT knowledge. The response scale is divided into five categories that is either Strongly Disagree (SDA), Disagree (DA), Not Sure (NS), Agree (A) and Strongly Agree (SA). SMEs perceived position is shown in Table 3.

Table 3. Respondents' perception on IT knowledge

Statement	SDA %	DA %	NS %	A %	AB %
I know about IT	2.9	2.9	6.9	66.7	20.6
I attended a workshop / seminar / IT courses	17.6	13.7	6.9	51.0	10.8
I have formal qualifications in IT	32.4	19.6	16.7	27.5	3.9
I do not know anything about IT	56.9	29.4	9.8	3.9	0.0
I have a high level of knowledge about IT	12.7	17.6	50.0	16.7	2.9
There is no specialist IT technology in business organization	31.4	27.5	12.7	21.6	6.9
Employees are given the opportunity to receive formal training in the use of IT	13.7	18.6	18.6	38.2	10.8

The first statement is about knowledge of IT. 87.32% of SMEs have knowledge of IT as the respondents agreed and strongly agreed on this statement. A high percentage who agreed showed SMEs have IT knowledge. For the second statement on attending workshops / seminars / courses in IT, the majority of respondents (51.0%) agreed and (10.8%) strongly agreed. A high percentage of respondents who agreed showed that SMEs have attended workshops / seminars / courses on IT.

"I have formal qualifications in IT" is the third statement in which 52% of respondents who have not strongly agreed and disagreed with the above issue, while 16.7% are not sure and 31.4% admitted having formal qualifications in IT. This proved that many SMEs did not have formal qualifications in IT.

The fifth statement that states “does not know anything about IT,” showed 56.9% of respondents did not agree, 29.4% disagreed, 9.8% were not sure, 3.9% agreed and none strongly agreed. High percentage of disagreed showed that SMEs have knowledge on IT.

Further statements about a high level of knowledge about IT, 50% of respondents were not sure and 30% disagreed and the remaining 20% agreed that they had a high degree of knowledge about IT. This indicated not many SMEs have a high degree of knowledge about IT.

The statement "There is no specialist IT technologies in business organizations," the majority (58.9%) SMEs declared that they are experts in the business of IT technology. Yet 12.7% of employers were unsure and 28.5% admitted SMEs did not have specialist IT technology in their businesses. Finally the statement about the chance to give formal training in the use of IT among employees, found that entrepreneurs are willing to provide formal training in the IT knowledge among the small and medium industries. This explained that some SMEs did not open up opportunities for employees to learn about the use of IT in their businesses.

Examining the mean average score for the perception of IT knowledge operators, operators found that the study had a positive trait as shown in Table 4. Based on this finding, operators should be able to perform well in handling the business with IT knowledge and should be able to face the challenges of globalization.

Table 4. Analysis of respondents perception towards IT knowledge

Statement	Mean Scores
I know about IT	3.99
I attended a workshop / seminar / IT courses	3.24
I have formal qualifications in IT	2.51
I do not know anything about IT	1.61
I have a high level of knowledge about IT	2.79
There is no specialist IT technology in business organization	2.45
Employees are given the opportunity to receive formal training in the use of IT	3.14

5. Conclusion

Overall, SMEs provide a positive view of their IT knowledge among their employees. The majority of operators have IT knowledge through workshops, seminars and IT courses they had attended. Moreover, there are also entrepreneurs and technologists who have formal qualifications in IT. They are also aware of the characteristics of IT knowledge which is essential to conduct business more effectively and also to contribute to the success of a business.

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