Determinants for ICT Adoption Among Small and Medium Enterprises in Pahang

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Abstract: In the new global economy, advent of the Information and Communication Technology (ICT) has revolutionized the way of doing commercial activities. It boosts firm's reachability to information and access to experts, expansion of market and customer, increase exports, and improvement in managing organization. However, SMEs still lag in strategy development and implementation of ICT adoption in their business. Therefore, the purpose of this study to investigate the determinant and strategy of ICT adoption among SMEs. The study was focusing on the small and medium enterprise in Pahang. The study employed quantitative method and data will be collected by distributing questionnaires to respondents. The data will be analyzed by using Statistical Package for Social Science (SPSS). Most of the respondents agree with the internal factor is management support and commitment while external factor is competitiveness of environment (need to stay competitive). The strategies are increasing the public spending on technology projects for government, lending programs for SMEs for non-governmental organizations and SME should attending in computerization projects meetings frequently. Based on the result and finding, the two research objectives in this research have successfully achieved. SME Malaysia need to consider the internal factor and external factor in ICT adoption and the strategies from the government, NGO and SME to ensure that they can implement the technology and ICT in their business.

Keywords: SMEs, ICT, Determinant, Strategy

1. Introduction

Information and communication technology (ICT) are the skill that have basic computer and internet skill in term of operating, processing, changing, accessing and using the hardware and software of computer and internet devices (Hashim, 2007). SMEs need to access to new technology to ensure they fully participate in the fast-changing market environment because ICT is key to business development. The SMEs are known as the main contribution of the economies in Malaysia. ICT

adoption in the study has crucial sources in improvement the efficiency of the systems and innovation of the technology. While, the business process can have improvement once the business tends to use the ICT.

1.2 Problem Statements

ICT applications improve information and knowledge management inside the firm and can reduce transaction costs and increase the speed and reliability of transactions for both business-to-business (B2B) and business-to-consumer (B2C) transactions. Despite these advantages, SMEs are generally slower in adopting ICT compared to large enterprises (Jaganathan *et al*., 2018). Some SMEs have few resources to allocate to ICT and that they lack the ability to recognize the benefits that ICT may provide to the business (Owen & Darkwa, 1999; Roberts, 2000; Holmqvist, 2003; Wolcott *et al*., 2008). Others found SMEs having lack of top management engagement (Furuholt & Orvik, 2006), poor business skills, competencies, and literacy (Leenders & Wierenga, 2002; Duncombe & Heeks, 2003), lack of affordability of ICTs (Mansell & When, 1998; Hazan, 2002), poor infrastructure (Latchem & Walker, 2001; Michailidis *et al*., 2012; Roberts, 2000). Therefore, this study seeks to investigate the determinant and strategy of ICT adoption among SMEs so that the strategic benefits of the technology could be fully exploited.

1.3 Research Questions

(i) What are the key determinants for ICT adoption among SME's?
(ii) What are the key determinants for ICT adoption among SME's?

1.4 Research Objectives

(i) To identify the key determinant for ICT adoption among SME's.
(ii) To identify the strategies for ICT adoption among SME.

1.5 Scope of the Study

This research will be focusing on the small and medium enterprise in Pahang. The survey will involve the enterprise that implements the adoption of information and communication technology (ICT) as the platform in their business. These SMEs have been targeted as the research respondents in this study.

1.6 Significance of the Study

The significance of the research is to know how far the SMEs adopting the ICT in their business. However, this research can help all the SMEs in Pahang identify the problem and difficulty in implement the ICT for the future reason. SMEs can have the overview of the adoption to their performance which give an impact to it. In addition, this research also beneficial to the SMEs to figure out any possible opportunity in running the business once the adoption of ICT has been implemented. Management, operations and the SMEs themselves will have an easy way in expanding the business as the rapid of the technology changes. In order to do so, this research also helps the SMEs understand the needs and develop a plan with strategy of technology in ICT.

2. Literature Review

2.1 Information Communication Technology (ICT)

Information Communication Technology (ICT) as the arrangement of digital technologies designed to collect, organise, store, process and communicate information whether internal or external to an organization and in SMEs case (Ritchie and Brindley, 2005). ICT include technologies like point of sales, telephones, e-commerce, credit card facilities, system and many more. ICT can meet the business

needs such as strategy, operations or marketing needs otherwise the combination of that things. Lucchetti and Sterlacchini (2004) categories the use of ICT into general-user, production-integration and market-oriented groups because the categorization caused when there is a different need of the business. When it comes to the general-user, it refer to the basic technologies that we used in daily life like phones, e-mail and internet in order to accomplish administrative functions in the SME, while the combination between production of goods and functionality of the business suitable for the production-integration. The last one is market-oriented is where they are using the ICT to communicate and market with the outsider around the world. Different terms are used to indicate the grouping of the use of ICT in the SME, but all the categorization above showed the common purpose of ICT use. All the categories of the use of ICT (general-user, production-integration and market-oriented groups) must be implemented in the SME in order to become as a competitive tool in the business.

2.2 Components of ICT

Components in the ICT are important elements to have the complex and advance technologies in ICT in order to ensure that all the process is going smooth. ICT include skills, software, applications and systems. But different with the ICT education consists of four components namely ICT/Digital Literacy, ICT Infrastructure and Support Applied Technologists, Specialized Business and Industry uses of ICT, and ICT Research and Development Scientists (Mid-Pacific ICT Center, 2014). ICT/Digital Literacy, ICT Infrastructure and Support Applied Technologies are the important part as the basic and advanced futures of ICT which all these things should be integrated to make sure ICT can be an adequate (Mid-Pacific ICT Center, 2014).

2.3 The Definition of Malaysia SMEs

There is no standard definition or terms for SMEs adopted in Malaysia but generally the earlier researchers take on their own definition by using number of the workers and fixed capital as an attempt to determine it. The definition covers all the sectors namely services, manufacturing, agriculture, construction and mining & quarrying. According to the SME Corporation Malaysia, there are two criteria used in determining the definition namely annual sales turnover and full-time employees. There are differences for the manufacturing sector and services with other sectors. Sales turnover not exceeding RM50 million or the number of full-time employees not exceeding 200 are used to defined SME for the manufacturing sector. While for the services and other sectors was classified as a SME when sales turnover does not exceed RM20 million or the number of full-time employees not more than 75. If the firm have the either one of the criteria based on the sector they involved, they can declare themselves as the SME. Then, the business was classified into three class of enterprise to be specific medium-sized enterprise, small-sized enterprise and micro-sized enterprise depend on annual sale turnover and the number of full-time employees.

2.4 SME in Malaysia

SMEs or more common as an entrepreneurship in Malaysia recorded the highest in the growth. Entrepreneurship is more related with the small medium enterprise (SME), can be considered as the strong of the developing economies market like Malaysia. SMEs showed that more than 80% of total manufacturing formed in Malaysia. Other than that, they also showed about 35% of the total workforce in the manufacturing sector (Fong, 2002). The majority are in the traditional sector of food and beverages (20%), fabricated metal products (18%), wood and wood products (17%), and basic metals (4%). According to the SMEinfo Selangor recorded 19.8% contribution in the SME platform compared with the other state in Malaysia. Government Malaysian have offered incentives and benefits for them to make an improvement in terms of technology and quality of work force through experience, education and skills development. Then, SMEs in Malaysia continually involved in product specification, design and to perform in marketing or distribution in order for them enhance the prosperity and contribute in global market.

2.5 The Importance of ICT in SME

ICT and SME have related each other which ICT contribute in the growth of the SME. Traditionally, the important and benefit of the ICT is occurred after the adoption in the business. ICT play important role in increasing the SME's performance with internal capabilities and organizational processes. Matthews (2007) claims that in utilizing the technologies (include ICT), the business can observe the similar staged progression with enabling technologies. The performance of the company will perform better in the market when the companies adopting the ICT and become more easier for them to make the differentiate in the products and services. However, importance of long-term investments in ICT is a crucial thing to impress because the positive impact ICT after the adoption happen (Consoli, 2012; Bayo-Moriones, Billon & Lera-Lopez, 2013). Consoli (2012) identified main impact of ICT on companies into 4 groups which are Performance, Growth, Expansion and New products.

3. Methodology

3.1 Research Framework

The first step in any research is identify the comprehensive questions that are relevant with the research objectives. Then, literature review can be done after formation of research scope which the information for literature review can get from the any available resources like journals, books, websites and others publishing sources. After that, determined the methods need to apply for this research and enlarged the research framework. Before obtained the results, the collected data need to be analyze first using the software program and make the conclusion.

3.2 Research Design

A research design is referred to the connection between data to be collected and the conclusions to be made from the beginning of the research questions (J. Rowley, 2002). Thus, in this research, quantitative approach is being used by distributed the questionnaire to the respondents. Whereas, quantitative research which is questionnaire designed for provide more responses and conclusions of concrete figures.

3.3 Population and Research Sample

The target population will be Small and Medium Enterprise (SME) in Pahang. The total number population of SMEs in Malaysia consists around 907,065 while the population of SMEs in Pahang is 37,573. According to the Krejcie and Morgan (1970), the sample size for the current study is 380 SME.

3.4 Data Collection

Data collection is an important phase for the empirical research. Data collection can be obtained from several method which are questionnaire survey, interviews, observation and historical achieve analysis. Primary data, secondary data and pilot study are the three types of data in this research.

(a) Primary Data

Primary data for this research is collected by distributing the questionnaire to targeted respondents. The questionnaire is used to determine the ICT adoption to SMEs. The primary data of the questionnaires is formed to achieve the research objectives.

(b) Secondary Data

In this research study, the data for secondary data is gathered from many sources available such as journal, books, newspapers, websites, government records and others publishing sources. It is a data that already collected in the past.

(c) Pilot Study

The pilot study is normally done on a smaller scale than it looks, and it is the final preparation in collecting the data. A pilot test was conducted discover the deficiency of the questionnaires. Only a small number of the respondents with similar characteristics are involved to answer in this pilot test for test the suitability of the questions and its understanding.

3.5 Data Instrument

Research instrument is a tool or medium used to collect data or information in conducting a study. Instrumentation consists of a few tools that are implemented in order to achieve the research's objectives. A questionnaire is a data collection instrument that used to collect data for this study.

(a) Questionnaire

The questionnaire in this study divided into three parts which are Part A, Part B and Part C. In Part A, there are seven items to provide demographic information of SME owner. Part B consist the questions about the determinant for ICT adoption. In Part C, questions regarding strategies for ICT adoption will be covered. Likert scale was used in the Part B and C for respondents to rate the measures of the variables based on their own decision. There are five scales in the Likert Scale from the strongly disagree to the strongly agree.

3.6 Reliability & Validity Test

In this study, quantitative approach is used to measure the reliability and validity. The reliability and validity determined by the scale in Cronbach's Alpha and if the value is above 0.6 it is indicated as an acceptable level of reliability and validity.

Table 1: Internal consistency of Cronbach's Alpha

Cronbach's Alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

3.7 Data Analysis

All the data collected from the questionnaire that have been distributed to the respondents. Then, the data questionnaires must be rearranged systematically and make it in a form that is easy to understand. Data analyzed using Statistical Package for Social Sciences (SPSS) software to ensure that the data is accurate, and the objectives of this study achieved.

(a) Descriptive Analysis

The data obtained will be analysed using the descriptive analysis. In this research, Statistical Package for Social Sciences (SPSS) used to analyse the questionnaire data in the form of frequency, mean, standard deviation and percentage. SPSS program is the software for the analysing tha data and come out with the easy form to summarize.

4. Results and Discussions

4.1 Survey Return Rate

The population of the Small and Medium Enterprise in Pahang was 37, 573 while the sample size of this study was 380. However, total of 190 questionnaires have been collected. The questionnaires survey return rate achieved only 50 % who willing participate in this research study.

Table 2: Survey return rate

Population	Sample Size	Questionnaire Distribute	Questionnaire Returned	Percentage
37, 573	380	380	190	50%

4.2 Reliability and Validity Analysis

To identifying the internal consistency approach for each scale item in the study instrument, we used the Cronbach's Alpha (α) coefficients test. The test has been done for both in pilot test and actual study.

(a) Reliability and Validity of Pilot Study

For this study, there were 30 respondents who have the same characteristics as the actual study respondents selected to answer the questionnaire. It shows that the value of Cronbach's Alpha (α) for pilot test is 0.960.

Table 3: Reliability test for pilot test

Cronbach's Alpha (α)	N of Items	N of Respondents
0.960	34	30

(b) Reliability and Validity for Actual Study

A total of 190 respondents have answered the questionnaire distributed. Table 4 shows that the that the value of Cronbach's Alpha (α) for actual study is 0.927 and there are 34 questions have been asked.

Table 4: Reliability test for actual study

Cronbach's Alpha (α)	N of Items	N of Respondents
0.927	34	30

4.3 Demographic Analysis

Table 5 shows, most of the respondents come from female respondents and most of the respondents are from the age between 31 to 39 years old. The majority of race who participated in the questionnaire is Malay, academic qualification was group from diploma or degree and have neutral level of knowledge in ICT adoption. Then, the highest frequency of number of the workers less than 10 workers and established their SME with 5 to 9 years.

Table 5: Respondent information analysis

ITEM	FREQUENCY	PERCENTAGE(%)
Gender		
Male	81	42.6
Female	109	57.4
Age (Years)		
Below 30 years	63	33.2
31 – 39 years	95	50
40 – 49 years	28	14.7
50 years and above	4	2.1
Race		
Malay	148	77.9
Chinese	23	12.1
Indian	19	10
Other	-	-
Academic Qualification		
Primary education	-	-
Secondary education	83	43.7
Diploma/ Degree	103	54.2
Post graduate	4	2.1
Professional certificate etc.	-	-
Level of knowledge of ICT adoption.		
Low	30	15.8
Neutral	119	62.6
High	41	21.6
Number of the workers in the company		
Less than 10 workers	116	61.1
10 – 15 workers	62	32.6
16 – 20 workers	10	5.3
20 workers and above	2	1.1
Establishment (Years)		
Less than 5	82	43.2
5 – 9	87	45.8
10 – 15	10	5.3
16 – 20	6	3.2
More than 20	5	2.6

4.4 Descriptive Analysis

The descriptive analysis describing the basic features of the data that summarize the mean and standard deviation for each element of the study. The descriptive analysis for this study to investigate what is the determinants and the strategies for ICT adoption among the small and medium enterprises.

(a) The Determinant for ICT Adoption

Table 6: Analysis of determinants of internal factors

Item	Internal Factors	Mean	Standard deviation
IF1	Employees have ICT skills and experience.	4.14	0.427
IF2	Perception of and attitude toward ICT adoption.	4.15	0.534
IF3	Management support and commitment.	4.35	0.605
IF4	Business growth and expansion.	4.26	0.565
IF5	In-house ICT experts.	3.77	0.672
IF6	SME's owner desire for growth.	4.31	0.546
IF7	Innovativeness from the SME owner.	4.32	0.561
IF8	Business size (turnover and number of employee).	4.11	0.585
IF9	Employees participation and involvement.	4.13	0.470

The determinants of internal factors are being determined. Table 6 shows the mean and standard deviation score of internal factors for each element. The highest mean score for determinants of internal factor in adopting ICT among SME's is management support and commitment which are 4.35. The second highest mean score is innovativeness from the SME owner to adopt ICT skill in their business with the mean 4.32. Meanwhile, having the in-house ICT experts obtained the lowest mean score which are 3.77. Based on the result, this can be concluded that internal factors for SME implemented the ICT for their business is the commitment and support from the management itslef.

Table 7: Analysis of determinants of external factors

Item	External Factors	Mean	Standard deviation
EF1	The cost of ICT / Lack of funds.	3.97	0.442
EF2	Competitiveness of environment (need to stay competitive)	4.19	0.553
EF3	Quality of software available in market.	3.94	0.750
EF4	Government support toward ICT adoption.	4.09	0.660
EF5	Getting exposure from the experts.	4.06	0.550
EF6	External expertise and services availability and support.	3.93	0.529
EF7	Legal issues in computer network security.	3.74	0.668
EF8	Perceived impact and benefit of ICT in organization.	4.11	0.503
EF9	Existing technology infrastructure.	4.11	0.493
EF10	Improvement in ICT security management.	4.12	0.484

Table 7 showed the mean for external factors in determinants for ICT adoption. The highest mean in the external factor's element is competitiveness of environment (need to stay competitive) with mean 4.19. The lower mean in the external factor is legal issues in computer network security with the mean score 3.74. Both perceived impact and benefit of ICT in organization and existing technology infrastructure factor get the same value of mean score which are 4.11. The result showed that surrounded with the high competitiveness and to stay competitive become the factor for them adopting the ICT.

(b) The Strategies for ICT Adoption

Table 8: Analysis of strategies from government

Item	Government	Mean	Standard deviation
G1	Government support for facilitating information transfers for SME.	4.01	0.418
G2	Government intervention towards financial services, technical support, market support and management training.	4.07	0.539
G3	Increasing public spending on technology projects.	4.33	0.626
G4	Government subsidies in decreasing SMEs investment costs.	4.12	0.551
G5	Government policy can educate SMEs on the benefits of ICT.	3.97	0.487

Table 8 showed the mean score for the strategies from governement perspective. The highest mean socre for the strategies from government is increasing the public spending on technology projects with 4.33 mean score. Meanwhile, the lowest mean with 3.97 score is strategy in educating SMEs on the benefits of ICT using government policy. The mean for other strategy is government subsidies in decreasing SMEs investment costs with 4.12, government intervention towards financial services, technical support, market support and management training with 4.07 and government support for facilitating information transfers for SME with 4.01.

Table 9: Analysis of strategies from NGO (Non-Governmental Organizations)

Item	NGO (Non-Governmental Organizations)	Mean	Standard deviation
NGO1	Assistance program in consulting and advisory services.	4.00	0.424
NGO2	Lending programs for SMEs for the adoption new technology.	4.11	0.518
NGO3	Developing an active intervention policies and strategies to encourage the adoption and usage of ICT.	4.03	0.662
NGO4	Coordinate and supervise all SMEs stakeholders and be responsible of the SMEs policy implementation.	4.04	0.576
NGO5	Hosting websites in free servers in supporting ICT technical services for SME.	3.87	0.586

Table 9 showed the mean and standard deviation for each of the statement in the strategies from NGO (Non-Governmental Organizations). Lending programs for SMEs for the adoption new technology have the highest core of mean 4.11 while hosting websites in free servers in supporting ICT technical services for SME getting the lowest mean with 3.87. The following strategy which are coordinate and supervise all SMEs stakeholders and be responsible of the SMEs policy implementation obtained 4.04, developing an active intervention policies and strategies to encourage the adoption and usage of ICT with 4.03 and assistance program in consulting and advisory services with 4.00.

Table 10: Analysis of strategies from SME (Small and Medium Enterprises)

Item	SME (Small and Medium Enterprise)	Mean	Standard deviation
SME1	Involvement of top management in ICT literacy skills.	4.24	0.539
SME2	Frequency of attending in computerization projects meetings.	4.29	0.522
SME3	Using online intermediaries or sharing resources with other companies.	4.28	0.557

SME4	Collaboration programs with public authorities alone or in partnership with private companies with expertise in IT.	4.27	0.570
SME5	Using low levels of ICT adoption and usage (e-mail and website) and upgrade day by day.	4.24	0.526

The strategies from the small and medium enterprise are been decided. Table 10 showed the mean also standard deviation for all strategies under SME. The highest mean score is 4.29 which SME should attend in computerization projects meetings frequently. Both involvement of top management in ICT literacy skills and using low levels of ICT adoption and usage (e-mail and website) and upgrade day by day obtained the lowest mean with 4.24. The following mean using online intermediaries or sharing resources with other companies with 4.28 and collaboration programs with public authorities alone or in partnership with private companies with expertise in IT with 4.27.

5. Conclusion

5.1 Summary Based on Research Objectives

(a) Research Objective 1

In this research, the first objective is to identify the key determinant for ICT adoption among SME's. Table 4.15 and Table 4.16 showed the score of mean and standard deviation for each element in internal and external factor. Management support and commitment become the dominant internal factor in adopting the ICT because the mean of that factor is 4.35 is higher among the other factors. Most of the respondents agreed that management support and commitment is one of the biggest factor in implementing the ICT. This is because management play a crucial role in the business since they are the leader to lead the others. Without the management support, the ICT adoption may not be approved. Other than that, commitent from the management can improve the effectiveness of their business with they show the high contribution and responsibility.

Among the external factors, the dominant factor for external factor is competitiveness of environment (need to stay competitive) with the highest mean score 4.19. Nowadays, it is difficult to the business stay competitive if they are still using the same ways without upgrade it. ICT also affects the flexibilty of organisations that using the ICT tend to have the better improvement in the market and have the differentiate in the products or services. People nowadys use the technolgy almost most of the time and to attract new customers, SME have to follow the trend of the technology.

(b) Research Objective 2

The second objective of this research is to identify the strategies for ICT adoption among SME. The dominant strategy from the government is increasing the public spending on technology projects with obtained high central of tendency and 4.33 mean score. For example, SMEs can upgrade the existing technology or buy the new technology because the cost in upgrading or buying the technology quite expensive. So, the SME especially around the rural area do not have the ability to make upgrade their business. With this strategy can help them to get the spending also can increase the economic growth in Malaysia.

Then, most of the respondents are agreed that the lending programs for SMEs for the adoption new technology become major strategy from non-governmental organizations. Lending programs for SMEs for the adoption new technology has a highest mean score 4.11 and standard deviation of 0.518. Some of the entrepreneur have the financial problem for them to start implement the existing technology. Lending program can help them gain the financial to use in the investment of the ICT.

According to the result obtained in section 4, frequency of attending in computerization projects meetings has the highest mean in the strategy from SME with mean 4.29 and standard deviation 0.522. SME should attend in computerization projects meetings frequently becomes the dominant strategy from the SME perspective. Mostly respondents are agreed that computerization projects or programme both from the government or the private sector is essential for SME once they attend it frequently.

5.2 Limitation

During conducted this research, there are some limitations that exist in this research. One of them is difficult to distribute and collect the data in questionnaire of the respondents. Questionnaires were distributed to the targeted respondents among SME. Majority of the respondents were not giving fully cooperation to answer the questionnaire. There are only 190 questionnaires in return after 380 questionnaires are distributed to the respondents.

Other than that, the second limitation in this research is time constraints. It takes a long time to get the feedback form the respondents and not get the cooperation from the respondents around Pahang to answer the questionnaires. The respondents who age above 39 years old hard to give cooperation compare to the respondents age below 39 years old. Therefore, the available of time to study the research problem and to identify any changes from time to time is limited.

5.3 Recommendation

(a) Recommendation for SME

The innovation in term of infrastructure is necessary for all SMEs because they do not have the needed resources in development. What they need to have is other different services and technical to support them in operations. The developed countries give the experience, the more infrastructure involve in developing, the greater chances for SMEs have the innovation development. They become more concern about the ICT adoption form this study. For example, the effect after using the technology and implement it. Besides, SMEs can gain and learn a few strategies before adopting the ICT for the business. Adaptation of the ICT can bring the SMEs for further in developing society.

(b) Recommendation for Government

As we know the government perceptive play a crucial role in this research. All the entrepreneur needs the government initiative to help to make an improvement also stay competitive in their business. For example, SME Bank is one of the initiatives under government which they provided the business financing assistance for help the SMEs also they provide the skill to allow those SMEs grow further in the business. From the study that has been conducted, the researcher hope that the organization can design any related programs and activities to the SMEs such as teaching programs, workshop or other events. This kind of programs can give the useful information and knowledge to SMEs there and may be understand the impact on adopting the ICT technology to remain sustain.

(c) Recommendation for Future Researcher

For future research, the recommendation to improve in conducting the research is use qualitative research method for this study. The qualitative method is used by conducting the interview with the targeted respondents. The result based on the interview might be different compare when using the quantitative method because the result will be more specific and precise. Then, the future researcher can expand the scope of the research to small business as it will give a better result. Future studies are expected to analyse more deeply about the ICT adoption in other business and able to compare with the other technology.

5.4 Conclusion

As a conclusion, adopting the ICT is a crucial step in improvement of the SME growth because ICT adoption and usage is beneficial to them for compete with the other competitors. SME also contribute a lot in the economic growth in Malaysia. The purpose of this study to identify the key determinant for ICT adoption among SME's and strategies for ICT adoption among SME in 2020. This study used the quantitative method by distributing 380 questionnaires to the SME but on 190 questionnaires obtained in return. Based on the result and finding, the two research objectives in this research have successfully achieved. SME Malaysia need to consider the internal factor and external factor in ICT adoption. Other than that, the strategies from the government, NGO and SME itself is important to ensure that they are able to implement the technology and ICT in their business.

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