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## ICT Usage Performance of Small and Medium Enterprises and Their Exporting Activity in Malaysia

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### Abstract

The implementation of the SME Masterplan 2012-2020 for the small and medium enterprises (SMEs) is expected to raise contribution share to total exports in gross domestic product (GDP) by 2020 in Malaysia. In this regard, the role of information, communication and technologies (ICT) is inevitable. This paper has two objectives. First is to identify the types of ICT device and network used by SMEs and their levels of ICT usage. Second is to determine their levels of exporting activity. Questionnaire is a main instrument for the data collection. Respondents consist of 14 SMEs. Sample size was determined after the discussion with the staff of SME Corp. Malaysia in the head office in Kuala Lumpur in this year, 2018. Majority of SMEs are from Selangor, followed by Perak and Kedah. Tablets/smartphones are the most popular types of ICT device among the respondent SMEs. In general, most respondents have only a moderate level of ICT usage in their business operations. Meanwhile, their level of exporting activity is very low. Ignoring this issue would hinder the achievement of economic growth. Therefore, even though this study is rather small, it provides a foundation of knowledge for further research on ICT usage performance of SMEs with the aim of increasing their level of exports in future.

Keywords: ICT Usage Performance; Small And Medium Enterprises; Exports

### Introduction

In 2010, the SME Masterplan 2012-2020 was implemented to empower the small and medium enterprises (SMEs) as a new engine of economic growth. It focuses on facilitating ease of doing business, access to finance and market, human capital and entrepreneurship development as well as fostering innovation (Malaysia, 2012a). In the Masterplan, it is expected that the contribution share of SMEs to total GDP will be raised to 41 percent (2010: 32 percent); 62 percent share to total employment (2010: 59 percent) and 25 percent share to total exports (2010: 19 percent) by 2020.

According to the findings of the SME Corp. Masterplan study, four key characteristics must be tackled by the Government. First, low productivity compared to large firms in Malaysia and SMEs in developed countries. Second, relatively low business formation compared to high income countries. Third, small number of high growth firms contributes the most to the national economy and fourth, material share of informal sector in the economy is larger than those in developed countries (Malaysia, 2012a). To tackle these characteristics, integrating the components of information, communication and technologies (ICT) in the existing measures and programs is important.

Under the Eleventh Malaysia Plan (11MP) from 2016 – 2020, the SME Masterplan serves as a basis for the development of SMEs to achieve the national goal of becoming a high-income nation. Development of information and communications technology is one of the key initiatives to promote their growth, resilience and sustainability (Malaysia, 2015). In the 11MP (2016 -2020), the Masterplan has made a considerable progress by the results of the six High Impact Programmes (HIPs) in 2016: Integration of Business Registration and Licensing (HIP1); Technology Commercialisation Platform (HIP2); SME Investment Programme (HIP3); Going Export (GoEx) Programme (HIP4); Catalyst Programme (HIP5); and Inclusive Innovation (HIP6). In relation to the ICT, the Technology Commercialisation Platform (TCP) project in the HIP2 is implemented by the Agensi Inovasi Malaysia (AIM) through its subsidiary PlaTCOM Venture Sdn Bhd. A total of 125 projects have been approved for integrated assistance, 174 licensing deals have been made and 22 innovations commercialised. In the HIP2, there is an establishment of a national network of privately-managed platform to promote innovative ideas from proof of concept to the commercialisation stage. In the initiative of promoting SME products for exports, the Malaysia External Trade Development Corporation (MATRADE) has been given a task to manage The Going Export Programme (GoEx) with the objective to internationalise export-ready SMEs. A total of 156 companies from 12 sectors have participated in the GoEx. The MATRADE also conducted 27 market immersions and had been able to generate RM57 million in potential export sales (SME Annual Report 2016/17).

In the performance report for SME exports, its share contributed about 18.6 percent to total exports in 2016 (2015: 17.7 percent). The SME share from services sector was 9.4 percent while its remaining was from manufacturing and agriculture sectors, i.e. 9.2 percent. The exports of SMEs in services sector were mainly from tourist arrivals and receipts (SME Annual Report 2016/17). The SME Masterplan is expected to promote SMEs in the business activities that can achieve their targeted share to total exports in gross domestic product (GDP) by 2020.

### **Research Problem**

As an open economy, Malaysia's exports may lose ground with negative effect on national income if costs of production and productivity in the country cannot be kept pace with those abroad. Since the Asian financial crisis of 1997-1998, private investment has not really well-recovered. To react actively, the national goal of being a high income nation by 2020 has been designed as stated in the New Economic Model (Malaysia, 2010). However in 2015, private investment had a slower growth of 6.4 percent (2014:11.0 percent) (BNM, 2016). One important measure to re-energise the private sector is the increasing contribution of small and medium enterprises (SMEs). In the period of 2004-

2010, the overall economic growth was at an average of 4.9 percent but the real gross domestic product (GDP) of SMEs had consistently outperformed that of the overall economy, expanding at an average of 6.8 percent. In the SME Masterplan 2012-2020, an outcome-based approach is adopted in SME development through the Monitoring and Evaluation (M&E) system (Summary SME Masterplan 2012 - 2020).

In relation to the role of ICT in SMEs, the report of Economic Census 2011 on SMEs has found that the percentage of ICT usage among SMEs is low. From 67 percent of SMEs internet usage, only 27 percent of them that use ICT in business operation (Malaysia, 2012b). Without strategic and effective ICT usage, Malaysia's SMEs export-orientation and export performance may not be strengthened in the current global competitive market. As a major component of total GDP, exports of goods and services are aimed to increase the level of national income that can lead Malaysia to achieve the goal of high income nation by 2020. Increase in net exports will improve trade balance and hence, balance of payment for Malaysia. In this paper, two objectives are designed. First, to identify the types of ICT device and network used by SMEs and their levels of ICT usage in the country. Second, to determine their levels of exporting activity.

### **Literature Review**

As the current external environment has become increasingly unpredictable due to uncertainties in many advanced economies, the role of information and communication technologies (ICT) has begun to be enablers for economic and business networks of developing countries (Abd ElGhany, 2015; Beley and Bhatarkar, 2013). In Abd ElGhany (2015), SMEs in developing countries mostly have deficiencies in technological infrastructure and ICT implementation. Among the challenges are unwillingness to share information within organizational boundaries, poor infrastructure of information technology (IT), poor internet connectivity and lack of resources. Managers in the SMEs are reluctant to invest in ICT applications. They are not willing to shift the focus from existing business activities' optimization to plan a future investment in information system inside their companies. Technically, there is a need to build a framework that has a formulation of collaborative data interchange systems to enhance business activities (Lau and Lee, 2000).

SMEs have been a key driver for economic growth and development (Makanyeza and Ndlovu, 2016; Nduati, Ombui and Kagiri, 2015; Gjini, 2014; Manyani et al., 2014). They help generate employment and reduce poverty within an economy. In different work of Makayenza (2015), the acceleration of globalisation over the years has resulted in increased movement of goods and services across national boundaries. International trade barriers have weakened. As a result, SMEs are also actively pursuing international markets. In Lages and Montgomery (2004), SMEs also can sustain economic security in a nation during periods of recession and slow economic growth. Therefore, ICT usage in SMEs is important to strengthen their role in an economy.

ICT is an integration of information, computers and communication (Ghalandri, 2013; Ashrafi and Murtaza, 2008). In a broad term, it includes computerised information and communication technologies such as computers, handheld devices, wired or wireless technologies, and business

productivity software (Ashrafi and Murtaza, 2008). In order to increase SMEs performance, improvement of ICT adoption is needed in their business practices, management, and internal organisation (Bassant, Commander, Harrison and Menezes-Filho, 2006; Morgan-Thomas and Bridgewater, 2004). According to Lucchetti and Sterlacchini (2004) three major categories of ICTs can be adopted by SMEs, namely general-use ICTs (email and Internet access), production-integrating ICTs (local area network, electronic data interchange and Intranet) and market-oriented ICTs (relevant tools such as websites). The use of ICT enables them to extend their businesses into foreign markets by reducing costs involved in managing international operations and by managing value chains that spurn across national boundaries (Cainelli, Evangelista and Savona, 2004; Bharadwaj, Bharadwaj and Konsynski, 1999).

In a study on the direct and indirect effects of ICT on SMEs performance, ICT has an impact on the improvement of external and internal communication and therefore it is important to align ICT investments with internal capabilities and organizational processes (Taruté and Gatautis, 2013). It is suggested that ICT can improve overall, financial and operational performance of SMEs if it is used appropriately. Marketing, communication, networking and resource planning are the areas that ICT impacts the most. Long term investments in ICT are important to benefit its positive impact which occurs only after a period of adoption (Bayo-Moriones, Billon and Lera-Lopez, 2013 Consoli, 2012).

As facilitator of internationalisation in SMEs, Hagsten and Kotnik (2017) found a positive relationship between the ICT capacities and the engagement in exporting activities, although the capacity most efficient seems to vary across countries. In countries where the ICT intensity of firms is less developed, more basic capacities such as online presence are mainly used for export decision. Their study suggested an expansion of international sales benefits from more advanced ICTs than the pure decision to export. In an empirical evidence of manufacturing sector in Zimbabwe, Makayenza and Ndlovu (2016) also showed a positive effect of ICT usage on the export performance of SMEs. In Bianchi and Mathews (2013), internet has indirect effects on a group of Chilean firms, through improved information flows and business relationships. But their firm-level studies use data from relatively small samples of export performance in single countries. Ghalandari (2013) conducted a study to explain the influence of ICT on the export performance of firms in Tehran and also found that ICT significantly influences export performance. In the study of Tambunan (2009), well developed networks with traders, trading houses, and foreign tourists are main factors for increasingly export activities in Indonesia.

To sum up, SMEs play a vital role in the revitalization and development of a national economy. However, it is important to note that success in economic and business activities is not possible without the usage of ICT in the current economic situation.

### **Method and Data**

For this study, questionnaire is used as an important instrument for the data collection. Before carrying out the research, the head office of SME Corp. Malaysia in Kuala Lumpur was visited. The



visit was to get a general picture on the ICT usage of SMEs and their export performance in Malaysia. The questionnaire was later designed and sample size was determined after consulting with relevant SMEs officers. Respondents consist of randomly selected SME entrepreneurs in 2018. After having information about the business activity of SMEs, 14 respondents were covered in this survey, as shown in Table 1.

**Table 1: Distribution of SMEs by state and age of business**

		Frequency	Percent	Cumulative percent
States	Kedah	2	14.3	14.3
	Kelantan	1	7.1	21.4
	Negeri Sembilan	1	7.1	28.5
	Perak	3	21.4	49.9
	Pulau Pinang	1	7.1	57.0
	Selangor	5	35.9	92.9
	Sarawak	1	7.1	100.0
	Total	14	100.0	
		Frequency	Percent	Cumulative percent
Age of Business (in number of years)	2	1	7.4	7.4
	3	3	21.4	28.8
	4	1	7.1	35.9
	5	1	7.1	43.0
	6	2	14.3	57.3
	8	1	7.1	64.4
	12	2	14.3	78.7
	21	1	7.1	85.8
	22	1	7.1	92.9
	50	1	7.1	100.0
	Total	14	100.0	

In this study, the highest number of respondent SMEs is from the state of Selangor (35.9 percent), followed by Perak (21.4 percent) and Kedah (14.3 percent). Their ages of business range from two to fifty years old. For the ages of three years and above 20 years, each has more than 20 percent of respondents while the ages of six and 12 years, each has more than 14 percent. In terms of ownership status, Table 2 shows that the status of company records the highest at 57.2 percent. It is followed by sole proprietorship at 35.7 percent. Manufacturing is the main type of business running by the respondents (71.4 percent).

**Table 2: Ownership status and types of business**

	Frequency	Percent	Cumulative percent
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Ownership Status	Sole Proprietorship	5	35.7	35.7
	Partnership	1	7.1	42.8
	Company	8	57.2	100.0
	Total	14	100.0	
		Frequency	Percent	Cumulative percent
Types of Business	Manufacturing	10	71.4	71.4
	Services	4	28.6	100.0
	Total	14	100.0	

Table 3 shows the business performance of the respondent SMEs, which has a range from small growth to moderate growth only. The highest number of respondents is recorded in the category of moderate growth (28.6 percent). About 14 percent of them are experiencing decline in business performance.

**Table 3: Business performance**

Performance	Frequency	Percent	Cumulative percent
Small growth (<15%)	3	21.4	21.4
Moderate small growth (16-30%)	3	21.4	42.8
Moderate growth (31-70%)	4	28.6	71.4
Small decline (<15%)	1	7.1	78.5
Moderate small decline (16-30%)	1	7.1	85.6
Break-even	2	14.4	100.0
Total	14	100.0	

### Findings

The findings of the types of ICT device and network used by the respondents and their degrees of ICT usage are displayed in Table 4 and Table 5. In Table 4, tablets/smartphones are the most popular types of ICT device used by the respondents (92.9 percent). It is followed by internet service (85.7 percent) and computer/laptop/notebook (71.4 percent). Customer relationship management (CRM) system is not favoured by the respondents in their business operation.

**Table 4: Usage of ICT devices and networks by type**

Items	Frequency		Percent	Cumulative Percent
Computer/laptop/notebook	Yes	10	71.4	71.4
	No	4	28.6	100.0
	Total	14	100.0	
Tablets/smartphones	Yes	13	92.9	92.9
	No	1	7.1	100.0
	Total	14	100.0	
Internet service	Yes	12	85.7	85.7
	No	2	14.3	100.0
	Total	14	100.0	
Official company website	Yes	5	35.7	35.7
	No	9	64.3	100.0
	Total	14	100.0	
Intranet	Yes	5	35.7	35.7
	No	9	64.3	100.0
	Total	14	100.0	
Extranet	Yes	1	7.1	7.1
	No	13	92.9	100.0
	Total	14	100.0	
CRM system	Yes	0	0	0
	No	14	100.0	100.0
	Total	14	100.0	

Regarding the levels of ICT usage, Table 5 shows that majority of the respondents use ICT moderately in their business activity (50.0 percent). It is followed by more than 30 percent of them in the category of high and very high levels of ICT usage. In administration, 50 percent and in marketing, about 36 percent of them have high and very high levels of ICT usage. In marketing, however, about 36 percent of the respondents are also found in the category of low and very low levels of ICT usage.

In relation to exporting activity, only about 18 percent of the respondents involve in selling their products to different countries, which is very low. Majority of them distribute their products to local customers only. For their exporting destination, Singapore is the main importing country for their products, as shown in Table 6. In future, however about 57 percent of non-exporting respondents have high intention to export their products, as shown in Table 7. Only 21 percent of them have no intention or make irrelevant to do export business.

**Table 5: Levels of ICT usage**

ICT usage in SMEs (in general)	Frequency	Percent	Cumulative Percent
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Low (21-49%)	2	14.3	14.3
Moderate (50-69%)	7	50.0	64.3
High (70-80%)	2	14.3	78.6
Very high (>80%)	3	21.4	100.0
Total	14	100.0	
ICT usage in administration	Frequency	Percent	Cumulative Percent
Very low (0-20%)	1	7.1	7.1
Low (21-49%)	3	21.4	28.5
Moderate (50-69%)	3	21.4	49.9
High (70-80%)	5	35.8	85.7
Very high (>80%)	2	14.3	100.0
Total	14	100.0	
ICT usage in marketing	Frequency	Percent	Cumulative Percent
Very low (0-20%)	3	21.4	21.4
Low (21-49%)	2	14.3	35.7
Moderate (50-69%)	4	28.6	64.3
High (70-80%)	1	7.1	71.4
Very high (>80%)	4	28.6	100.0
Total	14	100.0	

**Table 6: Importing Countries**

Country	Frequency
Brunei	2
China	1
Hong Kong	1
Indonesia	2
Japan	1
Korea	1
Oman	1
Philippines	1
Singapore	5
Sri Langka	1
Taiwan	1
Thailand	2
UAE	1
Not Relevant	8

**Table 7: Future Planning on exporting activity of non- exporting respondents**

	Frequency	Percent	Cumulative Percent
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High intention of exporting	8	57.1	57.1
Moderately high intention of exporting	3	21.5	78.6
No intention of exporting	1	7.1	85.7
Not relevant	2	14.3	100.0
Total	14	100.0	

From the findings of this study, the level of ICT usage of respondent SMEs is at a moderate level only. It is less than half of the respondents that use it intensively. At the same time, their exporting activity is very low. These conditions highlight that ICT devices and networks used by the respondents are mainly to serve their local business operation and customers. For the respondent SMEs that have high intention of exporting, they must strengthen their business operation through effective use of ICT devices and networks.

### Implication and Conclusion

Since Malaysia is an open economy, low exporting activity would hinder the achievement of economic growth. The findings of this study on exports of the country are consistent with the findings in the research carried out by the SME Corp. Malaysia, which is reported in the SME Annual Report 2016/17. In the report, less than 14 percent of respondent SMEs involved in exporting activity. In this study, the performance of ICT usage of SMEs to penetrate foreign markets is not very satisfied too. While emphasizing SMEs to increase ICT usage in their business operation, it also must not be focused in one or two types of economic sectors only. The ICT usage must be in various sectors, not only in manufacturing and services. More economic sectors that include agriculture, mining and quarrying, and construction should involve in the increasing use of ICT devices and network. As an initiative, the financial funds provided by the Government are to encourage innovation and ICT adoption that must be taken advantage by all SMEs in various economic sectors.

Realising the importance of ICT in business nowadays, it is the time for the Government of Malaysia to enforce strategies that can push SMEs to use ICT devices and networks intensively. Effective ICT usage will not only enhance their business in the global competitive environment but also reduce costs of production and thereby increase their productivity and sustain their survival. The role of ICT in exporting activity of SMEs is to help the Government of Malaysia in achieving the goal of high income nation in future. Even though this study is small, it can be a foundation for further research in more details on ICT usage performance of SMEs and how that contributes to improvement of their level of exports in future. Proper methods of analysis are needed to produce more reliable findings on the issue.

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