FACTORS INFLUENCING THE USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN SMEs IN BALANGODA AREA

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Abstract- Small and medium enterprises are the main influencing business sector of the Sri Lankan economy as well as all the developing countries. Information and Communication Technology is playing a major role in Small and Medium Enterprises. The main objective of this study is to examine the factor influencing the ICT adoption in SMEs in Balangoda area. The study examined the effect of cost of ICT, knowledge about ICT, ICT infrastructure and Perceived benefits associated with Information and Communication technology on its usage. Primary data were used as the data source of the study. As the sample of the study, researcher selected 50 SMEs established in the Balangoda area. Data were collected using a structured questionnaire and analyzed those using descriptive statistics, correlation and regression analysis. The results reveal that cost, knowledge, infrastructure and benefits of information and communication technology effect its use in small and medium enterprises. According to finding of the research, cost of ICT negatively affect for the usage of ICT in SMEs. But knowledge about ICT, ICT infrastructure and perceived benefits positively affect for the usage of ICT in SMEs. Therefore, owners of the SMEs should increase their knowledge about new ICT usage within the business organizations, should know how use ICT infrastructure to increase ICT usage in the organization. Perceived benefits is the strongly affective variable than the other Therefore, SME must apply the effective, efficient and employee friendly ICT system.

Keywords- ICT, Cost, knowledge, infrastructure

I. INTRODUCTION

SMEs (Small and Medium Size Enterprises) are defined in different ways by various countries using some features such as number of employees, capability of capital investments, amount of turnover as well as business nature etc. In Sri Lanka, there are different criteria to identify SMEs such as the number of employees, the size of fixed investment, and the nature of the business and the sector. In addition, there are different terms are used to identify this sector as well as SMEs, Small and Medium activities, Micro Enterprises, Rural Enterprises are the various names which are used to called SMEs.

Using as the criteria, the size of capital and the number of employees, the Industrial Development Board(IDB) defines a small industry as an establishment whose capital investment in plant and machinery does not exceed Rs.4 million(US$42,000) and the total number of regular employees does not exceed 50 (Lanka, 1998).

Companies today are adopting ICT in all aspects of their businesses, not only improving business processes and task efficiency, but also for improving engagement and communication with their customers (Mutula & Van Brakel, 2007) and also SMEs across the world are currently developing their businesses by adopting ICT. They have, market changes, controlling business cost, customer expansion, and wealth creation just to mention a few (Olatokun & Bankole, 2011). ICT is one of the forces in the economic growth (Kiveu & Ofafa,

2013) , thus a reason why small and medium enterprises (SMEs) adopt it in order to promote their business performance. Consequently, ICT enables other sectors to develop economically, and yet SMEs are not quickly adoption and use (Ongori & Migiro, 2011).Because of local and global competition, every businesses trying to use ICT in their Business activities using phones, emails, fax video conferences etc. Using ICT in business activities is generated effective and efficiency operational in SMEs such as growing their operational activities, promoting their business activities not only local but also global, and also innovating using ICT?

ICT is viewed as a main factor of productivity, growth and economic progress and is an essential component in the knowledge based economy. In Sri Lanka both of large enterprises and SMEs are using ICT. Nowadays usage of ICT become very essential for survive in the market and achieve each and every objectives of the business. ICT plays a important role, because it can help SMEs both create business opportunities and combat pressures from competition (Swash, 1998). Adoption of ICT can help SMEs reduce costs by improving their internal processes improving their product through faster communication with their customers and better promoting and distributing their products through online presence. Therefore, ICT has to improve the core business of SMEs in path of the business process. Therefore, every business is trying to use ICT in the business activity. Business should know the determinants of ICT usage and factors that drive or constraint its adoption and use. While most of SMEs are using ICT some similar SMEs are not using ICT at all or ICT adoption in SME is still limited for their business purposes.

In Sri Lanka there is a few number of research regarding factors effecting the usage of ICT in SMEs. Balangoda is a rural Area. Balangoda Area also has more SMEs. So that more factors are influencing for ICT usage SMEs in Balangoda Area as well as the other Area. Researcher unable to found out Research from Balangoda Area to identify the factors that affect the use of ICT in SMEs. This study aims to examine the factors influencing the use of ICT in SMEs in Balangoda Area. There for research problem is, identifying Factors which are influencing the Usage of Information and Communication Technology among SMEs in Balangoda Area. Questions of the research are,

1. What are the factors influencing to the usage of ICT in SMEs in Balangoda Area?
2. How are those factors affecting to the usage of ICT in SMEs in Balangoda Area?

Main objective of this study is to examine the factors that affect the use of ICT in SMEs. This objective is satisfied achieved through following sub-objectives.

1. To identify the factors that influence on usage of ICT in SME in Balangoda Area.
2. To examine the impact of various factors on usage of ICT in SME in Balangoda Area.

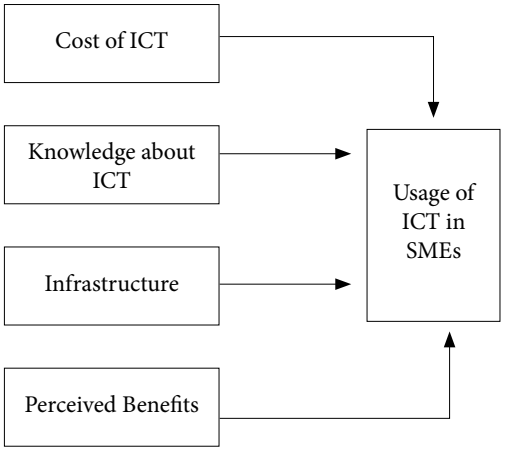
II. METHODOLOGY

The population of this study was SMEs in Balangoda Area. Researcher selected a sample of 50 SMEs population to carry out this study. Primary data were used for this study. 100 questionnaires were distributed among the SMEs to collect the primary data. Secondary data were taken from previous research, article, newspapers and thesis.

Collected data were analyzed by using SPSS – version 20 to find descriptive statistical measurement such as Mean correlation, Regression, Descriptive analysis, Standard deviation. Analyzed data was used for test the stated hyp

A. Conceptual Framework

Figure 1. Conceptual Framework



Source: develop by researcher

B. Research Hypotheses

H 1: Cost of ICT adoption discourages the use of ICT in SMEs.

H 2: Knowledge of SMEs owners about ICT has an impact on usage of ICT in SMEs.

H 3: ICT infrastructure and facilities promote usage of ICT in SME.

H 4: Perceived benefits of ICT encourage usage of ICT in SME.

B. Descriptive Analysis

III. DATA ANALYSIS

A. Reliability Analysis

To identify the internal consistency of the all constructs that were used to evaluate the key research variables was measured using Cronbach's alpha.

Table 1. Result of Reliability Test.

Variables	No of Item	Cronbach's Alpha
Cost of ICT	4	0.709
ICT Infrastructure	5	0.850
Knowledge about ICT	4	0.715
Perceived Benefits	4	0.711
Usage of ICT	4	0.792
Overall	21	0.889

According to the result of reliability test, each construct received alpha value over 0.7. This value is generally considered as the standard value. Therefore, reliability of all constructs are accepted.

Table 2. Descriptive Statistics

Variable	Mean	Std. Deviation	Skewness		Kurtosis	
			Statistic	Std.Error	Statistic	Std.Error
Cost of ICT	2.06	.489	.282	.337	.021	.662
ICT Infrastructure	3.78	.642	-.215	.337	-.612	.662
Knowledge about ICT	3.61	.596	-.118	.337	-.524	.662
Perceived Benefits	3.70	.552	.125	.337	-.753	.662
Usage of ICT	3.74	.598	.046	.337	-.711	.662

Result of table 2, indicate that selected SME owners perceive that cost of ICT is a huge constrain to them, SMEs have sufficient ICT infrastructure in their region to carry out their business, they have moderately high level of knowledge about the ICT, and SMEs owners have good understanding about the benefits that can be achieved through the use of ICT.

C. Correlation Analysis

Table 3. Results of Correlation analysis.

		Usage of ICT
Usage of ICT	Pearson Correlation Sig. (1-tailed)	1 -
Cost	Pearson Correlation Sig. (1-tailed)	-.258 .070
infrastructure	Pearson Correlation Sig. (1-tailed)	.772 ** .000
Knowledge	Pearson Correlation Sig. (1-tailed)	.677 ** .000
Perceived benefits	Pearson Correlation Sig. (1-tailed)	.836** .000

*. Correlation is significant at the 0.05 level (1-tailed).
**. Correlation is significant at the 0.01 level (1-tailed)

According to Table 3 results, there is an insignificant negative relationship between the cost of ICT and ICT usage in SMEs. Therefore, this results not support to the first hypothesis (H1) of the study. ICT infrastructures affect positively way to usage of ICT. Those values indicate that ICT infrastructure promote usage of ICT in SMEs and there is a positively relationship between knowledge about ICT and ICT usage. That means there is a significant relationship between perceived benefits and ICT usage. Therefore, H2, H3 and H4 can be accepted.

D. Regression Analysis

Table 4. Results of Regression Analysis.

R Square 0.802	Adj. R Square 0.784		Sig. value 0.000	F value 45.523	
Mode	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	0.502	.350		1.435	.158
Cost	-.209	.083	-.171	-2.531	.015
infrastru-cture	.286	.095	.307	3.008	.004
Knowledge	.225	.087	.224	2.591	.013
Benefits	.479	.119	.441	4.031	.000

Table 4. 1. Correlation and Regression Analysis.

Accepted	Correlation analysis			Regression analysis		
	Sig	P	Result	Sig	B	Result
H_1	0.070	-0.258	Rejected	0.015	-209	Accepted
H_2	0.000	0.772	Accepted	0.004	0.286	Accepted
H_3	0.000	0.677	Accepted	0.013	0.225	Accepted
H_4	0.000	0.836	Accepted	0.000	0.479	Accepted

Correlation analysis, second hypothesis which is Knowledge of SMEs owners about ICT has an impact on usage of ICT in SMEs accepted at 0.000 significant level. And also under the regression analysis second hypothesis accepted under the 0.044 significant level. Third hypothesis which is ICT infrastructure and facilities promote usage of ICT in SME accepted at 0.000 significant level. And also under the regression analysis third hypothesis accepted under the 0.013 significant level

And fourth hypothesis which is Perceived benefits of ICT encourage usage of ICT in SME accepted at 0.000 significant level. And also under the regression analysis fourth hypothesis accepted under the 0.000 significant level. Under the both of Pearson correlation and regression analysis indicates that, there is a significant and positive relationship between infrastructure, knowledge about ICT and Perceived benefits and Usage of ICT in SMEs. According to Regression analysis, F value represents that whether overall regression model fit to the data or not. In this study F value was 45.523 and it shows that there is a good fit with overall regression model. The adjusted R2 was 0.784 (78.4%) and adjusted R2 value represent that Cost of ICT, ICT infrastructure, Knowledge about ICT and Perceived benefits have ability to influence 78.4 percent to total variation of ICT usage.

IV. CONCLUSION

According to the results of regression analysis, Cost of ICT negatively affect for the ICT usage in SMEs. Knowledge about ICT, ICT infrastructure and Perceived benefits positively affect for the ICT usage at standard significant level. According to the results of correlation of analysis, cost of ICT negatively impact on usage of ICT in SMEs. Knowledge about ICT, ICT infrastructure and perceived benefits positively impact on usage of ICT in SMEs. But, only Cost of ICT not influence at standard significant level. Knowledge about ICT, ICT infrastructure and Perceived benefits have significant relationship with Usage of ICT in SMEs. When consider about results of regression analysis, Cost of ICT plays a major role when using ICT in SMEs and there is a negatively relationships between Cost of ICT and Usage of ICT in SMEs. The other selected independent variables like Knowledge about ICT, ICT infrastructure and Perceived benefits are affecting to the Usage of ICT in a positive way.

V. RECOMMENDATION

According to Study, SME owners should give priority to knowledge about ICT. Because, knowledge about ICT is affecting in significantly positive way and owners can control their knowledge than the other factors. When increase the knowledge about ICT owners will expect to use ICT for their business than current ICT usage level. Then, their perceived benefits of ICT also will increase than the current level. Following recommendations can be made based on the research findings. SME owners should increase their knowledge about new ICT trends and new practices within the industry and their competitors. Manual bill systems, inventory control systems and other manual process should be reduced to increase efficiency of the business process and reduce business cost. Conduct an ICT training program for employees based on their jobs.

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