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Role of Technology on Development of SME: Bangladesh Perspective

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Abstract

The present study attempts to shed light on the issues such as how technology affects the growth of local SMEs, which enterprises are using technology, and what types of development they are experiencing in using those technologies. It also focuses on the barriers SME owners face while adopting a technology. And finally, this study shows how SMEs of Bangladesh can be technologically upgraded focusing on the prospective technologies and overcoming barriers. The results of the study show SME development's positive relationship with introduction to new technology, technological acquiring, and operating capabilities and also positive but weak relationship with ICT and technological operating capabilities. The negative results have arisen because of the responses of the SME owners who still support the traditional manual operating systems. Instead of knowing the benefits of technology, they prefer not to adopt the up-to-date techniques and remain unaware about the software and information systems. But this study will help to determine the potentiality of SME development by introducing new technologies. It will help to determine the barriers to adopt technologies and also the ways to overcome those.

Keyword: SME, New Technology, ICT, Development

Introduction

The sustainable development of SMEs all over the country is now been considered as one of the vehicles for poverty alleviation, and generation of more employment. Technology is playing increasingly important role as engine of this sustainable growth of SMEs. But in Bangladesh most of the SMEs are using traditional technology. To compete in this competitive market, SMEs have to monitor the technological development actively. Here SMEs can be benefited from new process, techniques or new idea of production.

Statement of the Problem

The descriptive research on "The role of technology on development of SME" will unveil the facts about the existing technologies that are being used in the SMEs and the potentiality of SME development through introduction of new technologies. This research will also reveal the current technological awareness among the SME owners. How the technological acquiring, operating and upgrading capabilities influence the development of the SMEs will also be demonstrated through this research work. Finally, this research result will help to know the barriers faced by the SMEs owners and, above all, how to overcome those barriers. So, it can be said that this research will give an overall picture of how IT impacts the SME development process in Bangladesh.

Objective of the Study

Primary Objective

- To determine the impact of IT on development of SMEs.

Secondary Objective

- To identify types of existing technologies in SMEs.

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- To assess technological awareness among SME owners.
- To explore potentiality of SME development through introduction of new technologies.

Literature Review

It is generally recognised that SME plays a key role in revitalisation and development of national economy especially in a developing country like Bangladesh where industries are in decline or when unemployment levels are high. It encourages development of SME and role that SME sector can play in promoting economic and social development by creating opportunities for employment. In today's information society, in order to be flourishing, SME would need high quality information and must always endow with superior value, better than competitors, when it comes to quality, price and services. Information and knowledge are replacing capital and energy as the primary wealth creating assets (Chantanaphant, Nabi, & Dornberger, 2011). Information has become a critical resource, a priceless product and basic input to progress and development. Information has become synonymous with power.

Introducing SME

Small and Medium Enterprise (SME)

The widely accepted definition points to Small Sized Enterprises with number of employees between 1 and 49, while Medium Sized Enterprises are firms with employees between 50 and 100 (Mustafa & Gashi, 2006).

SME in Bangladesh

Currently, three sets of SME definitions are considered in Bangladesh. The Ministry of Industries (MOI), Bangladesh Bureau of Statistics (BBS), and Bangladesh Bank (BB) have adopted separate definitions for their own specific purposes.

According to the SMEP-2005 prepared by National Task Force on SMEs in 2004 and adopted by the MOI in 2005, SMEs in Bangladesh are defined as follows:

A. For Manufacturing Industries:

(i) an enterprise is treated as small if in the current market prices, the replacement cost of its fixed assets (excluding land and buildings) is up to Tk. 15 million;

(ii) an enterprise is treated as medium if in the current market prices, the replacement cost of its fixed assets (excluding land and buildings) is up to Tk. 100 million.

B. For Non-Manufacturing Enterprises (such as trading and other services):

(i) an enterprise is treated as small if it has less than 25 full-time workers;

(ii) an enterprise may be treated as medium if it has between 25 and 100 employees.

BBS, the national statistical agency of Bangladesh under the Ministry of Finance and Planning uses an alternative definition based on the number of persons employed. Enterprises with up to 9 employees are treated "micro", with between 10 and 49 as "small", with between 50 and 99 as "medium", and all the rest as large (Uddin, 2008).

Technology

Technologies include products and services such as desktop computers, laptops, handheld devices, wired or wireless intranet, business productivity software such as text editor and spreadsheet, enterprise software, data storage and security, network security, and others (Ashrafi & Murtaza, 2008).

IT can be defined as "those technologies engaged in the operation, collection, transport, retrieving, storage, access presentation, and transformation of information in all its forms ..." (Boar, 1997). Moreover, IT adoption is defined by Tan, Chong, Lin, and Eze (2009) as application of Information and Communication Technologies (ICT) tools including computer hardware, software, and networks required for connecting to the Internet. According to Attaran (2003), "information technology is defined as capabilities offered to organisations by computers, software applications, and telecommunications to deliver data, information, and knowledge to individuals and processes", however, and with regard to the concept of supplier relationships, Carr and Smeltzer (2002) defined IT as the use of automated purchasing systems, supplier links through electronic data interchange (EDI), computer-to-computer links with key suppliers and finally information systems. In the light of

aforementioned views, the term IT will cover wide range of information processing and computer application in organisations in this study. IT will cover IS, ICT, internet and their infrastructure including computer hardware and software, those technologies that processes or transmit information to enhance the effectiveness of individuals and organisations. Furthermore, term IT also includes any computer application and required hardware packages, Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), EDI, and Enterprise Resource planning (ERP) which increase the productivity of businesses, as well as any technologies used for electronic commerce (EC) such as electronic funds transfer (EFT), intranet, extranet, collaborative planning, forecasting, and replenishment (CPFR) applications, supply chain communications systems, and electronic supply chain management systems (Ghobakhloo et al., 2011).

Technology and SME

Among different types of industries SMEs are more flexible and can easily adapt technology for better progress. SMEs are better placed to develop and implement new ideas. The flexibility of SMEs, their simple organisational structure, their low risk and receptivity are the essential features facilitating them to be innovative (Shamim, 2008). Innovative capacity of SMEs varies by sector, size, focus, resources and business environment. Growth performance of SMEs has been analyzed in terms of scale turnover, investment and employment.

Uddin and Bose (2012) claim that there is a positive relationship between percentage of innovated products in total sales and rate of growth of sales of innovative SMEs. Higher growth of SMEs has higher shares of innovated products in total sales compared to the medium or low growth SMEs. Share of innovated products, rate of growth of capital, and labour has a significant influence on the rate of growth of sales turnover of innovative SMEs (Subrahmanya, Mathirajan, & Krishnaswamy, 2010).

According to Namani (2009) technology, especially ICT (Information & Communications Technology) has given rise to a very sharp rise in the number of "off-shore" SME businesses in The Asian and the Pacific regions that endlessly service the IT needs of the developed countries of Europe and North America. Some countries have introduced specific projects which introduce some technologies in those areas where people are under-privileged. For example, India has introduced the SARI (Sustainable Access in Rural India) project that led to a tremendous improvement in health, learning, empowerment and economic developments among the poorest and most under- privileged people. Today SMEs of these rural areas are using the technology in providing e-services like email, voice mail, telemedicine clinics and some forms of e-government like tax returns and enquiries. There are other similar projects, such as- the Grameen Village Pay Phones and the Gyandoot Rural Intranet, where technologies are making people's life as well as business easier.

Research has shown that the introduction of new technology in SMEs has a major impact on the structure and functioning of those businesses (Ojukwu, 2006). For instance, several SMEs of United Kingdom, France, and Germany have adopted "Internet Business Solution" which has resulted in a huge cost savings to the organisations. The research has also shown that Nigerian SME owners who are involved in road-side 'call centres' have been able to make money, only because of the introduction of mobile telephony technology.

Technology and SME in Bangladesh

Now SME is recognised as the engine of growth. According to Ahmed (2001), product mix, locational factors, technology, and market advantages work as the combined forces to develop the SMEs. In Bangladesh the main factors of SME development are high labour intensity, development of technology, contribution to entrepreneurship development and growth of industrial linkage. The average annual growth rate of value added by small and cottage industries is 3.15%.

Appropriate technology for SMEs should be the most suitable package of production techniques covering related production sectors and in the context of dynamics of production in the sectors over time. SMEs can be benefited from new process, techniques or new idea of production. SMEs with new technology may be able to overcome diseconomies of scale so as to compete with large enterprises. To compete in this competitive market, SMEs have to monitor the technological development actively. SMEs need technology to meet or exceed the expectations of customers. In Bangladesh the sources of technology vary from firm to firm. But most of the SMEs are using traditional technology here. In Bangladesh

the number of small industries is about 56000 and the number of cottage industries is around 512000 (excluding handloom, software and apparels). If we count this number, the number of small and cottage industries will be well over 60,000 and 600,000 respectively. The number of medium scale industries in Bangladesh is around 20,000. Taking all these numbers together, the total number of SMEs in

Bangladesh is 680,000. Light Engineering, Agro-processing, Electronics and Software are the four basic SME sub-sectors (Ahmed, 2003). Traditionally Bangladesh diversifies its business in few sectors such as food, textiles, light engineering, and wood and bamboo products. But now they have entered in new industries such as plastic products, electrical goods, electronics, artificial jewelry, wooden and steel furniture, television and radio assembling, and soaps and detergents. Now the entry into and exit from sectors have become easier. RMG industry has contributed significantly in SME development. Based on a recent research on 19 entrepreneurial firm we have identified that the main difficulties to develop SMEs in Bangladesh are lack of institutional credit, non-availability of working capital, low levels of technology, low productivity, high rate of interests on bank loans, inadequate raw materials and supply of power, absence of clear cut government policy, and lack of R&D. Now getting the Government out of business and greater participation of private sector have become the key strategy of development of SME.

Barriers to IT Adoption

Large organisations have enough resources to adopt IT while on the other hand SMEs have limited financial and human resources to adopt IT. Duan, Mullins, Hamblin, Stanek, Sroka, Mavhado, and Araujo (2002) identified lack of IT skills and knowledge in SMEs as one of the major challenges faced by all European countries, particularly in the UK, Poland, and Portugal in their study. Houghton and Winklhofer (2004) have reported a slow response of SMEs relating to adoption of IT. Shiels, McIvor, and O'Reilly (2003) found that characteristics of the firm and industry sector are contributory factors to the adoption and exploitation of ITs by SMEs. Kapurubandara and Lawson (2006) have categorised internal and external barriers that impede adoption of IT by SMEs in a developing country. The internal barriers include owner manager characteristics, firm characteristics, cost and return on investment, and external barriers include infrastructure, social, cultural, political, legal, and regulatory. In Bangladesh, SMEs are facing the following constraints in the field of technology: technical constraints, isolation from technology hubs and access to technology information, industrial consultancy, managerial constraints, marketing constraints, lack of R&D facilities, inadequate institutional support services (Ahmed, 2003).

According to the previous articles, it can be easily defined what SME is, what technology is, and how technology is playing the vital role to develop SME. But among all those researches adequate number of surveys on SMEs of Bangladesh can hardly be found. Most of them are mainly on other developing countries like Thailand, Malaysia, and India etc. In Bangladesh, there are only about the financial requirements and loans. Other barriers and factors those affect SME are very rare there. And, division wise research on Bangladesh is like impossible to find. So in the research those challenges are going to be faced. Here Khulna is the location in the sample. Here the focus will be on how technology affects the SMEs of local area, which firms are using technology and what type of technology they are using, their level of investments, negative impacts. Even there will be a survey why local area lags behind in terms of technology, barriers of SME owners and if they can use it then which areas can be developed.

Hypothesis

Based on the previous studies relevant to this field the following hypotheses are being considered for this research

H_{01}: There is no relationship between introduction of new technology and development of SME.

H_{11}: There is a relationship between introduction of new technology and development of SME.

H_{02}: There is no relationship between information & communications technology (ICT) and development of SME.

H_{12}: There is a relationship between information & communications technology (ICT) and development of SME.

H_{03}: There is no relationship between technological acquiring capability and development of SME.

H_{13}: There is a relationship between technological acquiring capability and development of SME.

H_{04}: There is no relationship between technological operating capability and development of SME.

H_{14}: There is a relationship between technological operating capability and development of SME.

H_{05}: There is no relationship between technological upgrading capability and development of SME.

H_{15}: There is a relationship between technological upgrading capability and development of SME.

Methodology

Among the three types of research, the present research - "Role of technologies on the development of SME" follows the characteristics of a descriptive research. It works with a certain group of the SME owners. The research will help to predict the specific scenario of SMEs of Khulna city.

Sampling Method

Here, the research total population is the SME owners. As the sampling frame, a list of SMEs in Khulna by BSCIC is considered. The total number of SMEs in Khulna is 28192. The total SMEs are divided into four (4) basic sectors.

Table 1: SMEs in Khulna

Name of the SME sector	*No. of the SMEs*
Shrimp Industry	28
Small Industry	2710
Cottage Industry	25300
Craft Industry	154
Total	**28192**

Source:Bangladesh Small and Cottage Industries Corporation (BSCIC)

Non-probability sampling method is used here to develop the sample. Among the non-probability sampling methods, quota sampling method is used to draw the sample. The sample frame is divided proportionately according to the proportions of 4 SME sectors in the population. According to the Mark Saunders, the sample size is 370. Due to the cost and time constraints a convenient sample of 100 SME owners is chosen for this research.

Table 2: Sampling Model

Name of the SME sector	*No. of the SMEs*	*Proportion*	*No. of SMEs in Sample(in 100)*
Shrimp Industry	28	28/28192=0.099%	1
Small Industry	2710	2710/28192=9.61%	9
Cottage Industry	25300	25300/28192=89.74%	89
Craft Industry	154	154/28192=0.546%	1
Total	**28192**	**100%**	**100**

Instrument Development

Different books, journals, newspapers, articles and Internet were consulted to formulate theresearch objectives and finding the major factors and variables important for SME development through technology. A questionnaire was prepared based on the review of previous researches and current literature to determine the role of technology on the development of SME. The questionnaire was prepared for conducting the field survey for primary data collection. The questionnaire had two sections. Both open-ended and close-ended questions had been used. The open-ended section represented the general information about the respondents and close-ended section included 27 questions related to the broad six influencing factors that have been considered as important for SME development through technology. They were: Development of SME, Introduction of New Technology, Information & Communications Technology (ICT), Technological Acquiring Capability, Technological Operating Capability, and Technological Upgrading Capability.

In case of measuring the level of agreement about the influencing factors 5-point rating scale (Likert scale) was used. The rating of the scale was as follows: Strongly Disagree (1), Moderately Disagree (2), Agree (3), Moderately Agree (4) and Strongly Agree (5).

Data Collection

For primary data collection, Khulna city has been selected. Primary data have been collected from respondents located at different areas of Khulna City such as Shonadanga, Gollamari, Moylapota, Sat RastarMore, Daulatpur, Khalispur, South-Central Road, Ahsan-Ahmed Road, SamsurRahmanRoad,Khan-Jahan-AliRoad,RayparaCross Road, and DolkholaBylane. These areas were selected for their importance as suitable location for small and medium scale enterprises. A structured questionnaire was used for gathering information. Data were collected by visiting the respondent's office through face to face interview. Through the face to face interview, the respondents revealed some basic information about their SMEs. They described about the currently used technologies in their SMEs and also described about the potential technologies for their SMEs. Respondents spilled out the barriers to adopt more flexible and useful technologies.

Selected 100 respondents agreed to complete the survey. So, the final sample is 100 for an effective response rate of 100%. The response rate is very high. The majority of the respondents were male (91%) and a few female respondents (9%). 'Cottage Industry' quota was the highest contributor of the total respondents (89.74%). Most of them are engaged in business from 2 to 3 years.

Variables

Table 3: Variables and Measurements

Variable	*Operational Definition*	*Measurement Items*
Development of SME	Improvement of the existing condition of SME.	Increase profit margin. Incr
Introduction of New Technology	Emerging technologies are contemporary advances and innovation in various fields of technology.	Reduces human effort. Reduces time. Reduces cost. Increase production. Maximizes profit margin. New machineries. Better customer service.
Information & Communications Technology (ICT)	Enabling users to access, store, transmit and manipulate information	Use of software. Internet connection. Sustainable SME development. obtaining information.
Technological Acquiring Capability	Acquire new knowledge through formal, informal, internal and external channels.	Increase efficiency. Linkage among suppliers and customers. Relationship with technology suppliers.
Technological Operating Capability	Operate, use and sustain production equipment and facilities.	Shorten the gaps with other leading companies. Enhances production. Training development
Technological Upgrading Capability	Improve technology on products and processes depending on firm's own strength.	Upgrades processes. Upgrades machinery. Upgrades products. Adjusting with existing technologies. Modifying existing products.

Measurement Development

Respondents completed personal survey questionnaire that incorporated questions about the basic information of the respondents (name, gender, age) items designed to determine a) SME development and b) Role of technology.

SME Development

Six items were rated using a multi-item method that was used to increase the accuracy of measurement, and each item was based on a 5 point Likert scale (1) strongly disagree to (5) strongly agree.

Role of Technology

21 items-measured variables were used to reflect the components of role of technology. Role of technology including introduction of new technology, ICT (Information & Communications Technology), technological acquiring capability, technological operating capability, and technological upgrading capability were considered as independent variables for this research. Similarly, like SME development a multi-item method was used to increase the accuracy of

measurement, and each item was based on a 5 point Likert scale (1) strongly disagree to (5) strongly agree.

Reliability Test

Examining the internal consistency reliability test for the specific research variables and the main construct of the research, it has been found that all those variables are internally consistent (Cronbach's α>.60); which implies, established scales for measurement are suited to the purpose of the research.

Table 4: Reliability Test

Variable	*Cronbach's Alpha*
Development of SME	0.608
Introduction of New Technology	0.662
Information & Communications Technology (ICT)	0.525
Technological Acquiring Capability	0.498
Technological Operating Capability	0.317
Technological Upgrading Capability	0.743

Results and Findings

Correlation

Table 5: Development of SME and Introduction of New Technology

		Development of SME	*Introduction of new technology*
Development of SME	Pearson Correlation	1	.336**
	Sig. (2-tailed)		.001
	N	100	100
Introduction of new technology	Pearson Correlation	.336**	1
	Sig. (2-tailed)	.001	
	N	100	100

Table 5 shows that there is a relationship between SME development and introduction of new technology and the relationship tends to be moderate (r = 0.336). The relationship is significant (p<.05). So it is likely that changes in introduction of new technology will lead to a positive change in SME development.

Table 6: Development of SME and ICT

		Development of SME	*Information & Communications Technology*
Development of SME	Pearson Correlation	1	.027
	Sig. (2-tailed)		.792
	N	100	100
Information & Communications Technology	Pearson Correlation	.027	1
	Sig. (2-tailed)	.792	
	N	100	100

Table 6 shows that there is a relationship between SME development and ICT. But the relationship tends to be very weak (r = 0.027). It shows non-significant relationship (p>.05). So it is likely that changes in ICT will lead to a slow change in SME development.

Table 7: Development of SME and Technological Acquiring Capability

		Development of SME	*Technological Acquiring Capability*
Development of SME	Pearson Correlation	1	.204*
	Sig. (2-tailed)		.042
	N	100	100
Technological Acquiring Capability	Pearson Correlation	.204*	1
	Sig. (2-tailed)	.042	
	N	100	100

Table 7 shows that there is a relationship between SME development and technological acquiring capability. But the relationship tends to be moderate(r = 0.204). The relationship is significant (p<.05). So, it is likely that

changes in technological acquiring capability will lead to a change in SME development.

Table 8: Development of SME and Technological Operating Capability

		Development of SME	*Technological Operating Capability*
Development of SME	Pearson Correlation	1	.079
	Sig. (2-tailed)		.436
	N	100	100
Technological Operating Capability	Pearson Correlation	.079	1
	Sig. (2-tailed)	.436	
	N	100	100

Table 8 shows that there is a relationship between SME development and technological operating capability. But the relationship tends to be very weak (r = 0.079). The relationship is non-significant (p>.05). So, based on the study it is likely that changes in technological operating capability will lead to a slow change in SME development.

Table 9: Development of SME and Technological Upgrading Capability

		Development of SME	*Technological Upgrading Capability*
Development of SME	Pearson Correlation	1	.337**
	Sig. (2-tailed)		.001
	N	100	100
Technological Upgrading Capability	Pearson Correlation	.337**	1
	Sig. (2-tailed)	.001	
	N	100	100

Table 9 shows that there is a relationship between SME development and technological upgrading capability. But the relationship tends to be moderate (r = 0.337). The relationship is significant (p<.05). So, based on the findings it is likely that changes in technological upgrading capability will lead to a positive change in SME development.

Regression

Table 10: Regression Statistics

Variables	*Coefficient Beta*	*Significance*
Introduction of New Technology	.201	.022
Information & Communications Technology (ICT)	.068	.440
Technological Acquiring Capability	.146	.041
Technological Operating Capability	.048	.532
Technological Upgrading Capability	.198	.016
R square	.210	_
Adjusted R square	.168	_
F value	4.994	.000

The model explains 21% variation of SME development by introduction of new technology. Here, data fit the model well (p = .000).

$\mathbf{H_{11}}$ suggests that there is a significant relationship between introduction of new technology and SME development. The regression result supports this hypothesis (p = .022). So, here is a positive relationship between these. It is likely that if introduction of new technology increases, SME development will also increase.

$\mathbf{H_{12}}$ suggests that ICT positively affects SME development. The regression result doesn't support the hypothesis (p = .440). This finding found that ICT has a non-significant relationship with SME development. There is a negative relationship. It is likely that if ICT increases SME development will not increase.

$\mathbf{H_{13}}$ suggests that there is a significant relationship between technological acquiring capability and SME development. The regression result supports the hypothesis (p = .041). There is a positive relationship. So, it is likely that if technology acquiring capability increases, the SME development will also increase.

$\mathbf{H_{14}}$ suggests that there is a relationship between technological operating capability and SME development. But the regression result shows that it has a non-

significant relationship with SME development (p = .532). It shows the negative relationship. So, it's likely that if technological operating capability increases, SME development will decrease.

$\mathbf{H_{15}}$ suggests that there is a positive relationship between technological upgrading capability and SME development. The regression result supports the hypothesis by showing the significant relationship (p = .016). So, it's likely that SME development will increase, if technological upgrading capability increases.

Discussion

The study combined five technological factors by five specific correlations but into one regression table, to see the overall impact of technology on SME development. The results show that of the five hypothesized relationship, three are significant ($p<0.05$) and two are non-significant ($p>0.05$).

$\mathbf{H_{11}}$ suggests that introduction of new technologies has positive impact on SME development. The correlation and regression results support this hypothesis ($p<0.05$). So, here is positive and significant relationship between these. It is likely that if introduction of new technology increases, SME development will also increase.

$\mathbf{H_{12}}$ suggests that ICT positively affects SME development. The correlation result shows the positive but weak relationship ($r=0.027$). Even regression result does not support this hypothesis ($p=0.440$). It shows negative and non-significant relationship between these. It is likely that if ICT increases, SME development will not increase.

$\mathbf{H_{13}}$ suggests that there is a significant relationship between technological acquiring capability and SME development. The correlation and regression result support the hypothesis ($p<0.05$). There is a positive relationship. So, it is likely that if technology acquiring capability increases, the SME development will also increase.

$\mathbf{H_{14}}$ suggests that technological operating capabilities positively affect SME development. The correlation result shows the positive but weak relationship between these two variables ($r=0.079$). Even regression result does not support this hypothesis ($p=0.532$). So, here is negative and non-significant relationship between these according the regression result. It is likely that if technological operating capability increases, SME development will not increase.

$\mathbf{H_{15}}$ suggests that there is a relationship between technological upgrading capability and SME development. Both correlation and regression result supports the hypothesis by showing the positive and significant relationship ($p<0.05$). So, it's likely that SME development will increase, if technological upgrading capability increases.

Limitations

The list of SME owners provided by BSCIC has been used as the sampling frame. But the list was unorganised and no soft copy of the list was available.

Due to time constraint and convenience issue, a sampling unit of 100 has been used instead of the suggested number of 383 by Mark Saunders. This may cause a reduction in the accuracy of the result.

There has been time constraint in the completion of the report.

As most of the SME owners have less access to education, the data collection has been problematic. Making them understand the purpose of the study was a tough call. Again, to fill up the questionnaire, the questions had to be translated into Bengali first. So, it has been time consuming for both the parties.

Many of the SME owners are unaware of the technologies that can be used.

There has been financial constraint in terms of data collection and questionnaire printing.

Recommendations

Technologies can play significant role on SME development only when the SME owners have some basic education needed for the operation of the technologies. So, basic education is a must.

As most of the SME owners possess little or no educational background, modern and complex technologies can be of no use to them. So, user friendly technologies should be introduced to the SME owners.

Pilot programmes can be introduced to encourage SME owners to use IT showing what additional benefits they can have through it.

Success of SME business depends mostly on the managerial capability of the SME owners. But there is hardly any training facility in Bangladesh to develop managerial capabilities. So, such training programmes are required for getting the best out of the use of IT.

Loan facilities on purchase and installation of new technologies can encourage SME owners to use IT in their business operation. So, SME loan on purchase and installation of new technologies should be introduced.

Institutional support service is still not strong in Bangladesh. A strong institutional support will ensure better use of IT.

Conclusion

The research framework for this study relied on five technological factors which help to develop SMEs. Those factors named introduction to new technologies, ICT, technological acquiring, operating, and upgrading capabilities have been s identified from various past researches. Based on the result of the study, three factors are found to be correlated with the SME development called introduction to new technologies, technological acquiring and upgrading technologies. These results indicate that two factors called ICT and technological operating capabilities are not likely to affect overall SME development of Khulna. These analyses indicate this unanticipated type of result because SME owners still depend on the traditional operating system. They still cannot rely on modern techniques and software. But this study has achieved its main objective which was to determine the impact of technology on the development of SMEs and barriers to adopt technology.

Therefore, this study will help to overcome the identified barriers in future. To sustain in the competitive market, it will help to identify the way to increase technological awareness among SME owners and also help to adopt potential technologies in long term process. Development of entrepreneurship, new business creation and development of inter-sectorial linkages should be given top priority. This study will help the SME owners to increase productivity and develop new SMEs by using technologies.

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