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PROSPECTS AND CHALLENGES OF INFORMATION TECHNOLOGY IN THE SOCIO-ECONOMIC DEVELOPMENT OF BANGLADESH

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ABSTRACT

The present era is the information age. The nature of economic, social and cultural activities are changing rapidly with introduction of Information Technology (IT). The aim of this paper is to explore the prospects of IT in the socio-economic development, to identify the different barriers it faces for its proper growth and finally put forward some suggestions to create a conducive environment for the development of IT industry in Bangladesh.

INTRODUCTION

The term information can be applied to just about anything that can be communicated. Data is the raw material from which information is derived. Information is the data that are collected and processed into a meaningful form. Information Technology (IT) involves collection, storage, processing and distribution of information. It is a collective reference to computers, information systems, data communication and computer technology. The nature of economic activity is changing rapidly with the introduction of IT.

In the old days, land was wealth, then came industrial revolution and the present era is called the information age. The information revolution has changed the perception of wealth. Now the intellectual capital is far more important than money. Developed countries are enjoying high living standard by the blessings of information processing using computers and automation. Developing countries lagged behind to feel the test of this technology and for this reason poor countries are being left in poor condition. Bangladesh is a developing country having 120 million population and majority of the population are below poverty level with per capita income of about US$300. If we are able to develop a strong infrastructure and turn this huge population to IT literate manpower of international standard then Bangladesh can open up new hopes for the socio-economic development by creating domestic employment opportunity and can also earn significant amount of foreign exchange by exporting software and manpower abroad.

PROSPECTS OF IT IN BANGLADESH

IT can change the life style, culture and civilisation by expanding knowledge base, by affecting the kind of job skills we need and the kinds of careers that are available and by transforming organisation of all kinds. By changing our knowledge barriers IT can create wide ranging change in our society and culture. It is encouraging that in Bangladesh application of IT are expanding fast and here we discuss some potential IT intensive area.

Data entry and software export

Data entry and software development is a multimillion dollar industry which has flourished in countries like India, Russia, Thailand, Ireland etc. Since in Bangladesh the labour is very cheap, data entry and software export could be a promising industry and it can open up huge employment opportunity for IT professionals. Already many data entry and software developments enterprises grew and government also provides them some incentives. But the main obstacle is the speed of data transmission which is 64 kbps through the VSAT. To expedite the growth of this particular sector government is actively considering to set up a Software Technology Park (STP) with high speed transmission (2 Mbps link) facilities.

Skilled IT professional export

The information revolution is a global phenomenon that has influenced all nations around the world. As electronic commerce and digital revolution spread rapidly, a new set of IT skills is being demanded, especially from western nations that have successfully embraced IT. The USA alone demands 166,000 highly skilled IT professionals every year, of which only 50% can be met through its own citizen. So Bangladesh can earn a large amount of foreign exchange by exporting skilled IT personnel abroad.

E-governance

E-governance is a concept which gives the transparency in every sphere of a government machinery through the use of IT. With the e-governance the head of government can have a glimpse of major activities in the district headquarters and also can keep track of all activities in all ministries and major organisations with the PC webbed with network of the machinery of the government. Singapore, Malaysia, Indian state of Andhra Pradesh, Karnataka etc. have successfully introduced e-governance.

E-commerce

E-commerce is the process of conducting all forms of business using computer hardware, software, processing, data communication and computer network. Because of technological and economic edge e-commerce services are already in place in the

developed world. E-commerce has created opportunity to compete successfully in providing digital products and services in the global market. Bangladesh which went on line in 1996 fast adopting itself to the new technology and e-commerce could open up new horizon for the rural as well as urban population if they could have access to information regarding agriculture, shrimp culture , art and craft etc. At present two enterprises named Designer's Den and Grameen Uddog selling Bangladeshi arts and crafts, and Grameen Check (a textile product) respectively in the world market through Internet.

Management and MIS

Information is a valuable asset which holds an organisation together and makes it work effectively. Success of an organisation depends on timely, and efficient collection, processing and dissemination of information. Lack of proper management is the cause of huge financial losses for some organisation in the public sector. Computerisation and MIS is required for effective management of an organisation. Excellent software tools and techniques are now available for efficient management and planning . Organisation in Bangladesh should use appropriate IT tools and techniques for efficient planning and management.

Education

Education is the tools which changes an ignorant person to a useful human resource. IT can help in creating a set of essential and useful manpower quickly and efficiently .Besides the Internet facility also offered a great opportunity to share the global knowledge from different advanced libraries and institutions. Most of the universities in our country are now connected to Internet either fully or partially, providing excellent service to the teaching community and students.

Farming and agricultural development

The knowledge of IT can be very useful for higher productivity in farming and in agriculture. The database for these purposes may be used for seedling, plantation and nursing of the plants. The integrated pest management can be undertaken properly by the use of computer pest control system. Higher productivity in agriculture is possible in Bangladesh of using It which will help in alleviating the food problems of teeming millions.

Health and environment development

IT can be of great help for awareness in health sector. Doctors can use it for treatment of patient on receiving the data base information. Computers are also being used for the diagnosis of diseases and the analysis of pathological samples. The environmental problems, like natural disaster , land and water management, social problems etc. can

be handled by the proper use of IT. Some works on geographical information system (GIS) are going on in connection with land management in Bangladesh.

BARRIERS OF IT DEVELOPMENT IN BANGLADESH

In the twenty first century no nation can prosper with electronic infrastructure embracing computers, data communication and other digital media. Though Bangladesh went on line in 1996 , the advancement in the field of IT is not encouraging as the neighbouring countries due to the various barriers it encountered in multiple spheres. Here we try to analyse few barriers that hinders the proper development of IT industry in Bangladesh.

Poor telecommunication infrastructure

The role of telecommunication and the extent of its application in facilitating the process of IT are significant. In the develop world where basic telecommunication infrastructure has already reached the saturation point or approaching it very fast . But unlike them, a developing country like Bangladesh lacks in possessing an adequate telecommunication infrastructure. This infrastructure constraints make the access to the international telecom and electronic network extremely expensive. Table-1 represents the performance of BTTB in comparison to other SAARC countries.

Table-1

Country	Revenue earning ($) /telephone	invest in % GFCF	Teledensity /100	Waiting time for connection	Installing charge ($)
Bangladesh	772	0.90	1.40	10-12	450
India	332	1.90	16.50	1-2	60
Pakistan	491	4.40	17.00	1-1.5	90
Sri Lanka	1070	13.00	9.60	2-3	80

Source : Journal of Telecom Samity " TELETECH". GFCF: Gross Fixed Capital Formation

There is no denying fact that Bangladesh failed to take advantage of the technological innovations and corresponding cost reductions in telecommunication sector that facilitated phenomenal increase in the service.

Lack of skilled manpower

The IT industry collectively refers to the software, computer hardware and telecommunication sector with other specialised areas in between. As the rapidly growing digital economy depends both on hardware and software components, the required skills are also diverse. The rate of IT implementation and awareness in the country has only accelerated during the past 2 years, indicated by an average annual growth of 30% in the PC market during this period. However, compared to

neighbouring countries such as India, IT penetration at an institutional level is still very low. Therefore, it is not surprising that IT human resource development in Bangladesh is also at low level, and certainly not enough to capitalise on emerging opportunities at home and abroad.

Inadequate incentives for IT development

Interest in IT development and education is a direct function of the growing opportunities in the IT industry. One reason why the domestic and export-oriented IT sector has been slow in taking off is the lack of incentives from the government. The government should establish as effective telecommunication infrastructure to help export-oriented IT service. They should also subsidise for IT companies and declare a tax holiday for IT and IT education companies.

Lack of domestic employment opportunity of IT professionals

The slow growth of IT implementation and a week domestic software industry is perhaps the most menacing of all impediments. Both private and public sector enterprises still use computer technology mainly for trivial tasks such as word processing. The government can play a critical role in stimulating the domestic software IT industry. The weak domestic IT sector has failed to generate a significant level of job opportunities that could motivate people to take IT education and training. It must be remembered that unless our youth get an opportunity to work on domestic software projects and thus gain valuable experience, it will be difficult or impossible to get lucrative export orders for advance software developments.

Poor quality of science, math and English of students

High quality of science and mathematics education is usually required for eventual advancement of IT. The manner in which students receive this education is not sufficient for generating intelligent and stimulating analytical problem solving skills. In addition, English skill are imperative for IT education and career, since English is the universal language of IT. The quality of English education has eroded at an alarming rate over the past 20 years. This situation urgently needs to be addressed through national level policies.

RECOMMENDATIONS

From the above discussion it is evident that modern society depends on IT for almost all their social, cultural, political, economic and legal activities. Thus it is indeed very important to increase awareness and understanding of the importance of IT and its implications on all sectors of development of the country. Following recommendations in this connection are made for consideration of the government of Bangladesh for the socio-economic development of the country.

1. Open market option should be adopted to encourage investment, competition, efficiency and innovations in the telecommunication sector.
2. High speed data communication infrastructure should be set up for speedy data transfer between Bangladesh and other countries.
3. Environment and opportunities should be created for rapid expansion of e-commerce, electronic banking and Internet banking.
4. E-governance should be established to reflect accountability and transparency of the administration.
5. Accuracy and reliability of information flow paper and electronic media must be ensured.
6. Our education system should be made dynamic and efficient enough to generate computer and IT literate manpower of international standard for home and abroad.
7. Public and private institution of higher learning should increase the intake of students in computer and IT related disciplines.
8. Software Technology Park (STP) or IT village should be set up with qualified professionals and state-of-art infrastructure producing quality product at competitive prices.
9. Working capital loan for software development and training should be available with no collateral.

CONCLUSIONS

Today, the world economic scenario is changing very fast that the time remaining with us in deciding the amplitude of investment, undertaking new ventures, introducing the latest services and changing the organisational philosophy is becoming shorter . We have missed the industrial revolution for no fault of our own. But if we fail to capitalise on the IT revolution, we have only ourselves to blame for it. Thus, we should not waste any more time to act in achieving what others have already achieved and look forward beyond the horizon to asses and prepare for future. Bangladesh should have two time horizons for IT infrastructure and human resource development : a long term vision that will yield results in the future, and a short term vision that will help capture tremendous global opportunities being presented currently.

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