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HARNESSING INFORMATION TECHNOLOGY FOR NATIONAL DEVELOPMENT: A POLICY FRAMEWORK FOR SRI LANKA

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ABSTRACT

Unprecedented advancements in Information Technology have made mankind very much dependant on it for a wide array of activities. IT also has paved a path for developing countries like Sri Lanka to overcome the severe challenges imposed by the globalisation of economic and financial activities. Therefore, the time is opportune for Sri Lanka to embrace IT and harness its capabilities for national development. Sri Lanka possesses the necessary prerequisites like a literate population and a liberalised economy, which would make this a relatively easy task. This paper discusses the measures needed to strengthen the key enabling factors for proliferation of IT includidng IT manpower and IT literacy, information infrastructure and legislation, measures needed to promote application of IT for activities falling under the major potential areas including education, access to information, governance, public services, business & commerce, industry, agriculture and home & leisure activities. The paper also presents measures to reap the maximum benefits of the two sectors related to IT having the greatest potential for success i.e., software industry and IT education & training. The paper argues the importance of incorporating the measures discussed under the above categories if Sri Lanka is to successfully harness the opportunities made available by IT for its development.

Keywords : Information Technology, IT application, Software industry, IT policy.

INTRODUCTION

The potential offered by the emerged IT revolution for national development is quite clear. The achievements made by India over the recent years in the IT sphere give a clear picture of the potential available. Indian software exports generated US$ 4 billion during the year 1999-2000. According to analysts India has prospects to earn an annual revenue of US$ 87 billion and to provide employment to 2.2 million persons in the IT sector by the year 2008. The Indian success is directly attributed to an enabling environment created by a well thought out and implemented policy framework. Sri Lanka, however, has not yet been able to harness the available potential to its benefit.

There have been policy statements made and implemented from time to time, but a coherent policy framework is markedly absent. It is now time to analyse the background issues in detail and develop a suitable policy framework. As depicted in Figure 1, policy formulation in this context should take cognisance of three related areas, i.e., key-enabling factors for IT proliferation, potential application areas and investment promotion related issues. This paper takes a thorough review of these related parameters and proposes a comprehensive policy framework for harnessing the available potential for national development.

Unprecedented advancements of computer and communication technologies coupled with innovative techniques to harness their powers have led to a situation where mankind has become almost totally dependant on IT (Howell, 1995). Parallely, globalisation of economic & financial activities and trade has imposed severe challenges to developing countries, making it very difficult for them to stay competitive without embracing IT (Desia, 1996; Dehejia, 1996; Hussain, 1996; Goonathilake *et al.*, 1998; Munasinghe & Jayawardena, 2003). Most nations have therefore realised the important role that IT can play in shaping the economic development of their countries and have formulated policies to harness its capabilities for national development. Sri Lankan government too has realised the potential of IT to provide efficient services, increase productivity and competitiveness in trade and industry, create new employment opportunities in order to develop Sri Lanka as the commercial hub of the region. Consequently, the government has identified IT as one of the major thrust areas for national development (IITC, 1998).

IT has now emerged as the major driver of almost all spheres of activities related to education and training, governance, public services, business & commerce, industry, agriculture, access to information and home & leisure activities. Further, there is tremendous potential for the software industry to become the main foreign exchange earner of Sri Lanka (Jayaram, 2000; Munasinghe *et al.*, 2001a; Munasinghe *et al.*, 2001b). To realise this potential, the government has to adhere to a policy that will consider the key factors such as developing IT manpower, facilitating an IT literate society, providing infrastructure, facilitating incentives and legislation in order to promote effective application of IT. These enabling factors are also vital to develop a vibrant software industry.

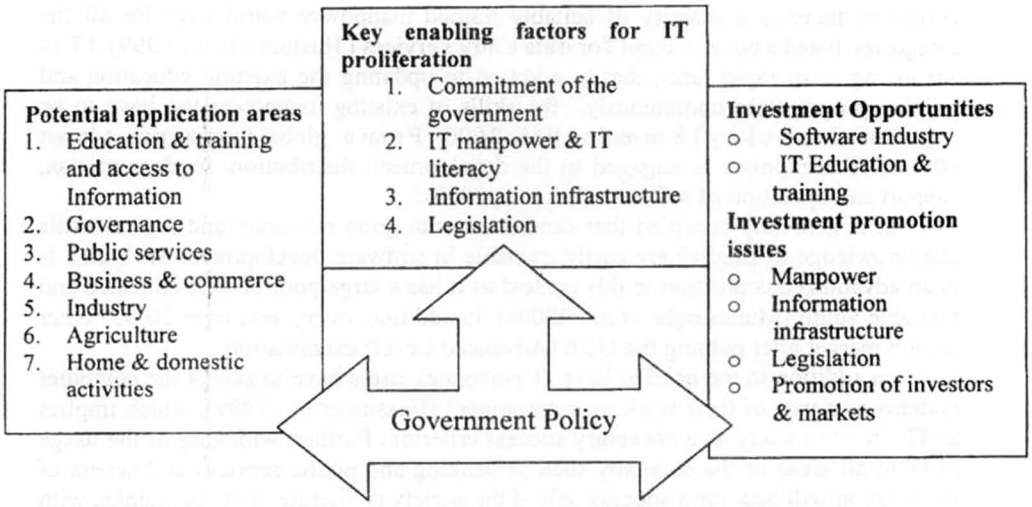

Figure 1. Relationship of government policy to aspects relevant to IT

KEY ENABLING FACTORS

Commitment of the government

The government of Sri Lanka has very rightly accepted the importance of IT for national development and identified it as one of the main thrust areas. Already a number of incentives are in place to attract investors for some of the sub-sectors of IT and promotion of application of IT in general. Five to eight year tax holiday and duty free import of equipment are some of them (CINTEC, 2000). IT education and training providers too, subjected to certain conditions, qualify for these incentives.

The continued commitment of the government, to incorporate in its IT policy, the measures suggested later in this paper and their effective implementation will be essential for Sri Lanka to realise the full benefits of IT.

IT Manpower and IT literacy

Manpower in IT sector include those engaged in IT related work, either in a supply or an end-user organisation. This work include the following:

a) Development, distribution, implementation, support and operation, of computer hardware and software (including networks).
b) Provision of information and data processing services to end-users.
c) Dissemination of IT knowledge and skills.
d) Research and development on IT.
e) IT Consultancy services.
f) Data entry services.
g) Management of the above activities.

The IT sector being knowledge based and manpower intensive, availability of suitably trained manpower is vital for its widespread application (Infoline, 2000). However, there is a scarcity of suitably trained manpower world over for all the categories listed above, except for data entry services (Hashim *et al.*, 1999). IT is advancing at so rapid rates, that in addition to updating the existing education and training programmes continuously, the skills of existing manpower too have to be upgraded almost every 18 months (IDA, 2000). From a global perspective, almost 80% of IT manpower is engaged in the development, distribution, implementation, support and operation of software (Infoline, 2000).

It is generally accepted that candidates with good numerate and logical skills and knowledge in English are easily trainable in software development. Sri Lanka is in an advantageous position in this context as it has a large pool of well-educated and trainable youth (Munasinghe *et al.*, 2000a). In addition, every year over 50,000 enter the job market after passing the GCE (Advanced Level) examination.

In addition to the need to have IT personnel, users have to accept the computer systems as a part of their working environment (Hassim *et al.*, 1999), which implies an IT literate society as a necessary success criterion. Further, widening of the usage of IT to all areas of the economy such as banking and public services and access of information will become a success only if the society is literate in IT. Sri Lanka, with its high literacy level, has the potential to achieve IT literacy faster than its neighbours. The familiarity of accessing the Internet and a working knowledge of widely used application packages such as word processing and spread sheets would be desirable.

Information infrastructure

A combination of factors enable IT to be used for every facet of human life. These include advancement of the microcomputers, opening of internet to non-academic purposes, creation of user friendly software and advancements of telecommunication technology coupled with the advent of the networks. Further, the advancement in the telecommunication sector has broken the barriers in distance, time and transportation and made software development viable at locations far away from the client. Wide spread usage of internet, e-mail, e-banking, e-learning, e-commerce and a host of other IT related activities could be made a reality only if information infrastructure facilities are adequately available. It is therefore a matter of utmost urgency to launch an accelerated drive to set up a world-class telecommunication infrastructure with an extensive spread of fibre optic, wireless and other networks with adequate bandwidth, reliability and interconnectivity at local, national and international levels. Infrastructure requirements for the zones earmarked for software technology parks (STP) will have to be catered for on a priority basis. Internet connectivity is the other major driver that would facilitate the creation of a knowledge-based society. Internet service providers should therefore be provided with adequate international and national bandwidth. It may be worthwhile exploring the feasibility of using alternative delivery mechanisms such as wireless/laser technologies, electricity supply grid, satellite operations and cable TV.

Also, the introduction of internet decoder boxes to access internet using the normal TV and the phone line would provide the large base of TV owners a cheap

option of e-mail and internet access. Sri Lanka could also make use of the large number of communication bureaus, agency post offices and private IT training centres across the country to extend their services for general public to access internet and intranets by assisting them with know how and soft loans.

Legislation

IT cuts across areas not currently covered by the conventional legal system. Even in more developed countries laws governing computer crime, e-commerce etc., is just emerging. Sri Lanka is far behind in this area and a concerted effort has to be made to develop a suitable legal framework. New legislation has to be formulated and enacted to satisfy requirements demanded by the advancements of IT in a number of areas. Enacting and proper enforcement of sound intellectual property rights (IPR) protection laws are vital to win the confidence of investors and induce them to subcontract programming assignments and start research and development activities in a country (Nasscom, 1999). Therefore, this is an essential factor for the development of the software industry. However, the current IPR protection laws in Sri Lanka are not adequate though some work in this area has been initiated.

MEASURES TO HARNESS BENEFITS OF IT

Strengthening key enabling factors

In order to harness the benefits of IT for national development, it is necessary to have a suitable policy framework that strengthens the four key enabling factors discussed above. Giving the highest priority for harnessing IT for national development should be a foremost requirement of the government. In this context, the government has to acknowledge the potential for software industry and IT education and training and give them all the required assistance.

Developing manpower for the IT sector

In order to create an adequately trained pool of IT manpower it is necessary to carry out the following.

- The annual capacity IT/Computer Science (CS), degree/diploma programmes at universities and public and private institutes should be increased. This can be done by
    a. increasing the intake for existing programmes,
    b. commencing new programmes, which are not available at present,
    c. starting new institutes, especially in areas earmarked for STPs,
    d. offering programmes in collaboration with foreign institutes,
    e. offering joint programmes with industry and other institutes,
    f. initiating conversion courses for unemployed and under-employed graduates and those who wish to change careers,
    g. offering suitable IT/CS modules during the final year of non IT/CS programmes in the Universities and
    h. promoting global IT firms to start their own or certified training programmes in Sri Lanka.

- The degree/diploma programmes should be made relevant to rapid technological advancements and industry needs. This can be done by
  a. promoting alliances, affiliations, links, franchises and accreditations with reputed local and foreign institutes,
  b. promoting linkages with industry and
  c. incorporating internships and industry based assignments in to the curricula.

- The annual capacity of training programmes of shorter duration at universities and public and private institutes on proprietary software packages, technology and/or skills upgrading, specific programming languages and on a particular niche area, leading to a career in IT or to upgrade the knowledge of those who are already in the industry should be increased.

Creating an IT literate society

In order to create an IT literate society the following may be carried out

- IT literacy should be made a compulsory component of all non IT/CS degree programmes.
- IT literacy programmes should be started for employees of government departments and private sector enterprises, at public and private institutes including universities.
- IT should be introduced to school curricula.
- Relevant school teachers should be given a training in IT and this training should be extended progressively to non IT teachers by initiating diploma programmes at all universities during vacations. Each university could train a number of groups at any given time and a modular course could be extended over more than one year. This would enable the teachers to practice and master what they learn at each module. The other teachers could be trained by those who have followed such programme as computer centres are set up within schools.
- A central body with representation from public and private sector institutes and industry or a reputed private or public institute with foreign affiliation should be established to develop curricula, testing guidelines, course material and instructor guidelines and franchise their courses. These courses should be made available to smaller training institutes across the country at a reasonable fee.
- The small scale private institutes scattered across the country should be used to achieve IT literacy by
  a. assisting them with upto date curricula, course material, teaching material, instructor guidelines, assessment criteria, etc.,
  b. promoting introduction of the franchisee model to IT education and training.
  c. providing soft loans for them to upgrade and expand and
  d. assisting them to establish cyber cafes.

- On line national examinations on computer literacy for candidates to sit at accredited centres at any time should also be introduced.

Resources for educational and training centres

- The public and private institutes including universities should be supported to acquire the facilities required to increase the capacity of IT related courses by
  a. providing grants or soft loans to obtain hardware, software and internet connectivity and
  b. providing online Internet connection at subsidised rates.

- The usage of resources at the universities should be maximized by
  a. keeping the IT centres open round the clock (or extended hours) and
  b. conducting external courses during weekends and vacations.

- The universities and public and private institutes should be supported to overcome the shortage of faculty by
  a. assisting to hire foreign faculty,
  b. increasing cadre positions of relevant departments and
  c. providing funding for academics to undergo postgraduate training.

- University Grants Commission (UGC) should establish clear cut rules and procedures for the affiliation of Sri Lankan universities with foreign institutions of excellence and local private sector institutions with universities.

- Universities and public and private institutes should be supported to make degree/diploma programmes relevant to rapid technological advancement and industry needs by
  a. providing funds/loans required for alliances, affiliations, links, franchises and accreditations with reputed local and foreign institutes and
  b. providing funds/loans required for linkages with industry.

- Opportunities for advancement of IT should be harnessed for developing an appropriate model of distance education
  a. using software already available for developing e-learning systems and
  b. using combinations of techniques such as news groups, conferencing, virtual reference groups, e-mail, streaming audio and video, multimedia CD-ROMs, file sharing, access to data bases, hypertext, online tutorials, question and answer assignments, real-time study sessions, lecture notes, slides, frequently asked questions and world wide web (WWW).

- Scholarships/bank loans should be provided for students at public as well as reputed private institutions to follow IT courses for which employment is guaranteed.

- National educational Intranets should be established and IT training material, interactive learning material and other educational products should be made available on them and

- The universities should be encouraged to generate portion of funds required for future upgrading and expansion through external training programmes.

Developing information infrastructure

- An accelerated programme should be launched to provide world-class telecommunication infrastructure to sites earmarked for STPs, all universities, public and private sector educational/training institutes, business users, general public as appropriate to each category. This can be done by the following means.
    a. Extending the coverage of fibre optic, wireless and other appropriate networks.
    b. Enhancing the local, national and international bandwidths.
    c. Enhancing ISDN coverage.
    d. Promoting the introduction of wireless Internet enablers such as WAP and third generation (3G) mobile systems.
    e. Introducing Intelligent Network (IN) services including free phone and premium services like 0800 and 0840 number facilities.
    f. Creating a competitive environment among telecommunication service providers.
    g. Allowing all telecommunication service providers to have access to international gateways.

- Reliable, easy and low-cost online/dialup access to internet should also be provided on a priority basis for all universities, public and private sector educational/training institutes, business users and domestic users. This can be done by the following means.
    a. Providing Internet access nodes at all local/district exchanges to enable access at local call rates.
    b. Providing Internet access at highly discounted rates (or preferably free) during off peak hours (from 6 pm to 8 am).
    c. Allowing Internet service providers to provide access to Internet through authorised cable TV channels.
    d. Exploring the feasibility of using alternative delivery mechanisms such as wireless/laser technologies, electricity supply grid, satellite operations and cable TV.
    e. Introducing Internet decoder boxes to access Internet using the normal TV and phone line.

- A network of centres for general public should be created to access Internet at a reasonable fee. The agency post offices, fax bureaus and private training institutes should be assisted to extend their activities to provide access to Internet and Intranets.

Strengthening legislation

- The legal requirements demanded for effective application of IT should be met for various application areas and software industry. It is also necessary to update them as and when the need arises.

  This can be achieved by the following means.
  a. Enacting legislature to protect IPR requirements.
  b. Enacting legislature to provide requirements of e-business, encryption, security, privacy, etc.
  c. Establishing a close relationship between policy makers and high-tech enterprises to adopt legislature as quickly as the need arises.
  d. Keeping close tabs on the changes of legislature in the developed countries and adopt them as and when they become relevant to us.

Legislation should be introduced and appropriate measures should be taken to prevent material that is unsuitable, anti-social, illegal and threatening the security of the country being published on websites.

Other enabling factors

- Rresearch and development (R&D) work related to IT should also be promoted. This can be done by the following means.
  a. Building close links among academia of different universities and higher educational institutes.
  b. Building close links between academia and industry.
  c. Supporting exchange programmes between academia and industry
  d. Providing incentives to ensure that personnel of highest quality join academia.
  e. Providing fellowships and adequate funding for research activities.
  f. Initiating R&D projects for IT interface and IT development tools in Sinhala and Tamil.

- It is also necessary to establish a systematic domain name registration system in line with guidelines practised elsewhere in the world.

- The necessary fiscal measures and incentives may be provided. This can be done by the following means
  a. Structuring duties and taxes for computer hardware based on the World Trade Organisation's (WTO) Information Technology Agreement (ITA).
  b. Exempting materials, components and parts required for production/assembly of items/equipment related to IT and telecommunication.
  c. Allowing 100% depreciation on IT related assets of companies.
  d. Allowing deductible expenditure on purchase of computers, peripherals and software from income of individuals for tax purposes.

Developing the software industry

Specific policies have also to be developed targeting the development of the software industry. In addition to the issues discussed in the foregoing section under manpower and infrastructures, there are few more critical factors that should be addressed for successful development of the software industry. This section covers the other important areas that have to be looked into to ensure the growth of the software industry.

Software technology parks

Software technology parks (STP) have been used as a successful model in other countries to promote the software industry. Sri Lanka should draw lessons from such experiences and develop a suitable framework to develop the STP model to fit the local needs.

The geographical areas for setting up STP should be identified using criteria such as concentrations of potential manpower.

Further, the manpower base around identified geographical areas should be developed by either expanding the existing IT related educational and training institutes around the proposed STPs or promoting national and international IT education and training providers to set up facilities around the proposed STPs.

Financial incentives and investment promotion

Many entrepreneurs in Sri Lanka are not fully aware of the opportunities open in the software industry. Being a new industry, investors are somewhat apprehensive about venturing into the area. To entice new entrants to the industry, adequate investments need to be made. The following policy recommendations would be useful in this aspect.

- Low cost funding and other incentives for the software industry should be provided. This can be done by following means.

  a. Providing venture capital and other funding at low cost.
  b. Providing working capital up to a specified percentage of the contract value without collaterals.
  c. Making available Central Bank refinancing facilities at low interest to banks on their lending to the software industry.
  d. Exempting computer hardware from value added tax (VAT).
  e. Offering income tax relief for technical personnel employed in the sector, as a measure to retain manpower the scarcest resource of the software industry.

- Simple and easy investment approval should be offered by simplifying project clearance preferably by automatic clearance if certain conditions are satisfied.
- It is necessary to attract local and foreign investors for the software industry. This can be achieved by following means.
  a. Holding investment seminars to prospective local and foreign investors.
  b. Making country specific initiatives.
  c. Publicising through diplomatic missions.

d. Publicising on web pages of Council for Information Technology (CINTEC), Board of Investments (BOI), Export Development Board (EDB), etc.
e. Making focussed efforts to attract market leaders.
f. Publicising through a network of Sri Lankans engaged in IT related activities.

- It is also necessary to identify emerging opportunities in IT enabled services that can be captured with the available skills and take proactive action to induce investors.

- Establishing software industry support groups consisting of expatriate Sri Lankans engaged in IT related professions in countries with a potential to export and getting their assistance to promote investors and markets and to get a feed back of market trends are also necessary.

- Providing assistance for development of export markets by subsidising the participation at relevant trade fairs and other promotional activities would also be helpful.

- It would also be necessary to incorporate relevant provisions to bilateral agreements with India to harness from its expertise on software development, project management and marketing. Measures to promote joint ventures with Indian companies too should be incorporated to such agreements.

Developing the IT education and training sector

The development of IT education and training provides two types of benefits, i.e., it creates the skills needed to develop the IT industry and also develops the human resources in IT industry which could be exported. It is predicted that many European and North American economies will have to rely on immigrant IT personnel to meet the skill shortfall. Some of the relevant issues were highlighted and some recommendations were suggested in the earlier section. Following action would also be helpful in this aspect.

- Supporting universities and training institutes to obtain services of foreign trainers by developing link programmes with foreign counterparts.

- Providing low cost funding and other incentives for the institutes involved in IT education and training by providing venture capital and other funding at low cost.

- Supporting the private sector ventures collaborating with reputed foreign education and training providers, by offering government subsidies.

- Incorporating relevant provisions to bilateral agreements with India, to harness from its expertise on education and training. Measures to promote joint ventures with Indian companies may be incorporated to such agreements.

PROMOTING APPLICATIONS OF IT

Education required training and access to information

Some of the measures required to strengthen IT literate society and resources for education and training centres discussed earlier are also relevant to promoting application of IT for education, training and access to information. In addition the following measures are also required for promoting application of IT in these spheres.

- Educationists should be made aware of the power and advantages of web-based education and other tools of IT by organising seminars and workshops and also demonstrating packages that are used in other countries.

- Usage of IT in education and training at all levels should be promoted by training school teachers and staff at universities and other institutes engaged in teaching non-IT subjects.

- Higher education institutions already engaged in distance education should be supported to use web based teaching and other tools of IT by providing relevant training for the staff and providing the infrastructure facilities.

- Traditional curriculum of different subject areas should be suitably modified to incorporate relevant tools made available by IT.

Governance

- IT could be used to ensure efficient delivery of government policy too. This can be achieved by the following means.
  a. Organising seminars and workshops to educate officials of Ministries and Departments regarding identification and methods of computerisation of activities and the resulting benefits.
  b. Launching a programme to make public sector employees literate in IT and make it a requirement for new recruits.
  c. Emulating relevant activities of e-governance promotion programmes of Newly Industrialized Countries (NICs) like Singapore and Government online programme of G-8 countries.
  d. Developing time based IT master plans and implementing them at all Ministries and Departments.
  e. Allocating the Ministries and Departments the required funding to acquire hardware, software and consultancy services.
  f. Re-engineering of processes, procedures, forms etc., within Ministries and Departments to improve efficiency and to make them compatible with electronic techniques.
  g. Making it mandatory for all Ministries and Departments to develop their home pages to make available all information like services, vacancies, instructions, forms, etc., relevant to public, on the home pages preferably in all official languages.

h. Collating frequently ask question (FAQ) relevant to various activities and services and providing answers to them under relevant sections of the home page.
i. Creating an Intranet for the Ministries and Departments.
j. Taking steps to make communications within and among Departments and Ministries via e-mail.
k. Making available information relevant to general public on the government Intranet for them to access through the Internet. In addition to home-based PCs, public could use proposed information centres managed by the private sector.

- A mechanism for the government and other agencies should be developed to obtain timely and accurate socio-economic and statistical information for monitoring activities and formulation of policies, by developing uniform guidelines for each Ministry and Department to digitise all information and data, and to create and maintain databases in electronic form.

- Arrangements should be made for public including businesses to do transactions with the government Ministries and Departments using electronic terminals.

- All government Ministries and Departments should make arrangements to obtain all reports and information in electronic form and maintain them using magnetic or optical media.

- Government tendering/procurement and settlement system should be computerized to increase efficiency and avoid duplication.

- Local government authorities should make use of IT to improve efficiency and effectiveness by developing uniform guidelines for each local government authority to create and maintain databases in electronic form.

Public services

In addition to measures listed under the section on governance following measures are suggested for harnessing IT for improving various public sector services.

- Public services should provide information using electronic media on proposed Intranets. Some of the examples for such information are information relevant to transportation such as railway and bus timetables and fairs, information relevant to various programmes on health, hygiene and nutrition, publications available at libraries, information on custom duty, exercise duty, services and other tax rates, income tax rates and other relevant information, relevant to tourism, information on educational, professional and vocational training programmes and information on government welfare programmes, public sector vacancies.

Business and commerce

- EDB should provide financial grants for exporters to implement home pages and to get WWW access.
- Infrastructure facilities, Internet and other emerging technologies required for electronic commerce (EC) implementation should be provided.
- Legislation should be formulated and enacted to barcode all product categories on phased out basis.
- Use of electronic means to perform transactions related to import and export should be promoted.
- The legislature required to successfully implement EC should be enacted by adopting relevant clauses of the Model Law on EC drafted for world's governments by the United Nations Commission on International Trade Law (UNCITRAL).
- Tax incentives and low cost funding should be provided for EC implementations.

Industry

- Top management of industry should be made aware of how IT can be made use to improve the competitiveness by assisting education and training institutes to organise seminars and workshops.
- The employees of private sector should also be made computer literate by assisting education and training institutes to organise training programmes.
- The assistance of consultants should be made available for computerising private sector enterprises by supporting existing consulting units at universities with additional staff positions and establishing new units to provide consulting services.
- It is also necessary to make education and training programmes more relevant to industry needs by incorporating a management components, industry training and industry-based assignments to IT curriculum.
- Investments on computer hardware and software should be promoted by providing income tax incentives on investments on hardware and software and exempting computer hardware and software from GST.

Agriculture

- Agriculture Department and other relevant agencies should digitise data and information and make them available on proposed Intranets. Some of the examples for such information are extent of cultivation and yields by produce and by geographical area, usage of fertiliser and chemicals, seed requirements and stocks, weather patterns by geographical area, commodity prices at production areas and major markets, imports of agricultural produce quantities on order, commodity stocks with wholesalers and Food Department, agricultural information services, best practices in agriculture, subsidies and other government benefits, loan schemes available for farmers, farmer insurance schemes etc.

- A sound food stocks control system should be developed in order to ensure the availability of sufficient food stocks without scarcities or oversupply at reasonable prices for consumers and producers by including in the model, the factors such as demand, local supply, stocks held by traders and farmers, imports on order and measures to control supply factors like acreage and imports to match the demand.

Home and leisure

- Cheap and easy access to Internet and other networks should be provided for households through measures already stated under the section on strengthening key enabling factors.

CONCLUSIONS

IT has the capacity to change the way people learn, shop, conduct business, access reliable information, govern, take business decisions, entertain and conduct many other activities. Therefore, it has an impact on every aspect of economic and social life. Sri Lanka with its high literacy rate, large pool of youth with good mathematical and logical skills, liberalised economy and a largely privatised telecommunication service has immense potential to leap frog a number of development phases by effectively using IT. Judging by the unprecedented growth of the software industry in neighbouring India during the last decade, Sri Lanka has the potential to more than double its value of software exports annually in the next few years. BOI has been successful in attracting a large number of investors from all over the world. However, the lack of trained personnel and the telecommunication infrastructure is the main impediment for growth. Sri Lanka, therefore, has to make a focussed attempt to attract reputed international IT education and training providers to conduct career-oriented programmes. It also has to support the existing public and private sector IT education and training institutes to obtain the services of foreign trainers, establish affiliations and obtain accreditations. Telecommunication infrastructure too has to be developed on a priority basis.

Government has to incorporate the measures in to its IT policy. It is suggested to form the folloiwng national committees to develop an action plan to effectively implement the IT policy.

i. Manpower, education and training.
ii. Information infrastructure.
iii. Software development industry.
iv. Usage in governance and public sector.
v. Usage in business and industry

These committees should have expertise on IT, telecommunication, software development business, industry and IT education and training. It should also have representation from government, CINTEC, BOI, EDB and Chambers of Commerce. CINTEC led by a professionally qualified dynamic person could continue to be the apex body. CINTEC should act as a facilitator and an enabler rather than a controlling body and encourage the stakeholders to achieve the policy objectives laid down by the government. It is also extremely important to establish a mechanism to formulate IT policies and implement them, which can keep pace with rapid developments of IT.

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