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INFORMATION-BASED PUBLIC SECTOR REFORMS AND THE MANAGEMENT OF CHANGE IN SRI LANKA

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Even though there is an emerging literature on information age reform of the public sector, research focused on potential and problems related to introduction of information-based reforms in developing countries is still limited. Thus in this chapter, experience in one developing country, Sri Lanka, is examined. Problems related to information-based technology will be analysed and the lacuna in the literature will be narrowed.

Policy makers in developing countries have become increasingly aware that gathering, storing, analysing and sharing information are crucial in public sector reforms leading to greater service efficiency and effectiveness (Heeks 1999 & 2001). It means facilitating a new government-citizen interface by making it not just efficient but transparent and accountable. This is the core idea of the widely discussed notion of information-based public sector reforms in recent years (Heeks 2001). Given the high degree of enthusiasm for the development of the IT sector from various focus groups (politicians, administrators, academics and professionals) IT initiatives to improve organisational efficiency and effectiveness became the focal point of government reforms in developing countries (Heeks 1999).

Various legislations related to IT have been passed and generous financial assistance from international financial organizations (ADB 2001) and donor countries was evident. Despite the growing awareness among policy makers about the prospects of the new technology in the public sector, the experience suggests that the quality and timeliness of the services provided by the information technology sector could best be described as poor. In particular, the effective use of IT in the public sector is far from satisfactory (Dey 2000; Bhatngar 1988; Heeks 1998; Peterson 1998). This has been the case in countries such as Ghana (Cain 1999), India (Heeks 2001) and Sri Lanka (CINTEC 2000). The main stumbling block in this regard appears to be the government's inability to establish a foundation of information infrastructure such as modern telecommunication facilities. In fact, there is a huge gap between support and action with regard to IT sector development. As Day (2000: 302) points out 'there perhaps is support, but no direction; there are small initiatives, but nothing major'.

Even though there is increasing literature on reforms focused on the development of IT in the public sector (OECD 1989 & 1995), research addressing the problems and prospects of such attempts in developing countries is still limited. Thus in this paper, an attempt is made to examine the experience in one developing country, Sri Lanka. The country has much to offer as a case study in IT reforms due to two main reasons: first Sri Lanka is blessed with a well-educated labour force which is a basic raw material for rapid technological change; second, the economic and administrative reforms introduced in the 1980s demanded an efficient and effective role of government in order to reap the full benefits of these reforms (Samaratunge 2000). In keeping with the increased awareness and appreciation of the role of government in this context, the process of governance became stronger in favour of the use of information technology and a new concept of e-governance emerged. The reforms will demand new skills and attitudes from bureaucrats and politicians in the country. It is important to recognise the development of e-governance initiatives in Sri Lanka and examine the potentials and problems with these initiatives.

THE PUBLIC SECTOR IN SRI LANKA: THE NEED FOR CHANGE

During the 1970s Sri Lanka experienced deteriorating terms of trade and increasing government deficits. When the policy makers in the country realised the imperative of economic and administrative policy reforms in addressing these issues, the emphasis was given to pro-market policies in trade and finance abandoning the inward-looking economic model and the introduction of decentralisation with a multi-layered administrative structure against the existing centralised administrative model. With an unprecedented increase of public sector reform, often sponsored by international financial institutions (IFIs), the reduction of government involvement in economic activities has become increasingly apparent. A new form of network between state, business and non-government sector is recognised in order to provide services that used to be primarily government responsibility. Growing prominence of the private sector in economic

activity and the IFIs, in particular the World Bank and the Asian Development Bank (ADB) forced the state to become more efficient and competitive. Flexibility and managing change were regarded as components in the public sector. In this regard, dissemination and sharing of information become a must. Introduction of e-governance is seen as a path to rapid improvement of efficiency in the public sector with much-needed transparency and improved accountability (World Bank 2000). Large bureaucracies become outdated and a new set of competencies needs to be developed.

In the context of decentralisation, how to improve coordination between the administrative levels and to enhance peoples' participation in policy formulation and implementation have become a focal point in policy debates in recent times. Compared to the existing administrative practices, information technology provides promising avenues to disseminate information and to obtain a speedy feedback from the public. It also allows administrators to connect 'agencies, levels and data stores of government to strengthen capacity to investigate, develop and implement the strategy and policy that guide government processes' (Heeks 2001: 5) which enhances the capacity to make decisions promptly at the local level. As customer-oriented benefits from internet-based transactions have been a key focus in the information age (Hitt and DeMarie 2000) such efforts would reduce the differences between the local community, bureaucrats and political leaders on the performance of decentralisation initiatives and increase the people's participation in the process of development in the country. Highlighting the experience in central India, Bhatnagar & Vyas (2001) point out that the online information in rural areas provides faster reaction to local demands and improved knowledge and awareness within the local community. Computer-aided decision-making processes and electronic databases would provide an environment conducive to effective decentralised management in the country.

INFORMATION-BASED REFORMS IN SRI LANKA: MANAGE CHANGE

Sri Lanka's attempts to improve IT facilities in order to increase the effectiveness of public policies can be looked at two interrelated perspectives: the priority given to the better infrastructure for IT initiatives and computer education; the growing awareness of the benefits of enhancing computer literacy in senior civil servants at the central and local government levels.

Having recognised the importance of information technology in the globalized world, Sri Lanka established the Computer and Information Council of Sri Lanka (CINTEC) under the Parliament Act of No. 10 of 1984. The main aim of the CINTEC was to identify the trend in the global IT industry and its implications for international trade (CINTEC 2000). The Science and Technology Act No. 11 of 1994, which replaced the previous Act, further elaborated the functions of the CINTEC of Sri Lanka. The functions of the Council were: the promotion and development of information technology literacy; the development of the human resources necessary for the promotion of IT and the promotion of R&D in information technology (ICT 2000). In the meantime universities and government training institutes were encouraged to introduce computer education courses. The private sector also actively participated in the provision of IT education. The result was a large number of IT institutes offered different certificate courses and degrees in IT for school leavers and professionals during the last decade. The emphasis was given to the increase demand for IT personnel as a high level of computer literacy is a necessity for employees in every organization, public as well as private in the 21st century.

Increasing communication facilities has been a top priority in all governments in the country since 1977. The government greatly expanded the telecommunication sector in the country. The privatisation of the Department of Telecommunication in the late 1980s reduced the government monopoly and hence a number of other private firms invested a substantial amount of resources in this sector (Central Bank of Sri Lanka 2000). In order to enhance communication between the central and local level government entities, all Pradeshiya Sabhas (provincial), Kachcheries (district) and Divisional Secretariats (divisional) have been provided with fax machines and computers. Short-term training programs for officers have been organised by the government training institutes such as National Institute of Business Management (NIBM) and Sri Lanka Institute of Development Administration (SLIDA). During a survey conducted by the author on the perception of bureaucrats regarding the effectiveness of public sector reforms in Sri Lanka in December 2001, most of the senior civil servants admitted that the failure or ignorance of the government to understand

the potential of new information technology much earlier was one of the main reasons for the poor performance of the public sector. They maintained that in the future the improvement of the quality and timeliness of public sector would mainly depend on computer based office systems and therefore, the improvement of IT facilities in the sector was a prerequisite in addressing the demand of devolution of power, efficiency and greater transparency in the public sector. The Executive President, Mrs. Kumaranatunge, has also repeatedly emphasised the urgent need of extensive use of information channels in policy making in order to improve the quality of public service (Daily News 14 Feb 2001). She further stressed that unless the public service performs its role as an efficient facilitator for the private sector, the projected economic and social targets could be jeopardised.

THE POTENTIALS AND CONSTRAINTS OF IT REFORMS: THE REALITY

Despite this enthusiasm and awareness at the highest political and administrative levels and increasing the facilities for computer education and training, it appears that public sector has not been able to realise the full benefits provided by information technology. The experience in the public sector shows that the provision of IT reforms has been largely restricted to installing a limited number of computers, fax machines in each ministry and short-term training programs for senior civil servants at the central level. At the local level the use of computers, fax machines is still very limited; rather, they are treated as a status symbol in government offices. The sub standard infrastructure services, such as unreliable electricity supply (since July 2001 due to the shortage of electricity power generation, a daily power cut has been a common phenomenon in the country), poor telecommunication facilities and a lack of trained personnel are the main factors responsible for this slow pace of change at the local level. Treasury directives that restricted the recurrent expenditure of government departments since 2000 greatly curtailed the use of telephones and fax machines and aggravated this problem.

At the national level, however, the quality of computerisation of the services in most of the key government institutions in particular the Treasury and the Central Bank is improving with the assistance from donor countries and IFIs such as the World Bank and the ADB. Some government departments, which so far have experienced difficulties in meeting the heavy service demand by the public, have also computerised their operations since the mid 1980s. The Department of Statistics, and the Department of Examinations were the early initiators among the government institutions that introduced computers to their operations. The Department of Examination has significantly reduced its long delays it experienced in releasing examination results of the GCE Ordinary Level and Advanced Level examinations with more than 1,50,000 candidates. Other government departments such as Departments of Motor Vehicle Registration, and Immigration and Emigration, and Personal Registration were under heavy criticism due to long delays in issuing passports, driving licences and national identity cards respectively that encouraged corruption. They have been able to streamline their services individually thanks to computerisation of application procedure but unable to establish a developed network between these departments. Not surprisingly, the issue of fake passports, driver's licences and national identity cards is still a common phenomenon in the country. Even though the use of IT facilities is not necessarily preventing corruption (Heeks 1998), the government has still not been able to use the opportunities provided by computerisation of relevant departments that strengthen the effectiveness of the procedure of screening applications for these documents at any significant level.

The above examples demonstrate some benefits achieved by the public with the introduction of IT initiatives but most of the government departments, particularly at the local level, are still adhering to the conventional office practices which inherited delays and bureaucratic red tape. Table 1 indicates the major sectors of the economy that use computers in their operations and demonstrates the finance and banking and the public sectors as the pioneering customers in the IT sector. Globalised economic policies significantly increased the importance of private commercial banks and other financial institutions in the private sector. In order to face the strong competition from computerised private banks and financial institutions state banks have been compelled to introduce computer-aided banking services and have gained a competitive advantage against others using inter-bank networks and Electronic Data Exchange (EDI) systems (ICT 2000).

Table 1: Major Customers in Information Technology Sector in Sri Lanka

Categories	Percentage
Central government	47.1
Local government	41.2
Other public sector	58.8
Universities	47.1
Training institutes/schools	39.2
Other educational institutes	31.4
Construction	25.5
Manufacturers	47.1
Finance and Banking	58.8
Communication	49.0
Wholesale and retailer	47.1

Source: JICA study for BOI 1999-2000, quoted in CINTEC 2000: 10-11

The increasing use of computers in the public sector does not necessarily imply that the sector makes use of full benefits provided by the IT service. As a recent survey on computer use in the country comments, despite all these initiatives in the IT sector, 'it is hardly in use in an effective way in Sri Lanka, particularly in the public sector' (ICT 2000: 9). Even within the government institutions which introduced computers to their operations there is no developed networking system that would allow computer-aided policy formulation, coordination and decision-making within or between departments. In fact, computer-aided pooling, storing, analysing and sharing information are almost non-existent in the public sector.

Apart from the key government departments, most of the government offices are largely adhering to the existing practice of the public sector such as manual working in file maintenance and communication. Responding the survey conducted by the author in December 2001 on the performance of the public sector in Sri Lanka, some officials were of the view that existing system of data collection, processing, record keeping and file maintenance is far more reliable than the computer-aided system. The existing system is slow and prone to bureaucratic red tape, but with proper management and incentive systems most of these problems can be overcome. The information technology may reduce cost and long delays, but given the poor infrastructure and training facilities it is unlikely that the introduction of computers would increase the efficiency of the public service. Poor maintenance of computers and lack of trained personnel may greatly weaken the advantages of computer-aided office work over the existing one. For instance, if office records are kept in computer files it is highly likely that dishonest officials may misuse computers to continue their corrupt practices. The more such officers obtain computer expertise, the higher they get chances to misuse information for their own benefits. Majority of the officials interviewed were of the view that under a computer-aided office work system monitoring of such malpractices would be much more difficult. Given the developing nature of computer-aided administration and lack of trained personnel in the country this phenomenon would be more prominent, they further added.

The lack of trained personnel in the computer field is a major problem that undermines the effectiveness of IT service in the public sector. Most of the officers are keen to obtain computer training not just because they can improve the system through computer-aided services, because it is an added bonus to get their next promotion or find a well-paid job in the private sector. Compared to the attractive salary level and other fringe benefits that IT executives in the private sector enjoy, the remuneration for public servants is considerably inadequate. In fact, retaining skilled public servants has become a major problem. It is a general phenomenon, therefore, in Sri Lanka that civil servants who obtained good computer training are encouraged to leave the public sector for higher salaried-positions either in the private sector or abroad. Further, there is neither a systematic approach for training and development nor specific plan that improves the link between strategic planning and human resource development in the public sector. These personnel rarely have sufficient time to improve their IT skills because their routine office work has been very time consuming.

As is the case in most developing countries (Heeks 2001), IT initiatives in the public sector are either ignored or isolated from the main process of governance resulting in no effective contribution resulting delays in

decision-making and in implementing the country's development. In fact, it was pointed out that the sluggish decision-making process in the public sector was partly responsible for the country's slow economic growth (The Sunday Times 14 December 2001). There is no significant partnership between the private sector and public training authorities and virtually they 'operate independently like closed systems in terms of planning, policy formulation and training (Liyanage 2002, p. 3). Making the necessary changes to achieve this policy integration will require a long-term vision with considerable political and administrative commitment. In the absence of such an assurance, little would change.

The lack of policy coordination in developing IT services is another common problem in the country. Since the 1990s the availability of funds to develop computer facilities has increased significantly. However, there was no plan with regard to ordering computers from various sources, selection of proper computer systems for the needs of different government institutions or the provision of infrastructure facilities. In some instances, the installation of computers imported was delayed for several months because other facilities such as air conditioning and power supply were not readily available at the time. Misuse of funds set aside for IT sector development is also a problem in Sri Lanka. As is the case in many developing countries, malpractices in the government tendering procedure has been a common phenomenon in Sri Lanka. The increasing availability of foreign funds to develop the IT sector seem to provide ample opportunities for unscrupulous public servants to manipulate tendering process for their own benefits.

Public awareness of IT and its relevance to public service delivery and quality are key factors that increase the efficacy of IT services provided at the time. Availability of IT training facilities especially for school leavers and other professionals is a decisive factor in this regard. As indicated in Table 2, more than 40 percent of IT training institutes in the country are concentrated in the Colombo and Gampaha regions which are the most urbanised districts in the country.

Table 2: Geographical Distribution of IT Training Institutes

Region	Percentage
Colombo	30.7
Gampaha	10.0
Kurunegala	8.7
Kandy	6.7
Galle	6.0
Kalutara	5.3
Anuradhapura	5.3

Source: JICA study for BOI 1999-2000, quoted in CINTEC 2000: 12-13

The lack of IT training institutes in rural areas suggests two factors that are relevant to the development of IT services. Firstly, rural youth are disadvantaged in obtaining training in a rapidly expanding field in the world and thereby weaken their relative competitiveness in the job market. It would prove to be a costly mistake when the inevitable failure to meet their expectations in this way would lead to youth unrest which in turn slows down the growth process. Secondly, it would contribute to the lack of awareness of the potential of IT services in delivering public services among the people in the rural areas. Without popularising the use of computers it is difficult to convince the people about the benefits available through IT services. Not only IT training providers but also other IT-based facilities are mainly limited to urban areas. For example, almost all state commercial banks have been computerised but ATM facilities are mainly limited to the urban areas. Most of the private banks provide island wide bank networking facilities for their customers, although their operations are also limited to urban and semi-urban areas.

Although problems of the use of computers in the public service mentioned above explain the ground reality of the country, they make no excuses to ignore the benefits provided by IT in increasing the efficiency of the public sector. The majority of the government officers are fully aware of the potential of IT facilities, but it seems that they are reluctant to change the status quo due to several reasons. Firstly, many top bureaucrats speculate that a computer-aided office work system would weaken their influence over their subordinates and undermine their dominant position in decision-making. Unlike in the existing system under which top bureaucrats can keep the key files that contain important data on a particular issue or project, a computer-

based file system provides more opportunities to obtain data to other focus groups. This would challenge the authority of top civil servants in decision-making. Secondly, most of the central government officers hold considerable influence in key aspects of local administration and would not fully support computer-aided office procedures. For instance, the existing process of distributing subsidised goods and services, paying old age pensions and issuing various government permits and licences provide government officials ample opportunities to keep their influence in delivering these services. Computerisation increases public access to official documents and procedures and thereby weakens officers' influence on delivering public services.

Thirdly, many seem to believe that computers and fax machines are status symbols and should be used only by top-level administrative officers. The prevailing austerity measures in the government departments seem to encourage this line of thought. The use of fax machines was very limited in accordance with the cost saving directives. Expenses on telephone use are fixed and the relevant Head of the department or the supervisor is responsible for not exceeding this limit. In most offices, particularly in local offices, fax machines are kept switched off. Finally, where computers are used in general office works, it is treated as a superior substitute to a typewriter and is often limited to typing documents. In fact, while addressing a conference for senior civil servants in the country in February 2001 the President highlighted in her address the pathetic situation of the use of IT in the public sector and claimed that she had hardly seen any computer-assisted cabinet papers or ministry documents prepared by the public servants [even] in the central government (Daily News 14 Feb. 2001). It could be argued, therefore, that on the surface, inadequate computer facilities, mainly in the provincial and local level offices, and the lack of computer literacy seem to be the main obstacles that prevent achieving the full benefits of IT facilities provided, but lethargy of senior officers to change the status quo might also be a key reason for poor performance of the IT sector.

Changing attitudes in the delivery of public service and convincing the public officials and the general public about the potential of the use of IT are the main challenges which lie ahead in improving the quality of the public sector. While accepting the fact that it is difficult to overcome the shortcomings of infrastructure facilities and financial constraints that limit expansion of IT facilities in the short run, the country would benefit if it could manage change in the public sector in order to make the best use of facilities available.

The provisions in IT legislation specified in the Science and Technology Act No. 11 of 1994 are limited to education, human resource development and R&D development. It is necessary to provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication. For instance, passing the Information of Technology Act of 2000 the government of India legally recognised the electronic records and digital signatures (Day 2000). Electronic data recording system has many advantages over the existing system. Paper work and file maintenance have always been under criticism because they allow bureaucratic delays. The IT initiatives with on-line information would enhance transparency and speed up the process. In Australia e-governance is being used to improve the quality of social security while in China on-line information is used in the process of privatisation in special economic zones (Day 2000). These are the examples which Sri Lanka can follow as role models when the government designs the blue print of e-governance. It is the responsibility of the central government to provide an overall development plan for IT in the country introducing e-governance initiatives with a long-term vision in the global economy.

CONCLUSION

Parallel to administrative and economic policy reforms in the country, Sri Lanka introduced a number of IT initiatives in the public sector. The growing recognition of the new approaches of IT that emphasises the importance of e-governance seems to have convinced the policy makers the timeliness of introducing the IT facilities in the country. Since the 1980s, Sri Lanka has initiated a number of IT reforms in public service delivery. The growing use of computers in various government departments, the establishment of inter-bank networks are clearly evident, but still the country has a long way to go in improving the IT facilities.

It is, therefore, argued that despite the great potential for IT in enhancing effective and efficient public sector in Sri Lanka, there are a number of difficulties hindering the development of computerised information systems. It requires competent and committed individuals who could provide effective guidance in

developing IT services in the public sector. The issues such as appropriate training, attractive promotion systems and remunerations for public officials need to be addressed urgently. Reforming organisational structures and changing officials' attitudes towards change are essential. It is of the utmost importance that the expansion of IT training facilities is carried forward not only for public officials but also for the rural youth.

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