

**Gender and Information and Communication Technology in Sri Lanka:  
An Overview**

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## **I. National Overview**

### **I.1 Background**

The ICT sector and industry in Sri Lanka have grown within the last three to four years. The major impetus to this growth came from the liberalisation of the telecommunications sector, initiation of the e-Sri Lanka programme, setting up of an institutional framework and the receipt of loan funds to implement the programme. Telecommunications infrastructure facilities expanded with the increase in the number of land lines and an almost exponential growth of mobile telephones providing benefits to all socio-economic strata while developments in mobile telephone technology hold the promise of overcoming some of the constraints of infrastructure bottlenecks. Computer usage has increased and more people are logging on to the Internet. Educational programmes have commenced at all levels to provide the necessary ICT related skills. Businesses and other economic enterprises are increasingly turning to new computer mediated technology and IT enabled services are starting to take off while electronics factories have been established in the free trade zones. New employment opportunities have opened up in the ICT sector. ICT are being used widely for environmental sustainability and natural resource management by both government and non-government agencies. ICT tools such as GIS systems are contributing to scientific policy formulation and decision making. Despite these developments Sri Lanka still lags behind many countries as indicated in the Network Readiness Index (NRI) of 2004-2005 (Schwab 2005). According to the NRI it appears difficult for Sri Lanka to provide access to the majority of the people who live in rural areas and empower them. But in 2001 UNDP categorised Sri Lanka as a dynamic adopter<sup>1</sup> ahead of India, pointing to the ability of Sri Lanka to forge ahead in this sector

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<sup>1</sup> in the classification showing disparities in technological development among four groups of countries with leaders (above 0.5), potential leaders (0.35-0.49), dynamic adopters<sup>1</sup> (0.20-0.34) and the marginalised

## **I.2 Gender and ICT at the national level**

Lack of sex disaggregated data is a serious constraint in assessing women's access to and use of new ICT and the benefits they derive from it. Consequently any assessment of women's use of ICT is necessarily based on the few micro level data that are available.

### *Access and Usage*

Despite the developments in the ICT sector only 3.8 per cent of households had a computer. Less than one per cent had access to the Internet and email. Of those households that had a computer only 19.2 per cent had Internet facilities. The vast majority were in Colombo (Department of Census and Statistics 2004). While this survey shows a wide disparity between Colombo and other areas of the country a 2003 study conducted among selected households in the Colombo Metropolitan area by CENWOR showed that even within Colombo only a minority were computer users and there were less women among them. While women owned less ICT equipment total usage was also lower. Most women use ICT from outside the home - in their work place, in education and training institutes, and to a lesser extent from public access points.

### *ICT Policy, Programmes and the Legal Framework*

The telecommunications policy, which had been approved by the Cabinet, is in abeyance and national ICT policy is still in draft form. However an IT policy has been developed for the education sector. These have been drafted in gender neutral terms.

Although gender has not been taken into consideration an attempt has been made to reduce the urban rural gap with the establishment of rural ICT centres throughout the country.

While the need to strengthen the regulatory and legal framework has been acknowledged data protection, intellectual property rights, electronic transactions and computer crimes have been identified as priority areas that require appropriate laws. Action has been taken to

prevent the sexual abuse of children by amending the Penal Code but laws are yet to be put in place to prevent the use of the Internet to perpetrate violence against women including trafficking of women and children.

### ***Content***

Content development has not kept pace with technology diffusion. Content that would empower women is also not available especially because the differential needs of women and men have not been taken into consideration by content developers.

### ***Employment***

Women have found new employment opportunities in the ICT sector but gendered patterns of employment are already emerging. Women tend to be concentrated in lower skilled IT jobs related to word processing or data entry. Lack of requisite educational and professional qualifications, employers' perceptions and attitudes towards the employment of women, diffidence, lack of assertiveness and leadership skills and poor performance at interviews are some of the reasons for these employment trends. However there are indications that women are making inroads into higher levels of the IT workforce but currently they make up only a very small percentage of managerial, maintenance and design personnel in networks, operating systems, or software development.

### ***Women in Decision-making Positions in the ICT Sector***

A glaring absence of women is seen in all ICT decision-making structures including policy and regulatory institutions, ministries responsible for ICT, boards and senior management of private ICT companies. A few examples are given in Table 1. In the universities too there were no women functioning as heads of faculties or departments related to science and technology and computing. An exception is the University of Colombo School of Computing. The Board of Management of the Arthur C. Clarke Centre for Modern Technologies included one woman. At SLIIT all the professors are men, one of the four senior lecturers was a woman, two of the five lecturers were women but one was teaching English, and of the 12 Assistant Lecturers five were women.

In the private sector, the top management of the licensed telecommunications services, as is to be expected, comprised men.

**Table 1**  
**Women Policy Makers in Selected Institutions**

<b>Institution</b>	<b>Total</b>	<b>Female</b>	<b>% Female</b>
Telecommunications Regulatory Commission of Sri Lanka- Commission Members and Director General	4	0	0
Sri Lanka Telecom Ltd.-Chairman and Board of Directors	9	0	0
Information and Communication Technology Agency-Board of Directors	6	0	0
Sri Lanka Institute of Information Technology	12	1	8.3
National S & T Commission	7	1	14.2
National Science Foundation	10	1	10

Source: [www.icta.lk/www.nsf.ac.lk/www.nastec.lk](http://www.icta.lk/www.nsf.ac.lk/www.nastec.lk) (October 2005)

### ***Use of New ICT by Women's NGOs***

New ICT were introduced to women's groups in the late 1990s and since then most of the NGOs based in Colombo and a few other cities have computerised their office operations and have Internet access. While geographical location and availability of infrastructure are factors that largely mediate access and connectivity, financial capacity and availability of human resources also impact on ICT access and use. Exploitation of new communication technology and Internet resources for the empowerment of women appear to be minimal.

As seen in the overview above, ICTs have spread unevenly across the country. Despite recent initiatives to develop ICT human resources and to foster developments in aspects such as e-learning, e-commerce and e-governance, wide regional, socio-economic and gender disparities have been underscored in the few available studies (Wanasundara, 2002; UNDP, 2004). The potential of ICTs as instruments for creating gender equality in all facets

of society and empowering women also appear to have been overlooked and untapped in many societies. In the context of the priority given currently to the promotion of ICT through formal institutions and informal processes, it is desirable to investigate the degree of gender sensitivity in policies in key institutions and the gender dimensions of the digital divide in Sri Lanka. Hopefully such a situational analysis will assist in preventing the social exclusion of women from a burgeoning field of knowledge and avenue of empowerment.

## **I. The Study**

This study on ICT and Gender in Sri Lanka was conducted under the Gender Network (Phase III) Project of the Institute of Social Studies Trust, New Delhi, funded by the International Development Research Centre (IDRC), Canada. The general objective of the project was to study the diffusion of new information and communication technologies in Sri Lanka and the use of information technology in economic, social and political spheres.

The specific objectives and scope of the study were to assess from a gender perspective the following dimensions of the issue:

### *Macro Level :*

Developments in the national ICT industry and sector.

### *Meso Level*

Gender differences in different types of establishments in the ICT sector including IT enabled services in terms of levels and terms and conditions of employment and in access to opportunities for skill generation.

### *Micro Level*

Gender differentiated access to and use of ICT in households in geographical locations (districts, urban, and rural areas). The following sections summarize the findings of the study carried out at various levels.

## II.1 Sample selection and other methodological issues

Studies were conducted in eight districts- in Colombo city and a location in the periphery in the district, Galle and Kurunegala as ‘growth’ districts, Anuradhapura and Moneragala as relatively disadvantaged districts, and Jaffna, Batticaloa and Ampara as conflict affected districts. Semi-structured interview schedules were used as instruments for data collection. The data was processed by the CENWOR Statistical Unit.

Gender ‘audits’ were conducted on six leading institutions in the IT field to assess the degree of sensitivity to gender issues with regard to policies, provision for education and employment, and opportunities for the upward career mobility of women.

**Table 2**  
**Study Sample**

<b>District</b>	<b>Urban</b>	<b>Rural</b>
<u>Colombo District</u> <u>City</u>		
a) Upper middle income neighbourhood (Colombo 7, Colombo 3 & Colombo 4 )	20	
b) Middle income neighbourhood (Colombo 6 & Colombo 5)	40	
c) Low income neighbourhood (Colombo 10)	40	
<u>Semi-urban and rural</u> Hanwella	30	20
Galle District	30	20
Kurunegala District	30	20
Moneragla District	30	20
Anuradhapura District	30	20
Jaffna District	30	20
Ampara District	30	20
Batticaloa District	30	20
Total	340	160

The findings of the study are presented below.

### ***Gender Audit***

At the macro level it was considered useful to undertake a gender audit of selected national level institutions in order to ascertain the extent to which policies and programmes have



promoted gender equality in participation and in decision making. The six institutions that were selected are located at high level in the public, private or non-governmental sector.

- (i) The institution responsible for computer education in the national university in the Metropolis.
- (ii) The largest private educational institution in the country offering courses in higher education in information technology, and based also in Colombo.
- (iii) The state regulatory body in the telecommunication field.
- (iv) An apex body engaged in implementing the e-Sri Lanka initiative.
- (v) One of the largest information technology services and training establishments in the private sector.
- (vi) The Information Technology Unit in the largest NGO engaged in extending IT awareness and services country-wide.

The gender audit of these six leading institutions indicated that gender role stereotypes that exclude women from technology related education and employment have tended also to affect adversely their participation in the field of information technology. While all these institutions have the capacity to increase access to opportunities and are not averse to training or employing or extending services to more women, they appear to accept the status quo of wide gender imbalances in employment as an inevitable outcome of prevailing social norms and practice.

Consequently no institution has integrated gender in the conceptualisation of its policies. Gender issues appear to be lost in overarching policies such as 'equal opportunity' and 'gender neutrality.' It is only very recently that some of them, at least, have attempted to formulate gender sensitive policies.

The degree of gender awareness at decision making level differed from institution to institution. The 'founder' and head of the IT Institute in the State University was the first senior IT professional to alert our Centre (CENWOR) to the gender digital divide and to the reluctance of female students and school leavers to opt for an IT career, and to co-operate with CENWOR in motivational programmes to change attitudes that are influenced by

norms internalised by girls and women. This institution also has an active woman IT professional on its staff. In all the other institutions the leadership was not adequately aware of the potential contribution of women to the IT industry and the need to be pro-active in formulating policies and programmes. Some degree of awareness was reflected however in measures such as widening entry qualifications to courses, flex-time and provision of transport as well as financial incentives for women employees.

A constraint to undertaking a gender audit is the absence of comprehensive sex aggregated data on enrolment in courses and in employment and management. According to the available data, around 25% to 30% of undergraduate and postgraduate IT students and 40% to 45% of students enrolled in certificate courses are women, a proportion that is higher than in the older discipline of engineering. It was also apparent that the percentage would be higher if IT was not assumed to be associated exclusively with physical sciences in which the percentage of girls and women enrolled is universally low.

The gender demarcation in the labour market is reflected clearly in the pattern of employment in these institutions. Most secretaries, receptionists and financial officers are women, and few women are employed in technical jobs. The exception is that 30% to 35% of the Chief Innovative Officers in the chief IT agency are women. At the management or decision making level the 'glass ceiling' appears to limit upward mobility. No institution has a woman on its Board of Directors or Board of Management, and only 5% to 15% of the senior staff are women.

Most key personnel are aware of these gender differences and inequalities that limit the life chances of women in a burgeoning field of education and employment. They are aware of the constraints of women students and employees in terms of their mobility, multiple roles, particularly childcare responsibilities, and have provided some support to reduce these constraints. However, they have not been conscientised adequately to challenge gendered norms from the perspective of individual aptitudes and human rights. Hence inequalities have tended to be reinforced.

## II.2 IT Education and Training

The ability to take advantage of the ICT sector depends primarily on the skills that women and men possess. Seven of the 15 state universities, and several private universities, some of which are affiliated to overseas universities offer diploma, degree and post graduate level courses in IT. State run vocational training institutes provide certificate and diploma level courses, as also a large number of private institutes.

Consequently the study included a survey of education and training institutes and trainees in these establishments. The study identified five training establishments from the districts selected for the study - Anuradhapura, Kurunegala, Mone ragala, Galle, Jaffna, Batticaloa, Ampara and Hanwella in the Colombo district. Ten were included from the Colombo metropolitan area. Five to ten female and male trainees from these institutions were interviewed.

Five of the training establishments were state institutions – three in conflict affected areas and two in Colombo. Almost all these establishments had one or more branches. The majority of instructors in all the districts included in the study had diploma/advanced diploma qualifications while the training institutions in all the districts employed instructors with certificate level qualifications. The highest number of instructors with a University degree or a post graduate qualification was found in Colombo city and in Jaffna, pointing possibly to disparity in the quality of instruction.

**Table 3**  
**IT Qualifications of Instructors**

Location	Certificate		Diploma/Adv Diploma		Degree		Post Graduate	
	No.	%	No.	%	No.	%	No.	%
Colombo City	1	3.8	20	55.5	11	30.5	4	15.3
Colombo District-Hanwella	-	-	15	93.75	1	6.25	-	-
Galle	3	10.0	24	80.0	2	6.7	1	3.3
Kurunegala								
Anuradhapura	3	12.0	21	84			1	4.0
Moneragala	2	20.00	6	60.00	2	20.0	-	-
Jaffna	1	5.9	10	58.8	5	29.6	1	5.3
Batticaloa	2	20.0	4	40.0	3	30.0	1	10.0
Ampara	4	26.7	9	60.0	2	13.3	-	-

The majority of training establishments stated that they have links with employers for the placement of students. However lack of follow up records did not make it possible to ascertain the number of trainees that had been found employment.

Except in the Jaffna district and the Colombo city the majority of women trainees was enrolled in certificate level courses. Enrolment of students in degree level courses was found in Jaffna, Batticaloa and Colombo where facilities for undertaking degree level studies were available.

**Table 4**  
**Level of Courses Followed**

Location	Certificate		Diploma		Degree		Total
	F	%	F	%	F	%	
Colombo City	6	15.8	10	26.3	22	57.9	38
Colombo District-Hanwella	4	66.7	2	33.3	-	-	6
Galle	2	33.3	4	66.7	-	-	6
Kurunegala	6	100	-	-	-	-	6
Anuradhapura	5	62.5	3	37.5	-	-	8
Moneragala							
Jaffna	2	22.2	5	45.5	2	22.2	9
Batticaloa	12	75.0	4	25.2	-	-	16
Ampara	12	80.0	3	20.0	-	-	15
Total	49	47.1	31	29.8	24	23.1	104

The trainees had paid amounts ranging from less than Rs. 1,000 to Rs. 800,000 depending on the level and duration of the course. The charge for a certificate level course was Rs. 1000-10,000 in all six districts. In Batticaloa a charitable association charged less than Rs. 1,000 and in Jaffna a well-recognised institution charged Rs. 30,000. The charge for a diploma level programme was between Rs. 3,000 and Rs. 10,000 with training establishments in the Colombo and Ampara and Batticaloa districts levying a fee of Rs. 30,000 and Rs. 50,000 respectively. The course fees for the degree had a range of Rs. 30,000 to Rs. 800,000. The higher amount was charged by a private sector institution with overseas affiliations.

**Table 5**  
**Fees Paid by Level of Course (Rupees)**

<b>Location</b>	<b>Certificate</b>	<b>Diploma</b>	<b>Degree</b>
Colombo City	3,000-10,000	5000-30,000	30,000-200,000
Colombo District-Hanwella	1,000- 10,000	3000-30,000	-
Galle	1,000-10,000	3000-30,000	-
Kurunegala	5,000-10,000	5,000-10,000	-
Anuradhapura	1,000-5,000	3,000-10,000	-
Moneragala	1,000-5,000	5,000-10,000	-
Jaffna	1,000-30,000	1,000-10,000	300,000-400,000
Batticaloa	Less than 1,000-10,000	30,000-50,000	30,000-50,000
Ampara	1,000-30,000	3,000-30,000	-

According to the responses of the training establishments gender differences in enrolment, participation and performance were minimal. The entry requirement of Advanced Level passes in science and mathematics for enrolment in the degree courses had excluded many women. However the change of entry requirements to include any three passes in the Advanced Level had increased the number of women who enrolled.

Other problems in enrolling in IT courses were cited as the inability to pay the course fees and meet other requirements due to lack of financial resources and the lack of guidance in selecting appropriate courses. The women had a basic ‘fear’ of following IT courses especially hardware courses, lacked confidence and basic knowledge in computing. The inability to attend evening classes and transport problems were some of the other difficulties that were articulated. Several institutions had taken measures to mitigate these problems. These included the facility to pay course fees in instalments, the supply of course material at discounted rates or without a charge, adjusting the times to enable females to avoid evening classes, and motivating women.

The majority of training establishments in all the districts responded that the participation of women was either better than men or that there was no difference. However, the course structure had impacted adversely on women’s participation in Jaffna but this constraint had been overcome when group work had been introduced. In Batticaloa there were no gender

differences in participation at higher levels, but the participation of women in certificate courses was not as satisfactory as that of men.. In Kurunegala and Galle the participation of women was lower than that of men at the certificate level. In Colombo a few of the women in the degree programme were rated as having a lower participation rate. The diffidence of women in facing interviews also impacted adversely on performance. No gender differences in participation were reported from Ampara. While gender differences in participation on the whole was negligible some training establishments had given guidance to women, paid individual attention to diffident students, and introduced additional courses for personality development.

The women trainees articulated several other problems in following the training courses. These included travelling, difficulty of combining domestic responsibilities, employment and studies, the perception that males are more knowledgeable than they were, inadequate explanations and consequent difficulty in comprehension. Difficulty in finding the financial resources required for following the course was also stated by women.

Attitudes of male trainers and male trainees towards women trainees were reported to be either friendly, good, positive or the same as that towards male trainees. However some stated that these attitudes are dependent mostly on the individual and that some male instructors tended to favour girls who were attractive. While women instructors did not treat them differently from the male trainees some stated that they encouraged them and were helpful.

Male trainees too did not treat them any differently and were said to be friendly, helpful, and willing to share information. Two women however stated that males do not respect women and three that they were “bad.” Women trainees too had positive attitudes towards their male colleagues. But many women held the view that men were more knowledgeable than they were. Women trainees in Jaffna showed a determination to perform better than men and without their assistance.

### **II.3 Employment**

The labour market is a source of gender inequality. In this context this study explored the situation in 41 employment establishments in the public and private sectors in the eight districts in the sample – Colombo, Galle, Kurunegala, Anuradhapura, Monaragala, Jaffna, Batticaloa and Ampara.. Of these 41 establishments, 31.7% were IT institutions in the private sector with the exception of the state agency, Sri Lanka Telecom, and 51.2% had special IT units. A sub-sample of 86 women and 41 men employees from all eight districts were selected to ascertain more information from a gender perspective regarding their professional and educational profiles, and their working conditions as well as gendered attitudes in the workplace and the perceptions of the women themselves. More than half of both women and men employees were between 20 and 29 years. Inevitably as a corollary to this youthful age profile, most women and men had been employed for less than 10 years and 61.9% women and 60.9% men for less than five years.

#### ***Employee qualifications in IT-related areas***

IT qualifications possessed by employees in these establishments ranged from Certificate level to the Master's degree but the percentage of women declined with each qualification level—53.4% at Certificate level, 43.1% Diploma, 28.5% Advanced Diploma, 23.4% degree and 18.2% Master's degree levels. District wise disparities were clearly visible as seen in the percentage of women and men of the total number of female and male employees who had qualifications of an Advanced Diploma or a degree (Table 6).

Colombo city and Jaffna had a high proportion of well-qualified women and men IT professionals, and Kurunegala and Colombo district, the periphery of the capital city, had none. Almost all the establishments claimed that they provided staff training facilities. It appears, however, that these are limited to on-the-job short-term courses or to training opportunities at professional level.

**Table 6**  
**Percentages of Women and Men of the Total Number in the Sample in Each**  
**District with Advanced IT Qualifications**

<b>Location</b>	<b>%Female</b>	<b>%Male</b>
Colombo City	80.0	96.9
Jaffna	76.0	76.9
Galle	16.1	84.6
Ampara	41.3	52.6
Batticaloa	18.2	18.8
Moneragala	5.3	5.8
Anuradhapura	0.0	46.7
Kurunegala	0.0	0.0
Colombo district	0.0	0.0

***Employment Levels***

The data pertaining to employment levels were consonant with the gender inequalities in the overall employment hierarchy, as women employees were 21.2% of those in management position, 32.5% at executive level, 48.4% at supervisory level and 72.8% in clerical jobs. The high percentage of women clerical employees reflects clearly the perpetuation of the concentration of women, including those with word processing skills, at this level in the labour market.

At the upper end, there were no women in management positions in the Moneragala, Kurunegala, Galle and Colombo district (outside the city). In the capital, Colombo city, only 4% were women. However Jaffna and Batticaloa, the conflict districts, had relatively high percentages.

***Occupational Status***

It is seen from Table 7 that that there were gender differences in occupational status, with a higher proportion of men (46.3%) than women (31.3%) in professional jobs such as engineer, manager, systems analyst, and a higher proportion of women (68%) than men (53,7%) in support jobs such as computer and data entry operators. The statistics in the Table point also to blatant disparities between districts with respect to both women and men. Only Colombo city and the conflict affected districts of Jaffna, Batticaloa and Ampara have



substantial percentage of employees in professional jobs. On the other hand, there were no women or men in professional jobs in Colombo district and Kurunegala, no women in the Anuradhapura group and no men in Galle and Moneragala.

**Table 7**  
**Occupational Status of Employees**

Location	Professional Level		Support Services	
	Female	Male	Female	Male
Colombo City	61.9	85.7	38.1	14.3
Colombo District	0.0	0.0	100.0	100.0
Galle	12.5	0.0	87.5	100.0
Kurunegala	0.0	0.0	100.0	100.0
Anuradhapura	0.0	66.7	100.0	33.1
Moneragala	22.2	0.0	77.8	100.0
Jaffna	55.6	0.0	44.4	100.0
Batticaloa	14.3	55.5	85.7	44.4
Ampara	40.0	40.0	60.0	60.0
Total	31.3	46.3	68.6	53.7

### ***Working conditions***

Employment status wise, a higher proportion of women (55.8%) than men (39.02%) had permanent jobs while 58.5% men and 27.9% women had temporary jobs and 15.1% of the women had contract jobs. The relatively high incidence of temporary and contract jobs vis-à-vis permanent jobs indicates instability in employment resulting perhaps in a high turnover. Juxtaposed with the fact that most women were in clerical employment, this aspect of their employment prospects is disturbing. IT is claimed to be a burgeoning area in the labour market but stable jobs do not appear to be adequate to meet needs.

The pattern of remuneration which underscores wide disparities, compounds these problems (Table 8)

**Table 8**  
**Current Monthly Salaries of Employees (Rupees)**

Location	<5,000/-		5,000/- < 15,000		15,000/- <40,000		40,000/-120,000	
	F	M	F	M	F	M	F	M
Colombo city	-	-	38.1	14.3	47.6	14.3	14.3	77.5
Colombo district – Hanwella	40.0	-	60.0	100.0	-	-	-	-
Galle	-	50.0	62.5	50.0	37.5	-	-	-
Kurunegala	-	-	66.7	-	33.0	100.0	-	-
Anuradhapura	42.9	-	57.2	100.0	-	-	-	-
Moneragala	11.1	-	88.9	100.0	-	-	-	-
Jaffna	22.2	50.0	66.7	11.1	50.0	-	-	-
Batticaloa	28.6	-	71.4	100.0	-	-	-	-
Ampara	60.0	26.7	40.0	73.3	-	-	-	-

It is to be noted that only IT employees in Colombo city earned Rs.40, 000 to Rs.120, 000 a month and that gender differences are wide at this upper income level – 14.3% women and 77.5% men. In fact, gender differences are seen in salaries at other levels too – 47.6% women and 14.3% men receiving Rs.15,000 – 40,000, 38.1% women and 14.3% men Rs.5,000 to 15,000 in Colombo city. Such gender differences too are seen in other districts. More women than men earned less than Rs.5,000. The district wise differences in salaries reflect the wide disparities in resources between Colombo, a few major urban centres and the rural sector. In many districts, - Colombo district in the periphery, Anuradhapura, Moneragala, Batticaloa and Ampara - no women or men employee earn Rs.15,000 or above. Benefits were provided for those coming within labour legislation but the large number of temporary and contract workers evidently had no access to such benefits.

Overall, however, there was job satisfaction articulated and workers said they were happy except in Anuradhapura. They were certain that there was a demand for their IT skills in the labour market but were pessimistic regarding career prospects in their workplace

***Gender specific facets of employers’ perceptions and employee experiences***

Employers’ perceptions did not reflect strong gender bias. They rated women somewhat better than men in personality attributes that affected their performance. However they had negative perceptions regarding their willingness to work after hours or during weekends and to travel away from home on official work within the country and their capacity to meet

deadlines. They appeared to make little allowance for the family responsibilities of women workers in a context in which the gender division of labour within the household is inequitable.

According to the women in IT jobs too, there was no evidence of strong overt gender prejudices reflected in the attitudes of their male colleagues or male employers. Most male employees had accepted their women colleagues on equal terms and only a few were reported to display nuances of resentment. By and large men employers had not differentiated between men and women employees in their attitudes and overt action and a few women even claimed that they were given special concessions. Only a few in Colombo and Jaffna said that they were aware of sexual harassment in the workplace – an understatement perhaps as women are often reluctant to articulate such concerns.

It appeared that not many women had experienced problems in getting their jobs or in handling their jobs. Some in Colombo city, Galle and Jaffna had had problems in getting an IT job but only two women in Colombo gave a gender related reason, that preference was given to men in recruitment. In most districts, however, several women said that they had problems in combining their job and their family responsibilities

The most interesting evidence of the influence of gendered norms is that the gender demarcation in the labour market was reproduced within the IT sector. Some employers tended to have stereotypical views such as data entry as a gender appropriate job for women. When the perceptions of women and men employees were explored regarding occupational tasks that they considered to be suitable for each sex, it appeared that some jobs like management, programming, graphic design and operating a computer were viewed in gender neutral terms. However, women employees felt that teaching, software, data entry and word processing were appropriate jobs for women, and that engineering, hardware, networking, repairing and maintenance of equipment and statistics – in fact all culturally ascribed male areas of excellence – and for practical reasons, field work, were suitable jobs for men. As men employees shared the same views, it is clear that internalisation of gendered norms is

likely to limit women's access to a diverse range of jobs in the IT sector and thereby to affect their employment prospects adversely.

#### **II.4 Access to Information and Communication Technologies in Households in Selected Locations**

The last component of the study investigated the differential access of members of 500 households in selected urban and rural locations in the eight districts in the study.

The inquiry into the socio-economic background of the households found that most children under 18 years went to school and that the adult population had had some exposure to secondary education. A substantial number had a complete secondary education and 80% of the men and 75% of the women in urban affluent households had a university degree or an equivalent professional qualification. There were wide economic disparities. Significant numbers of women and men in professional employment were found only in urban Colombo and Kurunegala. Income from employment reflected the same trend, ranging from Rs.100,000 in some affluent urban Colombo households to less than Rs.15,000 in most households in other districts and even less than Rs.2500 in some households.

There was gender equality in access to education but there were inequalities between the way women and men are positioned in the labour market and in their access to economic rewards. Nevertheless there was a wider and an unconscionable gap between the economic status and life styles of the Colombo based elite and professionals in the sample and those of households in the periphery of the capital city in the other districts in the study. The conflict areas bear the burden of violence and disruption in terms of economic activities but did not appear to be as disadvantaged as expected in access to education or to household assets.

#### ***Access to Information and Communication Technology***

The study examined access to ICT related knowledge and information, services and facilities, and ownership of such facilities. A statistical analysis using tests of significance (Chi square at 5% level of significance) was carried out in order to present a clear and

holistic picture of relationships between variables of sex, urban-rural residence and district and the three facets of access to ICT.

### ***Access to Computer Education***

A major fact that surfaced from the study was that 60% to nearly 90% of the female and male members of urban and rural households, except in the Colombo urban affluent and middle class households and in urban Jaffna and rural Ampara households in the conflict affected areas, did not have any exposure to computer education.. Age wise, the household members who did not have access belonged not only to the under 10 years and over 60 years population but also to other age groups who were in educational institutions or in employment.

**Table 9**  
**Exposure to Computer Education**

(Chi square at 5% level of significance) -All households all levels

		<b>% exposed</b>	<b>Significance</b>
Gender differences	Male	40.9	Significant
	Female	33.2	
Urban-rural differences	Urban	39.7	Significant
	Rural	30.5	
Location wise differences			Significant
Urban Colombo affluent and middle class		69.2	
Jaffna & Ampara		47.6	
Other districts		26.1	

Except in urban Colombo and the conflict areas, skills were acquired informally by most members of households in both urban and rural households, while a few have had access to formal training in skills. Relatively small numbers even in well favoured districts had had training to intermediate and advanced levels. For instance, intermediate level skills had been acquired by 36.4% male and 16.2% female members in Colombo affluent households, 23.2% and 11.5% respectively in Colombo middle class households, 13.0% and 11.2% in urban Jaffna households and 12.6% men in Ampara rural households. Elsewhere, the percentages ranged chiefly from 1.2% to 6.8%. Only around 10% to 16% of women and men in affluent Colombo and urban Batticaloa households in the east, and men in Colombo

urban middle class and in urban Jaffna households had received training to an advanced or professional level. While it is not possible to generalise from this sample, district wise and urban rural differences are clearly evident. Gender differences were not wide at the level of ‘no exposure’ but were wide at higher levels of training.

More information pertaining to access was forthcoming from the responses at the interviews with the sub sample of the 10 - 35 years old female and male population in the households. Of the three modalities of instruction in computer skills, it was found that around half of both sexes in the urban and rural sector had acquired their skills at Institutes organised for this purpose and around a quarter through informal learning or from schools. Informal learning was dominant in Colombo urban affluent households where computers were available in their homes to acquire skills from an early age. The 10 – 19 age group had acquired skills through schools but urban – rural differences reflected the paucity of facilities in rural schools. Gender differences were seen chiefly in rural households.

The locations in which these respondents had access to the Internet were in the home (chiefly in affluent homes), Internet cafes, workplaces and schools. Schools played a minor role and no girls in a rural household had had the opportunity of browsing the Internet in schools. More young men than women tended to use Internet cafes and more women were dependent on facilities in their workplace. Overall there were wide urban – rural differences and gender differences. It was found, too, that a large percentage of women and men accessed educational programmes in both urban and rural households, followed by the search for general information and entertainment. The potential of job information and office work is yet to be tapped adequately.

### *Users of ICT Services*

Communication centres, telephone booths, teleshops and cyber cafes are new services even in urban areas and telephone booths have been historically unknown in the rural. Communication centres appeared to be accessible to some urban and rural households in all districts other than Batticaloa and Ampara in the conflict areas. Telephone booths were

also a part of this new communication structure. Around 30% members of all households have used communication centres and telephone booths in all districts except in affluent homes (where private facilities are available).

Teleshops and cyber cafes were scarce in the rural environment. The services in teleshops were used by 30% men and 19% women in Colombo urban affluent households, 29% men and 7% women in Colombo urban middle class households, and 6% - 15% in Galle, Kurunegala and Ampara districts. They have not been used by anyone or by very few in households in other districts. Cyber cafes are used by even fewer members. Around 8% women and men in Colombo urban middle class and lower middle class and in Galle and Ampara households and women in Kurunegala have said that they use the services in cyber cafes while Colombo affluent households do not need to use these services. Elsewhere the issue seems to be the unavailability of teleshops and cyber cafes except in large urban centres. Moneragala district is the most disadvantaged (as it is in respect of other services) as no member of any household, urban or rural has used a teleshop or cyber cafe.

**Table 10**  
**Use of ICT Services**  
Statistical Analysis of Differences

% Using	Gender Differences			Urban-Rural Differences		
	Male %	Female %	Significance	Urban %	Rural %	Significance
Communication Centres	34.4	30.1	Significant	37.3	21.0	Significant
Telephone booth	30.7	26.6	Significant	32.6	19.4	Significant
Teleshops	8.4	4.4	Significant	7.8	2.8	Significant
Cyber cafes	4.4	1.9	Significant	4.0	1.2	Significant

***Ownership of ICT Facilities***

The ownership of ICT facilities was used as an indicator of access to ICT as well as of gender equality as control of resources is a measure of empowerment. The data presents a bleak picture of geographical, socio-economic and gender disparities. Members of Colombo urban affluent households owned all the ten facilities listed – mobile telephones (62.1% women and 75.8% men), land telephones, e-mail, internet, desk top computers, printers (around 15% - 18% women and 40% - 50% men), lap top computers, scanners, digital

cameras (5% - 15% women and 30% - 40% men) and CD writers (18.9% women). Gender disparities in ownership are evident in the most prosperous and educated households. Members of Colombo urban, middle class households owned all these facilities in lesser numbers but with similar evidence of gender inequality in ownership of ICT resources. In Colombo affluent and middle class households around one third of the young persons in the 10 to 18 age group also had mobiles phones and computers - clearly an indicator of the economic resources of households.

The next group in terms of ICT assets is the conflict affected districts of Jaffna, Batticaloa and Ampara where at least a percentage of men in urban Jaffna and Batticaloa and urban and rural Ampara owned all facilities except CD writers. Women are clearly disadvantaged in these districts also. In urban Galle and urban and rural Kurunegala, a few men chiefly owned some of these facilities, and 15% to 25% men and a few women owned mobile phones. Semi urban and rural Colombo households and Ampara and Moneragala households owned chiefly telephones. The most deprived are the women and men in rural households in Anuradhapura and Moneragala districts who did not own any ICT related equipment. The pattern of ownership therefore reflects markedly district, urban – rural and gender disparities.

**Table 11**  
**Ownership of ICT Equipment and Facilities**  
**Statistical Analysis of Differences**

	Gender Differences			Urban-Rural Differences		
	Male %	Female %	Significance	Urban %	Rural %	Significance
Land phone	20.3	5.4	Significant	15.6	6.6	Significant
Mobile phones	21.8	10.0	Significant	17.6	11.4	Significant
Computer desk top	9.2	3.0	Significant	7.1	3.5	Significant
Computer lap top	2.4	1.1	Significant	2.4	0.3	Significant
Printer	5.2	1.8	Significant	4.2	1.7	Significant
Email	4.8	1.5	Significant	11.4	3.7	Significant
Internet	4.6	1.6	Significant	3.6	1.0	Not significant
Scanner	2.9	0.9	Significant	2.2	1.0	Not significant
CD Writer	3.5	1.3	Significant	3.0	0.9	Significant
Digital camera	4.1	2.1	Significant	4.0	0.9	Significant



This statistical analysis confirms therefore, that the gender gap is wide in access to Information Technology. It is disturbing that there appears to be an even wider urban –rural gap and that there is an enormous gap between access in affluent and middle class households, and households in other districts, except in Jaffna...It is an indictment of the development process that rural households, and households in the least developed district, Moneragala, were excluded from the benefits of an ever expanding field of knowledge and employment

### ***Gendered Norms and Attitudes and ICT***

The study also explored the incidence of gender based positive or negative perceptions that could impinge on the degree of access of girls and women to ICT related skills.

The responses of parents indicate acceptance of computer education as a path for daughters as only minuscule number perceived it as a gender issue. Overall, the majority of parents in all households had aspirations that their daughters would be employed in ICT related jobs, aspirations reaching as high as over 80% in households. in some districts. Most parents had not specified the jobs they preferred for their daughters. A few ambitious parents in urban and middle class households wanted their daughters to be computer engineers, designers, system analysts and lecturers. Other parents were satisfied with jobs such as computer instructors, computer operators, data entry operators, information officers and even telephone operators It is evident that ICT related employment was seen as a potential and expanding field of employment in a country with a high incidence of unemployment.

Young people in the 10 to 35 age group had positive perceptions of gender equality in access to ICT related employment. The majority, over 80% of both sexes in urban and rural households in some districts, held the view that both girls and boys, and women and men were equally suited for ICT jobs. The absence of gender stereotypical views regarding such technologies as an area of excellence for men was found in both urban and rural households and in what are identified as ‘backward’ districts. The perception that there was gender equality in access to ICT related jobs was surprisingly stronger in rural households than in urban (even affluent Colombo) households. In some households this perception was

stronger among women than among men. It is likely that there was more competition for jobs in the urban environment, particularly as it was seen earlier that access to ICT related skills was limited to a small percentage in the rural environment.

Although the perceptions of the 10 – 35 age group of gender differentiation in attitudes within the family indicated that these young people did not perceive it as a problem in households, particularly in rural households in any district, perceptions of family attitudes to the employment of daughters in ICT related jobs were more negative than expected from parental responses. Very few males felt that there would be opposition from parents regarding their acceptance of such jobs but some girls and women anticipated opposition from parents or spouses

Overall, therefore, gender bias against the participation of women in ICT was not pervasive. Lack of opportunities for the acquisition of relevant skills appears to be a stronger constraint than gendered norms.

### **III. Concluding Observations**

Sri Lanka has initiated action to extend ICT facilities and services and to maximise benefits for national development. The macro scenario presented in the study identifies gaps and resultant socio-economic and gender disparities. This study has confirmed the macro situational analysis and the findings of the few micro studies that are available.

The gender audit of leading institutions and the information that surfaced from the survey of training and employment establishments indicated that disparities had been reinforced rather than reduced as a consequence of lack of awareness of the need to be pro-active in promoting gender equality. Underpinning the absence of adequate sex disaggregated data, the relatively low representation of women in student enrolment and in employment, and the exclusion of women from the highest level in policy and management, are the gender stereotypes that have tended to subsume IT in physical sciences and technology and to exclude women from this ‘male domain.’ Juxtaposed is the absence of overt gender bias in educational institutions and work places.

The information surfacing from the household study regarding access to computer education, ICT services, and ownership of ICT related assets reflects the impact of interrelated factors such as location of residence and economic status as well as gendered norms.

These findings are particularly significant as access to secondary education was seen to be extensive in the household survey. It is a sad reflection on the education system that schools, especially in the rural environment, have not been equipped to provide access to ICT skills and thus compensate for the technological poverty of homes and neighbourhoods. It is likely that interventions made at the school level will reduce the gender gap as there is gender equality in access to education.

The wide gulf between economic conditions in urban well-to-do households, particularly in Colombo, and in the majority of households in other districts is seen to be mirrored in the differential access of households to ICT education, services and assets. It appears that IT development has taken place chiefly in and around the capital city. Violence and resultant trauma does not appear to have affected the access of many households in conflict affected districts to ICT. The relatively advantaged situation pertaining to ICT facilities and services of these districts as compared with other districts (except Colombo) could be the result of the interplay of a multiplicity of factors including education, the breakdown of regular information channels and the need for contact with kinsfolk who have been displaced or have emigrated.

Galle and Kurunegala were identified in the study design as potential growth regions. From the evidence in the study, access to ICT in Kurunegala has expanded and urban Kurunegala appears to be poised for growth. The situation in Galle (even before the tsunami) was disappointing but it is likely that the suburbs of Galle are better developed with respect to access to ICT. However Ampara which was assumed to be a 'backward' district, appears even after the tsunami to have the economic resources to move into the world of ICT.

In the two 'backward' districts, urban Anuradhapura appears to have entered a phase in IT development, reflecting perhaps the IT resources of its large urban schools and their past students. Moneragala is clearly disadvantaged in access to ICT as the infrastructure required is also underdeveloped in the district. The interface of poverty and relative exclusion from the development process exacerbates the depressed situation of many households in accessing ICT in these districts. The urban – rural gap is also wide and globalisation has hardly impinged on these rural locations in terms of modern techniques of communication.

While it is not possible to generalise from the findings of this study the fact remains that gender, urban-rural and district wise differences were seen to be statistically significant.

Together they form a formidable barrier to women in accessing the benefits of ICT, although younger women were optimistic regarding their future in the world of information technology. The gender gap in the ownership of ICT equipment, underscores the lack of resources that could empower women to control the direction of their lives. It is a matter for immediate concern that the urban-rural divide and the gap between affluent Colombo neighbourhoods, Jaffna and the rest of the country is unconscionably wide, indicating that existing disparities could be widened with the current expansion of ICT in the country. In this context, policy and action in the fields of education and training, employment, service delivery and gender sensitisation at all levels are imperative from the perspectives of human rights, human development, social justice and gender equality.

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