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**TITLE:** Country Paper on Household ICT Access and Individual ICT Usage in Bangladesh

# **Country Paper on Household ICT Access and Individual ICT Usage in Bangladesh**

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## **1. Introduction**

The vision of the Government is to make Bangladesh Digital by 2021. The present government has considered ICT as a driving tool for Socio-Economic Development. The government has also taken initiatives to assist talented young people and interested entrepreneurs for developing ICT skills in appropriate fields. It is also a thrust sector presently. Meanwhile a task force on ICT has been established by the present government.

A good deal of enthusiasm prevails in Bangladesh in both government and private sectors about the potential of ICT in accelerating the rate of growth and poverty reduction in the country. A reflection of this view is found in the government's poverty reduction strategy paper for 2006-8 period titled "Unlocking the Potential: National Strategy for Accelerated Poverty Reduction" where ICT has been identified as one of the critical sectors for pro-poor economic growth. The government has undertaken a series of measures to promote rapid expansion of ICT. However, despite government's efforts there has been only moderate progress in ICT in the country. More importantly, there exists some weaknesses in generation and dissemination of ICT statistics.

The rest of the paper is organized as follows: Section 2 provides an overview of government initiatives to facilitate the spread of ICT in the country. Section 3 focuses on status of ICT statistics in Bangladesh Section 4 presents the status of the government agency responsible for collection of ICT statistics and its dissemination. Section 5 presents few concluding observations.

## **2. Overview of Government Initiatives in ICT Sector in Bangladesh**

The government has undertaken a number of initiatives - policies, programmes, projects and regulations to create a vibrant ICT sector and to ensure access of all sections of the population in all regions of the country to the new technology. Some of the key initiatives are mentioned here. Bangladesh has approved the National Policy on Information and Communication Technology (ICT) in 2009. The policy aims at building an ICT-driven nation for capturing a share of the multi-billion dollar software export market, facilitating e-governance and e-commerce and promoting application of ICT in health care, agriculture, disaster management, social welfare, transportation and judiciary. Bangladesh Computer Council (BCC) is the apex body under the Ministry of Science and Information & Communication Technology responsible for formulating and implementing the policies on information and communication technology. Present Government created ICT division under the ministry of science & ICT to promote ICT in every sector all over the country. The government created Bangladesh Telecommunications Regulatory Commission (BTRC) early in 2002, with strong regulatory independence. BTRC has now full authority to grant licenses to all providers of telephony, data, network and content services. Government-owned Bangladesh Telephone Company Ltd. (BTCL) has set up digital telephone exchanges and ISP in each district town of the country. The government of Bangladesh abolished import tax and VAT on computer hardware, software and accessories. This brought down the cost of computers significantly at the retail outlets. Now even the low income households in the country can afford to have PCs. Bangladesh assemble Laptop Computer brand named "Dowel". It will be distributed the educational institute and government officers by low cost to promote ICT in education & government offices.

## **3. Status of ICT statistics in Bangladesh**

There has not been any attempt in the country to undertake a comprehensive survey to collect information on the use of ICT at the household and individual levels. As can be observed from Table-1 there has been modest use of ICT in the economy though its use is gradually increasing. Increasing importance of this sector in the national economy and its potential for development by now justify a comprehensive survey of this sector. The government has a plan to conduct a survey regarding the use of ICT at the household and individual levels to identify the progress of this sector, its potential for future expansion and its contribution to the economy. However, the government will need donor assistance to supplement its resources to undertake this activity.

It might be of interest to note how the questionnaire for this survey might be developed. BBS has a long tradition in conducting surveys. A draft questionnaire of a particular survey is developed initially by the officials of BBS, sometimes with inputs from consultants. The questionnaire is then shared with all stakeholders, for example, the planning commission, concerned government ministries, donor agencies, researchers and academics. A draft final questionnaire is prepared with inputs from the stakeholders. The

questionnaire is finalized after pre-testing. In conducting a survey on ICT the same procedure is expected to be followed.

It should be mentioned here that anticipating the importance of accurate information on the use ICT at the household level BBS included four questions on ICT in Household Income and Expenditure Survey (HIES) 2005 & 2010. The questions focused on the use of fixed telephone, mobile phone, computer and email facilities. As is known HIES is a large survey with a long questionnaire. The inclusion of only four questions marks the beginning of a full effort in the future to conduct a survey especially on ICT. At this stage it would be interesting to share the information generated through this survey.

### 3.1 Household Income and Expenditure Survey 2005 and 2010

As mentioned earlier, “Household Income and Expenditure Survey 2010” sought information on the use of ICT (use of computer, email, internet, telephone, mobile phone etc.) at the household and individual levels. The enumerators were provided with Laptop computers to collect and process field level data. The preliminary result of the survey has been published. However preliminary results show the following:

**Table-1:** Percentage of households having ICT facilities

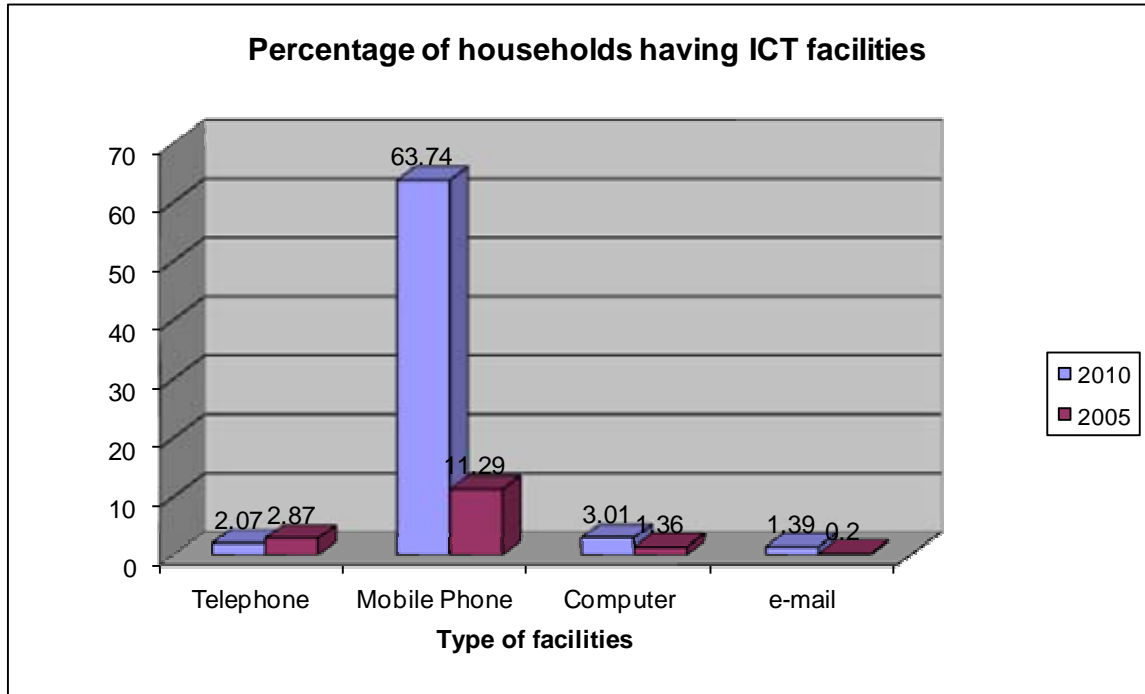
Type of facilities	National		Rural		Urban	
	2010	2005	2010	2005	2010	2005
Telephone	2.07	2.87	0.70	0.33	5.79	10.36
Mobile Phone	63.74	11.29	56.77	6.05	82.74	26.73
Computer	3.01	1.36	0.97	0.17	8.58	4.88
email	1.39	0.20	0.39	-	4.10	0.81

Source: BBS, Household Income and Expenditure Survey 2005 & 2010

The table shows increasing tendency of use of computer facilities in Bangladesh especially in rural areas. The most notable information from the survey is that though mobile phone has been introduced in the country in early nineties, there has been substantial growth of mobile phone use. The use of Internet has considerably increased both in urban and rural areas as focus by the recent survey. Understandably, the use of the ICT facilities is much higher in urban areas compared to rural areas.

There has been rapid growth of use of Mobile phones between 2005 and 2010. While only 11.29% of households used mobile phones in 2005, more than 63% of households were found to use them in 2010.

Graph-1: Percentage of households having ICT facilities.



**Table-2:** Mobile phone used by households

Locality	2000	2005	2010
National	1.50	11.29	63.74
Rural	0.30	6.05	56.77
Urban	6.50	26.73	82.74

Source: BBS, HIES 2000 and HIES 2005 & 2010

It may be mentioned here that the government has been trying to popularise ICT in government offices to improve productivity and promote e-governance. The progress in this front has been captured in a recent survey which is discussed below.

Graph-2 : Percentage of Mobile Phone used by households

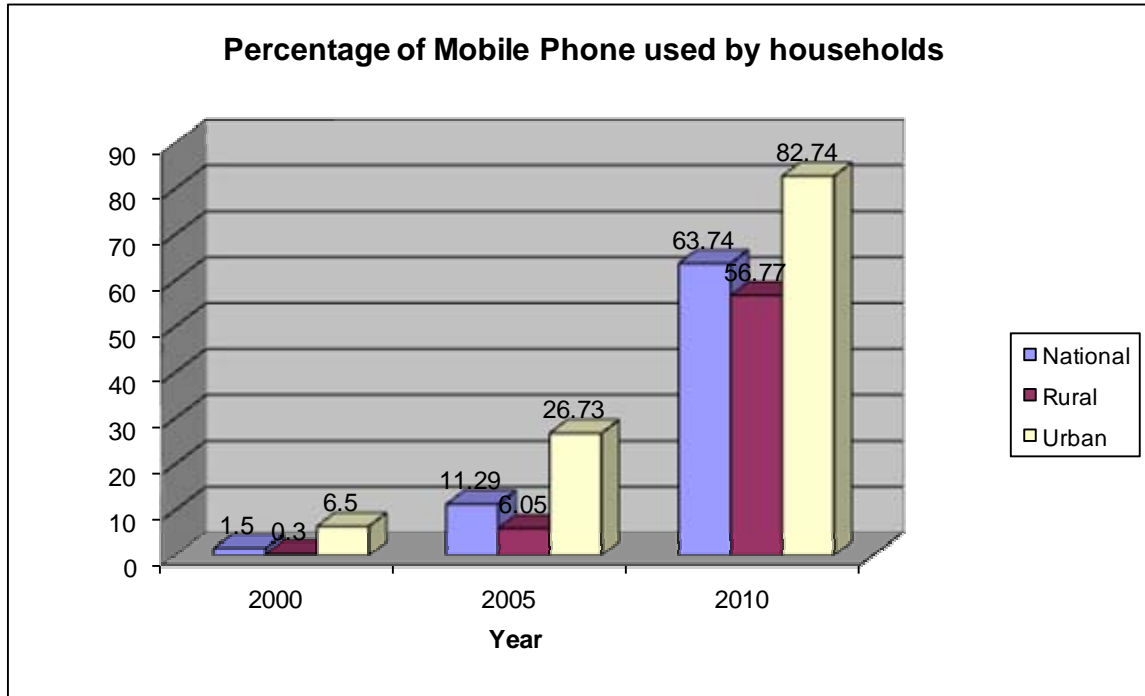


Table-03: Percentage Distribution of household by ownership of Computer and e-mail/Internet facility by locality and monthly income group.

Monthly Household Income(Tk.)	Year 2005		Year 2010	
	%Computer	%E-mail/Internet	%Computer (p)	%E-mail/Internet(P)
<b>National</b>				
<1500	0.00	0.00	0.14	0.00
1500-1999	0.24	0.00	0.00	0.00
2000-2499	0.00	0.00	0.40	0.55
2500-2999	0.51	1.69	0.51	0.00
3000-3999	1.13	1.69	1.58	0.83
4000-4999	0.26	0.00	0.74	0.90
5000-5999	3.09	0.00	0.46	0.50
6000-6999	4.13	0.00	3.25	0.93
7000-7999	2.74	0.00	1.75	0.65
8000-8999	2.64	0.00	3.01	3.08
9000-9999	2.38	3.89	1.66	1.24
10000-12499	9.29	10.18	5.35	5.54
12500-14999	6.48	0.00	3.40	5.87
15000-17499	7.99	0.00	4.78	2.37
17500-19999	7.86	0.00	5.82	4.77
20000+	51.27	82.55	67.16	72.78

Monthly Household Income(Tk.)	Year 2005		Year 2010	
	%Computer	%E-mail/Internet	%Computer(p)	%E-mail/Internet(p)
<b>Urban</b>				
<1500	0.00	0.00	0.18	0.00
1500-1999	0.27	0.00	0.00	0.00
2000-2499	0.00	0.00	0.12	0.00
2500-2999	0.56	1.69	0.17	0.00
3000-3999	0.28	1.69	0.18	0.00
4000-4999	0.28	0.00	0.15	0.32
5000-5999	2.54	0.00	0.60	0.63
6000-6999	2.81	0.00	1.64	1.17
7000-7999	2.06	0.00	1.07	0.00
8000-8999	2.91	0.00	2.16	3.06
9000-9999	2.63	3.89	0.98	0.75
10000-12499	10.25	10.18	3.08	2.05
12500-14999	6.18	0.00	3.09	2.19
15000-17499	8.81	0.00	4.92	2.98
17500-19999	8.67	0.00	6.42	5.19
20000+	51.76	82.55	75.25	81.67
<b>Rural</b>				
<1500	0.00	0.00	0.00	0.00
1500-1999	0.00	0.00	0.00	0.00
2000-2499	0.00	0.00	1.34	2.69
2500-2999	0.00	0.00	1.62	0.00
3000-3999	9.35	0.00	6.13	4.06
4000-4999	0.00	0.00	2.67	3.16
5000-5999	8.47	0.00	0.00	0.00
6000-6999	16.94	0.00	8.50	0.00
7000-7999	9.35	0.00	3.95	3.16
8000-8999	0.00	0.00	5.77	3.14
9000-9999	0.00	0.00	3.85	3.16
10000-12499	0.00	0.00	12.76	19.12
12500-14999	9.35	0.00	4.41	20.19
15000-17499	0.00	0.00	4.32	0.00
17500-19999	0.00	0.00	3.87	3.16
20000+	46.55	0.00	40.8	38.16

Table 03 shows percentage use of computer and Internet/e-mail facilities by locality and monthly income group. In the more than 20000.00TK monthly income group the use of computer 51.27% and use of internet/e-mail is 82.5% in the year 2005. Whereas the percentage use regarding computer in the year 2010 is 67.17% and use of internet/e-mail is 72.78% in the year 2010. In this observation, it is shown that there has been an increment of 15.89% in the year 2010 compare to the year 2005. In case of the use

regarding and use of internet/e-mail facilities there has been observed decreasing tendency of 9.77% in the year 2010 compare to the year 2005.

**Table-04: Percentage Distribution of household by ownership of Computer and e-mail/Internet facility by locality and level of education of household head.**

Monthly Household Income(Tk.)	Year 2005		Year 2010	
	%Computer	%E-mail/Internet	%Computer(p)	%E-mail/Internet(p)
<b>National</b>				
Class I-V	13.82	15.25	4.49	4.01
Class VI-IX	5.78	0.00	21.69	19.97
SSC/HSC or equiv.	19.15	1.75	28.11	25.64
Graduate or equiv.	24.24	35.14	21.96	17.8
Post Graduate or eqi.	25.74	40.40	18.06	24.14
Doctor	1.93	0.00	1.63	2.74
Engineer	9.33	7.46	2.67	4.20
Others	0.00	0.00	1.39	1.51
<b>Urban</b>				
Class I-V	11.49	15.25	2.56	0.98
Class VI-IX	5.50	0.00	11.18	11.73
SSC/HSC or equiv.	17.26	1.75	29.85	24.80
Graduate or equiv.	24.95	35.14	26.52	21.55
Post Graduate or eqi.	28.39	40.40	22.47	30.34
Doctor	2.13	0.00	2.12	3.44
Engineer	10.29	7.46	3.49	5.27
Others	0.00	0.00	1.81	1.90
<b>Rural</b>				
Class I-V	36.51	0.00	10.80	15.82
Class VI-IX	8.47	0.00	55.95	52.08
SSC/HSC or equiv.	37.64	0.00	22.46	28.94
Graduate or equiv.	17.38	0.00	7.11	3.16
Post Graduate or eqi.	0.00	0.00	3.67	0.00
Doctor	0.00	0.00	0.00	0.00
Engineer	0.00	0.00	0.00	0.00
Others	0.00	0.00	0.00	0.00



### 3.2 Comprehensive Study of e-Government Initiatives in Bangladesh

A study titled “**Comprehensive Study of e-Government Initiatives in Bangladesh-2003**” covering 303 Government institutions throughout Bangladesh with a total of 35,658 officers and 103,126 staff were conducted to assess the current situation of IT in the government sector. It also gives a comprehensive idea about the IT resources that different government offices have. The study covers areas of existing ICT infrastructure, inventory of ICT resources, nature of use of ICTs, training schemes and maintenance mechanisms in government offices across the country.

#### 3.2.1 Major findings of the study are given below:

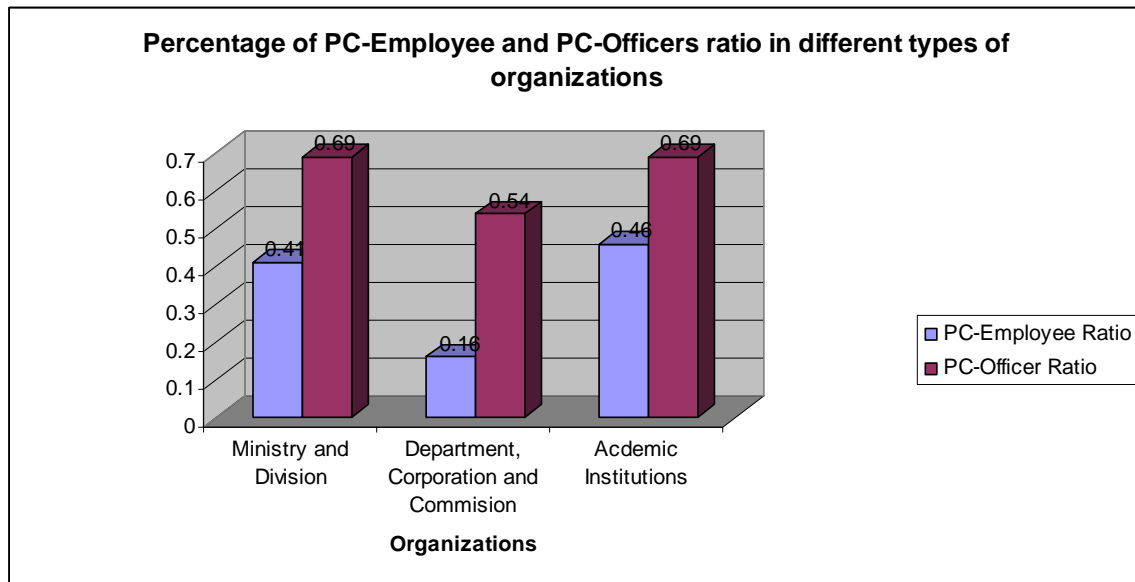
Table-05: PC-Employee and PC-Officers ratio in different types of organizations

Type of Organizations	Total PCs	Total Officers	Total Employees	PC-Employee ratio	PC-Officer ratio
Ministries and Division	2780	4041	6777	0.41	0.69
Department, Corporation and Commission	2684	4964	16597	0.16	0.54
Academic Institutions	3034	4383	6633	0.46	0.69
<b>Total</b>	<b>8498</b>	<b>13388</b>	<b>30007</b>		
<b>Over all</b>				<b>0.28</b>	<b>0.63</b>

Source: e-Government initiatives in Bangladesh (A Sample Survey 2008)

Academic institutions have the highest PC-Employee and PC-Officer ratio i.e., 0.46 and 0.69 respectively while the departments, corporations and commissions have the lowest PC-Employee and PC-Officer ratio (0.16 and 0.54 respectively).

Graph-3: Percentage of PC-Employee and PC-Officers ratio in different types of organizations



#### 4. Government Organization for Collecting ICT Statistics

##### 4.1 Bangladesh Bureau of Statistics

Bangladesh Bureau of Statistics (BBS) is the National statistical organization (NSO) of Bangladesh. It was established in August 1974 under the Ministry of Planning and is headed by a Director General. The broad functions of the BBS are to collect, compile, analyze and publish statistics on all sectors of the economy to meet the needs of development planning, policy analysis and decision making. Apart from this, BBS is also playing a vital role in improving the quality of data through conducting research activities, imparting training and organizing seminars, symposiums and workshops. These activities also help disseminate information collected by BBS.

There are two mechanisms to initiate a data collection procedure in BBS. In case of regular activities, BBS initiates the data collection process on its own. However in case of some new surveys, BBS can either articulate the need for data collection and initiate the process or it can respond to the request of some ministries/divisions.

##### 4.2 Functions of BBS in relation to ICT

The main functions of BBS in relation to ICT are as follows:

- Direct and coordinate all aspects of planning, installation, operation and maintenance of data, server-based applications and computer systems.
- Provide support and planning for network administration.

- Design and development of database and customized software to cope with the requirements of the BBS.
- Provide training to the end-user and build-up ICT sound manpower.
- Troubleshooting of software and hardware.
- Design and development of program to capture, edit & clean, analyze and tabulation of collected data of census and surveys conducted by BBS.
- Backup and recovery of database.
- Assist in designing computer based questionnaire.
- Designing of census questionnaire for OMR and ICR/OCR.
- Implementation of optical data archive and networking system.

BBS has taken an initiative to conduct a survey named “Baseline Survey on ICT Statistics in Bangladesh”. Preliminary Concept paper is submitted for approval to the authority. Objectives of the survey are as follows:

The main objectives of the project are-

- i. To bring out the lessons learnt from different e-government initiatives that have been taken so far;
- ii. To assess the extent of private initiatives taken so far to promote ICT in Bangladesh;
- iii. To identify the prospects and common problems encountered in ICT activities in Bangladesh;
- iv. Human Resource Development through ICT training; and
- v. To assess the extent of digital divide scenario of Bangladesh.

**Specific objectives:** In order to achieve the overall goal two types of surveys will be conducted :

- i) Survey of ICT Enterprises; and
- ii) Survey of Households.

**4.3 BBS and the Web site:** BBS has its own dynamic web site named [www.bbs.gov.bd](http://www.bbs.gov.bd) to disseminate information.

**4.4 Users of Data/Statistics:** The users of BBS data/statistics generated through census and survey are usually the government – ministries/divisions and departments, NGOs, private sector organizations, researchers and academics, international organizations and donor agencies.

## **5. Concluding Observations**

The use of ICT has experienced a modest growth in Bangladesh with rapid use of mobile phones. BBS, the apex statistical organization is using Hi-Tech sophisticated machineries in data processing. There has also been substantial progress in the use of ICT in government offices. However, lack of comprehensive survey on the use of ICT is preventing us from giving a full picture of ICT statistics in the country. If an ICT survey can be conducted under the “Baseline Survey on ICT Statistics in Bangladesh” then a through picture regarding ICT Statistics may be revealed. It has been observed that this sector has inadequate infrastructure and insufficient trained manpower. Besides, the quality of training is not satisfactory up to the mark. Despite these shortcomings, an enlightened future of this sector is anticipated. The universities – both public and private, are producing increasing number of graduates in computer related fields who can contribute to the development of this sector.