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Introduction

The Information and Communications Technology Sector has witnessed immense improvement in recent years in terms of high prevalence and diversity

of services provided, in addition to increasing the volume of investment and employment in this sector. Flow of investment from the private sector has increased to replace the public sector. The rapid technological development in Information Technology has lead to significant impact in various economic and social fields, which are clearly reflected in the performance of economic establishments through increased productivity, improvement of work, promoting competition and provision of better services to consumers.

The survey, conducted by the Department of Statistics in accordance with the Memorandum of Understanding concluded between the DoS and the Ministry of Communications and Information Technology in order to provide the necessary data on the use of Information and Communications Technology in economic establishments for decision makers and policy makers in both public and private sectors. And this paper will include a discussion about the available indicators at the DOS and the experience of the DOS in collection, releasing, and preparation of the ICT statistics.

1 – Information society in the households sector.

- The Department of Statistics carried out a series of household surveys on the use of information technology once a year to get information about the use of information technology at the household level.
- The first survey has been implemented in 2007, the second survey in 2008, and the third survey in 2009. The fourth survey in 2010.and the last survey in 2011.

2 – Information society in the Economic Enterprises sector.

To provide data on the Information Society in Jordon, the Department of Statistics carried out two surveys on the information society in the economic establishments in Jordan. The first survey has been carried out in 2006, and second survey was carried out in 2008. A last survey was carried out in 2011.

Present paper will discuss the contents of the surveys. Which include the following?

- Objectives of the Survey
- Comprehensive survey
- Design of the sample
- Method of data collection
- Summary of the most important indicators that can be extracted from each survey.

A–Information and Communications Technology Use in Economic Enterprises Survey:–

- ◆ **Objectives of the Survey**:

  The Main objectives of the survey:
  - Provision of data on the use of information technology and Communications in the economic establishments.
  - Provision of data on postal service used by the economic establishments.
  - Provision of data on the use of the Internet in the economic establishments.
  - Provision of data on the use of e–commerce in the economic establishments.
  - Provision of data on how these establishments deal with e–government.

- ◆ **Comprehensiveness of the survey** :–

  This survey covered all establishments operating in the public sector (except for security and military establishments) and a sample of economic establishments in the private sector. The total sample that drawn from the framework of the 2006 Establishment Census. Which was implemented reached 3700 enterprises.

- ◆ **Sample Design**:–

  The sample of the 2010 survey was designed to include the following:

– All public establishments (except security and military establishments).

– Selecting a random sample from the private sector establishments, including the non– profit establishments.

♦ **Method of data collection**:–

The Data on the economic establishments was collected through personal interview. In the case of some large establishments, a date was set to obtain the data, so that the concerned person is given the chance to prepare the requested data.

♦ **Summary of Main Results**:–

This table presents some of the most important indicators that can be calculated from the information and communications technology use in the Economic Enterprises Survey 2010.

Summary of Main Results

1	Percentage of government establishments that deal with Jordanian post companies	99
2	Percentage of government establishments that deal with private sector companies	39
3	Percentage of private enterprises that deal with Jordanian post companies	96
4	Percentage of private enterprises that deal with private sector companies	69
5	Percentage of government establishments that approach post offices on a daily basis	74
6	Percentage of private enterprises that approach post offices on a daily basis	16
7	Average monthly expenses incurred on local postal services by government establishments (JD)	356

8	Average monthly expenses incurred on local postal services by private enterprises (JD)	49
9	Average number of land telephone sets in government establishments (set)	228
10	Average number of cellular telephone sets in government establishments (set)	47
11	Average number of personal computers in government establishments (set)	229
12	Average number of land telephone lines in government establishments (line)	47
13	Average number of cellular telephone lines in government establishments (line)	49
14	Percentage of government establishments that use computers	100
15	Percentage of private sector enterprises that use computers	83
16	Percentage of government establishments which believe that an initiative to provide them with computers will encourage use of PC and Internet inside enterprise.	95
17	Percentage of private sector enterprises which believe that an initiative to provide them with computers will encourage use of PC and Internet inside enterprise	85
18	Percentage of staff that use computers within the government establishments	57
19	Percentage of staff that use computers within the private sector enterprises	28
20	Percentage of government establishments which train their staff on computer software continuously	88
21	Percentage of private sector enterprises which train their staff on computer software continuously	47
22	Average annual expenses incurred by the government establishments on hardware, software and maintenance services (JD)	94182
23	Average annual expenses incurred by the private sector enterprises on hardware, software and maintenance services (JD)	9729
24	Percentage of government establishments which believe the possession of computer skills by job seekers is pre-requisite	64

25	Percentage of private sector enterprises which believe the possession of computer skills by job seekers is pre-requisite	50
26	Percentage of government establishments that has positive impact on their work by using PC	100
27	Percentage of private sector enterprises that has positive impact on their work by using PC	90
28	Percentage of government establishments that grant incentive benefits to their employees who have computer skills	40
29	Percentage of private sector enterprises that grant incentive benefits to their employees who have computer skills	23
30	Percentage of government establishments that own Internet lines	98
31	Percentage of private sector enterprises that own Internet lines	74
32	Percentage of computers connected to the Internet in government establishments	73
33	Percentage of computers connected to the Internet in private sector enterprises	74
34	Percentage of government establishments that use VOIP	10
35	Percentage of private sector enterprises that use VOIP	15
36	Percentage of government establishments that have a Web site on the internet	98
37	Percentage of private sector enterprises that have a Web site on the internet	67
38	Percentage of government establishments that host their Web site in Jordan	88
39	Percentage of private sector enterprises that host their Web site in Jordan	62
40	Percentage of government establishments that promote their website	67
41	Percentage of private sector enterprises that promote their website	61

42	Percentage of government establishments that provide services through their website	81
43	Percentage of private sector enterprises that provide services through their website	56
44	Percentage of government establishments that obtain the e-mail service through the Internet	97
45	Percentage of private sector enterprises that obtain the e-mail service through the Internet	94
46	Percentage of government establishments that obtain government services through the Internet	80
47	Percentage of private sector enterprises that obtain government services through the Internet	38
48	Percentage of government establishments whose their stuff use the internet for working from outside their place of work	19
49	Percentage of private sector enterprises whose their stuff use the internet for working from outside their place of work	21
50	Percentage of government establishments that install anti-virus software	98
51	Percentage of private sector enterprises that install anti-virus software	87
52	Percentage of government establishments that own programs for monitoring Internet use by their staff	81
53	Percentage of private sector enterprises that own programs for monitoring Internet use by their staff	41
54	Average monthly expenses incurred on Internet services by government establishments (JD)	1900
55	Average monthly expenses incurred on Internet services by private sector enterprises (JD)	240
56	Percentage of private sector enterprises that use electronic commerce	16
57	Percentage of government establishments that dealt with the e-government	89
58	Percentage of private sector enterprises that dealt with the e-government	31

59	Percentage of government establishments that encourage research and devolvement	83
60	Percentage of private sector enterprises that encourage research and devolvement	53
61	Percentage of government establishments that has allocate research and devolvement budget	47
62	Percentage of private sector enterprises that that has allocate research and devolvement budget	14
63	Percentage of government establishments that believe that spread of PC and Internet encourage research and devolvement	68
64	Percentage of private sector enterprises that believe that spread of PC and Internet encourage research and devolvement	52
65	Percentage of government establishments that employee people of special needs	47
66	Percentage of private sector enterprises that employee people of special needs	8
67	Percentage of government establishments where the employee of special needs use technology	85
68	Percentage of private sector enterprises where the employee of special needs use technology	30
69	Percentage of government establishments which believe that use of technology has created job opportunities of people of special needs	79
70	Percentage of private sector enterprises which believe that use of technology has created job opportunities of people of special needs	53

♦ **B‒ Information Technology Use at households Survey**:‒

♦ **Objectives of the Survey**

The main objectives of the survey:

–Provide up-dated statistical data on information technology use at homes;

–Identify the characteristics of the information technology users;

–Identify the reasons for not using information technology.

–Identify the availability of the IT and communications equipment used by households.

♦ **Comprehensiveness of the survey**:–

Based on the household frame available from the Population and Housing Census 2004. A sample of HHs has been selected and amounted to 3340 households distributed among the different regions in the Kingdom.

♦ **Sample Design** :–

The sample of this survey was designed; using the cluster stratified sampling method. It is representative on the Kingdom, rural, urban, and regions levels. The total sample size was 334 PSUs (clusters). These units were distributed among governorates, urban, and rural.

The sample was selected on two stages, in the first stage; the Primary Sampling Units (PSUs) were selected, using the Probability Proportionate to Size with systematic selection procedure. The number of households, in each primary sampling unit (cluster) served as its weight or size. In the second stage, the blocks of the primary sampling units (cluster) which were selected in the first stage have been updated. Then a constant number of households (10 households) were selected, using the random systematic sampling method as final PSUs from each PSU (cluster).

♦ **Method of data collection** :–

Data was collected from the field by interviewers who visited the selected household in the sample and fill out the questioners in a special interview with the respondent.

♦ **Annual Indicators**:–

These indicators are produced by the Telecommunications Regulatory Commission (**TRC**) are indicators of quarterly and annual indicators in collaboration with telecommunications companies and Internet providers and others interested in the telecom sector and information technology. Those indicators are: -

➢ Fixed phone subscribers and penetration rate.
➢ Mobile phone and Radio Trucking subscribers and penetration rate.
➢ Internet Users and penetration rate.
➢ Telecommunications Investment.
➢ Telecommunications employment.

Abstract:–

1. Due to the limited data available at the Department of Statistics on the information society, the following concluding points are shown below:
2. Limited dissemination of indicators at the national and regional level, due to the small sample size.
3. The produced Indicators for the household sector are comparable internationally and can be compared with indicators for other countries to identify the position of Jordan in the field of information technology.
4. Indicators of enterprises sector need to be developed to be comparable with indicators adopted by international bodies.
5. There is a need to implement separate surveys to measure the information society, and to provide more accurate statistics on the Information Society.

♦ **Recommendations**:–
   1. Continue the implementation of household surveys and surveys of economic establishments on information technology and communications on a regular basis, according to international recommendations and standards in order to create time series indicators.
   2. Develop and update the indicators on an ongoing basis to match the rapid growth of the information and communications technology sector, in a

manner consistent with indicators being developed by international institutions and organizations in the field of statistics.

3. Raise the level and efficiency of manpower in the field of statistics, information and communication technology in the department in order to obtain data and indicators of high quality.