

Kenya - National Information and Communication Technology Survey 2010

Report generated on: October 29, 2014

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Overview

Identification

ID NUMBER

KEN_2010_NICTS_v01_M

Version

VERSION DESCRIPTION

Version 01

Overview

ABSTRACT

In an effort to address the ICT data challenges, the Communications Commission of Kenya (CCK) partnered with Kenya National Bureau of Statistics (KNBS) to undertake a comprehensive National ICT Survey. This was planned and executed during the months of May and June 2010.

The main objective of the study was to collect, collate and analyse data relating to ICT access and usage by various categorizations in Kenya. The survey captured data and information on critical ICT indicators as defined by international bodies such as the International Telecommunications Union (ITU). These indicators focused on household and individuals; and the data was be disaggregated by age, gender, administrative regions, rural and urban locations.

The specific objectives of the study were to; Obtain social economic information with a view of understanding usage patterns of ICT services;

(a) Obtain social economic information with a view of understanding usage patterns of ICT services;

(b) Collect, collate and analyze ICT statistics in line with ICT indicators;

(c) Evaluate the factors that will have the greatest impact in ensuring access and usage of ICTs and;

(d) Develop a database on access and usage of ICT in Kenya

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

District, Household, Individual

Scope

NOTES

The ICT survey sought information on the general characteristics of the sampled population, including composition by age and sex, household size, education, employment, literacy, disability and source of electricity to households, and ICT infrastructure- Access and usage by Household members.

TOPICS

Topic	Vocabulary	URI
Infrastructure	World Bank	

Topic	Vocabulary	URI
Information & Communication Technologies	World Bank	

KEYWORDS

Communication, Technology

Coverage

GEOGRAPHIC COVERAGE

National coverage

UNIVERSE

Households from the sampled areas.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Kenya National Bureau of Statistics	Ministry of Planning and National Development

FUNDING

Name	Abbreviation	Role
Communication Commission of Kenya	CCK	Funding

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Kenya National Bureau of statistics	KNBS	Ministry of Planning, National Development and Vision 2030	Implementing Agency
Accelerated Data Program	ADP	International Household Survey Network	Review of the metadata

DATE OF METADATA PRODUCTION

2013-05-31

DDI DOCUMENT VERSION

Version 02 (October 2013). Edited version based on Version 01 DDI that was done by Kenya National Bureau of Statistics and reviewed by Accelerated Data Program, International Household Survey Network.

DDI DOCUMENT ID

DDI_KEN_2010_NICTS_v02_M

Sampling

Sampling Procedure

The National Sample Survey and Evaluation Programme (NASSEP IV) maintained by the Bureau was used as the sampling frame. The frame has 1,800 clusters spread all over the country, and covers all socio-economic classes and hence able to get a suitable and representative sample of the population. The survey was distributed into four domains, namely:

1. National,
2. Major Urban areas,
3. Other Urban areas, and
4. Rural areas.

The major urban towns included Nairobi, Thika, Mombasa, Kisumu, Nakuru and Eldoret. All other areas defined as urban by KNBS but fall outside the major municipalities above were categorized as 'other urban areas'. The rural domain was further sub-divided into their respective provinces, excluding Nairobi which is purely urban. For the 'rural' component, the districts that display identical socio-cultural and economic conditions have been pooled together to create strata from which a representative set of districts is selected to represent the group of such districts. A total of 42 such stratifications were done and one district in each categorization was selected. The major urban areas of the country namely Nairobi, Mombasa, Kisumu, Nakuru, Eldoret and Thika were all sub-stratified into five sub-strata based on perceived levels of income into the:

1. Upper income
2. Lower Upper
3. Middle
4. Lower Middle and
5. Lower.

In this survey, all the six 'major urban' are included while just a few of the 'other urban areas' are selected depending on their population (household) distribution.

Selection of the Clusters for the Survey

The selection of the sample clusters was done systematically using the Equal Probability Selection method (EPSEM). Since NASSEP IV was developed using Probability Proportional to Size (PPS) method, the resulting sample retains its properties. The selection was done independently within the districts and the urban /rural sub-stratum.

Selection of the Households

From each selected cluster, an equal number of 15 households were selected systematically, with a random start. The systematic sampling method was adopted as it enables the distribution of the sample across the cluster evenly and yields good estimates for the population parameters. Selection of the households was done at the office and assigned to the Research Assistants, with strictly no allowance for replacement of non-responding households.

Deviations from Sample Design

Owing to the some logistical challenges the following clusters were partially or not covered at all:

- One cluster in Tana River due to floods.
- Two clusters in Molo where households shifted to safer areas after the Post Election Violence (PEV). As a result, fewer than the expected households were covered.
- One cluster in Koibatek was covered halfway due to relocation of households to pave way for a large plantation.

Where there was no school found within the cluster, Research Assistant was allowed to sample an institution from a neighbouring cluster. In some districts, the schools were found to be very far from the cluster and therefore could not be covered. Where a cluster was to be covered over a weekend, it was often not possible to find a responsible person in institutions to respond to the questionnaire.

Response Rate

The overall response rate stood at 85.9 per cent. Nairobi had the lowest response rate at 69.4 per cent while the highest (94.6 per cent) was realized in North Eastern. More than 95.5 per cent of all the sampled households were occupied out of which 85.9 per cent were interviewed.

Weighting

The resulting sample would not be self weighting owing to the unproportional allocation of the sample into the domains. Weights were developed to account for the selection probabilities. The weights were developed using the design weights of the clusters, the response levels and the number of clusters in the survey. In the computation process, adjustment was done for cluster and household non-response. The generation of the cluster weights is the product of sample cluster design weight, household and cluster response adjustment factors.

Questionnaires

Overview

Household questionnaire: This will be used to collect background information pertaining to the members of the household and businesses operated by household members. It will collect information about each person in the household such as name, sex, age, education, and relationship to household head etcetera. This information is vital for calculating certain socio-demographic characteristics of the household. The Business module in the household questionnaire will be used to collect information pertaining to usage of ICT in businesses identified in the household. To estimate the magnitude, levels and distribution of ICT usage in the country, all the selected respondents 15 years and above will be subjected to business questionnaire.

Institutional Questionnaire: This will collect information pertaining to institutions providing ICT related programmes in the country. This information will be analyzed to identify gaps and other issues of concern, which need to be addressed in the promotion ICT provision in the country.

Data Collection

Data Collection Dates

Start	End	Cycle
2010-05-30	2010-06-20	N/A

Data Collection Mode

Face-to-face [f2f]

Data Collection Notes

Training

The training for fieldwork personnel took 6 days. This covered the contents of the questionnaire as well as survey concepts, logistics and other related issues. The survey personnel were also taken through the standard survey methodology and data collection procedures which included among others; how to interview and record different types of responses, applying skip patterns and cancelling wrong answers. A total of seven trainers facilitated the training.

Data collection

To aid in identification and access to the household, letters of introduction and identification badges were provided to the RAs. This was in addition to facilitating the team with a village elder recognised by the community. Prior to visiting the clusters, teams also went for courtesy calls to the nearest provincial administration offices.

Data collection took 30 days from 30th May and 20th June 2010. Research Assistants visited sampled households to administer the questionnaires. It took the RAs approximately 40-50 minutes to administer the questionnaire depending on the size of the household. Most of the teams managed to collect the data within the stipulated timeframe except teams from Upper Eastern, Nairobi and Nyanza Provinces where data collection was completed a week later owing to various challenges that were encountered.

Questionnaires

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Data Collectors

Name	Abbreviation	Affiliation
Kenya National Bureau of Statistics	KNBS	Ministry of Planning and National Development

Supervision

Each team comprised of four research assistants, one supervisor and a driver. The Field Supervisors were responsible for at least one team. The teams were assigned to operate in areas where their local languages are spoken. The supervisors were

answerable to the Project Team Leader (The Lead Co-Coordinator) through designated Regional Coordinators.

Data Processing

Data Editing

As a matter of procedure initial manual editing was done in the field by the RAs. The supervisors further checked the questionnaires and validated the data in the field by randomly sampling 20 per cent of the filled questionnaires. After the questionnaires were received from the field, an office editing team was constituted to do office editing.

Data was captured using Census and Survey Processing System (CSPRO) version 4.0 through a data entry screen specially created with checks to ensure accuracy during data entry. All questionnaires were double entered to ensure data quality. Erroneous entries and potential outliers were then verified and corrected appropriately. A total of 20 data entry personnel were engaged during the exercise.

The captured data were exported to Statistical Package for Social Sciences (SPSS) for cleaning and analysis. The cleaned data was weighted before final analysis. The weighting of the data involved application of inflation factors derived from the selection probabilities of the EAs and households detailed in section 2.2.7, on weighting the Sample Data.

Data Appraisal

No content available

Documentation

Questionnaires

Household Questionnaire

Title	Household Questionnaire
Author(s)	Kenya National Bureau of Statistics
Date	2010-05-14
Country	Kenya
Language	English
Publisher(s)	Kenya National Bureau of Statistics (KNBS), Communications Commission of Kenya (CCK)
Description	Comprises questions to households.
Filename	Household Questionnaire-Final.pdf

Reports

National ICT Survey Report

Title	National ICT Survey Report
Author(s)	Kenya National Bureau of Statistics
Date	2011-06-01
Country	Kenya
Language	English
Description	This report presents results of the national ICT Survey conducted by the Kenya National Bureau of Statistics [KNBS] in liaison with the Communications Commission of Kenya [CCK]. The survey was carried out over a period of thirty days.

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ACRONYMS/ABBREVIATIONS

BPO	Business Process Outsourcing
CCK	Communications Commission of Kenya
CSPRO	Census and Survey Processing System
DVD	Digital Video Disc
DNS	Domain Name System
DK	Don't Know
EAC	East African Community
EPSEM	Equal Probability Selection Method
GDP	Gross Domestic Product
GoK	Government of Kenya
ICT	Information and Communication Technology
IP	Internet Protocol
ISPs	Internet Service Providers
ITU	International Telecommunications Union
KBC	Kenya Broadcasting Corporation
KDHS	Kenya Demographic and Health Survey
KNBS	Kenya National Bureau of Statistics
KPTC	Kenya Posts and Telecommunications Corporation
KShs	Kenya Shillings
LAN	Local Area Network
MDGs	Millennium Development Goals
MTP	Medium Term Plan
NASSEP	National Sample Survey and Evaluation Programme
NS	Not Stated
PC	Personal Computer
PCK	Postal Corporation of Kenya
PEV	Post Election Violence
PPS	Probability Proportional to Size
RAs	Research Assistants
SPSS	Statistical Package for Social Sciences
TKL	Telkom Kenya Limited
TV	Television
VSAT	Very Small Aperture Terminal
WSIS	World Summit on the Information Society

Technical documents

ICT Survey 2010 Interviewer's Manual

Title	ICT Survey 2010 Interviewer's Manual
Author(s)	Kenya National Bureau of Statistics Communication Commission of Kenya
Date	2010-05-14
Country	Kenya
Language	English
Description	Manual for delivering NICTS 2010
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