

Rwanda - Integrated Household Living Conditions Survey 2005-2006

NISR (National Institute of Statistics, Rwanda) - Government of Rwanda

Report generated on: June 28, 2016

Visit our data catalog at: http://microdata.statistics.gov.rw/index.php

Overview

Identification

ID NUMBER

RWA-NISR-EICV-2005-2006-V1.1

Version

VERSION DESCRIPTION

Vesion 1.0 June 2006

Vesion 1.1 June 2016

PRODUCTION DATE

2007-06-07

NOTES

Version 1.0

- -First release of data used in a capacity building workshop held on 22-27 Feb. 2007
- -This data is the original data set as used for the OPM preliminary poverty analysis.
- -This data has been largely edited for poverty related studies. Further editing may be likely
- -Key data quality issues:
- 1. Adjusments were done to the own consumption data on reporting of buckets as a unit of consumption. Price reporting for for unit needed to be adjusted in some areas.
- 2. The residual value as reported in Section 11 Durables is likely not useable as it reflects replacement value and no correction was undertaken.
- 3. All product codes are not recoded to a standard. They have been left as sequential numbers.
- 4. Household identifiers have been subject to some anonymization. They have been uniquely identified by a sequential cluster and sequential household id number.
- 5. Only relevant and representative geographic ids are included. A key to match the current ids to their geographic correlates has been provided to the NISR. This file is entitled: eicv2_remap_weights.sav
- -The following additional derived files are provided:
- *deflators: contains the computed deflators used for the poverty sttudy.
- *poverty file: contains the household consumption aggregate, poverty statistics and welfare quintile.
- Version 1.1 -Corrected some spelling errors in the DDI. -Added the OPM Poverty Assessment from December. -Changed the name of the community files.

Version 1.2

Some changes have been made to the data files.

- -sections 6e, 6f, 7 (employment) were missing the unique keys. These have been added.
- -deflator file has been added

- -added ASCII data
- -study folders for labour, poverty, social sector and national accounts added.

Other changes:

Version 1.1 had problems with some of the hyperlinks. These have been corrected.

User feedback regarding the literacy questions suggest that the universe is not well defined. The universe for literacy is only asked for those persons aged 6 and over that did not complete primary school. The question was otherwise skipped as it was assumed that those with a primary school education could read and write.

Overview

ABSTRACT

The objectives of the EICV 2005 are to provide information on poverty and living conditions in Rwanda and to monitor changes over time as part of the ongoing monitoring of the Poverty Reduction Strategy and other Government policies. The results of the EICV 2005 will be compared with the results of the EICV 2001 and the content of the questionnaire will be broadly similar to that of the previous survey. In addition the survey will provide data on household income and expenditures which can be used for updating the weights and market basket for the Consumer Price Index (CPI) and components of the national accounts. Survey data on agricultural activities have also proved to be important for national accounts and will complement information provided by future agricultural and rural sector surveys.

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

Household

Person

Commodity (for GDP computation)

Scope

NOTES

The information gathered during the survey will be used primarily to provide information on assorted household and personal level characteristics which can be analyzed vis a vis the household's consumption. The primary household and person characteristics that are gathered in this survey in order to provide relevant indicators are:

- -school attendance and literacy. This includes information to compute net and gross enrollment rates
- -health and fertility. Some indicators such as maternal mortality are outside the scope of the survey. In this case, a more appropriate survey like the DHS may be recommended
- -migration
- -employment and economic activity.
- -land ownership and other agricultural based indicators.

The survey is also designed to provide important information for the computation of National Accounts and rebasing the Consumer Price Index.

Coverage

GEOGRAPHIC COVERAGE

Complete national coverage which included all 11 former provinces (now 5 major provinces) and the City of Kigali.

UNIVERSE

Household members (institutional and itinerant populations exxluded)

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

| Name | Affiliation |
|---|----------------------|
| NISR (National Institute of Statistics, Rwanda) | Government of Rwanda |

FUNDING

| Name | Abbreviation | Role |
|---|--------------|------------------------------|
| The Government of Rwanda | GOR | Government funding |
| Department for Intenational Development | DIFD | Bilateral funding assistance |

OTHER ACKNOWLEDGEMENTS

| Name | Affiliation | Role |
|--------------------------|----------------------|------------------------------------|
| Oxford Policy Management | DFID | International Technical Assistance |
| MINECOFIN | Government of Rwanda | Primary user of data (EDPRS) |

Metadata Production

METADATA PRODUCED BY

| Name | Abbreviation | Affiliation | Role |
|--|--------------|---|---|
| National Institute of Statistics of Rwanda | NISR | Ministry of Finance and economic Planning | Data and metadata producer and deposit |
| Oxford Policy Management | ОРМ | DFID | Provided technical assistance for archiving the data set |
| PARIS 21 (Accelerated Data Program) | | PARIS 21 (Accelerated Data Program) | Provided funding to send an expert to assist and train in archiving |
| Ruben MUHAYITETO | | NISR | Revised the metadata |

DATE OF METADATA PRODUCTION 2007-02-23

DDI DOCUMENT VERSION

Version 1.0

Contains the following:

MICRODATA:

-All microdata associated with the EICV 2005 survey

DERIVED FILES:

-Key derived files used to produce a prelimiary poverty report for the Ministry of Finance

v1.0: First ddi produced

v1.1: DDI revised(changed the title from french to English)

DDI DOCUMENT ID

RWA-NISR-EICV-2005-2006-V1.1

Sampling

Sampling Procedure

Introduction

The sampling frame for the EICV1 was based on the data and cartographic materials from the 1991 Rwanda Census of Population and Housing, while the EICV2 was based on the 2002 Rwanda Census frame. There were significant changes in the areas considered urban between the two censuses, but these geographic changes are taken into account in the comparative analysis between the EICV1 and EICV2 data. The sample design for EICV1 is described in the report on Enquête Intégrale sur les Conditions de Vie des Ménages (Avec Volet Budget - Consommation) - Plan de Sondage" (Scott, July 1997). A detailed description of the EICV2 sample design is found in the report on Recommendations on Sample Design and Estimation Methodology for the Rwanda Enquête Integrale sur les Conditions de Vie des Ménages 2005. (Megill, June 2004).

A stratified two-stage sample design was used for both the EICV1 and EICV2. The primary sampling units (PSUs) were the enumeration areas or zones de dénombrement (ZDs) defined for the census. The sample of ZDs in each stratum was selected with probability proportional to size, where the measure of size was based on the number of households from the census frame. A new listing of households was conducted in each ZD, and a sample of households was selected at the second sampling stage. The units of analysis are the households and the individual members of the household.

One of the objectives of EICV1 and EICV2 was to provide reliable estimates of household consumption and other characteristics at the level of the 12 old provinces, as well as at the national level, City of Kigali, other urban and rural. Later the country was divided into five new provinces; given the larger size of the new provinces, the corresponding estimates will have better precision than those at the old provincial level.

Stratification

The stratification of the sampling frame for both EICV1 and EICV2 was designed to improve the efficiency of the sample design and ensure a sufficient sample size for the major geographic domains of analysis. The sampling frame for these surveys was stratified by the 12 old provinces, as well as by urban and rural areas. At the national level three residential strata were defined: (1) City of Kigali, (2) other urban, and (3) rural. In the case of EICV1, the ZDs in the urban and rural strata for each province were ordered geographically to provide a corresponding implicit stratification.

In the case of the City of Kigali, there is a higher variability in socioeconomic characteristics compared to the other domains. Therefore a socioeconomic stratification was defined for the ZDs in the EICV2 sampling frame for the City of Kigali, using an indicator of bien-être (well-being) based on housing characteristics in the 2002 Rwanda Census data. The ZDs were coded by four socioeconomic quartiles, and this was used as a sorting variable to provide a corresponding implicit stratification. A new stratification code for "semi-rural" was introduced into the sampling frame for EICV2 to identify urban ZDs with at least 70 percent of households with agricultural operations (based on the 2002 Rwanda Census data). This "semi-rural" code was used as one of the sorting criteria for the sampling frame of the City of Kigali and the other urban stratum in each province. Within each stratum, the ZDs in the sampling frame were further sorted geographically to provide an additional level of implicit stratification.

Given that the rural economy is primarily agricultural, the socioeconomic characteristics of the rural households are generally correlated with the crop and livestock activities found in the different bio-climatic zones. Therefore the EICV2 sampling frame for rural strata was sorted by the ten bio-climatic zones as well as geographic codes to provide an effective implicit stratification.

Sample size and allocation

The sample size for EICV1 and EICV2 was determined by the precision required for the survey estimates for each domain, as well as by the resource and operational constraints. The total sample size for EICV1 was 570 ZDs and 6,450 households. For EICV2 this sample size was increased to 620 ZDs and 6,900 households, in order to provide a larger sample for the urban strata. One reason for increasing the urban sample for EICV2 was because of the expansion of urban areas following the 2002 Rwanda Census. The effective sample size for EICV1 was actually 6,420 households, since 30 non-interviews were not replaced for this survey.

Given that one of the objectives of these surveys was to produce reliable estimates for each of the 12 old provinces, a total of 40 sample rural ZDs was allocated to each province. A larger sample was allocated to the City of Kigali because of the larger variability of socioeconomic characteristics; 80 sample ZDs were selected in this domain for EICV1 and 100 ZDs for EICV2. In the case of the other urban strata, a sample of 50 ZDs for EICV1 and 80 ZDs for EICV2 were allocated to the 11 other provinces proportionately to their urban population. Table A.1 presents the distribution of the sample for EICV1, and Table A.2 shows the corresponding distribution for EICV2.

For EICV1 the number of households selected per sample ZD was 9 for the City of Kigali and the other urban stratum, and 12 for the rural stratum. This was an effective sampling strategy given that the urban strata generally have more variability between ZDs and homogeneity of households within ZDs. This approach also provided a reasonable workload for the enumerators in the urban and rural ZDs based on the data collection procedures each cycle. Therefore this same sampling strategy was used for EICV2.

Sample Selection Procedures

For both EICV1 and EICV2 the ZDs within each stratum were selected systematically with probability proportional to size, where the measure of size was based on the number of households in the ZD from the corresponding census frame (1991 for EICV1 and 2002 for EICV2). Following a new listing of households in the sample ZDs, at the second stage 9 sample households were selected systematically in each sample urban ZD and 12 sample households were selected in each rural ZD. This sampling strategy provided an approximately self-weighting sample (that is, the sampling weights were similar) within each stratum. A sample of possible replacement households was also selected systematically within each sample ZD. Whenever an original sample household could not be interviewed for any reason, it was substituted by one of the random replacement households.

Deviations from Sample Design

As indicated, any household that was not interviewed as per the original listing and selection was replaced with a reserve household. Each EA had 4 households on reserve. A total of 522 households were replaced over the course of the survey. In addition, several EAs were swapped from their scheduled cyclic visit due to seasonal accessability problems.

| Cluster | From To | |
|---------|---------|---------|
| 337 | Cycle 6 | Cycle 2 |
| 364 | Cycle 8 | Cycle 2 |
| 131 | Cycle 6 | Cycle 3 |

| 269 | .Cycle | 5 | .Cycle | 3 |
|-----|--------|---|--------|---|
| 270 | .Cycle | 5 | .Cycle | 3 |
| 264 | .Cycle | 3 | .Cycle | 5 |
| 271 | .Cycle | 3 | .Cycle | 5 |
| 132 | .Cycle | 3 | .Cycle | 6 |
| 327 | .Cycle | 2 | .Cycle | 6 |
| 362 | .Cycle | 2 | .Cycle | 8 |

Response Rate

Out of the 6900 household sample, 92.4% responded. All 7.6% of households that were not interviewed (for the reasons provided below) were replaced.

 Reason for non-response
 HHolds
 precent

 Yes
 .6378
 .92.4%

 No, address not found or uninhabited dwelling
 .254
 .3.7%

 No, change of residence
 .139
 .2.0%

 No, sick or deceased
 .29
 .0.4%

 No, refused
 .27
 .0.4%

 No, other
 .73
 .1.1%

 Total
 .6900
 .100.0%

The City of Kigali and the old province of Butare had the highes refusal rates with about 14% of the original selected households being replaced. The primary reason given for replacement was the inability to positively identify the dwelling (or the selected dwelling was found unihabited).

Weighting

In order for the estimates from each survey to be representative at the national level, it is necessary to apply sampling weights to the survey data. The weights for the sample households were calculated as the inverse of the overall probability of selection, taking into account each sampling stage. Given the nature of the sample design and the new listing of households, the weights vary by sample ZD. An Excel spreadsheet with all the sampling frame information for the sample ZDs was used for calculating the weights, which were then attached to the corresponding records in the survey data files.

Questionnaires

Overview

The questionnaires that were used for the survey were largely adapted from the EICV-1. However there were some substantial changes in structure particularly for the employment section. The questionnaire was subject to revision through a series of consultative meetings held in October 2004. The questionnaires remain predominantly structured with pre-coded responses. It should be noted that some of the response categories have changed between the EICV-1 and EICV-2 requiring a series of recodes for comparability.

The questionnaires were piloted in August 2005 and printed locally. Part A was color coded with a green cover and Part B was color coded with a pink cover.

Questionnaire Contents (see external resource entitled: Questionnaires)

The following are the primary sections of the questionnare and associated data file in parentheses:

PART A: General

- -Section 0: Introductory Section (eng_eicv2_s0_id): Contains introductory observations and records the response rate and replacement households as well as dates of the interview.
- -Section 1: Demographics (eng_eicv2_s1_demo): Contains general demographic information of the persons present at the household during the survey and makes a determination on who is a household member based on the appropriate selection criteria (see the variable description for household member for more information).
- -Section 2: Education (eng_eicv2_s2_education): All household members 6 years and over. Contains information on school attendance (current and past), expenditures, literacy etc.
- -Section 3: Health (eng_eicv2_s3_health): Contains 3 sub sections:
- a. general section for all household members including health expenditures
- b. fertility section for all female household members between the ages of 12-49
- c. vaccination section for all children 5 and under
- -Section 4: Migration (eng_eicv2_s4_migration): All household members 15 and over. This section identifies those persons who have moved into the district and provides information on mobility
- -Section 5: Household characteristic (eng eicv2 s5 housing): All households responding to various questions on:
- a. ownership status

- b. household amenities
- c. rental payments and other household expenditures
- -Section 5E: Access to services (eng_eicv2_s5e_services): All households responding to nine sequentially ordered services.
- -Section 6ABC: Employment Parts A,B,C (eng eicv2 s6abc employment): All household members six years and over.
- a. Contains general filter questions to help determine employment status and sector of work
- b. employment search
- c. household chores.
- -Section 6D: Employment listing (eng_eicv2_s6d_employ_roster): All household members six and over that are economically active. This is a listing of all occupations and time estimations dedicated to each occupation throughout the year in the last seven days.
- -Section 6E: Salaried employment (eng_eicv2_s6e_employ_wages): All occupations in a household that are salaried. This section provides income and benefit information for all salaried employment.
- -Section 6F: Non-remunerated work (eng_eicv2_s6f_noremuner): All employments listed that are classified as non-remunerated work.
- -Section 7: Non-farm Enterprise (eng_eicv2_s7_emterprise): All non-farm independent occupations that are conducted by the househol

PART B: Agriculture and Expenditure

- -Section 8A1: Livestock ownership (eng_eicv2_s8a1_livestock): Contains household ownership of 8 sequentially ordered kinds of livestock -
- -Section 8A2: Livestock products (eng_eicv2_s8a2_livestock_products): Contains household ownership of 7 sequentially ordered kinds of livestock products.
- -Section 8A3: Expenditures related to livestock ownership (eng_eicv2_s8a3_livestock_expenditures): Contains household ownership of 9 sequentially ordered kinds of products related to livestock ownership.
- -Section 8B: Assets related to agriculture activity (eng_eicv2_s8b_ag_assets): Contains household ownership of 13 sequentially ordered assets used to facilitate agricultural production.
- -Section 8C: Individual plots of land (eng_eicv2_s8c_ag_plots): Contains information at the individual declared plot level related to size of holding and crop production
- -Section 8D: Large scale or bulk agricultural production (eng_eicv2_s8d_ag_production1): Contains information regarding the harvest, sale, processing and own-consumption of crops harvested in bulk quantities. Products are listed as they are applicable and not pre-coded.
- -Section 8E: Small scale or piecemeal agricultural production (eng_eicv2_s8e_ag_production2): This file contain information regarding the harvest, sale, processing and own-consumption of crops harvested in piecemeal fashion. Products are listed as they are applicable and not pre-coded.
- -Section 8F: Other agricultural products (eng_eicv2_s8f_ag_other) Contains household ownership of 8 sequentially ordered items (like honey and wood foraging) defined as miscellaneous agricultural production.

- -Section 8G: Inputs related to agricultural production (eng_eicv2_s8g_ag_expense): Contains household expenditure 14 sequentially ordered items primary agricultural inputs.
- -Section 8H: Agricultural processing (eng_eicv2_s8h_ag_process): Contains information on the processing of various processed items. Products are listed by the household and not pre-coded.
- -Section 9A1: Annual (infrequent) non food expenditure (eng_eicv2_s9a1_nfood_annual): This section contains annual expenditure information at the product code level of 68 sequential products.
- -Section 9A2: Monthly (infrequent) non food expenditure (eng_eicv2_s9a2_nfood_month): This file contains mothly expenditure information at the product code level of 31 sequential products.
- -Section 9A3: Frequent non food expenditure (eng_eicv2_s9a3_nfood_freq): This section contains information on 44 frequent non-food item purchases as reported during the time between enumerator visits. The periodicity of the visits varies between urban and rural areas with:
- -Section 9B: Frequent food expenditure (eng_eicv2_s9b_food): This section contains information on 144 frequent food item purchases as reported during the time between enumerator visits. The periodicity of the visits varies between urban and rural iwth:
- -Section 9C: Availability of key items (eng_eicv2_s9c_availability): This section contains information on the availability of 20 items considered as staples or critical for the household.
- -Section 9D: Own consumption (eng eicv2 s9d ex owncons):
- -Section 10A: Transfers out of the household (eng_eicv2_s10a_transfer_out): This section contains a listing of individual transfers made by household members in the last 12 months.
- -Section 10B: Transfers into the household (eng_eicv2_s10b_transfer_in) This section contains a listing of individual transfers received by household members in the last 12 months.
- -Section 10C: Miscellaneous income and expenditure (eng_eicv2_s10c_misc): This file contains a combined listing of 24 sequential income and expenditure items made over the last 12 months. There are 14 revenue items and 11 expenditure items.
- -Section 11A: Household Credit (eng_eicv2_s11a_credit): This section contains a listing of individual loans received by household members in the last 12 months.
- -Section 11B: Durable good ownership (eng_eicv2_s11b_durables): This section contains information on the availability of 27 household durable goods.
- -Section 11C: Household Savings (eng_eicv2_s11c_savings): This section contains a listing of individual savings held by household members in the last 12 months.
- PART C: Community Questionnaire
- -Section 0: Introduction (eng eicv2 com0 intro): This section contains the date of the interview.
- -Section 1: Migration patterns (eng_eicv2_com1_migration): This section contains information on migration patterns into and out of the community (cluster).
- -Section 2: Economic activity (eng_eicv2_com2_econactivity): This section contains information on the cluster's predominant livelihood. It also contains information on community services and access to these services: roads, utilities, public transport etc.
- -Section 3: Access to school (eng_eicv2_com3_education): This section contains information on the cluster's access to school and other educational institutions. It also provides some data on school facilities.
- -Section 4: Health (eng_eicv2_com4_health): This section contains information on community health problems, services and

access to services.

- -Section 5: Agriculture (eng_eicv2_com5_agri) (eng_eicv2_com6_ivestock) (eng_eicv2_com7_ag_extension) : This section contains information on coded products and agriculture activity related to the community, livestock and access to agricultural coomunity services.
- -Section 6: Community Services (eng_eicv2_com8_comm_service): This section contains information of the existence of community services such as: churches, mosques, markets, health centers etc.
- -Section 9: Market survey (eng_eicv2_com9_market) This section contains price and product information as collected (and available) at the local market.

NOTE: All codes are sequential for all the precoded sections. There is not standard coding schem provided.

Data Collection

Data Collection Dates

| Start | End | Cycle |
|------------|------------|-------|
| 2005-10-12 | 2005-11-13 | 1 |
| 2005-11-17 | 2005-12-19 | 2 |
| 2005-12-23 | 2006-01-24 | 3 |
| 2006-01-28 | 2006-03-01 | 4 |
| 2006-03-05 | 2006-04-06 | 5 |
| 2006-04-10 | 2006-05-12 | 6 |
| 2006-05-16 | 2006-06-17 | 7 |
| 2006-06-21 | 2006-07-23 | 8 |
| 2006-07-27 | 2006-08-28 | 9 |
| 2006-09-01 | 2006-10-03 | 10 |

Data Collection Mode

Face-to-face [f2f]

Data Collection Notes

- -A listing of households was undertaken of the selected EAs in the sample. This exercise began in June 2005. Three months were required to list the households in the EAs.
- -Vehicles were provided by DFID. They were transferred from another DFID project for use on the EICV.
- -A four week training of enumerators was held in Ruhengeri. Of 114 applicants 94 were selected. This included the 16 controllers and 78 enumerators.
- -Controllers were provided with a list of replacement households in the event of non-response. Four replacements were drawn for each cluster. These are identifiable in the data set as the end in multiples of 4. Households 4-8-12-16 indicate replacement households.

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- -Section 11A: Household Credit (eng_eicv2_s11a_credit): This section contains a listing of individual loans received by household members in the last 12 months.
- -Section 11B: Durable good ownership (eng_eicv2_s11b_durables): This section contains information on the availability of 27 household durable goods.
- -Section 11C: Household Savings (eng_eicv2_s11c_savings): This section contains a listing of individual savings held by household members in the last 12 months.
- PART C: Community Questionnaire
- -Section 0: Introduction (eng eicv2 com0 intro): This section contains the date of the interview.
- -Section 1: Migration patterns (eng_eicv2_com1_migration): This section contains information on migration patterns into and out of the community (cluster).
- -Section 2: Economic activity (eng_eicv2_com2_econactivity): This section contains information on the cluster's predominant livelihood. It also contains information on community services and access to these services: roads, utilities, public transport etc.
- -Section 3: Access to school (eng_eicv2_com3_education): This section contains information on the cluster's access to school and other educational institutions. It also provides some data on school facilities.
- -Section 4: Health (eng_eicv2_com4_health): This section contains information on community health problems, services and access to services.
- -Section 5: Agriculture (eng_eicv2_com5_agri) (eng_eicv2_com6_ivestock) (eng_eicv2_com7_ag_extension) : This section contains information on coded products and agriculture activity related to the community, livestock and access to agricultural coomunity services.
- -Section 6: Community Services (eng_eicv2_com8_comm_service): This section contains information of the existence of community services such as: churches, mosques, markets, health centers etc.
- -Section 9: Market survey (eng_eicv2_com9_market) This section contains price and product information as collected (and available) at the local market.

NOTE: All codes are sequential for all the precoded sections. There is not standard coding schem provided.

Data Collectors

| Name | Abbreviation | Affiliation |
|--|--------------|----------------------|
| National Institute of Statistics, Rwanda | NISR | Government of Rwanda |

Supervision

Urban and rural teams were organized. The allocation of teams were as follows:

Rural Areas: One rural team was set up for each of the 11 rural provinces. Each team consisted of one controller and 5

enumerators. A driver and vehicle was also assigned to each team. Urban: 4 teams were set up for urban areas (Kigali and "other urban"). These consisted of a controller and 4 enumerators. Monthly supervisory trips were conducted by central NISR staff to maintain control of the process. The field coordination was managed by one assigned and dedicated survey manager (Mr. Innocent Niyonsaba). Personnel Required for the survey Technical Project Manager 1 24 months Technical Deputy Managers 2 24 months Accountant 1 18 months Secretary 1 24 months Provincial Officers 12 24 months Supervisors 16 17 months Interviewers 98 14 months Data Entry Operators 17 14 months Drivers 22 14 months (includes central supervision) Data Entry Supervisor 1 18 months Data Editors 6 15 months Archivist 1 15 months Vehicles, maintenance and fuel Vehicles 23 4WD Vehicle Rental for Listing 7 90 day

Other equipment

17

Core Team Desktops 5

Core Team Laptops 2

Core Team printers 2

Data Entry Computers 17

Verifiers and Editors Computers 6

Photocopier 1

Fax machine 1

Survey material (boots, umbrellas, etc.) 120

Cell Phones 15

Data Processing

Data Editing

Data Editing (see external resource entilted: Final Data Processing Report)

Questionnaires were reviewd by the controller in the field before they were dispatched for data entry. A control sheet was provided to the contollers to assist in the process of manually editing the questionnaires. Questionnaire structures were verified when the questionnaires were checked in prior to data entry. Three contracted persons reviewed the questionnaire and filled in a form that served as a primary data control sheet. Automated data editing was largely done during the data entry phase (see "Other Data Processing" for details). Some batch edit programs were used to identify inconsistent data.

Data Imputation

Data imputation was largely done during the analysis phase by analysts. However, a "structural" imputation on the microdata was required for the own consumption data. This was done to adjust for erroneous pricing when the unit for measuring own consumption was buckets. For more information, please refer to the SPSS su=yntax files orthe data processing report.

Primary Data Issues

Coding of products was based on sequential codes for each section. Sequential coding was used to correlate the indexed position of the item for locating the record in the data processing system with the actual row number or sequence. For the poverty study, a recode was done to expenditures to the EICV-1 codes. The recodes are available in the syntax files. However a general recode to standardize commodites to a standard (such as COICOP) was not done.

Other Processing

Data Entry (see external resource entilted: Final Data Processing Report)

New systems and techniques were used to capture and edit the data for the EICV-2. Many improvements were implemented to the data entry system for the EICV-1 used the DOS based software called IMPS for both data entry and data editing (CENTRY and CONCOR modules respectively). In addition, EICV-1 used various short term and intermittent consultant inputs for the design and implementation of the data processing system. The first five months of the data entry process during the EICV-1 suffered greatly from a lack of quality control. This lack of cohesive support during both the design phase and initiation of the data processing system likely impacted the quality of the data despite attempts made to correct the system during mid-survey.

For the EICV-2, long-term and continuous technical support was provided by the OPM consulting firm and better trained and more committed local supervisors followed through in implementing and maintaining the system. In addition and more importantly, the EICV-2 data processing activities followed quickly behind the processing of the DHS (Demographic and Health Survey). It was clearly advantageous to simply adapt the DHS data processing system for the EICV-2. The DHS data processing system is a broadly used and dynamic system designed for use with the data processing software CSPro (Census and Survey Processing System). In fact, CSPro is designed with the DHS as its model survey. Furthermore, this system of

managing the data processing activities is also being used by UNICEF to process the MICS. Applying a robust system and modifying it for use during the EICV-2 saved a great deal of time and effort in training and development. The staff was already familiar with the DHS data processing and editing system and porting the system to the EICV-2 over the long term and through the extent of the survey proved very useful. Some of the specifications that are used by the DHS, MICS and the EICV are:

- a. An integrated sample design control sheet used to check in questionnaires.
- b. A data entry system designed as "system control". A system controlled application is a very tight control system where the path of data entry cannot be circumvented by the data entry clerk. The path is fully programmed and must include: skips and pre-defined keys for: missing, other or incoherent data.
- c. Full double-entry for independent verification.
- d. A systematic control of data files from: primary-verified-raw-edit-final data files.
- e. Full reconstruction of the consolidated data file with the primary cluster file.
- f. All corrections done on the lowest ASCII cluster level.

The data entry was done centrally in the NISR headquarters. Activity was initiated in the old Census building in Remera on October 20. On December 16, 2006, the NISR consolidated its offices and moved the Census activities to its current location in the old MINIPLAN building. The move required the establishment of the new data entry operations in the new building and the transfer of all machinery to the building. This operation did not adversely affect the keying operations. The remainder of the survey was keyed in the MINPLAN building.

All computers were set up in a LAN with data being copied and written to the supervisor machines and backed up daily.

The questionnaires were received and checked into a central repository. Data was entered by the cluster (9 urban questionnaires or 12 rural questionnaires). Two archivists managed the check-in and distribution of questionnaires to the data entry supervisors. A sample of the check-in forms is provided in Annex 1.

Once the questionnaires were received and logged on a control sheet, the control sheet was entered in an automated control system by the data entry supervisors prior to being assigned to the data entry clerk. This system maintained by the supervisors assured that the sample design was strictly adhered to and that the coding and tracking of the questionnaires was properly initiated and followed. This system was built on the DHS control system and used CSPro to manage the flow and assignment of the questionnaires.

There was a 100% full independent double data entry of the questionnaires. This assured virtual certainty that inconsistencies found in the data were mostly due to errors and misreported items from the field.

Average data processing time to process all three questionnaires related to a cluster was 21.3 days

Data Appraisal

Estimates of Sampling Error

Given that the survey estimates are subject to sampling variability, it is important to calculate the sampling errors for the most important estimates from each survey. The sampling error is measured by the standard error, or square root of the variance of the estimate. The CENVAR software, a component of the Integrated Microcomputer Processing System (IMPS) developed by the U.S. Census Bureau, was used for tabulating the standard errors and other measures of precision, taking into account the stratification and clustering in the sample design. The CENVAR output tables show the value of the estimates, standard errors, coefficients of variation, 95 percent confidence intervals, design effects and number of observations. Given that the confidence intervals provide a user-friendly interpretation of the sampling variability, an annex was produced with tables showing the 95 percent confidence intervals for the most important estimates from the EICV1 and EICV2 data appearing in the preliminary report. These tables provide a quick conservative test to determine whether any difference between the EICV1 and EICV2 estimates is statistically significant.

The INSR was also provided with tables showing the full CENVAR results. The design effect is defined as the variance of an estimate based on the actual sample design divided by the corresponding variance based on a simple random sample of the same size; it is a measure of the relative efficiency of the sample design. In comparing the CENVAR results from EICV1 and EICV2, it was found that the design effects are generally lower for EICV2, indicating that the stratification used for this survey was very effective. Given that the EICV1 was based on an older sampling frame from the 1991 Rwanda Census, this also contributed to the higher design effects for the EICV1 estimates.

File Description

Variable List

Documentation

Questionnaires

Questionnaires Part A and Part B

Title Questionnaires Part A and Part B

Author(s) National Institute of Statistics fo Rwanda, NISR

Date 2005-06-01 Country Rwanda Language French

Contributor(s) Government of Rwanda

Publisher(s) National Institute of Statistics fo Rwanda, NISR

Section 7: Non-farm activity......32
section 8: Agricultural......35
Section 9: Expenditure.......46
Section 10: Transfers and Credit.......70
Section 11: Durable goods and saving.....73

Filename docs/datacollection/rwa eicv 2005 questionnaire.pdf

Questionnaire Part C: Community

Title Questionnaire Part C: Community

Author(s) National Institute of Statistics fo Rwanda, NISR

Date 2006-06-01 Country rwanda Language French

Contributor(s) Government of Rwanda

Publisher(s) National Institute of Statistics fo Rwanda, NISR

Description Questionnaire used to gather information at the community level.

Filename docs/datacollection/rwa_eicv_2005_questionnaire_communautaire.pdf

Reports

Final Data Processing Report

Title Final Data Processing Report

Author(s) Geoffrey Greenwell,, Oxford Policy Management

Date 2007-02-01 Country Rwanda Language English

Contributor(s) Oxford Policy Management (OPM)

Description

This document provides a summary report of the data processing activities for the EICV-2. It includes information on the selection and training of data entry clerks; definition of processes and some statistics on average processing time; returns of questionnaires to the field. It also contains a summary of final general observations.

Contents 1

1. Data Processing Methodology 3

1.1 Selection and Training of Data Entry Clerks 4 Box 1.1 Qualifications for data entry clerks 4

1.2 Management and Flow 3

1.3 Primary data quality issues 5

Table of contents 1.4 Recodes and comparability 6

1.5 Summary specifications 6

1.6 Recommendations & Observations 6

1.7 Appendices 7

1.8 Control sheet for questionnaire A & B 1 Figure 1.1 Returns of questionnaire to the field 3 Figure 1.2 Average processing time by cycle 4

Filename

docs/dataprocessing/final data processing.pdf

Preliminary Poverty Update Report

Title Preliminary Poverty Update Report

Professor Andy McKay, University of Sussex, Mary Strode, OPM Project Manager, Patrick Ward, OPM

Author(s) Consultant , David Megill, OPM Consultant , Geoffrey Greenwell, OPM Consultant , Clare O'Brien, OPM

Consultant

Date 2006-12-01 Country Rwanda

This report contains the preliminary poverty findings as presented in December 2006. It contains the first

Description computations of the primary poverty indicators plus a some key and brief analysis on some relevant

indicators.

List of tables and figures iv Acknowledgements vii Summary of findings viii Poverty and Inequality viii Social indicators ix

Economic activity and time use ix

Conclusions x
1. Introduction 1

2. Poverty and inequality in Rwanda: 2001 to 2006 2

2.1 Summary of methods for poverty and inequality analysis 2

2.2 A summary of recent poverty trends and patterns 2

2.3 Geographic patterns of inequality and their evolution over time 6

2.4 Patterns of ownership of core durable goods 92.5 The situation of specific vulnerable groups 10

3. Social indicators 12

3.1 Education 12

Table of contents 3.2 Health 17

3.3 User satisfaction with services 20

3.4 Housing and access to water and sanitation 21

4. Economic activity and time use 25

4.1 Jobs 25

4.2 Time Usage 27

4.3 Agriculture 32

4.4 Credit 35

4.5 Energy expenditures 37

4.6 Migration 38

Annex A: Methods used to estimate poverty and inequality; and sensitivity analysis 42

A.1 Construction of the household consumption measure 42

A.2 Adjusting for price differences and changes 43

A.3 Adjusting for differences in household size and composition 44

A.4 The poverty line 44

A.5 Adjusting for urban and rural boundary changes 45

Annex B: Supplementary tables 46

Filename docs/studies/Master Report.pdf

OPM Survey Assessment-February

| Title | OPM Survey Assessment-February Table of Contents |
|-------------------|--|
| Table of contents | 1. Introduction |
| Table of Contents | Annexes14 |
| | Annexe 1: Terms of Reference - Construction of Consumption Aggregates and Preliminary Poverty Analysis |
| Filename | docs/overview/EICV2 review mission report.pdf |

Technical documents

Recommendations on Sample Design and Estimation Methodology for the Rwanda Enquête Intégrale sur les Conditions de Vie des Ménages 2005

| Title | Recommendations on Sample Design and Estimation Methodology for the Rwanda Enquête Intégrale sur les Conditions de Vie des Ménages 2005 |
|----------------|--|
| Author(s) | David J. Megill, U.S. Census Bureau |
| Date | 2004-06-01 |
| Country | Rwanda |
| Language | English |
| Contributor(s) | Oxford Policy Management (OPM) |
| Publisher(s) | National Institute of Statistics of Rwanda, NISR |
| Description | This document provides a full report of the methodology used to design the EICV-2. It covers some of the sampling issues of EICV-1 for comparability purpose and also deals with all the mechanics for sample design and sample selection. |
| | TABLE OF CONTENTS 1. Background |
| Filename | docs/sampling/Samples Megill Mission 1.pdf |

Computation of household weights

Computation of household weights

Title

Author(s) David J. Megill, U.S. Census Bureau

Date 2006-10-01 Country Rwanda Language French

Contributor(s) Oxford Policy Management (OPM)

Publisher(s) National Institute of Statistics, Rwanda (NISR)

Description This excel file contains the computations for the household weights.

Filename docs/dataappraisal/EICV2 Ponderation Final.xls

Selected Confidence Intervals

Title Selected Confidence Intervals
Author(s) David J. Megill, U.S. Census Bureau

Date 2006-12-01 Country rwanda Language english

Contributor(s) Oxford Policy Management

Filename docs/dataappraisal/Annex conf int test hypothesis.pdf

Other materials

EICV-2005 Data Entry Applications

Title EICV-2005 Data Entry Applications

Author(s) OPM-Geoffrey Greenwell-Data Processing Consultant

Date 2005-10-01 Country rwanda

Contributor(s) DHS-ORC Macro

The data programs attached here are based on the DHS managment system. The DHS Rwanda data

Publisher(s) entry system was used as the basis to manage the and track the survey. Although the programs have

been highly modified, the design remains the same.

Description

This is a zip file that contains the data entry programs that were used for the EICV-2005. They are in

CSPro and include various INI type text files.

Part A: Contains the data dictionary and programs for entering Part A. Part B: Contains the data dictionary and programs for entering Part B. Part C: Contains the data dictionary and programs for entering Part C.

Table of contents LOOKUP: Contains the various sample and control files used to manage the data entry

ENTRY: Contains the data entry management system (based on DHS)

DICTS: Contains all the data dictionarues used for data entry and data management

Filename docs/dataprocessing/data entry apps.zip

Data Entry Manual and Instruction

Title Data Entry Manual and Instruction

Author(s) ORC-Macro (Based on the DHS Data Entry Manual) , National Institite of Statistics of Rwanda

Date 2005-10-01
Country Rwanda
Language French

Contributor(s) ORC Macro (Based on the DHS data entry manual)

Description This is a manual written in French adapted from the DHS data entry manual.

| Table of content | 1. Directives générales de saisie de données2 2. Commencer la saisie de données3 3. Corriger les données |
|------------------|--|
| Filename | docs/dataprocessing/fr_entry.pdf |

Data Entry Supervisor's Manual

Title Data Entry Supervisor's Manual Author(s) ORC-Macro (Based on the DHS Data Entry Manual), ORC-Macro (Based on the DHS Data Entry Manual) Date 2005-10-01 Country Rwanda Language French Contributor(s) ORC Macro (based on the DHS Supervisor's Manual) Description This is the supervisor's guide for data entry. It is based on the DHS Supervisor's guide. Introduction...... 2 3) Assignation pour la saisie de données...... 3 4) Saisie des quetionnaires...... 4 5) Plénitude du fichier de données...... 5 6) Vérification des questionnaires...... 5 9) Sauvegarde des données brutes de la grappe 6 10) Edition secondaire et correction finale du fichier des données 6 11) Sauvegarde des données finales...... 7 Appendice A : État de la grappe...... 8 Appendice B: Menu de Supervision 8 Filename docs/dataprocessing/fr superv.pdf

SPSS Synthax of EICV2

Title SPSS Synthax of EICV2

Author(s) National Institute of Statistics of Rwanda

Date 2005-2006 Country Rwanda Language English

Filename C:/Doc/xampp/htdocs/microdata/datafiles/default/cfff23c7aeaded338ca2e193195d1df5/docs/spss_syntax_eicv2.zip

EICV-2005 Methodological Report for Poverty Line Construction

Title EICV-2005 Methodological Report for Poverty Line Construction

Author(s) Dr. Andy McKay, University of Sussex Mr. Geoffrey Greenwell, Oxford Policy Management

Date 2006-12-01 Country Rwanda Language English

Contributor(s) Oxford Policy Management (OPM)

Description

This document contains methodolgical content on the computation of the household aggregate and the manner the poverty line was computed for the EICV 2005. It also contains a brief outline of the methods

employed for deflating the consumption aggregate.

1. Introduction......1

2. Overview: the basic approach to the estimation of poverty and inequality......2

3. Estimating household consumption expenditure......2

Table of contents 4. Adjusting for differences in prices faced by households......7

5. Adjusting for differences in the size and composition of households......10

6. Construction of the consumption measure......11

7. Poverty Line......12

Filename docs/studies/rwanda poverty analysis methodological note first draft.pdf

Labour Analytical files

Title Labour Analytical files

Author(s) Mary Strode

Description

This file contains the various data bases that were computed for the labour statistics of the EICV analysis.

It includes some data files from the EICV 1 used for comparisons.

Ag employment tables (SPSS file)

EICV Economic Activity File (Word Document)

EICV Economic data (SPSS file)

Table of contents Syntax for computation

EICV1 job status (SPSS file) EICV2 job status (SPSS file) Total jobs EICV2 (SPSS file)

Filename docs/derived/Labour/EICV1 JobStatus Subsistence1.zip

Social Sector Study on EICV 2

Title Social Sector Study on EICV 2

Author(s) Claire O Brian
Country rwanda
Language english

This file contains the various syntax and tables used for the social sector analysis of the EICV2. The Word

Description document entitled: Data Documentation: Social Sector is a primary document included providing details regarding some of the intermediate files. This file contains separate analysis folders for EICV 1 and EICV 2.

Documentation Overview (Word Document)

Table of contents Various syntax files in STATA

Various interemdiate data in STATA

Filename docs/derived/Social/eicv social sector analysis.zip

Poverty Analysis

Title Poverty Analysis

Author(s) Dr. Andy McKay University of Sussex, Geoffrey Greenwell OECD geoffrey.greenwell@oecd.org

Country rwanda Language eng

Description Contains the syntax and methodology for conducting the poverty study.

Filename C:/Doc/xampp/htdocs/microdata/datafiles/default/cfff23c7aeaded338ca2e193195d1df5/docs/studies/Poverty.zip

Price Deflators

Title Price Deflators

Author(s) Dr. Andy McKay University of Sussex , Geoffrey Greenwell Geoffrey Greenwell OECD

geoffrey.greenwell@oecd.org

Country rwanda

Language english

Description This file contains the Excel file and the methodology used to compute the price deflators used for the EICV 2

'' poverty study.

Mission to Kigali, Rwanda: September 9-21

Title Mission to Kigali, Rwanda: September 9-21

Author(s) Mr. Juan Munoz, Oxford Policy Management (OPM)

Date 2004-09-01 Country Rwanda Language English

Contributor(s) Oxford Policy Management (OPM)

Contains details regarding the planning stages of the EICV 2005. It provides a peer review of the sample

Description selection process; reviews plans to include a panle component (this was subsequently dropped due to lack of

funding) and a review of the general organization and budget needs (financial details ahve been excluded).

Filename docs/overview/JM_Rwa1.pdf

EICV 2005 Survey and Microdata Documentation

Title EICV 2005 Survey and Microdata Documentation

Author(s) National Institute of Statistics, NISR

Date 2007-02-01 Country Rwanda Language French

Contributor(s) Oxford Policy Management (OPM) Uganda Bureau of Statistics (UBOS) PARIS 21

Publisher(s) National Institute of Statistics of Rwanda, NISR

Description

This is a PDF report generated by the Microdat Management Toolkit. It provides a detailed data and

metadata report for the EICV 2005 survey.

Filename docs/overview/MMT Survey report.pdf

Map of selected EAs

Title Map of selected EAs

Country rwanda

Description This is a map that shows the clusters chosen for the EICV2.

Filename docs/docs/maps/ZDEICVII.emf