The Republic of Rwanda

NISR
NATIONAL INSTITUTE OF STATISTICS OF RWANDA

Rwanda Poverty Profile Report 2013/2014

Results of Integrated Household Living Conditions Survey [EICV]

National Institute of Statistics of Rwanda

THE REPUBLIC OF RWANDA

NATIONAL INSTITUTE OF STATISTICS OF RWANDA

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Rwanda Poverty Profile Report

Integrated Household Living Conditions Survey

Enquête Intégrale sur les Conditions de Vie des Ménages

[EICV]

2013/14

August 2015

The Rwanda Poverty Profile Report is produced based on the results of EICV4 (2013/14) that was conducted by the National Institute of Statistics of Rwanda (NISR).

Additional information about Poverty Profile report and EICV4 may be obtained from NISR:
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Foreword

The Government of Rwanda needs updated information for monitoring progress on poverty reduction programmes and policies as stipulated in the second Economic Development and Poverty Reduction Strategy (EDPRS2), the Millennium Development Goals (MDGs) and Vision 2020.

The 2013/14 EICV is a follow-up to the 2000/01, 2005/06 and 2010/11 EICV surveys. Each survey provides information on monetary poverty measured in consumption expenditure terms, but also provides complementary socio-economic information that facilitates understanding changes in households living conditions.

The 2013/14 EICV was implemented by the National Institute of Statistics of Rwanda (NISR), in collaboration with different stakeholders in the country.

Results of the 2013/14 EICV indicate substantial progress in poverty reduction and improvement in other socio-economic and demographic indicators in the last three years. The survey shows that poverty is at 39.1% as of 2013/14, down from 44.9% as was reported in 2010/11. During the same period, extreme poverty dropped from 24.1% to 16.3%.

Generally the progress is impressive. However challenges remain; many Rwandans are still poor and for many others living conditions still need to be improved especially in areas of education and employment.

I find these findings very informative; the report is an important vehicle for addressing poverty concerns and informing policy makers and other stakeholders where to intervene. We should stay on course.

I urge all stakeholders: government, researchers, partners and the general public to optimize the use of these findings.

Finally, I congratulate the National Institute of Statistics of Rwanda and all those who contributed in one way or another in this exercise, for the job well done.

Claver Gatete
Minister of Finance and Economic Planning

Acknowledgements

While celebrating a decade since its establishment, the National Institute of Statistics of Rwanda (NISR) is honoured to present the results of EICV4 conducted in 2013/14.

Through the second National Strategy for the Development of Statistics (NSDS2), NISR has managed to increase the frequency of some surveys to provide timely and update statistics that will facilitate monitoring and evaluation of different policies and programmes at both national and international levels.

The frequency of EICV is now three years. This is an ambitious target that we are committed to achieve in collaboration with our stakeholders in order to support evidence-based decision and planning processes with more frequent and reliable statistics.

In this regard, we present our sincere appreciation to the Government of Rwanda for its support for statistics development in the country, the Ministry of Finance and Economic Planning, and other Government Ministries and Agencies for the facilitation that we received in this endeavour and in other similar efforts.

We express our gratitude to Development Partners that support statistics development in the country and especially EICV4; including: The African Development Bank (AfDB), World Bank, UK Aid, European Union, One UN and other UN agencies in the country. Their contribution was of immense importance to the effective accomplishments of the survey.

We also express our profound gratitude to the advisory team of national and international experts for their advice while constructing the survey, constructing the food basket and setting a new poverty line. Their technical advice contributed to the success of the analysis.

We would also like to thank the EICV management team for their effort throughout the planning and implementation stages of 2013/14 EICV; and also appreciate the valuable support provided by administrative and financial departments of the NISR. Their contribution allowed this exercise to be carried out smoothly.

Yusuf Murangwa
Director General, NISR

Executive Summary

This report provides an update on the level of poverty based on 2013/14 Integrated Household Living Conditions Survey (EICV4) focusing on poverty as measured in consumption terms. The report also highlights other trend dimensions of living conditions captured in other surveys that complement and provide a holistic understanding of poverty and living conditions.

Rwanda's economy has been growing steadily at about 8% since 2001 with GDP per capita more than tripling from US$ 211 in 2001 to US$ 718 in 2014. Food crop production growth was more than twice that of population growth between 2007 and 2014.

Over the period 2011 – 2014 business establishments in Rwanda increased by 24.4% mainly in rural areas. In rural areas the increase was 38.1% compared to 7.3% in urban areas. During the same period, 34.5% new jobs were created by the businesses, 47.9% in rural areas compared to 22.4% in urban areas.

Education outcomes between 2011 and 2014 are also improving with net attendance in secondary education increasing from 17.8% to 23% and that for tertiary education almost doubles from 1.7% to 3%. As a result literacy has also improved from 74.9% to 77.8%. However, net attendance in primary education dropped slightly to 87.9%.

Both fertility and dependency are dropping; with nutrition indicators among children improving; overall stunting dropped from 44.2% to 37.9% between 2010 and 2014/15 while that for the poorest quintile improved also dropping from 54% to 48.6%.

Housing conditions are also improving. Households with grass roofing (nyakatsi) dropped to 0.4% in 2014 from 2.2% in 2011 while roofing with metal sheet increased from 54.4% to 61.1%. Access to electricity almost doubled during the same period to about 20%.

Water and sanitation improved as well with households using improved sanitation (toilets) increasing from 74.5% in 2011 to 83.4% in 2014; while during the same period households with access to improved sources of drinking water increased from 74.2% to 84.8%.

Household assets for example ownership of mobile phones increased from 45.2% in 2011 to 63.6% in 2014. For the poorest quintile (bottom 20%), ownership of mobile phones doubled during the same period from 17.6% to 36.4%.

Following the above context, we see systematic improvements at macro level for the whole country both since 2001 and in the recent past since 2011 when poverty was last measured. We are also seeing similar and in some cases faster improvements in rural areas, among the poorest quintiles (bottom 20%) of the population and small businesses.

Finally, poverty has reduced from 44.9% in 2011 to 39.1% in 2014 and extreme poverty from 24.1% to 16.3%. This follows similar reduction between 2006 and 2011 where poverty dropped from 56.7% to 44.9% and Extreme poverty from 35.8% to 24.1%.

Inequality reduced as well with both the Gini coefficient dropping from 0.49 in 2011 to 0.45 in 2014 and the ratio of the wealthiest 10% to the poorest 10% dropping from 6.36 to 6.01 during the same period.

The following table provides a snapshot of some key indicators:

No	Indicator	2005/06 EICV2	2010/11 EICV3	2013/14 EICV4
1	Poverty	56.7	44.9	39.1
2	Extreme Poverty	35.8	24.1	16.3
3	GINI index	0.522	0.490	0.448
4	Ratio of 90th to 10th percentile	7.1	6.36	6.01
5	Average household size	5.0	4.8	4.6
6	Mean dependence ratio	87.0	85.7	82.7
7	Number of males per 100 females	90.3	90.2	91.6
8	% of individuals (6+ years) that have ever attended school	78.7	83.2	86.1
9	Net Attendance Rate in Primary School	86.6	89.6	87.9
10	Net Attendance Rate in Secondary School	10.4	17.8	23.0
11	Literacy rate among people aged 15-24	76.9	83.1	86.2
12	Percentage of households living in Umudugudu	17.6	37.5	49.2
13	Percentage of households with thatch or leaves roof	9.8	2.2	0.4
14	Percentage of households with metal sheet roof	43.7	54.4	61.1
15	Percentage of households with cement floor	13.3	17.1	21.1
16	Percentage of households with electricity as main source of lighting	4.3	10.8	19.8
17	Percentage of households with oil lamp as main source of lighting	12.7	9.7	5.0
18	Percentage of households with candle as main source of lighting	1.6	5.9	7.4
19	Percentage of households with firewood as main cooking fuel	88.2	86.3	83.3
20	Percentage of households with charcoal as main cooking fuel	7.9	10.6	15.2
21	Percentage of households with crop waste as main cooking fuel	2.7	2.3	0.8
22	Percentage of households with improved drinking water source	70.3	74.2	84.8
23	Percentage of households with improved sanitation	58.5	74.5	83.4
24	Percentage of households owning radio set	46.7	60.2	59.8
25	Percentage of households owning TV set	2.4	6.4	9.9
26	Percentage of households owning computer	0.3	1.7	2.5
27	Percentage of households with access to internet	-	3.7	9.3
28	Percentage of households owning mobile phone	6.2	45.2	63.6
29	Percentage of households owning bicycle	12.9	13.4	15.8
30	Average time (in minutes) to reach a health center	95.1	61.4	56.5
31	Prevalence of health insurance	43.3	68.8	70.0
32	Percentage in Wage farm	8.2	9.8	11.4
33	Percentage in Wage non-farm	10.9	16.8	19.6
34	Percentage of Independent/Small-scale farmer	71.3	61.2	58.0
35	Percentage of Independent non-farm	8.1	9.6	9.9
36	Percentage of livestock-owning households rearing cattle	34.4	47.3	50.4
37	Percentage of livestock-owning households rearing pigs	22.9	24.1	31.9
38	Percentage of households participating in agricultural land consolidation	-	22.4	29.6
39	Percentage of crop-producing households with any plot protected from erosion	-	83.5	85.4
40	Percentage of crop-producing households participating in crop intensification	-	21.1	29.4
41	Percentage of crop-producing households purchasing chemical fertilizer	10.8	28.9	36.4
42	Percentage of crop-producing households purchasing insecticides	24.4	30.5	29.3
43	Percentage of households with at least one savings account	18.9	36.1	54.1

Note: Initially, EICV was conducted every five years. However, starting with EICV4, it is conducted every three years.

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Acronyms

AE	:	Adult Equivalent
AfDB	:	Africa Development Bank
COLI	:	Cost of Living Index
CPI	:	Consumer Price Index
D	:	Decile
DPs	:	Development Partners
EC	:	Establishments Census
EDPRS	:	Economic Development and Poverty Reduction Strategy
EICV	:	Integrated Household Living Conditions Survey (Enquête Intégrale sur les Conditions de Vie des Ménages)
FAO	:	Food Agriculture Organization
FGT	:	Foster-Greer-Thorbecke indices
GDP	:	Gross Domestic Product
HH	:	Household
IMR	:	Infant Mortality Rate
Kcal	:	Kilocalorie
Kg	:	Kilogramme
MDGs	:	Millennium Development Goals
MINAGRI	:	Ministry of Agriculture and Animal Resources
MINECOFIN	:	Ministry of Finance and Economic Planning
MMR	:	Maternal Mortality Ratio
MoH	:	Ministry of Health
MPI	:	Multidimensional Poverty Index
NAR	:	Net Attendance Rate
NISR	:	National Institute of Statistics of Rwanda
NSDS	:	National Strategy for the Development of Statistics
PRSP	:	Poverty Reduction Strategy Paper
Q	:	Quintile
RAB	:	Rwanda Agriculture Board
RBC	:	Rwanda Biomedical Centre
RDHS	:	Rwanda Demographic and Health Survey
RWF	:	Rwandan Francs
SAS	:	Seasonal Agriculture Survey
TV	:	Television
U5MR	:	Under five Mortality Rate
UN	:	United Nations
UNICEF	:	United Nations Children Fund
US	:	United States
WFP	:	World Food Programme
WHO	:	World Health Organization

1. Introduction

Rwanda is experiencing fast socio, demographic and economic transformation since 2000. It has been recording on average 8% GDP annual growth since then, mainly driven by agriculture and services. In addition, socio-demographic indicators have witnessed substantial improvement from 2000 onward.

Following the crisis period; the 1994 genocide against the Tutsi era, the country developed a long term vision "Vision 2020" with five year development programmes: PRSP, EDPRS1 and EDPRS2. The main objective of each was poverty reduction.

With the need to adequately plan interventions and monitor progress in poverty reduction, estimation of absolute monetary poverty in Rwanda started in a regular manner since 2001 when the first Household Living Condition Survey *(Enquête Intégrale sur les Conditions de Vie des Ménages- EICV1)* was undertaken.

Monetary poverty was estimated and analysed as the main objective in all successive EICV surveys (EICV2, EICV3 and the present EICV4). However, the surveys also provide a rich set of complementary social-economic indicators that facilitate understanding of changes in households living conditions.

As for EICV2 carried out in 2005/06 and EICV3 carried out in 2010/11 poverty was estimated using the poverty line derived from EICV1 after deflating the consumption expenditure in both surveys so as to reflect prices that prevailed in 2001.

For EICV4 carried out in 2013/14 it has been deemed necessary to update the poverty line. It has been a long time since 2000/01, and several changes have occurred in the socio-economic structure of the country including the consumption pattern of the population.

This poverty report is built up principally on the basis of the EICV4 results and complemented by information from other sources.

The report is structured as follows: Chapter two describes the Rwandan context in terms of socio-economic and demographic trends of some indicators, Chapter three explains the welfare measure used in computing poverty, the cost of living index and the methodology for determining the food basket and setting the poverty line. Chapter four presents the main poverty results disaggregated geographically while Chapter five provides the conclusions and the way forward.

2. Rwanda Context

Poverty is a complex phenomenon that manifests in different ways and can be studied in many different ways. Some authors define poverty as a lack of material wellbeing considered the minimum acceptable in the society where they live (Ravallion M. 1992) or as a deprivation of basic human needs (UN 1995). Amartya expanded these concepts, arguing that poverty is a denial of choices and opportunities to live a tolerable life (Amartya S. 1992).

Measurement of poverty can be done in different ways. The three principal approaches of measuring poverty are the monetary, non-monetary and subjective poverty measurements.

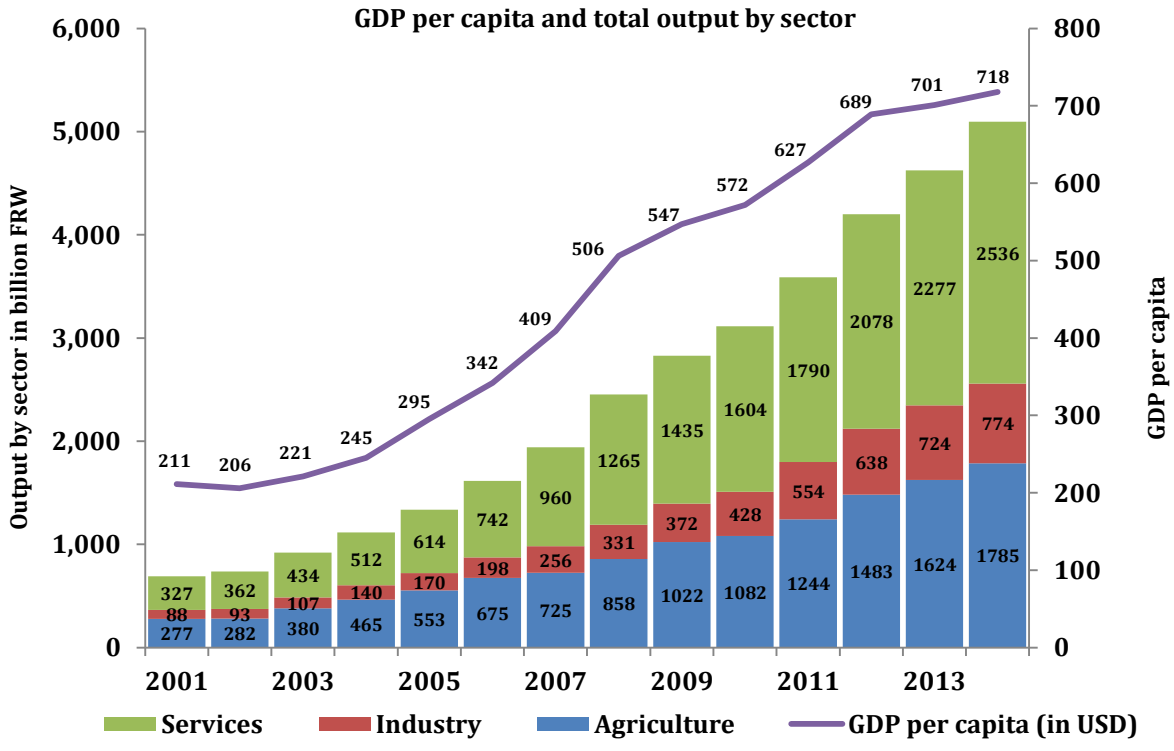
In Rwanda, specifically in the EICV surveys, it is the monetary approach that is used particularly consumption poverty. Nevertheless, other approaches have also been used for example non-monetary poverty, the Multidimensional Poverty Index (Sabina A. et all 2013) following the 2012 Population and Housing Census. However, it is important to note that monetary poverty estimated from EICV surveys forms the official poverty statistical indicators.

This chapter provides a snapshot of the developments that have taken place in Rwanda over the EICV survey period from 2001 to 2014. Focus will be on economic trends, agriculture, businesses and jobs, education, health, nutrition, assets and housing.

2.1 Economic trend

The economic situation in Rwanda has improved substantially in the last 13 years. GDP has grown on average 8% per annum and GDP per capita has increased more than three folds from about US$ 211 per capita in 2001 to about US$ 718 in 2014. Figure 1shows total output by sector and GDP per capita over the years.

Figure 1: GDP at current prices from 2001-2014

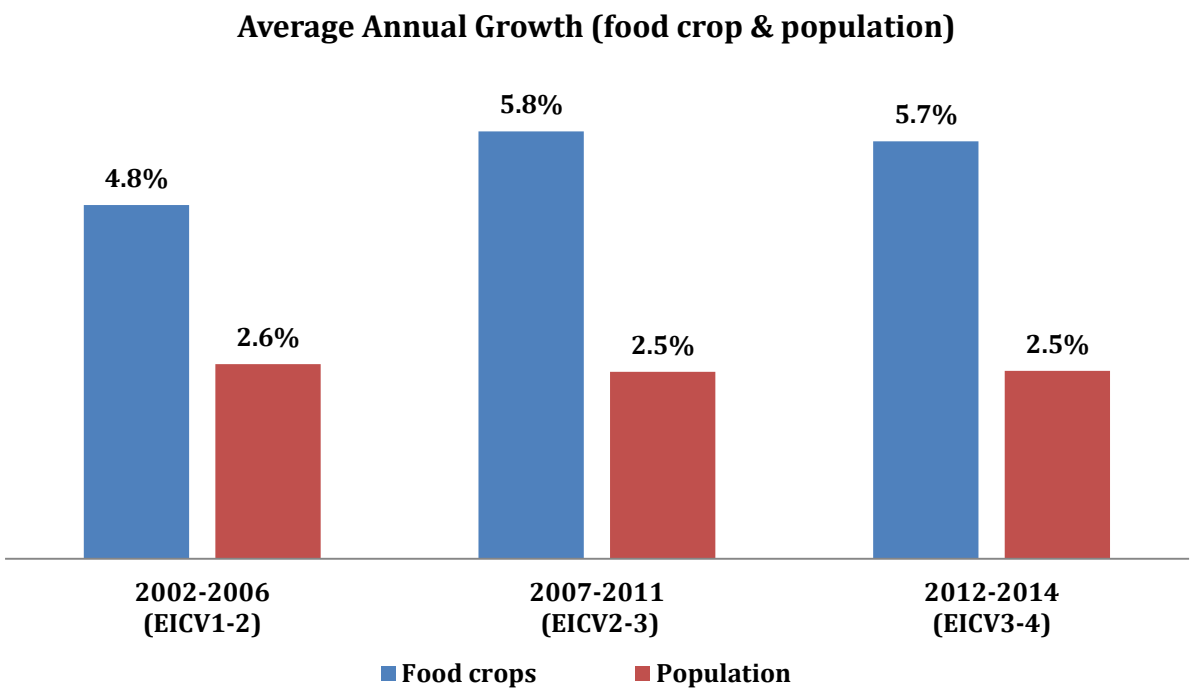


Source: NISR, National Accounts, 2014

As highlighted above, agriculture and services contribute most of the output about 33% and 47% of the GDP respectively. Most Rwandans are also employed in the agriculture sector about 72% mainly in subsistence agriculture. In that sense agriculture is very important for food security, nutrition and poverty reduction. Figure 2 shows a comparison of average annual food crop growth with average annual population growth over the EICV surveys period.

Although starting at a low level in 2001 food crop production has grown faster than population over the period with food crop growing more than twice the rate of population growth over the period of EICV2-3 and EICV3-4 (Figure 2).

Figure 2: Agriculture food crop growth and population growth



Source: NISR, National Accounts, 2014

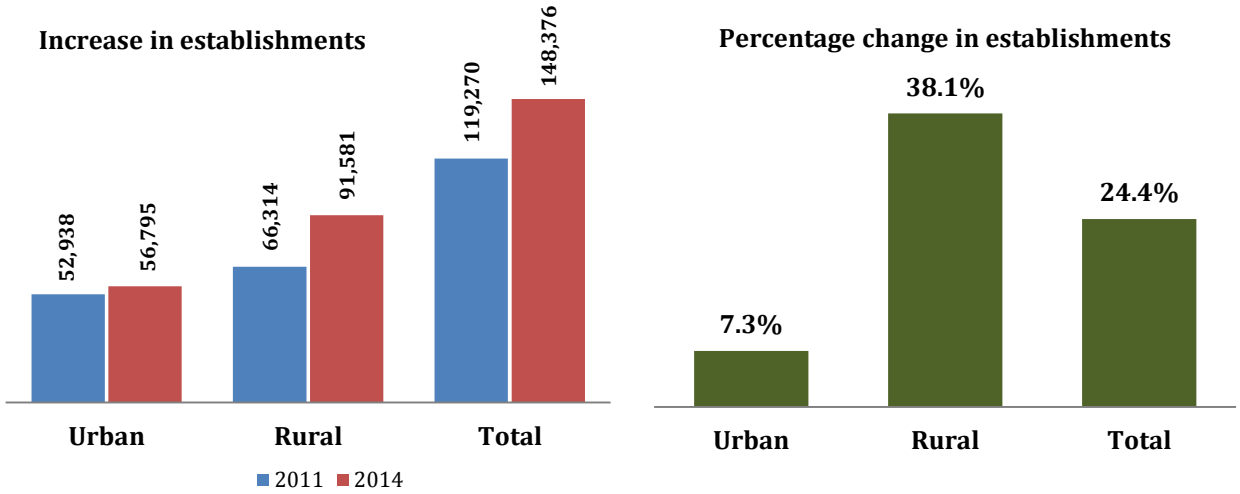
2.1.1 Trend in establishments

As part of an attempt to track business development and employment, NISR has so far conducted two establishment censuses, one in 2011 and another one in 2014. The censuses cover the whole country both the formal and informal sectors and large, medium, small and micro enterprises. These two years coincide with the reference times of EICV3 and EICV4 respectively. The timing is an effort under the national statistics calendar to establish benchmark years in which it is possible to obtain a lot of statistics that complement each other to understand and contextualise different development aspects.

In that regard, it is observed that private establishments increased between 2011 and 2014 by about 24.4% (Figure 3) with corresponding jobs increasing by 34.5% (Figure 4). The percentage increase of establishments is higher in rural areas (38.1%) compared with urban areas (7.3%). As regards jobs the percentage increase is 47.9% in rural compared with 22.4% in urban areas.

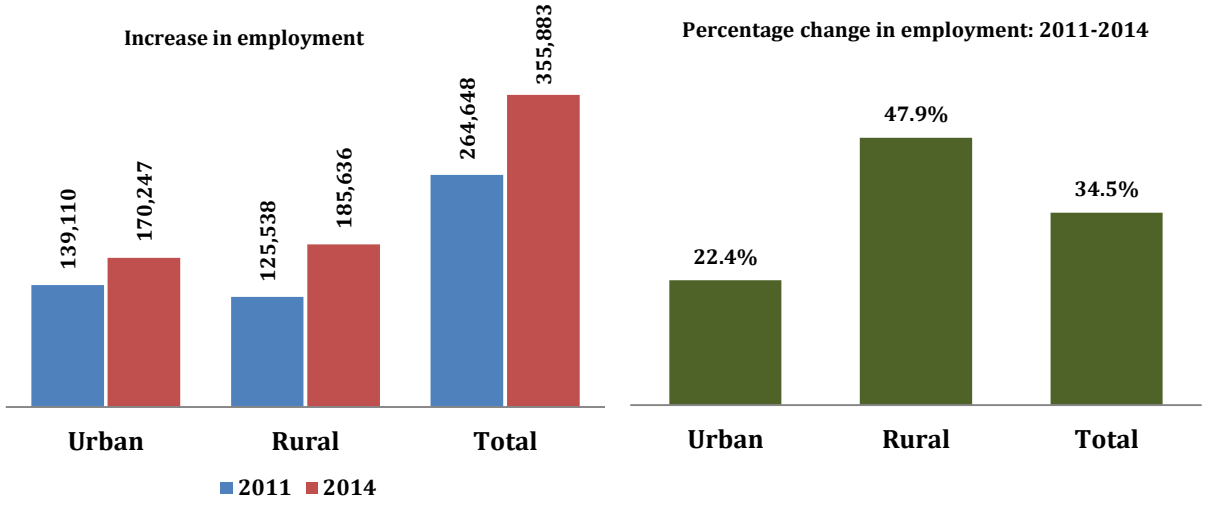
Although the level is low, the large establishments (100+ workers) have more than doubled over the period of the two censuses increasing by about 103%, while micro (1-3 workers), Small (4-30 workers) and medium (31 – 100 workers) establishments increased by about 24%, 28% and 19% respectively (Figure 5).

Figure 3: Increase in establishments: 2011-2014



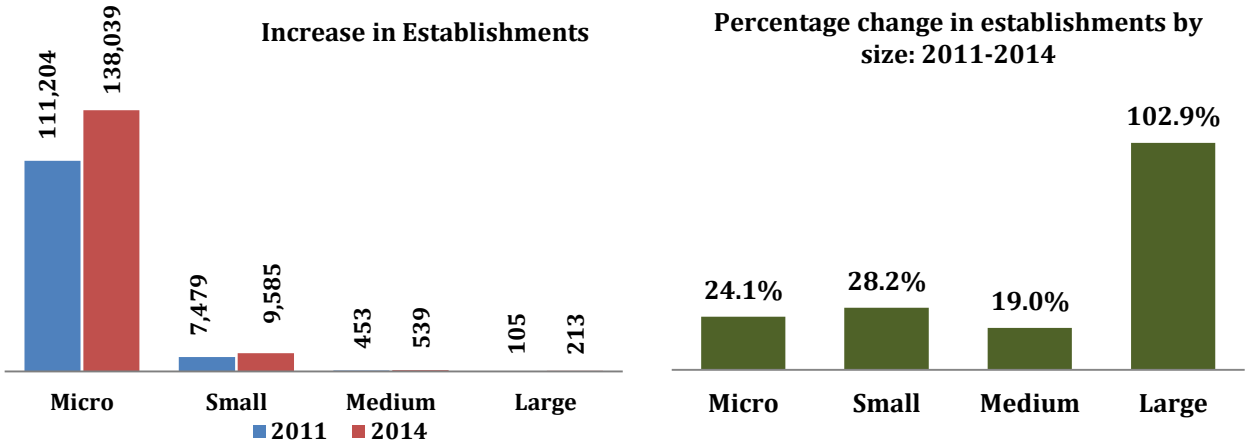
Source: NISR, Establishment census 2011, 2014

Figure 4: Employment change in establishments: 2011-2014



Source: NISR, Establishment census 2011, 2014

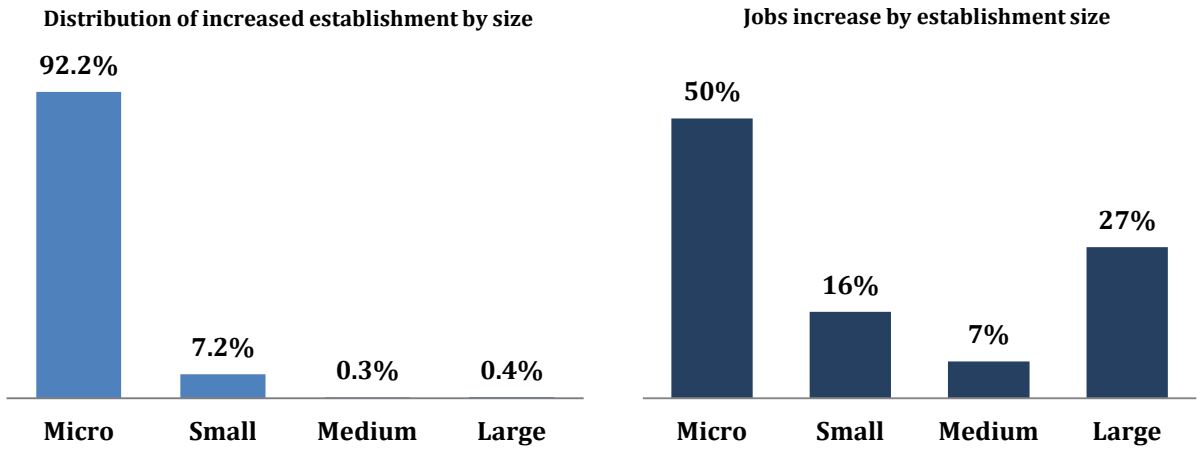
Figure 5: Change in establishment 2011 – 2014



Source: NISR, Establishment census 2011, 2014

Another interesting observation is that of all increased establishments about 92% of them are micro and employing about 50% of the additional establishment jobs. Considering the small proportional increase in large establishments, their jobs contribution was quite high (Figure 6).

Figure 6: Distribution of increased establishments and jobs by establishment size



Source: NISR, Establishment census 2011, 2014

2.1.2 Trends in total farm and non-farm main usual jobs

Looking at the main usual jobs as measured by EICV, Table 1 shows how different types of main usual jobs are distributed in Rwanda overall and for different provinces. Table 1 further demonstrates how this distribution has changed between 2010/11 and 2013/14. The percentage of employed individuals with a main job in wage-employment outside farming has increased from about 17% in 2010/11 to about 20% in 2013/14 while, the percentage of independent farmers has declined from 61.2 % to 58% between 2010/11 to 2013/14. The increasing proportional shift from farm to non-farm has been steady since 2005/6 in EICV2.

Table 1: Percentage of persons aged 16+ by main usually type of job from EICV2 to EICV4

	Wage farm			Wage non-farm			Independent/Small			Independent non-far		
	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2
Rwanda	11.4	9.8	8.2	19.6	16.8	10.9	58	61.2	71.3	9.9	9.6	8.1
Province												
Kigali City	2.8	4.0	3.5	55.2	52.8	47.7	17	19.1	24.5	22.6	19.8	18.2
Southern	11.2	9.7	8.4	14.8	11.5	7.6	65.5	69.6	75.2	7.5	7.2	6.9
Western	13.3	12.4	9.4	17.6	14.9	7.8	58	58.5	74.5	9.9	11.3	7.2
Northern	12.6	10.4	9.6	15.3	15.2	7.5	65.1	64.3	75.3	6.6	7.8	6.8
Eastern	12.7	9.1	7.3	12.9	10.3	6.0	64.6	70.6	78.8	8.8	7.5	7.2
Urban/rural												
Urban	3.9	4.4	-[1]	52.8	49.3	-	19.1	20.1	-	21.3	21.7	-
Rural	12.8	10.7	-	13	11.1	-	65.8	68.5	-	7.7	7.5	-

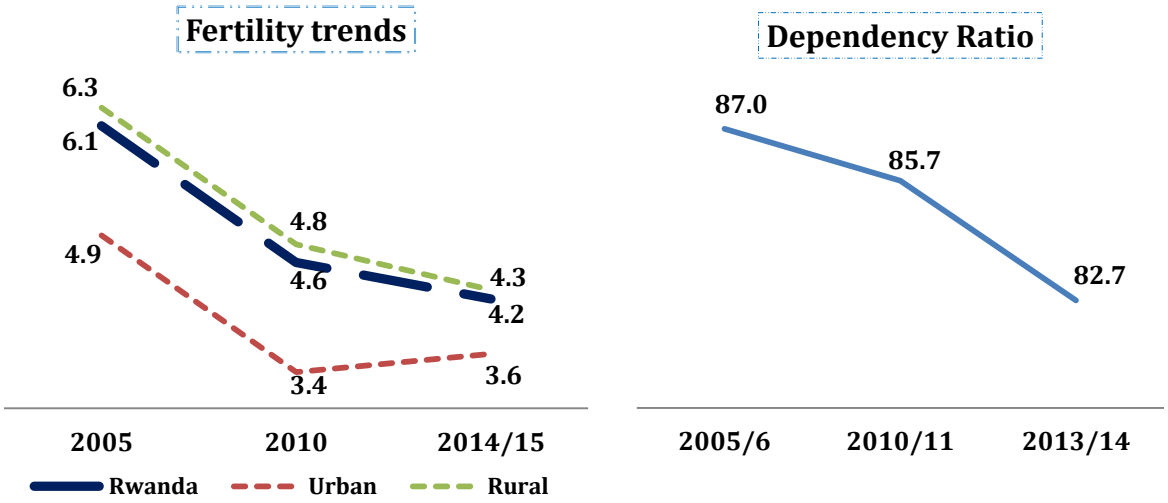
Source: NISR, EICV2, EICV3 and EICV4

[1]Not available

2.2 Demographics

In this section, the focus is on fertility and dependency ratio. As it is noted in Figure 7 fertility has dropped from about 6.1 children per woman in 2005 to about 4.2 children per woman in 2014 overall and correspondingly the dependency ratio has also been dropping from 87 in EICV2 to 82.7 in EICV4.

Figure 7: Demographic characteristics



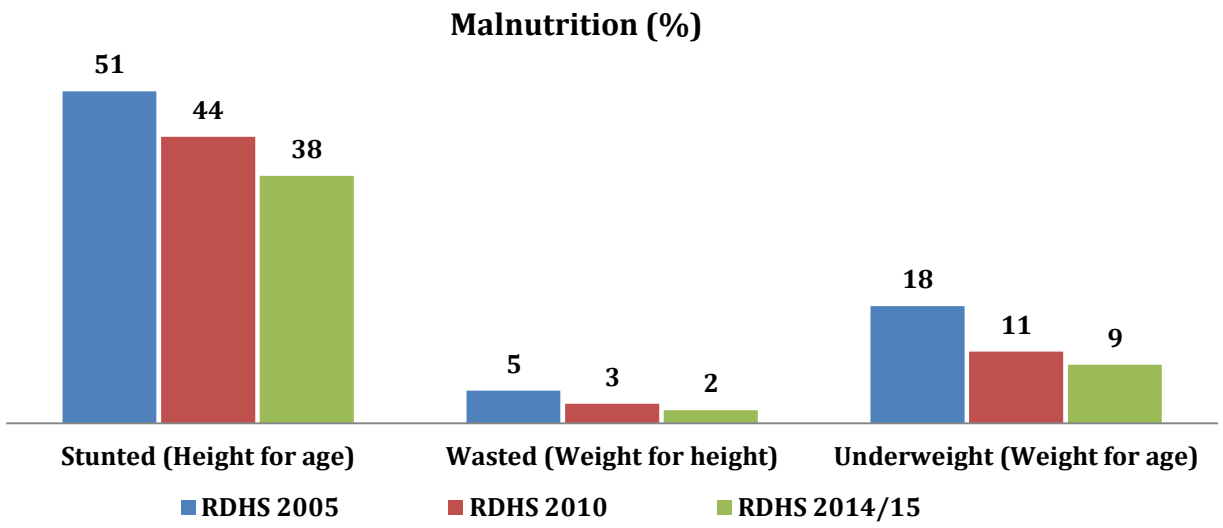
Source: NISR, EICV2, EICV3, EICV4, RDHS 2005, RDHS 2007/08, RDHS 2010 and RDHS 2014/15

In spite of the slight increase in urban fertility between 2010 and 2014/15, the relatively tangible decline in rural fertility has resulted in an overall decline in the national fertility.

2.3 Nutrition

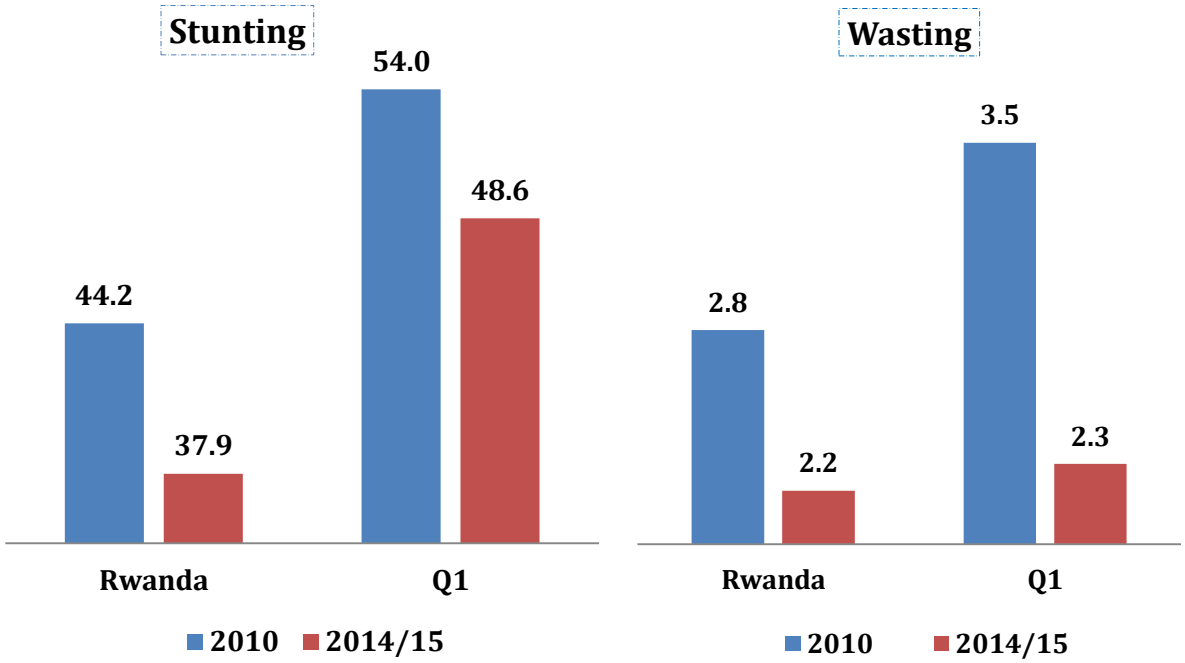
According to the Rwanda Demographic and Health Survey (RDHS), 51 percent of children under age 5 were stunted or too short for their age in 2005. The prevalence of stunted children has gradually declined over time to about 38 percent in 2014/15. Wasting (too thin for height), reduced to 2 percent in 2014/15 while 9 percent were underweight by 2014/15 (Figure 8). The decline in malnutrition between 2010 and 2014/5 is both at National level and for the lowest quintile (Q1) as shown in Figure 9.

Figure 8: Undernourished children



Source: NISR, RDHS 2005, RDHS 2010 and RDHS 2014/15

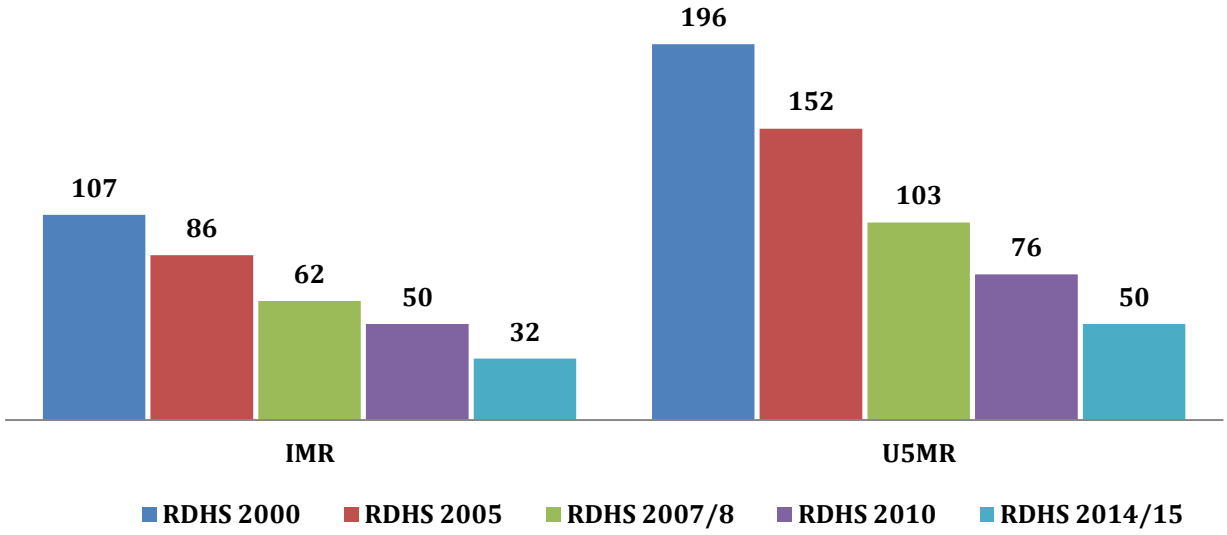
Figure 9: Undernourished children at national level and quintile one



2.4 Mortality

Infant and Under 5 mortality are very important elements of human development. It is well known that any improvement in the living conditions and poverty status of the population is immediately reflected in the level of infant and child mortality. Figure 10 shows that Rwanda has experienced gradual and tangible declines in IMR and U5 mortality rates over the years since 2000. With infant mortality rate (IMR) decreasing to 32 deaths per 1,000 live births compared to 107 deaths in the year 2000, and Under 5 Mortality Rate (U5MR) dropping to 50 deaths per 1,000 live births in 2014/15 down from 196 deaths per 1,000 live births in 2000.

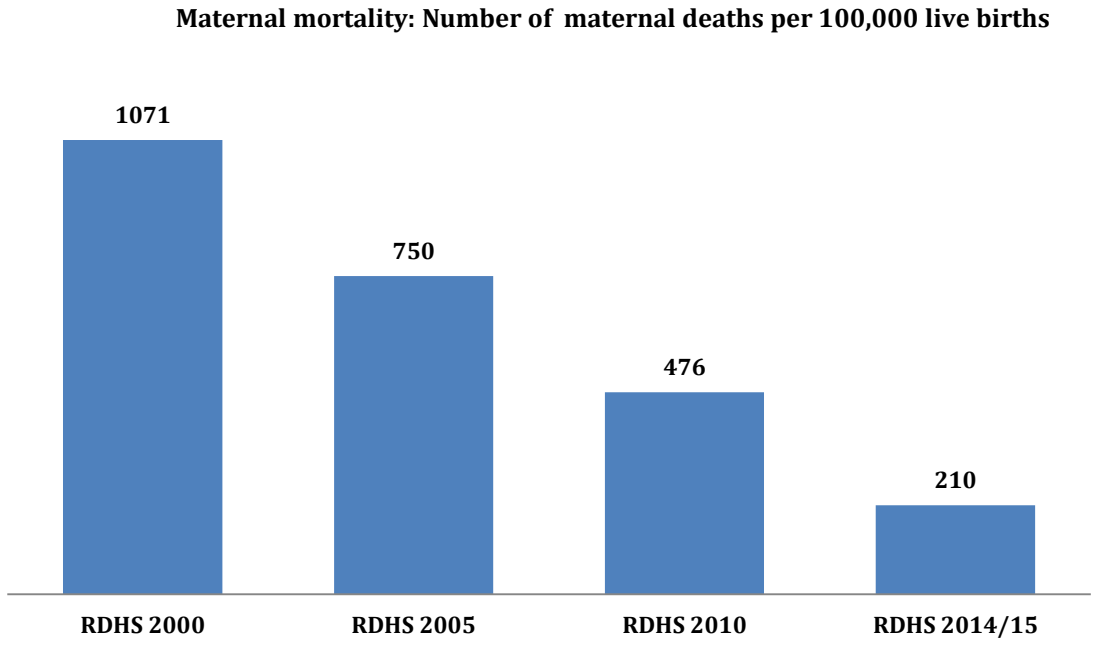
Figure 10: Infant and Under 5 mortality



Source: NISR, RDHS2000, RDHS 2005, RDHS 2007/08, RDHS 2010 and RDHS 2014/15

In addition, maternal mortality ratio (MMR) has declined significantly to 210 deaths per 100,000 live births in 2014/15 down from 1071 in 2000 RDHS (Figure 11).

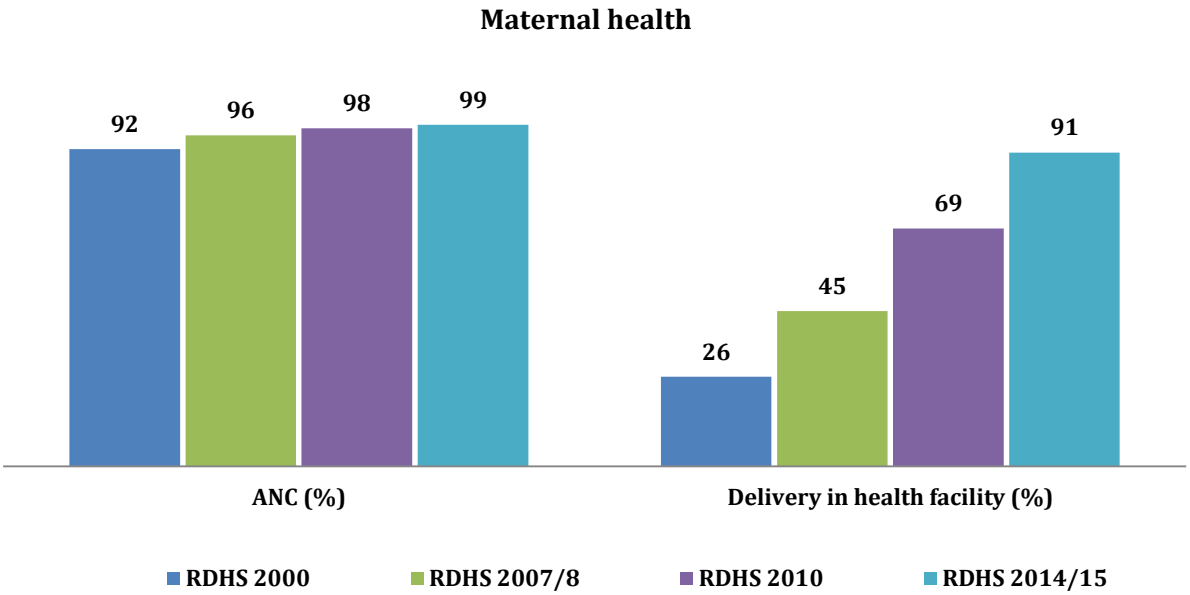
Figure 11: Maternal mortality



Source: NISR, RDHS2000, RDHS 2005, RDHS 2007/08, RDHS 2010 and RDHS 2014/15

Figure 12 shows development in antenatal care from trained personnel and deliveries at health facilities since 2000 to 2014/15.

Figure 12: Maternal health



Source: NISR, RDHS2000, RDHS 2005, RDHS 2007/08, RDHS 2010 and RDHS 2014/15

2.5 Other living standards indicators

Other living standards indicators have also shown a similar pattern over the surveys. Table 2, 3 and 4 give some of the selected indicators.

Table 2: Demographic and education indicators from EICV2 to EICV4

	Net Attendance Ratio-Primary			Net Attendance Ratio-Secondary			Literacy rate among people aged 15-24		
	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2
Rwanda	87.9	89.6	86.6	23.0	17.8	10.4	86.1	83.1	76.9
Province									
Kigali City	90.6	90.6	92.0	36.9	36.5	24.6	93.7	88.6	86.6
Southern	86.6	89.2	85.7	19.9	14.9	8.8	84.9	80.9	77.0
Western	87.2	89.2	85.0	19.9	16.4	8.8	85.1	82.9	75.7
Northern	91.7	93.3	89.2	24.2	16.5	7.3	87.1	83.9	76.2
Eastern	86.5	86.9	85.0	21.3	15.9	10.6	83.3	82.2	73.9
Urban/rural									
Urban	91.2	92.4	90.9	38.9	36.6	21.1	92.4	89.0	84.7
Rural	87.4	89.1	85.8	19.3	14.1	8.3	84.4	81.8	75.1
Quintile									
Q1	82.2	84.3	79.9	10.1	6.7	2.2	77.8	74.9	66.3
Q2	87.8	89.9	86.3	16.3	9.5	5.6	84.5	80.2	72.9
Q3	89.2	90.7	88.1	20.2	14.8	9.3	86.0	83.1	77.2
Q4	91.2	91.5	89.8	27.6	21.1	14.2	88.0	85.4	80.3
Q5	92.5	93.5	91.2	39.8	34.8	21.3	91.4	88.4	84.2

Source: NISR, EICV2, EICV3, EICV4

Table 3: Water and sanitation indicators from EICV2 to EICV4

	% of households with access to improved drinking water source			% of households with improved sanitation		
	EICV4	**EICV3**	**EICV2**	**EICV4**	**EICV3**	**EICV2**
Rwanda	84.8	74.2	70.3	83.4	74.5	58.5
Province						
Kigali City	84.5	82.7	84.8	93.2	83.3	78.5
Southern	85.8	74.8	73.4	69.5	66.2	56.2
Western	84.5	74.2	67.8	85.4	79.2	57.9
Northern	90.6	78.9	76.7	85.9	74.2	64.6
Eastern	80.6	66.6	57.7	88.4	74.9	48.5
Urban/rural						
Urban	90.0	87.1	83.9	93.5	87.4	74.9
Rural	83.7	71.9	67.6	81.3	72.2	55.3
Quintile						
Q1	81.1	68.4	66.6	70.4	64.7	42.4
Q2	82.1	71.4	66.7	76.9	72.1	51.1
Q3	84.0	71.5	67.2	82.8	71.9	55.6
Q4	85.7	73.2	68.9	87.4	74.7	60.3
Q5	89.3	84.0	79.6	94.4	85.6	76.6

Source: NISR, EICV2, EICV3, EICV4

Table 4: Housing characteristics indicators from EICV2 to EICV4

	% of households with thatch or leaves roof			% of households with metal sheet roof			% of households with cement floor		
	EICV4	**EICV3**	**EICV2**	**EICV4**	**EICV3**	**EICV2**	**EICV4**	**EICV3**	**EICV2**
Rwanda	0.4	2.2	9.8	61.1	54.4	43.7	21.1	17.1	13.3
Province									
Kigali City	0.5	1.7	2.3	98.8	94.6	93.2	63.8	60.0	54.7
Southern	0.0	1.8	8.0	19.5	14.7	14.1	16.1	13.6	11.0
Western	0.4	3.1	5.8	47.3	43.6	36.7	12.3	10.3	9.2
Northern	0.3	2.0	9.7	58.3	49.0	37.3	12.4	11.2	6.5
Eastern	0.6	2.0	19.6	95.9	92.5	70.7	19.2	14.1	8.7
Urban/rural									
Urban	0.4	0.8	2.8	88.6	87.5	73.7	63.3	61.0	45.4
Rural	0.4	2.4	11.2	55.4	48.6	37.8	12.4	9.4	7.0
Quintile									
Q1	0.2	4.8	-[2]	47.5	39.7	-	3.2	2.3	-
Q2	0.4	2.6	-	49.4	45.3	-	5.1	3.8	-
Q3	0.3	1.4	-	56.0	49.7	-	8.8	7.3	-
Q4	0.4	1.7	-	63.0	56.5	-	18.9	13.4	-
Q5	0.4	1.0	-	82.2	74.4	-	58.4	50.5	-

Source: NISR, EICV2, EICV3, EICV4

2.5.1 Energy

Overall, percentage of households using electricity as main source of lighting has doubled between 2010/11 and 2013/14, with biggest improvement observed in Southern and Eastern provinces and quintile 1, 2 and 3. More importantly, the use of oil lamp as main source of lighting has decreased from

[2]Not available

10% to 5% between 2010/11 and 2013/14. At national level, the use of firewood as main cooking fuel has decreased from 86.3% in EICV3 to 83.3% in EICV4, as can be seen in Table 5.

Table 5: Energy indicators from EICV2 to EICV4

	% of households using electricity as main source of lighting			% of households with Oil lamp as main source of lighting			% of households with Candle as main source of lighting			% of households with Firewood as main cooking fuel		
	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2
Rwanda	19.8	10.8	4.3	5.0	9.7	12.7	7.4	5.9	1.6	83.3	86.3	88.2
Province												
Kigali City	73.3	55.6	29.7	2.2	9.6	29.0	10.9	12.6	6.6	25.6	31.5	38.9
Southern	9.3	3.2	2.1	5.5	7.2	8.2	4.2	4.0	1.0	92.6	94.1	96.5
Western	14.7	8.2	2.0	7.2	14.8	16.7	7.4	6.1	0.9	88.3	92.2	94.6
Northern	10.4	6.7	1.0	3.5	4.9	8.6	9.7	7.0	2.3	94.4	90.9	86.1
Eastern	15.3	5.6	1.7	5.0	11.0	10.1	7.3	4.0	0.4	89.9	91.7	94.0
Urban/rural												
Urban	71.8	46.0	23.1	3.6	9.6	28.7	9.0	8.8	4.8	29.3	36.0	51.4
Rural	9.1	4.7	0.7	5.3	9.7	9.5	7.0	5.4	1.0	94.4	95.1	95.4
Quintile												
Q1	1.7	0.4	0.0	2.9	5.2	3.0	6.0	4.8	0.8	97.5	95.4	93.6
Q2	5.0	0.8	0.2	4.3	6.5	3.9	6.3	4.2	0.3	96.3	95.4	94.1
Q3	7.1	2.1	0.1	6.4	8.8	7.4	7.4	4.5	1.2	95.0	94.2	96.1
Q4	16.8	5.6	0.6	6.7	12.2	14.9	8.7	7.6	1.3	87.4	91.0	92.7
Q5	57.2	38.8	17.8	4.5	14.0	29.3	8.0	7.6	3.8	50.0	61.0	68.9

Source: NISR, EICV2, EICV3, EICV4

2.5.2 Assets ownership

Table 6: Assets ownership indicators from EICV2 to EICV4

	% of households owning mobile phone			% of households owning TV set			% of households owning computer		
	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2	EICV4	EICV3	EICV2
Rwanda	63.6	45.2	6.2	9.9	6.4	2.4	2.5	1.7	0.3
Province									
Kigali City	90.0	79.6	33.2	44.1	35.8	18.0	12.8	10.5	2.8
Southern	54.0	35.0	3.1	4.9	2.1	0.8	1.3	0.5	0
Western	58.2	40.4	3.8	5.9	4.1	1.0	1.1	0.6	0.1
Northern	60.8	41.8	3.1	4.1	4.5	0.2	1.2	1.4	0.1
Eastern	67.0	48.4	3.8	6.1	2.3	1.0	1.0	0.5	0.1
Urban/rural									
Urban	87.9	79.7	26.5	41.4	36.4	12.9	12.2	10.6	1.8
Rural	58.6	39.1	2.2	3.4	1.2	0.3	0.5	0.1	0
Quintile									
Q1	36.4	17.6	0.1	0.1	0.1	0.0	0.0	0	0.0
Q2	50.8	32.2	0.3	0.6	0.1	0.0	0.0	0	0.0
Q3	61.9	40.8	0.5	1.2	0.6	0.1	0.0	0	0.0
Q4	71.3	50.7	2.4	5.3	1.4	0.2	0.5	0	0.0
Q5	87.5	74.3	23.6	35.3	25.8	10.0	10.2	7.3	1.4.

Source: NISR, EICV2, EICV3, EICV4

The percentage of households owning a TV set has increased across both urban and rural areas. Similarly, there is an increase in the percentage of households owning a computer across urban and

rural areas, and similar trends are observed at national and province levels (Table 6). The most pronounced increase is in the proportion of households owning a mobile phone, which grew from 45% to 64% between 2010/11 and 2013/14. In particular, in rural areas, cell phone ownership has grown by almost 20 percentage points. Mobile phone ownership has increased in wealthier as well as poorer households, for instance from 74% to 88% in quintile 5 and from 18% to 36% in quintile 1.

3. Poverty line update

3.1 Consumption aggregation

Measurement of household consumption was maintained similar to the previous EICV surveys. The EICV questionnaire collects detailed information on household expenditures, as well as on consumption obtained from non-purchased sources , for example consumption of food crops grown by the household. The contents of the consumption aggregate used for the analysis of poverty are summarised in Table B1 (Annex) which also gives the sources of the data from the questionnaire. For most households the most important components are purchases of food items, consumption of food items that the household produced itself (*auto consumption*) and purchased non-food goods and services. In addition, the consumption aggregate included are spending on education, frequent health expenses (routine consultations), expenses on housing and utilities (water, electricity), as well as other smaller items such as the value of wages received in kind and received in-kind transfers made by other households or institutions serving households.

The construction of the consumption aggregate follows standard international practice on what items to include and which to exclude (Angus D. et all 2002). Care was taken to exclude non-consumption expenditures of the household (e.g. purchases of business or farm inputs); to exclude purchases of large durable goods the consumption of which is spread over many years (Deaton A. 1997); and also to exclude large, one off exceptional items of expenditure such as weddings and funerals, or hospital stays. In the case of durable goods estimation is made of consumption flows based on the current value of any durable goods the household owns and commodity-specific depreciation rates. The exceptional items of consumption are excluded precisely because of their one-off nature: a household may have incurred a very high expenditure on a wedding in the period covered by the survey, but if this was included in the consumption aggregate it would exaggerate the household's normal level of consumption.

3.2 The cost of living index

The Cost of Living Index (COLI) is a numeric factor which describes price deviations over the survey period and across provinces from national average prices of a selected basket of goods as recorded in January 2014. The index is used to control for spatial and temporal effects on price which would otherwise artificially worsen or improve a household's standard of living due to lower and higher purchasing power respectively. The index then solves this problem by deflating or inflating nominal consumption over the twelve months of the survey thus equalling purchasing power across time and space.

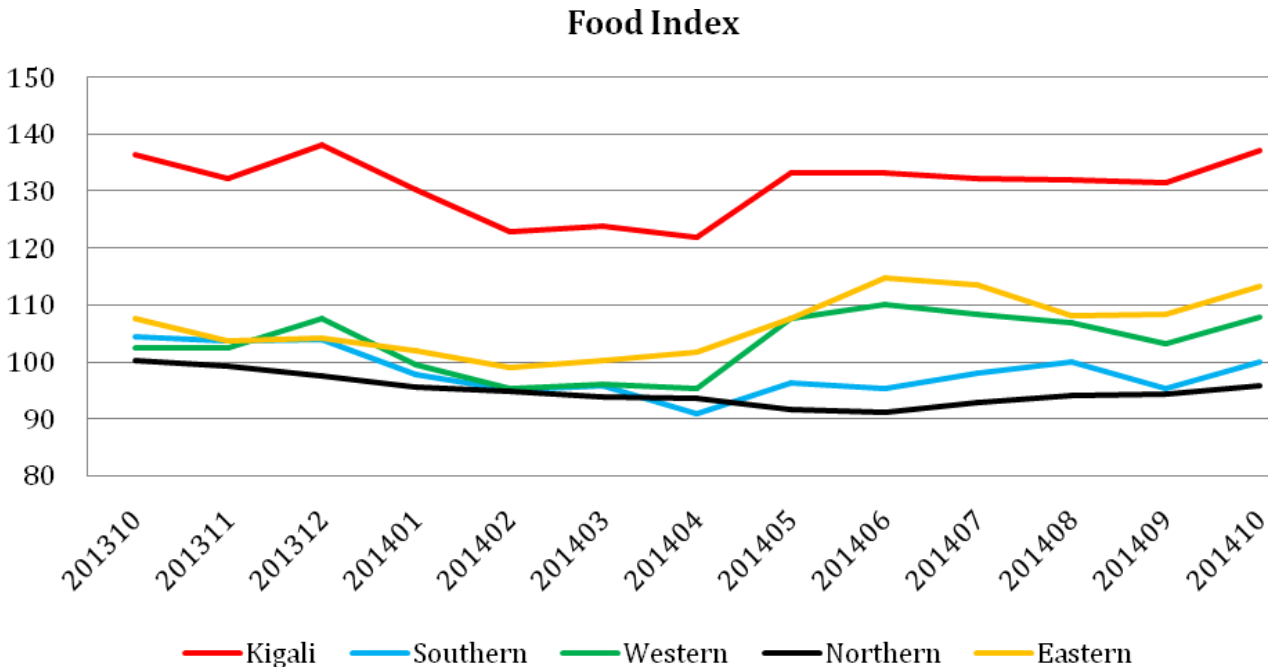
This index only captures price movements of a selected basket of goods with respect to national average prices in January 2014. Items are selected for the index due to their relevance to the poorest households. The reason for this is that EICV is designed to measure poverty which makes it prudent to control for welfare effects on the poor due to prices which they face. The most recent poverty headcount ratio was 44.9 percent (2010/11), thus the goods included in the basket are those consumed by households whose per capita consumption is at the bottom 40 percent of the national distribution.

The basket comprises 42 food items and 84 non-food items consumed in varying proportions by the reference population. These households allocate most of their consumption budget (69.9%) towards food. The relative importance of the items in the total consumption budget then forms a basis for the aggregation of the individual price changes into food and non-food indices prior to compiling a cost of living index.

3.2.1 Food index

Food items were selected based on their relative importance to households at the bottom 40% of the consumption distribution as well as availability of prices throughout the period of the survey in all provinces of the country. The basket comprises of the main staple cereals, tubers, vegetables and fruits and their prices were sourced from National Institute of Statistics of Rwanda/Price Statistics Division. The food index is plotted in Figure 13. The index shows spatial and temporal variation characteristic of Rwanda. For instance, Kigali city which is the most urbanised province has the highest prices in comparison to the Northern Province which is the main food producing region of the country. Likewise, July to September have higher prices on average corresponding to the cultivation period when food supply is low, while January to March have the lowest prices corresponding to the main harvest period when food supply is high.

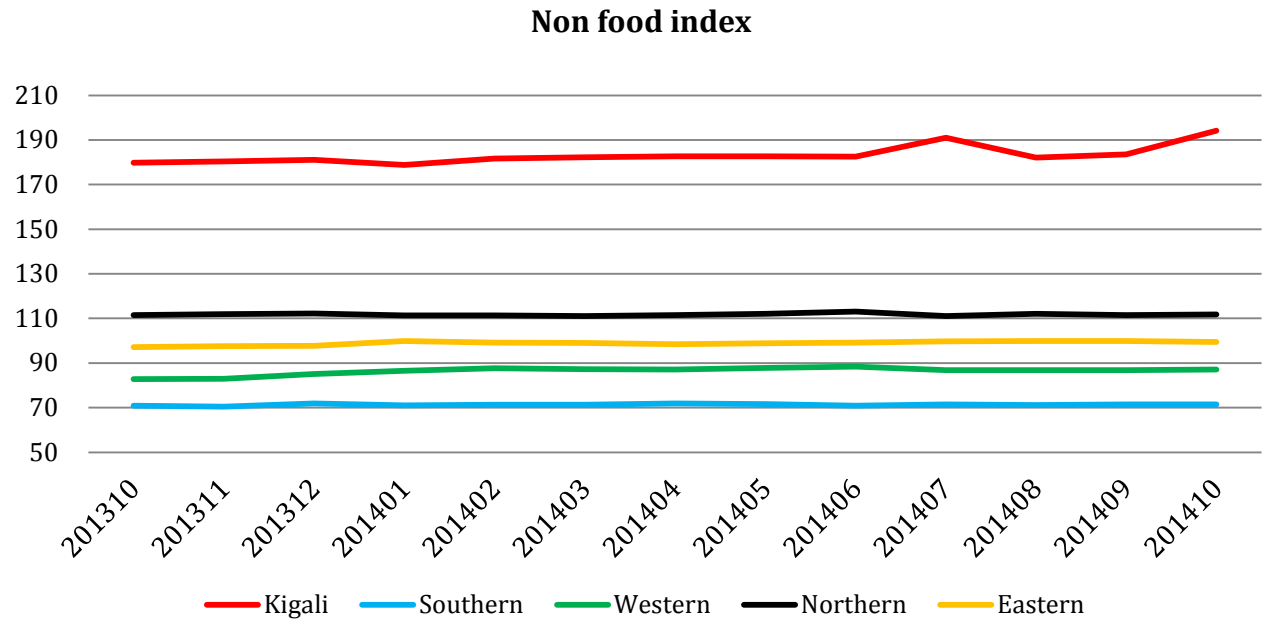
Figure 13: Food index for EICV4 period: October 2013 to October 2014



3.2.2 Non-food index

Non-food items were selected based on their relative importance to households at the bottom 40% of the consumption distribution as well as availability of prices throughout the period of the survey in all provinces of the country, the selected 84 items account for 86% of household consumption expenditure on non-food. These include but are not limited to house rent, education, clothing, transport and fuel. The prices were sourced from the Consumer Price Index (CPI) system of the National Institute of Statistics of Rwanda (NISR), and the index is plotted in Figure 14. The non-food index shows spatial differentials in price of non-food items, however, it does not exhibit the same seasonality as food prices. Kigali City has significantly higher prices for non-food items compared to the other provinces.

Figure 14: Non-food index for EICV4 period: October 2013 to October 2014



The cost of living index is the weighted average of the food and non-food indices. Due to the high relative importance of food in the consumption budget of the reference population, the COLI largely follows a similar spatial and temporal pattern as the food index shown above.

3.3 Poverty line setting methodology

Estimation of absolute monetary poverty in Rwanda started in a regular manner since 2001 when the first Household Living Condition Survey *(Enquête Intégrale sur les Conditions de Vie des Ménages-EICV1)* was undertaken. In 1983-1985, a previous similar survey called National Household Budget and Consumption was conducted in Rwanda.

Monetary poverty was estimated and analysed as the main objective of all successive EICV's surveys, EICV2, EICV3 and the present EICV4. However, the surveys also provided a rich set of complementary social-economic indicators that facilitate understanding changes in households living conditions.

As for EICV2 carried out in 2005/6 and EICV3 carried out in 2010/11 poverty was estimated using the poverty line derived from EICV1 after deflating the consumption expenditure in both surveys so as to reflect prices that prevailed in 2001. As for EICV4 carried out in 2013/2014 it has been deemed necessary to update the poverty line. It has been a long time since 2000/1 and many changes in the socio-economic structure of the country have taken place.

The Poverty Line

For the purpose of setting the poverty line, as the preferred measure of household living standard, household consumption expenditure, was continued and specifically for analysing poverty in terms of absolute poverty (a level of consumption which could enable basic nutritional requirements to be satisfied, as well as essential non-food requirements) the cost of basic needs approach (Rio 2006) was used

This approach followed two steps:

1. Setting the food poverty line and;

2. Estimating minimum non-food requirements.

The Food Poverty Line

Concepts

There are various ways of constructing a food basket and a food poverty line. However, the underlying principle is that minimum nutritional standards should be met. Approach examples include (Rio 2006):

1. Normative (pure expert prescription) ;
2. Semi-normative (respecting observed consumer habits in different degrees).

The normative basket follows expert specification of the basket that is considered as minimum requirement. Few countries use this approach and a good example is the US where the official poverty line is based on the least costly of four nutritionally adequate food plans designed by the U.S Department of Agriculture.

It is the second approach that is most widespread in measuring poverty. Hence in EICV4 a semi-normative approach is applied. In practice, the semi – normative approach follows three steps (Rio 2006):

1. Setting a basket with its original number of products or selecting the most representative items for each food category and then adjusting their quantities according to the reference group's consumption structure;
2. If the objective is to obtain a minimum basket, then replace rarely consumed or extremely costly goods with more common, less expensive items within the same category. Other items that are not necessarily pertinent for the poor may need special consideration (cola drinks, alcoholic drinks, spices and others);
3. Finally other parameters of nutrition may be considered.

In EICV1 the food basket was constructed based mainly on calorie requirements but also ensuring that proteins and other nutrients were met.

The basket was based on the consumption pattern of the bottom 60%. The choice of bottom 60% was based on the assumption that poverty was around 60% - 65% (World Bank, 1998). The standard approach is to either consider the bottom 40% in case of no information or preferably use the estimated proportion of the poor. In this case it was 60%. The final basket provided for about 2500 Kilocalories per adult equivalent per day (MINECOFIN 2002).

Table 7: Country examples for calorie threshold per adult equivalent per day

Country	Calorie threshold (Kcal)	Number of food items in the basket	Reference year
African Countries			
Comoros	2160	10	2004
Gabon	2100	29	2005
Guinea	2100	30	2003
Malawi	2198	14	1998
Tanzania	2200	28	2000/01
Niger	2400	18	2005
Benin	2400	21	2006
Burundi	2400	19	1998
Senegal	2400	26	2006
Togo	2400	50	1996
Rwanda	2500	42	2014
Other Countries in the World			
Armenia	2100	24	2003
Bangladesh	2122	11	2000
Indonesia	2100	52	2004
Philippines	2000	22	2003
Vietnam	2100	40	2002

Source: (1) AFRISTAT (2009), Méthodologie d'élaboration de la ligne de pauvreté sur une base harmonisée: Bilan dans les Etats membres d'AFRISTAT, SERIE METHODE N°7, (2) United Nations Statistics Division (2005), Handbook on Poverty Statistics: Concepts, methods and policy use, New York

The food basket

The first step was to review the consumption pattern of the bottom 40% of the population as observed in EICV4 in terms of item quantities and calories that they consume. Using household consumption item by item, household survey reported prices were used to obtain quantities consumed measured in local units. These were then converted to quantities in kilograms consumed per adult equivalent per day. This was then followed by using standard FAO calorie table (FAO 2001) to compute calories consumed.

It was observed that the average calories consumed per adult equivalent per day for the bottom 40% was 1,335 Kcal and an average total quantity of 1 kilogram of food per day (not cooked)[3]. The food was dominated by low calorie food items (sweet potatoes, Irish potatoes and cassava root) with very little cereals.

It is important to note that this level of calories consumed is quite low given the threshold needed. This phenomenon is similar to the situation in EICV1 and in other studies done elsewhere, South Africa for example, (Morné O. 2008).

The team recommended that some items were not of relevance to the poor. For some of the items either it would be difficult to obtain calorie contents or unit prices; these together with items that had very low weight were removed.

A threshold of 0.1% share of total weight in Kilograms of items consumed was considered for retention in the basket. Most of the items that have less than 0.1% weight did not have a basis for calorie allocation and prices in the same time. Other items that were not considered relevant for the poor and for inclusion in the basket were dropped including beer, sodas, spices and others. This resulted in a basket comprising 88.2% of the original basket weight composition. The retained 42 items were grouped into ten categories.

1. Cereals and products
2. Eggs
3. Fish
4. Fruits and products
5. Meat
6. Milk and cheese
7. Pulses
8. Roots and tubers (products)
9. Tree nuts/oil crops
10. Vegetables

The final basket contains only 42 food items. Table B4 of Annex B provides more details.

The second step was to get the minimum cost basket by replacing high cost per calorie items with less cost per calorie items in the same category (cereals, fruits, meat, roots and tubers). In the categories of cereals and roots and tubers it was agreed that corn flour and cassava flour as is in the basket are mostly available in urban (not in rural) areas for the poor. Hence the amount of scaled-up calories of those two items is adjusted to reflect what the poor would access.

[3] If cooked the kilograms may be more

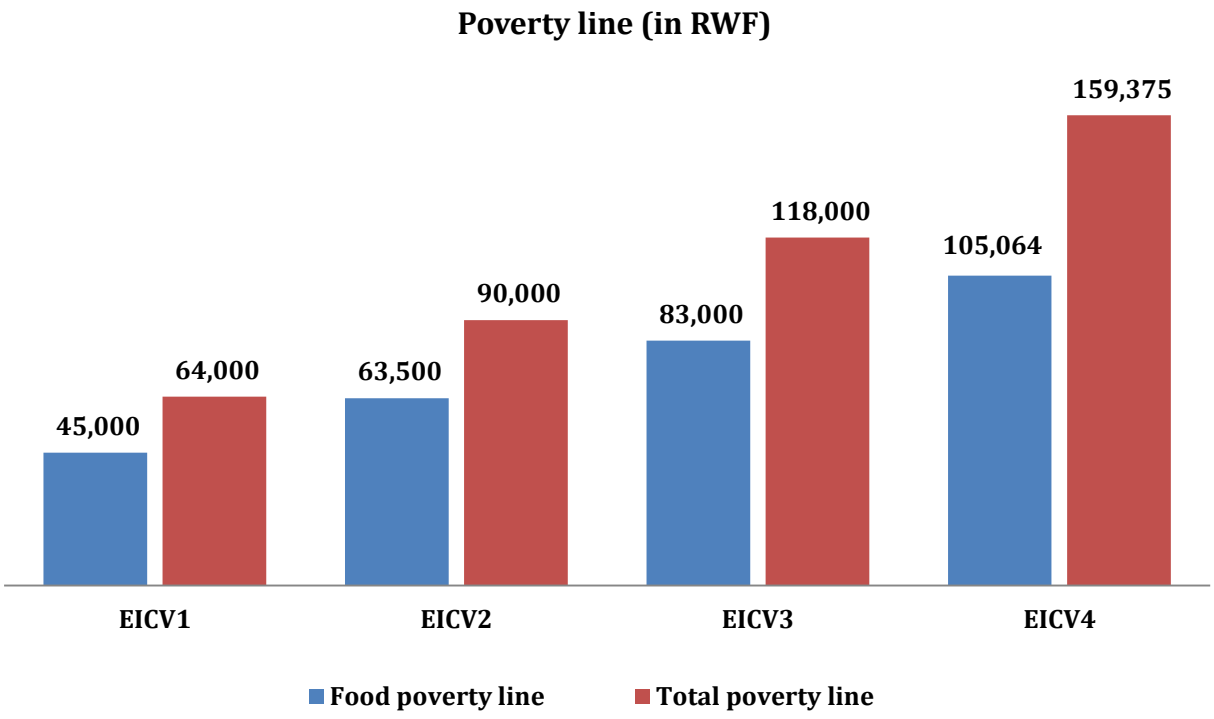
The team concluded with a basket that provides the pre-set 2500 Kcal per adult equivalent per day; the total quantity was estimated as 1.4 Kilograms per adult equivalent per day. The basket mainly composed of roots, tubers and products that accounted for about 52% basically sweet potatoes, cassava and its products. Beans being the main source of proteins with fish and meat also included.

Although the calories and total quantity seemed high the expert team settled for it subject to further analysis going forward. The basket was then costed using survey reported January 2014 prices as the reference month giving a cost of RWF 105,064 as the value of food/extreme poverty line in January 2014 prices.

Total poverty line

To obtain the total poverty line, it is important that essential non-food items cost is added to the food poverty line. To do this, households whose food consumption is within ten percent (plus or minus) of the food poverty line were identified. The median proportion that these households spend on food items was computed which is 0.659225. Based on this the total poverty line was estimated to be about RWF 159,375 in January 2014 prices.

Figure 15: Trend in nominal value of food and total poverty lines in all EICV surveys.



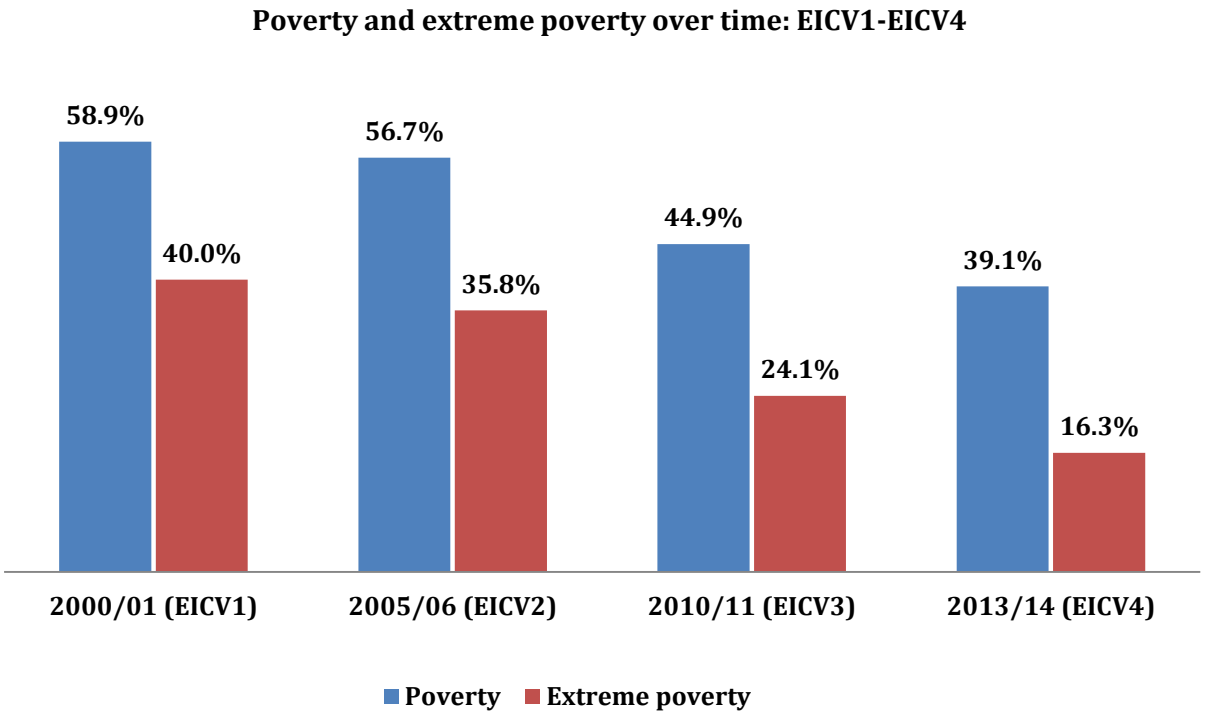
4. Poverty measures

Five poverty measures are estimated based on EICV4 data: Headcount Index or Incidence of Poverty, Extreme Poverty Index, Depth of Poverty or Poverty Gap, and Gini coefficient Watts Index.

4.1 Headcount index (Incidence of poverty)

This is the share of the population whose total consumption is below the total poverty line (RWF 159,375 in January 2014 prices), that is, the share of the population that cannot afford to buy a basic basket of goods (food and Non-food). At this threshold, 39.1% of the population are identified as poor (Figure 16) compared to 44.9% that were identified as poor in EICV3 IN 2010/11.

Figure 16: Distribution of Rwandan population identified as poor and extreme poor: EICV1-EICV4



4.2 Extreme poverty index

This is the share of the population whose total consumption (food and non-food) is below food poverty line (RWF 105,064 in January 2014 prices). Looking at extreme poverty we are focusing on the poorest households of all. Figure 16 above shows the level and trend of extreme poverty at the national level. The level of extreme poverty is 16.3% in 2013/14 EICV4 compared to 24.1% in 2010/11 as was estimated in 2010/11 in EICV3.

There are also important differences in the incidence of poverty and extreme poverty across districts (Table 8 and Figure 17: Distribution of poverty and extreme poverty by district: EICV4). The proportion that are both poor and extreme poor are highest in Nyamasheke district where 62 % and 39.2% of the population are poor and extreme poor respectively. In each of Burera, Rutsiro, Gisagara and Gicumbi districts more than 50% of their residents are poor.

Table 8: Population (%) identified as poor and extremely poor by district, 2013/14

No	District	Poverty incidence	Extreme poverty incidence
1	Kicukiro	16.3	6.5
2	Nyarugenge	19.9	8.4
3	Gasabo	23.4	11.3
4	Rwamagana	25.4	8.0
5	Kamonyi	25.9	6.0
6	Kayonza	26.4	9.5
7	Muhanga	30.5	7.8
8	Huye	32.5	5.7
9	Bugesera	34.3	13.4
10	Musanze	34.9	16.8
11	Rusizi	35.1	15.8
12	Rubavu	35.5	14.2
13	Ruhango	37.8	12.8
14	Nyanza	38.0	17.6
15	Nyabihu	39.6	12.6

No	District	Poverty Incidence	Extreme poverty incidence
16	Nyamagabe	41.5	13.0
17	Kirehe	41.8	17.8
18	Gakenke	42.0	16.2
19	Gatsibo	43.8	18.5
20	Nyagatare	44.1	19.5
21	Karongi	45.3	21.3
22	Ngoma	46.8	19.5
23	Nyaruguru	47.9	20.0
24	Rulindo	48.1	20.2
25	Ngororero	49.6	23.5
26	Burera	50.4	23.0
27	Rutsiro	51.4	23.6
28	Gisagara	53.3	20.6
29	Gicumbi	55.3	24.7
30	Nyamasheke	62.0	39.2

Figure 17: Distribution of poverty and extreme poverty by district: EICV4

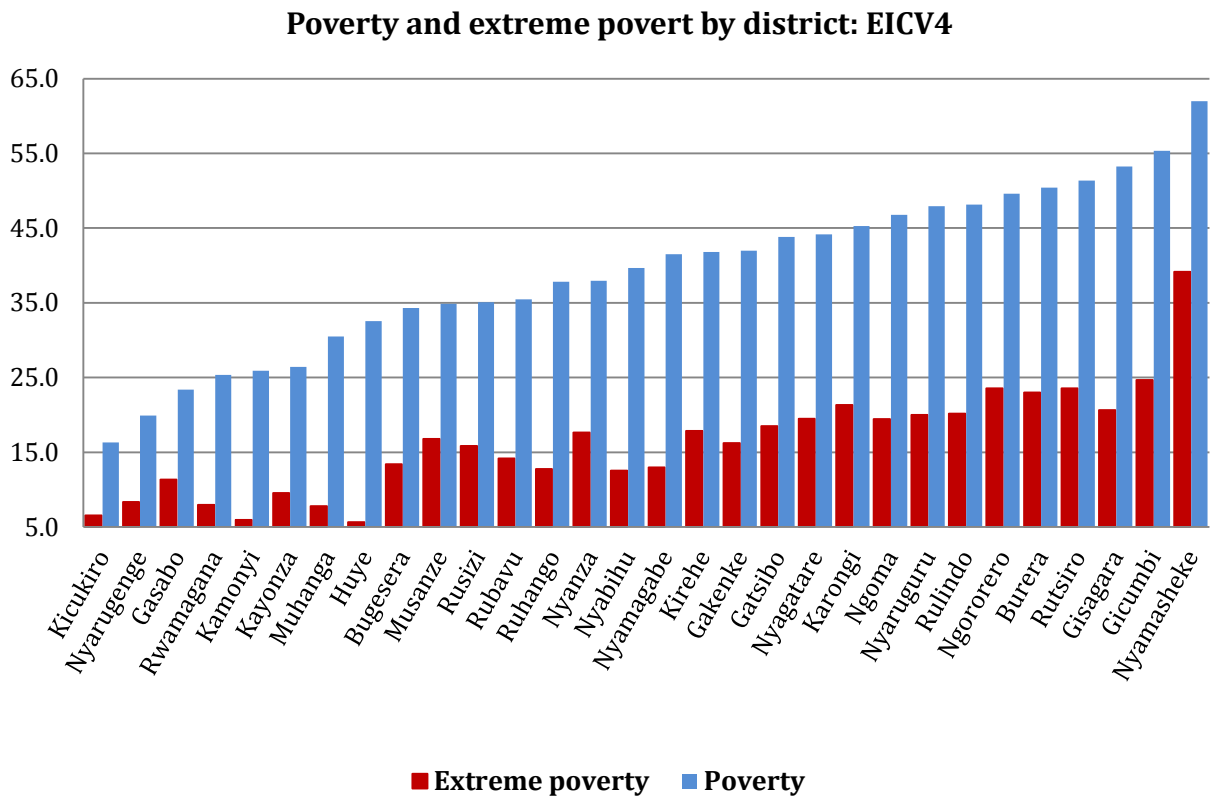
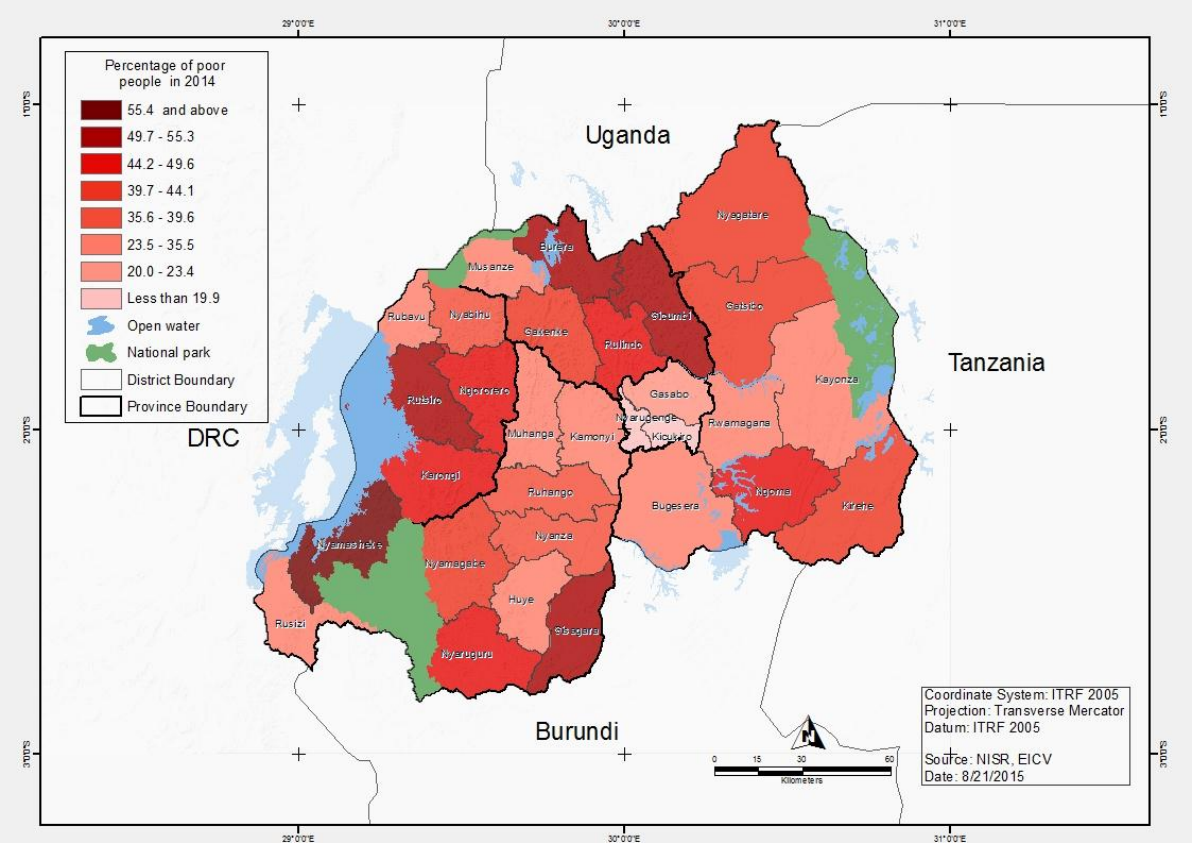


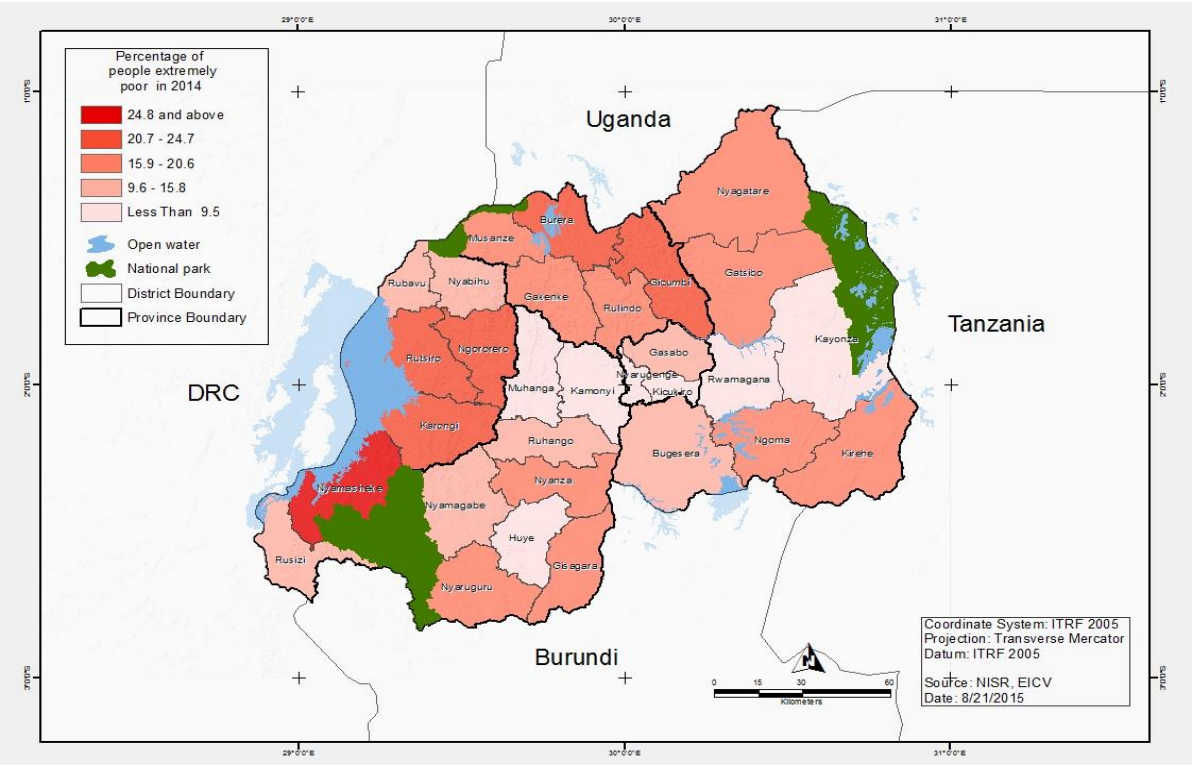
Figure 18 presents the maps of poverty and extreme poverty by district in Rwanda in 2013/14. These show important regional differential of poverty and extreme poverty. Poverty in Rwanda in 2013/14 is lowest in the three districts of Kigali City. Its incidence is notably low in Kamonyi, Rwamagana and Kayonza. The greatest concentrations of poverty in Rwanda are in the South and the West, including districts of Gicumbi and Burera from Northern Province. The regional variations of extreme poverty follow similar patterns.

Figure 18: Percentage of the Rwandan population identified as poor and extreme poor (Map 1 and Map 2)

Map 1 Poverty by District, 2013/14



Map 2 Extreme poverty by District, 2013/14

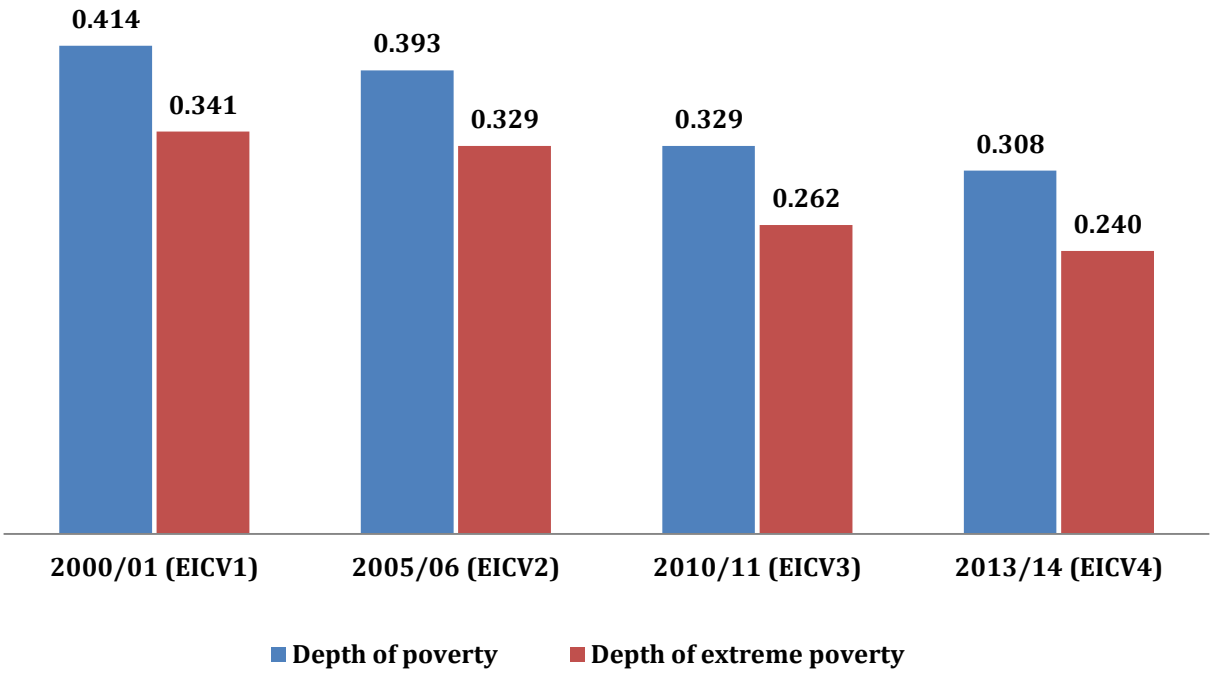


4.3 Depth of poverty

This provides information regarding how far off households are from the poverty line. This measure captures the mean aggregate consumption shortfall relative to the poverty line across the whole population. It is obtained by adding up all the shortfalls of the poor (assuming that the non-poor have a shortfall of zero) and dividing the total by the population. In other words, it estimates the total resources needed to bring all the poor to the level of the poverty line divided by the number of individuals in the population.

At national level, in 2013/14 both depth of poverty 0.308 and extreme poverty 0.24 is below those reported in 2010/11 and 2005/6 (Figure 19).

Figure 19: Depth of poverty and extreme poverty over time: EICV1-EICV4



4.4 The Watts index

This is based on the logarithmic transformation of the distance separating the poor from the poverty line. It is calculated the same way as the depth of poverty but using the logarithmic transformation instead of the direct values of the poverty line and consumption expenditure of the poor population. The watts index is 16.2 a measured in EICV4 2013/14.

Table 9: Summary of poverty measures at national level

	2000/01	2005/06	2010/11	2013/14
Headcount ratio (%)	58.9	56.7	44.9	39.1
Poverty gap ratio (%)	24.4	22.3	14.8	12.0
Poverty severity measure (FGT2) *100	13	11.4	6.6	5.2
Watts index	36.6	32.9	20.2	16.2

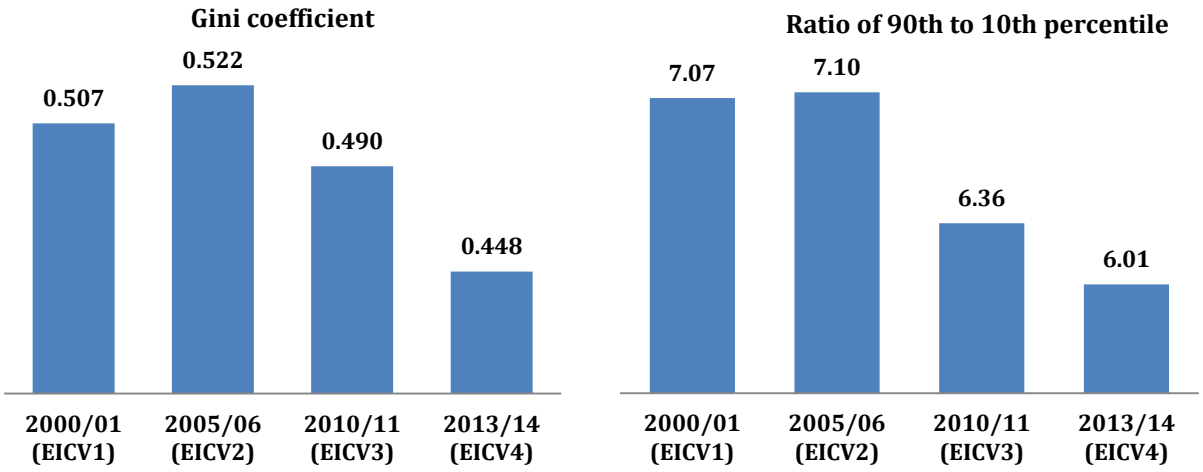
4.5 Inequality measures

Inequality is a broader concept than poverty in that it is defined over the entire population, and does not only focus on the poor. The simplest measurement of inequality sorts the population from poorest to richest and shows the percentage of expenditure (or income) attributable to each fifth (quintile) or tenth (decile) of the population.

A popular measure of inequality is the Gini coefficient, which ranges from 0 (perfect equality) to 1 (perfect inequality). The Gini coefficient is derived from the Lorenz curve, which sorts the population from poorest to richest, and shows the cumulative proportion of the population on the horizontal axis and the cumulative proportion of expenditure (or income) on the vertical axis.

The evolution of the two commonly used measures of inequality is presented in Figure 20. At national level, the ratio of the 90th percentile of consumption to the 10th falls between 2010/11 and 2013/14 from 6.36 to 6.01. The Gini coefficient also falls from 0.490 to 0.448 between 2010/11 and 2013/14.

Figure 20: Evolution of inequality measures over time: EICV1-EICV4



5. Conclusions

In this report, the data presented gives an overview of socio-economic and demographic developments over a long period of time from 2001 to 2014.

The report has benefited from the rich data base and questions in EICV surveys and other sources (the establishment census, the demographic and health survey and NISR National Accounts).

Overall looking at the long term since 2000/01 and the immediate past since 2010/11 we see the economy growing, agriculture and food crops particularly growing fast. Business and jobs are also increasing especially in rural areas and large and micro establishments.

Although small and medium establishments have not increased in equal numbers compared to larger ones from 2011 to 2014, they have significantly contributed to the increase in jobs. Demographic pressures are also reducing (fertility, population growth and dependency). We also see improvements in health outcomes, education, assets and living standards like access to water and sanitation to mention but a few are observed.

The momentum of improvements in various developmental fields that was observed between EICV2 and EICV3 has more or less been maintained for most indicators. Generally, living conditions are improving and poverty is reducing.

Going forward, because of some methodological improvements especially the basket, it is important that further analysis is done and the feasibility of linking up the series more precisely going backward with previous survey findings is assessed. Also some assumptions need to be revisited especially the need for 2500 Kcal per adult equivalent per day.

The findings in this report form the official poverty estimates in Rwanda as of 2013/14 and a benchmark going forward.

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Annexes

A. Additional indicators

Table A1: Increase in private and business oriented mixed establishments by industry: 2011-2014

Industry	2011	2014	% Change
Total	**119,270**	**148,376**	**24.4%**
Agriculture, forestry and fishing	667	724	8.5%
Mining and quarrying	49	281	473.5%
Manufacturing	9,118	10,730	17.7%
Electricity, gas, steam and air conditioning supply	135	20	-85.2%
Water supply, sewage, waste management and remediation activities	221	49	-77.8%
Construction	110	156	41.8%
Whole sale and retail trade; repair of motor vehicles and motorcycles	64,676	78,453	21.3%
Transportation and storage	263	282	7.2%
Accommodation and food service activities	33,285	44,621	34.1%
Information and communication	554	397	-28.3%
Financial and insurance activities	968	1,146	18.4%
Real estate activities	17	4	-76.5%
Professional, scientific and technical activities	897	932	3.9%
Administrative and support services activities	745	917	23.1%
Private formal Education	496	499	0.6%
Human health and social work activities	344	458	33.1%
Arts, entertainment and recreation	100	131	31.0%
Other services activities	6,437	8495	32.0%
Not stated	188	81	-56.9%

Table A2: Employment change in private and business oriented mixed establishments by industry: 2011-2014

Industry	2011	2014	% Change
Total	**264,648**	**355,883**	**34.5**
Agriculture, forestry and fishing	22,653	26,273	16
Mining and quarrying	2,407	16,182	572.3
Manufacturing	34,504	39,581	14.7
Electricity, gas, steam and air conditioning supply	671	1,747	160.4
Water supply, sewage, waste management and remediation activities	944	704	-25.4
Construction	5,639	5,087	-9.8
Whole sale and retail trade; repair of motor vehicles and motorcycles	93,551	120,419	28.7
Transportation and storage	2,926	4,532	54.9
Accommodation and food service activities	59,581	82,040	37.7
Information and communication	1,621	1,824	12.5
Financial and insurance activities	6,343	11,195	81.2

Real estate activities	163	9	-94.5
Professional, scientific and technical activities	2,789	2,861	2.6
Administrative and support services activities	2,999	11,045	268.3
Private formal Education	9,261	9,323	0.7
Human health and social work activities	2,736	4,109	50.2
Arts, entertainment and recreation	511	857	67.7
Other services activities	14,385	17,636	22.6
Not stated	964	459	-52.4

B. Details of EICV4 Poverty Line Setting

B.0 Introduction

Estimation of absolute monetary poverty in Rwanda started in a regular manner since 2001 when the first Household Living Condition Survey *(Enquête Intégrale sur les Conditions de Vie des Ménages-EICV1)* was undertaken. In 1983-1985, a previous similar survey called National Household Budget and Consumption was conducted in Rwanda.

Monetary poverty was estimated and analyzed as the main objective of all successive EICV's surveys, EICV2, EICV3 and the present EICV4. However, the surveys also provided a rich set of complementary social-economic indicators that facilitate understanding changes in households living conditions.

As for EICV2 carried out in 2005/6 and EICV3 carried out in 2010/11 poverty was estimated using the poverty line derived from EICV1 after deflating the consumption expenditure in both surveys so as to reflect prices that prevailed in 2001. As for EICV4 carried out in 2013/2014 it has been deemed necessary to update the poverty line. It has been a long time since 2000/1 and many changes in the socio-economic structure of the country have taken place.

B.1 Poverty Line

For the purpose of setting the poverty line we continued with household consumption expenditure as the preferred measure of household living standard and specifically analysing poverty in terms of absolute poverty (a level of consumption which could enable basic nutritional requirements to be satisfied, as well as essential non-food requirements) using the cost of basic needs approach (Rio 2006).This approach followed two steps:

1. Setting the food poverty line and;
2. Estimating minimum non-food requirements.

B.2 Estimation of household consumption

Measurement of household consumption was maintained similar to the previous EICV surveys. The EICV questionnaire collects detailed information on household expenditures, as well as on consumption obtained from non-purchased sources , for example consumption of food crops grown by the household. The contents of the consumption aggregate used for the analysis of poverty are summarised in Table B1which also gives the sources of the data from the questionnaire. For most households the most important components are purchases of food items, consumption of food items that the household produced itself (*auto consumption*) and purchased non-food goods and services. In addition, the consumption aggregate included are spending on education, frequent health expenses (routine consultations), expenses on housing and utilities (water, electricity), as well as other smaller items such as the value of wages received in kind and received in-kind transfers made by other households or institutions serving households.

The construction of the consumption aggregate follows standard international practice on what items to include and which to exclude (Angus D. et all 2002). Care was taken to exclude non-consumption expenditures of the household (e.g. purchases of business or farm inputs); to exclude purchases of large durable goods the consumption of which is spread over many years (Deaton A. 1997); and also to exclude large, one off exceptional items of expenditure such as weddings and funerals, or hospital stays. In the case of durable goods estimation is made of consumption flows based on the current value of any durable goods the household owns and commodity-specific depreciation rates. The exceptional items of consumption are excluded precisely because of their one-off nature: a household may have incurred a very high expenditure on a wedding in the period covered by the survey, but if this was included in the consumption aggregate it would exaggerate the household's normal level of consumption.

Table B1: Contents of household consumption aggregates used for poverty analysis

Component	Description of contents and items covered	Source of data in questionnaire
Education expenses	Household expenses on costs of schooling for all members who have been to school in the last 12 months	Section 4A, questions S4AQ11A - S4AQ11H
Housing expenditures	Actual rent, Imputed rental value of owner-occupied dwellings (respondent- provided valuation), rent in cash and in kind	Section 5B, questions S5BQ3A and S5BQ4A
	Household expenses on water and electricity	Section 5C, questions S5CQ9B, S5CQ11, and S5CQ17
Wage income	Payments received by employees in kind	Section 6C, question S6CQ25A
	Subsidized houses by employer and other benefits	Section 6C, questions S6CQ27A and S6CQ29A
Non-food expenses	Infrequent non-food items: purchases in the past year, but excluding purchases on durable goods and items already reported elsewhere	Section 8A, questions S8A1Q3, but excluding the following items: 21, 31, 36-38 inclusive, 44, 56, 60, 62-66 inclusive, 68
	More frequently purchased non-food items, including medical consultations, exams and medicines: based on purchases in last month	Section 8A, question S8A2Q3
	Frequent purchased non-food items	Section 8A, questions S8A3Q3-S8A3Q12
Food expenditure	Purchases of all food items	Section 8B, questions S8BQ3 - S8BQ12
Own food consumption expenditure	Consumption of own-produced food items	Section 8C, questions S8CQ3-S8CQ12, excluding the following non-food items: 98-101 inclusive
Transfers	Transfers received from other individuals or households paid in kind (food or non-food)	Section 9B, questions S9BQ10-S9BQ12
Use value of durable goods	Estimated consumption flows derived from durable goods (based on current value and estimated depreciation rates)	Section 10B, questions S10BQ5A, S10BQ5B and S10BQ5C

In the EICV surveys consumption values are collected from households with differing recall periods depending on the frequency of purchase or consumption. Thus for infrequently purchased items households are asked to report their purchases over the last year, or last month in the case of more regular non-food purchases such as transport. But for the most frequent items, including all food items, households are asked over several visits to report their purchases or *auto consumption* over the two or three days (in rural and urban areas respectively) since the last visit of the enumerator. This is considered to provide more accurate recall for the two or four week (in rural and urban areas respectively) period covered. However, all consumption needs to be computed with reference to a consistent time period. Here all consumption is expressed on an annual basis, grossing up the consumption reported with reference to shorter time periods to give annual values.

In the process of calculating consumption aggregates, attention must be given to the potential problem of outliers, the presence of extremely large values which mean that the value of household consumption is overestimated. One common reason for this in surveys is data entry errors, where for example extra zeros are added or decimal points are missed. In fact this is very unlikely in this case due to the thorough process of double data entry; and because the careful storage of the completed questionnaires of EICV surveys made it very straight forward to check apparently extreme observations against the original questionnaires.

Nevertheless the possibility of outliers still remains. Hence in constructing the consumption aggregate, mean values and standard deviations at the regional level were computed for each individual consumption commodity on adult equivalent basis, (see Table B2) in the case of food purchases, *auto consumption* and the main non-food purchases, and this was used to identify extreme observations as those lying more than three and a half standard deviations away from (above in practice) the mean value. Extreme values thereby identified were replaced with the mean value (multiplied by the number of equivalent adults in the household where relevant). Once the data was annualized a search was conducted for extreme values, as observations lying more than three and a half standard deviations away from the mean value[4]. The regional disaggregation used for this process distinguished the following locations: the City of Kigali, Other Urban areas, rural Eastern province, rural Northern Province, rural Southern province and rural Western province. Doing these at a regional level allows for the fact that average consumption levels of a commodity may differ significantly by location.

Table B2: Adult equivalence scale

Age range	Gender	
	Male	Female
Less than 1 year	0.41	0.41
1 to 3 years	0.56	0.56
4 to 6 years	0.76	0.76
7 to 9 years	0.91	0.91
10 to 12 years	0.97	1.08
13 to 15 years	0.97	1.13

Age range	Gender	
	Male	Female
16 to 19 years	1.02	1.05
20 to 39 years	1.00	1.00
40 to 49 years	0.95	0.95
50 to 59 years	0.90	0.90
60 to 69 years	0.80	0.80
More than 70 years	0.70	0.70

B.3 Food Poverty Line

1. Concepts

There are various ways of constructing a food basket and a food poverty line. However, the underlying principle is that minimum nutritional standards should be met. Approach examples include (Rio 2006):

1. Normative (pure expert prescription) ;
2. Semi-normative (respecting observed consumer habits in different degrees).

The normative basket follows expert specification of the basket that is considered as minimum requirement. Few countries use this approach and a good example is the US where the official poverty line is based on the least costly of four nutritionally adequate food plans designed by the U.S Department of Agriculture.

[4] The choice of the three and a half standard deviation criterion reflects the fact that if the statistical distribution of the variable can be approximated by a normal distribution, the probability that an observation lies so far away from the mean value is very small.

It is the second approach that is most widespread in measuring poverty. Hence in EICV4 a semi-normative approach is applied. In practice, the semi – normative approach follows three steps (Rio 2006):

1. Setting a basket with its original number of products or selecting the most representative items for each food category and then adjusting their quantities according to the reference group's consumption structure;
2. If the objective is to obtain a minimum basket, then replace rarely consumed or extremely costly goods with more common, less expensive items within the same category. Other items that are not necessarily pertinent for the poor may need special consideration (cola drinks, alcoholic drinks, spices and others);
3. Finally other parameters of nutrition may be considered.

In EICV1 the food basket was constructed based mainly on calorie requirements but also ensuring that proteins and other nutrients were met.

The basket was based on the consumption pattern of the bottom 60%. The choice of bottom 60% was based on the assumption that poverty was around 60% - 65% (World Bank, 1998). The standard approach is to either consider the bottom 40% in case of no information or preferably use the estimated proportion of the poor. In this case it was 60%. The final basket provided for about 2500 kilocalories per adult equivalent per day (MINECOFIN 2002).

2. Expert team

In setting poverty lines, it is important that the basket and the resultant poverty line are derived in consultation with local experts. This among other benefits allows understanding the context, meeting local realities and consensus. To achieve this NISR worked with a team of experts in nutrition, food security and poverty reduction program in Rwanda to discuss and advice on the process of constructing a new food basket for Rwanda in regards to EICV4. They included experts from:

1. The Ministry of Agriculture (Food security and agriculture policy)
2. Rwanda Agriculture Board (Food security)
3. The Ministry of Health (Nutrition)
4. World Food Program (Food security)
5. UNICEF (Nutrition)
6. World Health Organization (Nutrition)
7. Ministry of Finance and Economic Planning (Poverty reduction programme and national economic policy)

3. Discussions

Discussions focused on:

1. Reviewing poverty concepts and specifically the food basket in the context of absolute poverty in Rwanda;
2. Reviewing EICV1 food basket, composition, calories and cost;
3. Reviewing expenditure patterns of the bottom 40% in EICV4 as the reference group;
4. Deciding on the best approach to construct the food basket;
5. Agreeing on the food basket composition and its cost.

4. Process

Basic poverty concepts and EICV1 food basket methodology was reviewed. Overall EICV1 methodology was considered to be realistic within reasonable limitations of any approach as was elaborated in the methodological note and the time at which the survey was conducted.

There was discussion on whether we still need to maintain 2500 kilocalories per adult equivalent per day or reduce it.

The arguments for reducing the kcal threshold stems from the following:

(1) The population engaged in agriculture has declined substantially since 2001 from about 90% to 70% in 2014;
(2) There was a general sense in EICV1 that those working in agriculture needed higher calories due to the demanding nature of the job and lifestyle. However, from analysis of survey data on economic activity (NISR 2012) there is evidence that in fact median daily hours worked on farms are quit low (about 3.4 hours) and hence maybe no need for such high calories;
(3) The calorie requirement set for analysing poverty in Rwanda is quite high as compared to those used in the region and beyond, with few exceptions as can be seen in Table B3 below; and

Table B3: Calorie threshold per adult equivalent per day

Country	Calorie threshold (Kcal)	Number of food items in the basket	Reference year
African Countries			
Comores	2160	10	2004
Gabon	2100	29	2005
Guinea	2100	30	2003
Malawi	2198	14	1998
Tanzania	2200	28	2000/01
Niger	2400	18	2005
Benin	2400	21	2006
Burundi	2400	19	1998
Senegal	2400	26	2006
Togo	2400	50	1996
Rwanda	2500	42	2014
Other Countries in the World			
Armenia	2100	24	2003
Bangladesh	2122	11	2000
Indonesia	2100	52	2004
Philippines	2000	22	2003
Vietnam	2100	40	2002

Source: (1)AFRISTAT (2009), Méthodologie d'élaboration de la ligne de pauvreté sur une base harmonisée: Bilan dans les Etats membres d'AFRISTAT, SERIE METHODE N°7, (2) United Nations Statistics Division (2005), Handbook on Poverty Statistics: Concepts, methods and policy use, New York

Arguments for keeping 2500 kilocalories included:

1. The population in agriculture was still substantial;
2. A decision to reduce the calories would need more analysis and considerations; tasks that would be beyond what could be achieved within the available time and;
3. The need to have broad comparison of progress from EICV1 to EICV4.

Finally, it was decided we maintain 2500 kilocalories as was determined in EICV1 and consider revisions in the future after more considerations have been done.

5. The food basket

The first step was to review the consumption pattern of the bottom 40% of the population as observed in EICV4 in terms of item quantities and calories that they consume. Using household consumption item by item, household survey reported prices were used to obtain quantities consumed measured in local units. These were then converted to quantities in kilograms consumed per adult equivalent per day. This was then followed by using standard FAO calorie table (FAO 2001) to compute calories consumed.

It was observed that the average calories consumed per adult equivalent per day for the bottom 40% was 1,335 Kcal and an average total quantity of 1 kilogram of food per day (not cooked)[5]. The food was dominated by low calorie food items (sweet potatoes, Irish potatoes and cassava root) with very little cereals.

It is important to note that this level of calories consumed is quite low given the threshold needed. This phenomenon is similar to the situation in EICV1 and in other studies done elsewhere, South Africa for example, (Morné O. 2008).

The team recommended that some items were not of relevance to the poor. For some of the items either it would be difficult to obtain calorie contents or unit prices; these together with items that had very low weight were removed.

A threshold of 0.1% share of total weight in Kilograms of items consumed was considered for retention in the basket. Most of the items that have less than 0.1% weight did not have a basis for calorie allocation and prices in the same time. Other items that were not considered relevant for the poor and for inclusion in the basket were dropped including beer, sodas, spices and others. This resulted in a basket comprising 88.2% of the original basket weight composition. The retained 42 items were grouped into ten categories.

1. Cereals and products
2. Eggs
3. Fish
4. Fruits and products
5. Meat
6. Milk and cheese
7. Pulses
8. Roots and tubers (products)
9. Tree nuts/oil crops
10. Vegetables

The final basket contains only 42 food items. Table B4 of Annex B provides more details.

It is worth noting that the amount of consumed kcal per adult equivalent per day corresponding with the 42 items selected in the food basket is 1206 kcal. As such, the standard practice is applied in order to obtain the needed 2500 kcal, through scaling up the consumed quantities item by item by 2500/1206=2.07.

However, the total quantity obtained was quite high about 1.9 Kg (not cooked). There was a general consensus that scaling up mathematically by a factor of (2.07) may not be realistic.

Referring to the discussion, it was explained that the poor prioritize cost per quantity, hence low cost, big quantity and potentially low calorie choices. However, to achieve the necessary calories it may not be quite appropriate to unreasonably increase the quantity of the same low calorie/quality food items. This may not represent consumption habits of the poor if they are to consume food that will give them the needed calories especially if the calorie gap is big. Instead, ideally the poor should be shifting from low calorie/low quality items to higher calorie ones that are available to them in order to obtain the necessary calories.

[5] If cooked the kilograms may be more

The second step was to get the minimum cost basket by replacing high cost per calorie items with less cost per calorie items in the same category (cereals, fruits, meat, roots and tubers). In the categories of cereals and roots and tubers it was agreed that corn flour and cassava flour as is in the basket are mostly available in urban (not in rural) areas. Hence the amount of scaled-up calories of those two items are adjusted to reflect what the poor would access.

The team concluded with basket that provides the pre-set 2500 Kcal per adult equivalent per day; the total quantity was estimated as 1.4 Kilograms per adult equivalent per day. The basket mainly composed of roots, tubers and products that accounted for about 52% basically sweet potatoes, cassava and its products. Beans being the main source of proteins with fish and meat also included.

Although the calories and total quantity seemed high the expert team settled for it subject to further analysis going forward. The basket was then costed using survey reported January 2014 prices as the reference month giving a cost of RWF 105,064 as the value of food/extreme poverty line in January 2014 prices. Figure 15 shows the trend in nominal value of food poverty lines in all EICV surveys.

B4. Total poverty line

To obtain the total poverty line, it is important that essential non-food items cost is added to the food poverty line. To do this, households whose food consumption is within ten percent (plus or minus) of the food poverty line were identified. The median proportion that these households spend on non-food items was computed which is 0.659225. Based on this the total poverty line was estimated to be about RWF 159,375 in January 2014 prices.

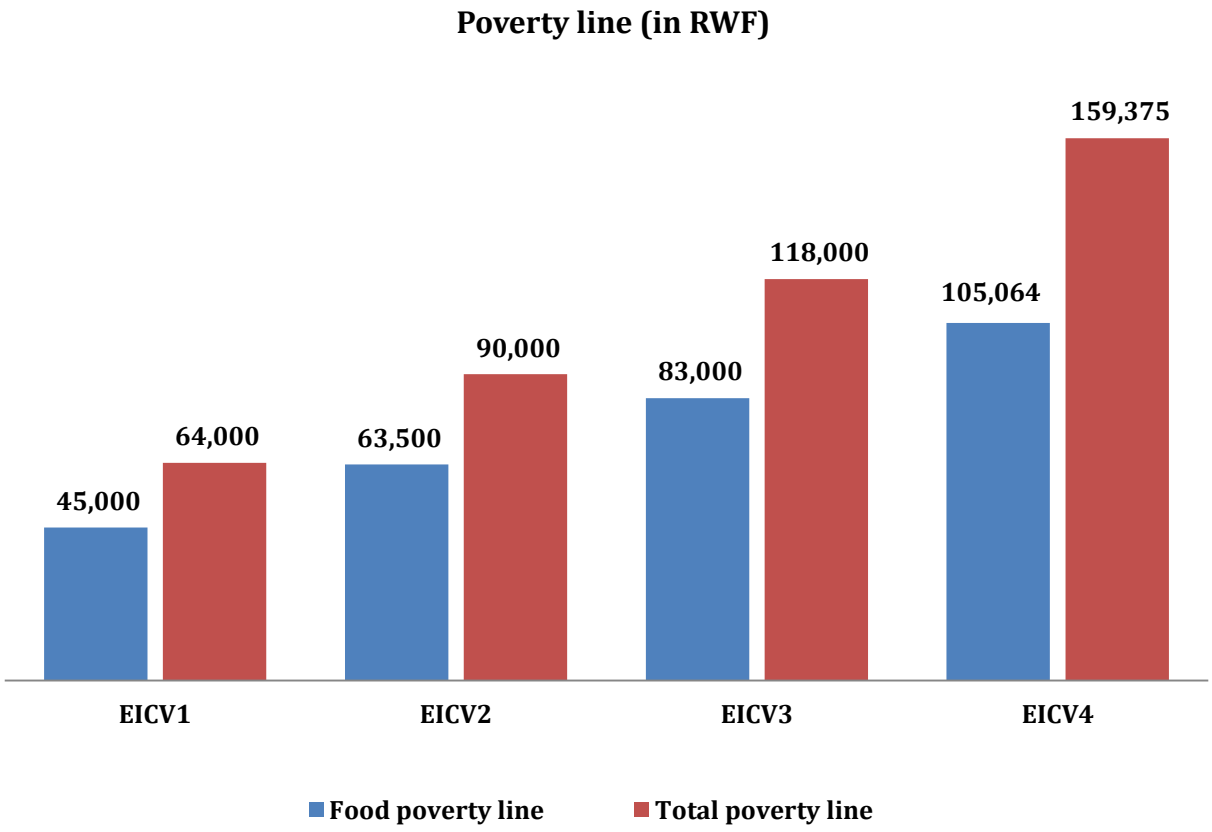

Table B4: Computation of food poverty line

SN	Food item	Quantity (Kg per AE per day)	Kcal per 100g	Kcal consumed	National price (RWF per 1 Kg)	Scaled up Kcal	Adjusted scaled up Kcal	Scaled up quantity (Kg)	Adjusted scaled up quantity (Kg)	Basket cost (RWF) per AE per day
	Cereals and products	**0.049379677**				**350.5**	**350.5**	**0.10240**	**0.10159**	
1	Corn (flour)	0.01835526	363.00	66.63	400	138.2	8.9	0.03806	0.00247	0.99
2	Dry maize (grain)	0.013813145	356.00	49.17	200	102.0	165.8	0.02864	0.04658	9.32
3	Local rice	0.009247573	280.00	25.89	600	53.7	20.0	0.01918	0.00716	4.30
4	Sorghum	0.002818775	343.00	9.67	200	20.0	102.0	0.00585	0.02973	5.95
5	Sorghum (flour)	0.005144923	343.00	17.65	300	36.6	53.7	0.01067	0.01565	4.70
	Eggs	**0.000935924**				**2.7**	**2.7**	**0.00194**	**0.00194**	
6	Eggs	0.000935924	139.00	1.30	80	2.7	2.7	0.00194	0.00194	0.16
	Fish	**0.012727656**				**52.5**	**52.5**	**0.02639**	**0.02639**	
7	Fish (dry / smoke	0.012727656	199.00	25.33	1020	52.5	52.5	0.02639	0.02639	26.92
	Fruits and products	**0.106784876**				**171.2**	**171.2**	**0.22144**	**0.18095**	
8	Avocado	0.014311332	119.00	17.03	100	35.3	121.8	0.02968	0.10237	10.24
9	Banana - cooking	0.07832337	75.00	58.74	150	121.8	35.3	0.16242	0.04709	7.06
10	Banana fruit (Im	0.005586184	60.00	3.35	200	7.0	3.4	0.01158	0.00573	1.15
11	Local banana jui	0.003451249	48.00	1.66	250	3.4	2.0	0.00716	0.00422	1.05
12	Mangos	0.002168461	45.00	0.98	200	2.0	7.0	0.00450	0.01545	3.09
13	Orange (local)	0.000197944	34.00	0.07	200	0.1	0.1	0.00041	0.00041	0.08
14	Papayas	0.001397093	26.00	0.36	200	0.8	0.8	0.00290	0.00290	0.58
15	Pineapple	0.001349244	26.00	0.35	150	0.7	0.7	0.00280	0.00280	0.42
	Meat	**0.001971231**				**6.5**	**6.5**	**0.00409**	**0.00306**	
16	Beef meat	0.001599325	150.00	2.40	1700	5.0	0.1	0.00332	0.00007	0.12
17	Chicken live	4.34734E-05	122.00	0.05	2000	0.1	0.1	0.00009	0.00007	0.15
18	Other Meats	3.45718E-05	126.00	0.04	800	0.1	1.2	0.00007	0.00094	0.75
19	Pork meat	0.000260615	220.00	0.57	1500	1.2	0.2	0.00054	0.00008	0.12
20	Sheep /Mutton /lamb	3.32458E-05	263.00	0.09	1500	0.2	5.0	0.00007	0.00189	2.84
	Milk and Cheese	**0.011495436**				**16.1**	**16.1**	**0.02384**	**0.02384**	
21	Curdled Milk	0.005298077	75.00	3.97	250	8.2	8.2	0.01099	0.01099	2.75

SN	Food item	Quantity (Kg per AE per day)	Kcal per 100g	Kcal consumed	National price (RWF per 1 Kg)	Scaled up Kcal	Adjusted scaled up Kcal	Scaled up quantity (Kg)	Adjusted scaled up quantity (Kg)	Basket cost (RWF) per AE per day
22	Fresh milk	0.006197359	61.00	3.78	200	7.8	7.8	0.01285	0.01285	2.57
	Pulses	**0.075845616**				**536.3**	**536.0**	**0.15728**	**0.15718**	
23	Dry beans	0.075845616	341.00	258.63	350	536.3	536.0	0.15728	0.15718	55.01
	Roots and tubers (products)	**0.575775373**				**1318.2**	**1318.2**	**1.19399**	**0.72329**	
24	Cassava (ferment	0.01130231	362.00	40.91	200	84.8	823.8	0.02344	0.22756	45.51
25	Cassava (flour)	0.039097123	338.00	132.15	300	274.0	44.5	0.08108	0.01315	3.95
26	Cassava (root)	0.069385616	109.00	75.63	150	156.8	156.8	0.14389	0.14389	21.58
27	Irish Potato	0.125675342	67.00	84.20	140	174.6	33.7	0.26061	0.05024	7.03
28	Sweet potato	0.311440274	92.00	286.53	100	594.2	174.6	0.64584	0.18980	18.98
29	Tarot/amateke	0.018874707	86.00	16.23	180	33.7	84.8	0.03914	0.09866	17.76
	Treenuts	**0.000474244**				**3.7**	**3.7**	**0.00098**	**0.00098**	
30	Ground nuts (pea	9.24307E-05	567.00	0.52	800	1.1	1.1	0.00019	0.00019	0.15
31	Soya (dry)	0.000381814	335.00	1.28	400	2.7	2.7	0.00079	0.00079	0.32
	Vegetables	**0.086752313**		**-**		**42.3**	**42.3**	**0.17990**	**0.17990**	
32	Amarante (large	0.002812896	22.00	0.62	200	1.3	1.3	0.00583	0.00583	1.17
33	Amarante (small	0.015043795	22.00	3.31	200	6.9	6.9	0.03120	0.03120	6.24
34	Cabbages	0.017226932	19.00	3.27	100	6.8	6.8	0.03572	0.03572	3.57
35	Carrot	0.001053907	38.00	0.40	300	0.8	0.8	0.00219	0.00219	0.66
36	Cassava leaves	0.009334622	53.00	4.95	300	10.3	10.3	0.01936	0.01936	5.81
37	Eggplant	0.008161573	21.00	1.71	200	3.6	3.6	0.01692	0.01692	3.38
38	Ibishayote	0.01036551	19.00	1.97	100	4.1	4.1	0.02150	0.02150	2.15
39	Lettuce	6.83562E-06	12.00	0.001	500	0.002	0.002	0.00001	0.00001	0.01
40	Onion	0.002421793	24.00	0.58	400	1.2	1.2	0.00502	0.00502	2.01
41	Pumpkin	0.005770416	19.00	1.10	100	2.3	2.3	0.01197	0.01197	1.20
42	Tomato	0.014554036	17.00	2.47	200	5.1	5.1	0.03018	0.03018	6.04
	Total	**0.922142345**		**1206**		**2500**	**2500**	**1.9**	**1.40**	**288**
									Food poverty line (RWF) per AE per year	**105,064**

C. Previous statistics

Table C.1: Percentage of the Rwandan population identified as poor

	2000/01	2005/06	2010/11
Rwanda	58.9	56.7	44.9
Urban		28.5	22.1
Rural		61.9	48.7
Kigali city	22.7	20.8	16.8
Southern Province	65.5	66.7	56.5
Western Province	62.3	60.4	48.4
Northern Province	64.2	60.5	42.8
Eastern Province	59.3	52.1	42.6

Table C.2: Percentage of the Rwandan population identified as extreme poor

	2000/01	2005/06	2010/11
Rwanda	40	35.8	24.1
Urban		16	10.4
Rural		39.5	26.4
Kigali city	14.5	12.9	7.8
Southern Province	44.7	44.9	31.1
Western Province	40.4	37.7	27.4
Northern Province	46.5	39.1	23.5
Eastern Province	39.4	29.9	20.8

Table C3: Distribution of poverty and extreme poverty Incidence by district: EICV3 (2010/11)

No	District	Poverty Incidence	Extreme poverty Incidence	No	District	Poverty Incidence	Extreme poverty Incidence
1	Kicukiro	8.3	2.8	16	Ngoma	47.6	22.3
2	Nyarugenge	10.1	3.6	17	Kirehe	47.9	25.6
3	Musanze	20.1	5.9	18	Bugesera	48.4	28.3
4	Gasabo	26	13.2	19	Gicumbi	49.3	33.9
5	Nyabihu	28.6	11.9	20	Nyanza	49.8	28
6	Rwamagana	30.4	12.4	21	Ngororero	51.9	29.5
7	Rubavu	35.8	19	22	Rutsiro	53	26.1
8	Nyagatare	37.8	19.1	23	Muhanga	53.6	26.2
9	Kayonza	42.6	19.2	24	Gakenke	56.6	30.9
10	Rulindo	42.9	19.7	25	Gisagara	59.4	32.1
11	Gatsibo	43.1	18.8	26	Ruhango	60.4	32.2
12	Rusizi	45	24.5	27	Nyaruguru	61.6	35.4
13	Burera	45.2	23.4	28	Karongi	61.7	39.8
14	Huye	46.6	25.2	29	Nyamasheke	63.4	40.6
15	Kamonyi	46.7	23.9	30	Nyamagabe	73.3	45.2

Figure C1: Distribution of poverty and extreme poverty Poverty Incidence by district: EICV3 (2010/11)

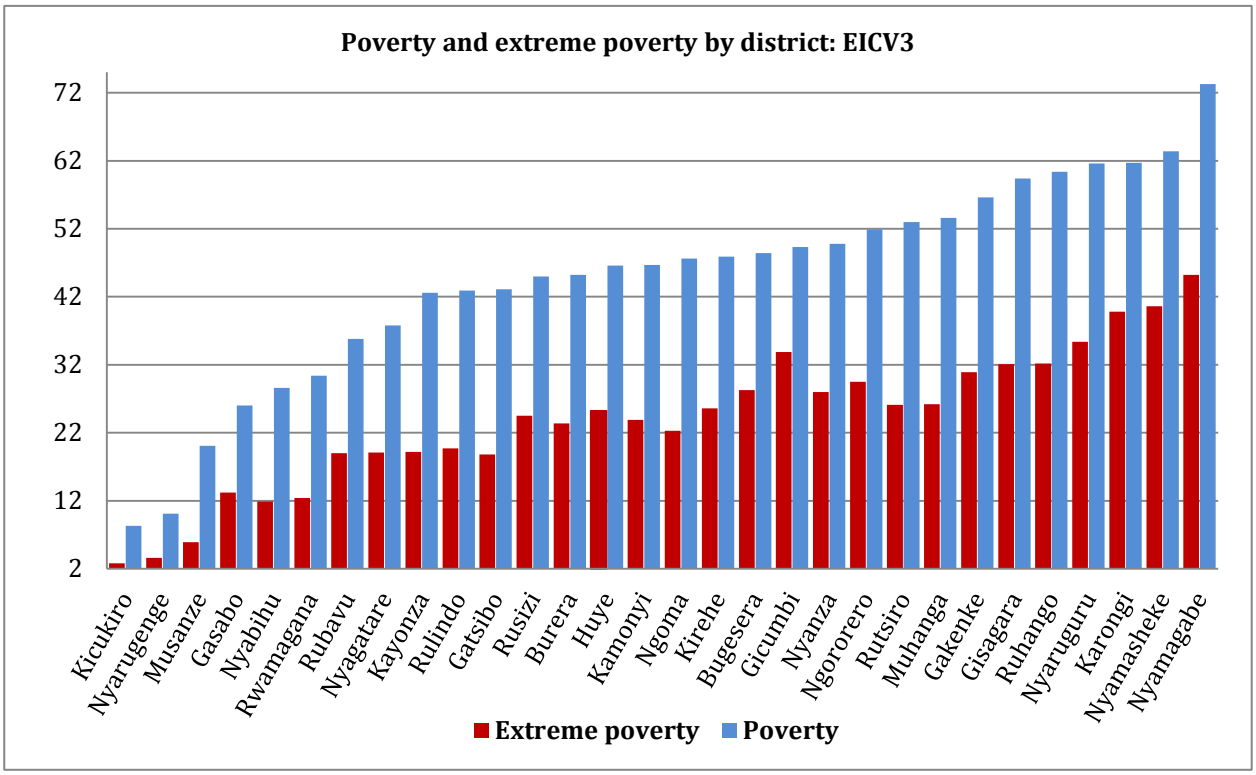

Table C.4: Poverty and extreme poverty depth

Depth of poverty	2000/01	2005/06	2010/11
Rwanda	0.414	0.393	0.329
Urban	0.280	0.348	0.300
Rural	0.420	0.397	0.331
Kigali city	0.366	0.346	0.284
Southern Province	0.422	0.416	0.340
Western Province	0.396	0.395	0.340
Northern Province	0.431	0.400	0.340
Eastern Province	0.415	0.357	0.302
Depth of extreme poverty	0.341	0.329	0.262

Table C.5: Evolution of inequality in Rwanda (Gini coefficient)

	2000/01	2005/06	2010/11
Rwanda	0.507	0.522	0.490
Kigali city	0.559	0.586	0.559
Southern Province	0.425	0.446	0.373
Western Province	0.445	0.492	0.395
Northern Province	0.457	0.431	0.438
Eastern Province	0.403	0.436	0.362
Ratio of 90th to 10th percentile	7.066	7.1	6.36

Table C.6: National averages of household consumption expenditures per year from EICV4 (2013/14)

Variable	Average value (RWF/HH/year)	Share of total consumption
Education	12,099	4%
Rent (imputed and actual rents)	27,830	10%
Water	1,702	1%
Electricity	1,326	0%
In kind wage and other benefits	11,476	4%
Non-food consumption, including health expenditures	66,712	24%
Food expenditure	87,986	31%
Own food consumption expenditure	48,610	17%
Transfers received	6,913	2%
Use value of durable goods	10,263	4%
Other expenditures	4,634	2%
Household consumption	279,553	100%
Total Food	136,597	49%
Non-food	142,956	51%

D. Persons and Institutions that contributed to the EICV4 poverty analysis

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