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# PRELIMINARY POVERTY UPDATE REPORT

# **INTEGRATED LIVING CONDITIONS SURVEY 2005/06**

(Enquête Intégrale sur les Conditions de Vie des Ménages)

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This report contains the initial survey findings and will be followed by several specialist publications which follow up in-depth several specialist topics including poverty and economic activity.

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# Summary of findings

This Preliminary Poverty Update Report presents the preliminary findings of the second Integrated Household Survey on Living Conditions (*Enquête Intégrale sur les Conditions de Vie des Ménages* (EICV), conducted in 2005/06. It compares key results with the first EICV, conducted in 2000/01 and so provides information on changes in the well-being of the population of Rwanda between the two surveys.

The surveys interviewed some 6,900 and 6,400 households respectively and provided nationally representative estimates. The key findings are summarised here and in the table of key estimates that follows. In the main body of the report, results are also presented separately for Kigali, other urban and rural areas. Information on the statistical significance of changes is given in the Annexe.

# **Poverty and Inequality**

The surveys collected detailed information on household consumption, including the consumption of home produced items. This information is used to quantify households' standard of living in monetary terms and is the basis for measuring income (consumption) poverty.

The surveys show that consumption per capita has grown, in real terms, at an average rate of around 3.0 percent per annum. Growth was highest in rural areas, and varied between provinces, with Eastern Province highest at 6.1 percent; and Northern Province lowest at 1.2%.

Poverty has declined as a result. Using comparable measures of consumption and poverty lines, the surveys showed that the proportion of individuals in poverty declined from 60.4 to 56.9 percent over the period. Extreme poverty, using a lower poverty line, also declined. Poverty declined most in other urban areas in proportionate terms. In rural areas, poverty declined from 66.1 to 62.5 percent. Progress in rural areas is critical to having on overall impact on poverty, since most of the poor are located there. Poverty remains an overwhelmingly rural phenomenon: even with the decline, over 90 percent of the poor are living in rural areas.

At the provincial level a large and statistically significant reduction of poverty occurred over this period in the Eastern province. Poverty in most other provinces also fell but at slower rates, except in the Southern province where poverty rose modestly. Although poverty has declined, growth has also been associated with an increase in inequality. The Gini coefficient, which measures inequality, has increased from 0.47 to 0.51, and inequality increased in most provinces, especially in the Southern provinces. Growth was therefore unequally distributed. This fact, plus the high initial level of inequality, moderated the impact on poverty reduction of a reasonable growth performance over this period.

The surveys also collected information on the ownership of various durable goods. The analysis of selected items presented in this report shows that ownership of many goods has increased, although many items remain rare. Some 53 percent of households now own a radio, although only six percent own a telephone. Poorer households show increased ownership of more basic items, including radios.

The proportion of the population living in female- and widow-headed households has declined. Poverty levels in these groups are higher than average, but have decline by more than in the population as a whole.

# **Social indicators**

The surveys collected information on education, health and housing conditions. They show that enrolment in primary schools has increased substantially over the period, with a rise in the net enrolment rate from 74 to 86 percent. These trends are consistent with MINEDUC data, although the level is lower. Both urban and rural populations have seen an increase in enrolment rates. However, many children in primary school are above the official primary school age range, due to late entry and delays in their schooling.

A small fraction of children complete primary education and go on to secondary education. The surveys show that the secondary net enrolment rate has shown only a small increase over the period, from 7 to 10 percent. In rural areas, only 8 percent of children aged 13 to 18 years are in secondary education.

Household expenditure on primary school students has remained approximately constant once adjusted for inflation, standing at an average 1,845 FRw per student per year. Uniform is the largest single element of this expenditure. The cost of secondary schooling is much higher, with households spending an average of around 68,000 FRw each year on secondary school students. Wealthier households spend much more than poorer households on secondary schooling.

The frequency of medical consultations has increased only marginally, despite the incidence of reported illness having risen. However the use of antenatal services has increased substantially and differences in utilisation between poorer and less poor households have narrowed.

Some 47 percent of individuals are now covered by health insurance, the vast majority by mutual insurance arrangements. This seems to have substantially reduced out-of-pocket payments for health care.

Users are broadly satisfied with most government services. Overall, satisfaction is highest with the district administration and primary education and health services and lowest with drinking water supplies.

There has been little change overall in the provision of safe of drinking water. Some 64 percent of households have access to a safe source, the same percentage as in 2000/01. Almost 10 percent fewer households collect their water from a free public pump or standpipe, and more are collecting water from a public spring or buying it. The change from free to purchased water is particularly marked in urban areas outside Kigali. In Kigali there has been a decline in the proportion of households using protected sources.

There has been a move towards enclosing pit latrines, with 58 percent of households using them in 2005/06 compared with 50 percent in 2000/01. This increase is most pronounced in rural areas.

# Economic activity and time use

In employment, there has been some movement out of agricultural activities, with a decline from 88 to 80 percent of working adults reporting it as their main occupation. There has been an increase in people working in commerce and sales, in the skilled service sector and in unskilled elementary occupations. In terms of industry, growth has been largest in wholesale and retail trade and domestic services have seen the largest increase.

Men have moved out of agriculture to a greater degree than have women and 86 percent of women continue to work in agriculture and fisheries.

Information collected on time use shows that workers in agriculture work the shortest number of hours, at 27 hours per week, compared with an overall average of 31 hours. This suggests underemployment. Perhaps reflecting this, rural dwellers are particularly likely to have more than one job.

Women work fewer hours than men in employment -28 compared with 35 hours per week. However, this is compensated by domestic labour, on which women spend 21 hours per week compared with nine hours men.

Children provide a significant amount of domestic labour, rising from 9 hours per week for children aged 7 to 10 years to 15 hours per week for children aged 16 to 20. Girls do substantially more than boys; 23 hours per week compared with 10 hours for boys. Children under 11 years old do very little paid work, but 11 percent of 11 to 15 year olds do some paid work.

The proportion of households owning livestock has increased from 60 to 71 percent. The average number of animals owned by households that own them has changed little. There has been an appreciable increase in the utilisation of agricultural inputs (seeds, insecticides and fertiliser), with reported use of chemical fertilizers among agricultural households having increased from 5 to 11 percent.

Some 19 percent of adults over 15 years old have changed their district of residence in the last five years. Migration is mostly due to work postings and family reasons. The main destination of migrants within Rwanda is the City of Kigali.

# Conclusions

In conclusion, the EICV surveys have been able to assess changes in a number of measures of welfare between 2000/01 and 20005/06. They have shown improvements in a number of important areas. They include a decline in income poverty, an increase in the ownership of some consumer goods, improvements in the welfare of some vulnerable groups. It has also shown an increase in primary school enrolment; enrolment at secondary level has also increased although it remains low. A higher proportion of people have been able to find jobs outside the agricultural, sector, however the main challenge for the future will be ensuring that the poor benefit from growth equitably.

# 1. Introduction

The first *Enquête Intégrale sur les Conditions de Vie des Ménages* (EICV1) was conducted in 2000/01 in a nationally representative sample of 6,420 households, to measure household expenditures, consumption and income, as well as demographic and socioeconomic characteristics of the population of Rwanda. The EICV data were used for poverty studies, determination of the market basket and weights for the consumer price index (CPI), and for national accounts estimation. This survey was followed about five years later (2005/06) by the second EICV (EICV2), conducted in a national sample of 6,900 households. This second survey had similar objectives to the first and is primarily intended to capture national changes in consumption and poverty levels on a national basis. The design of the second survey followed that of the first as closely as possible. The distribution of the sample households by residential strata for each survey is presented in Table 1.1.

Each of these surveys was designed to be geographically representative over a 12-month period, in order to take into account seasonality in consumption patterns and other characteristics. The second EICV started data collection in October 2005 and finished a year later in October 2006.

# Table 1.1Distribution of sample households by residential stratum for EICV1 and<br/>EICV21

	EICV1	EICV2
City of Kigali	720	900
Other Urban	450	720
Rural	5,280	5,280
All	6,450	6,900

Source: EICV1 and EICV2.

The sampling frames for both surveys were stratified by the 12 old provinces, urban and rural, and the sample was allocated fairly equally among the provinces and over the 12 months of the year, given that they were the main geographic domains at that time. The sample was not designed to be representative at the level of the new Districts. To enable comparisons to be made, and to provide a greater level of disaggregation, the results in this report are presented using the new provinces and the 12 old provinces.

The data are routinely analysed by three domains of study: the City of Kigali, Other Urban, and Rural. These are based on the 2002 census definitions of urban and rural and the corresponding city boundaries. These boundaries do not correspond exactly with those used for the first survey, which used the 1991 census. We have recoded the EICV1 data to enable exact geographical comparisons to be made. In some cases the EICV1 estimates do not correspond exactly with that presented in the EICV1 report published in 2002, because of these boundary changes. Further details of this recoding can be found in Annex A.5.

<sup>&</sup>lt;sup>1</sup> For both of EICV1 and EICV2 the non-interviewed households were replaced with other random households within the same ZD (*zone de denombrement*). However, in the case of EICV1 30 non-interviews were not replaced, so that the total number of households interviewed was 6420. For EICV2 all 6900 households were interviewed.

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

This chapter focuses on the pattern of income poverty in Rwanda and its changes over the past five years, based on a comparison between the recent EICV household survey and the previous round of the same survey conducted in 2000/01. It builds on the poverty profile study published by the Government of Rwanda in 2002, and follows the same methodology for both surveys to enable comparability. The methodology for assessing poverty is briefly discussed in section 2.1, with more detail being provided in Annex A: The chapter then presents the key poverty results in section 2.2, and some summary measures of inequality in section 2.3. The chapter considers a different indicator of household wellbeing in section 2.4, by looking at the pattern of household ownership of key durable goods. Finally, in section 2.5, it considers the position of vulnerable groups in relation to these poverty indicators, focusing specifically on female, widowed and child headed households.

# 2.1 Summary of methods for poverty and inequality analysis

The analysis of poverty and inequality in this paper is based on the total consumption expenditure of each household, expressed on a per adult basis in comparable prices. The household consumption expenditure measure includes purchases of food and the value of food consumed from own production, as well as all categories of non-food expenditures (excluding the purchase of durable goods) and the rental value of houses. It is adjusted to take account of differences in household size and composition to create a per capita consumption estimate<sup>2</sup>, and then adjusted to take account of differences in prices paid between different regions and different months, as well as changes in prices between the EICV1 and EICV2 period. This means that all consumption values can be expressed on a comparable basis, calculated at the national average prices applying in Rwanda in January 2006.

Comparable information is available for both survey years, as the consumption data collected is the same for both surveys and the same adult equivalence scale<sup>3</sup> and sources of price data are used for both. This consumption measure, therefore, should be comparable between both surveys. It forms the basis for the analysis of poverty in Rwanda, using exactly the same absolute poverty line as was used for the EICV1 poverty profile, now re-expressed in January 2006 prices. The consumption measure also forms the basis for an analysis of inequality based on the Gini coefficient and the Lorenz curve, as well as for dividing the population into quintile groups (where the first quintile includes the poorest 20% of the Rwandan population and the fifth quintile the richest 20%).

As the poverty results can be sensitive to the precise assumptions made, a sensitivity analysis is also presented in Annex A.2. In all cases the results are computed using sample weights, so that the results represent the entire Rwandan population.

# 2.2 A summary of recent poverty trends and patterns

In the analysis of poverty based on the EICV1 survey, a poverty line of FRw 64,000 per adult per year was used in January 2001 prices. This was estimated following the internationally used cost

<sup>&</sup>lt;sup>2</sup> The household consumption is divided by the number of adult equivalent persons in each household

<sup>&</sup>lt;sup>3</sup> To obtain a value for individual members of households the household total is divided by the number of adult equivalents resident there. Details of these calculations can be found in Annex A.3.

of basic needs method, based on a basket of food commodities sufficient to provide 2500kcal per adult, and to meet basic non-food requirements. Full details of the estimation of the poverty line are provided in Annex 2 of the EICV1 poverty profile. An extreme poverty line of FRw 45,000 per adult was also used, representing the level of expenditure needed to consume the basic food basket. These same poverty lines in real terms have been retained for this analysis to enable a comparison of poverty levels relative to the same thresholds; but the lines have been converted into January 2006 prices, giving values of 90,000 FRw per adult per year for the poverty line and 63,500 FRw for the extreme poverty line. This translates to a poverty line of 250 FRw per day per adult and 175 FRw for the extreme poverty line.





Source: EICV1 and EICV2

At the national level the proportion of the Rwandan population identified as poor fell from 60.4% in 2000/01 to 56.9% in 2005/06 (Figure 2.1 and Table 2.1), a reduction of 3.5 percentage points. This reduction is statistically significant at the 95% level of confidence. Poverty fell in each stratum of study; Kigali, other urban and rural areas, with the largest percentage point reduction in urban areas outside Kigali. The rural poverty reduction is also statistically significant, though those in urban areas are not, in part reflecting the smaller sample sizes there.

While this represents reasonable progress in poverty reduction terms, it is important to remember that there has also been significant population growth over this period at an average of around 3.5% per annum. Therefore though the percentage of the population has fallen, due to population growth, the total number of Rwandans living in poverty is estimated to have increased from around 4.8 million in 2000/01 to 5.4 million in 2005/06.

A geographic disaggregation of poverty changes reveals important differences between different parts of the country. The poverty headcount is much lower in Kigali than in other urban areas; but

poverty levels in rural areas are much higher than urban areas. It is also possible to calculate what proportion of the poor live in each area, (last two columns of Table 2.1). Nearly 92% of the poor in Rwanda live in rural areas, a proportion which changed little over this period and which is somewhat greater than the share of the population living in rural areas (around 83% in 2005/06). Poverty in Rwanda remains disproportionately a rural phenomenon.

		count (share of ition, %)	Share of t	he poor (%)
	EICV1	EICV2	EICV1	EICV2
by stratum				
Kigali	16.1	13.0	2.2	1.7
Other urban	46.5	41.5	6.0	6.7
Rural	66.1	62.5	91.8	91.6
by province				
City of Kigali	24.4	20.2	4.1	3.4
Southern province	65.8	67.3	27.1	30.2
Western province	63.1	62.0	24.9	26.3
Northern province	66.9	62.7	23.5	20.3
Eastern province	61.8	50.4	20.4	19.7
by old province				
City of Kigali	16.1	13.0	2.2	1.7
Kigali Ngali	70.7	46.5	11.9	8.4
Gitarama	53.8	56.5	9.4	9.9
Butare	73.5	70.6	10.0	11.4
Gikongoro	76.1	79.2	8.0	9.1
Cyangugu	63.9	61.4	8.0	7.3
Kibuye	73.1	64.5	6.9	6.7
Gisenyi	54.9	61.8	8.7	11.5
Ruhengeri	71.2	64.5	13.7	11.3
Byumba	64.7	67.2	9.9	9.9
Umutara	53.7	45.4	3.7	4.7
Kibungo	53.7	50.3	7.6	8.1
National	60.4	56.9	100.0	100.0

### Table 2.1 Poverty headcounts for Rwanda, disaggregated by location (%)

Source: EICV1 and EICV2 surveys.

According to the new provincial classification, the largest reduction is observed in the Eastern province (Figure 2.2 and Table 2.1), a fall which is statistically significant at the 95% level. Quite large reductions are also observed in the poverty headcounts in the Northern province and the City of Kigali. But in the Southern province, which was one of the poorest in 2000/01, the poverty headcount increased slightly. In addition, the southern province has the highest share of poverty in Rwanda; this was already the case in 2000/01 and is even more so now. The Western province has the second highest share of the poor in Rwanda; while in contrast the new Kigali province only accounts for 3.4% of the national poverty headcount.



Figure 2.2 Poverty headcounts by province, Rwanda 2001 and 2006 (%)

Source: EICV1 and EICV2

There is substantial heterogeneity among these new provinces in poverty levels. For example, in the Southern province in 2000/01, poverty levels were substantially higher in the old provinces of Butare and Gikongoro than in Gitarama (Table 2.1). There are important differences across the old provinces in the experience of poverty changes. For instance, a large (and statistically significant) reduction in poverty is observed in Kigali Ngali; but it is important to recognise that a part of this may reflect the severe drought which affected this province in 2000/01. Large percentage point reductions in poverty are also observed in the former provinces of Umutara, Kibuye and Ruhengeri. The reduction in Kibuye is also statistically significant; it may in part be a consequence of the new road which was completed since the EICV1 survey. In Ruhengeri the reduction may reflect in part the insecurity problems that affected part of that province in 2000/01 now having been overcome. In other areas, though poverty increased, notably in Gisenyi, Gikongoro and Gitarama. Gikongoro, the poorest of the former provinces to begin with has become poorer over the period. While Gikongoro is now the poorest of the former provinces by some margin, the highest contributions to national poverty now come from the former provinces of Butare, Ruhengeri and Gisenvi, reflecting a combination of high population shares and relatively high poverty headcounts.

When a similar analysis is conducted for the extreme poverty line (the line below which households' total consumption expenditure falls even below the cost of the minimum food basket) this shows a fall of 4.2 percentage points, from 41.3% in 2000/01 to 36.9% in 2005/06 (Annex Table B.1). This reduction still means an estimated increase of 200,000 in the number of Rwandans living in extreme poverty, as a consequence of continued fast population growth. Extreme poverty reduction was faster in rural areas than in urban areas; but apart from this the geographic pattern of change in extreme poverty is similar to that for overall poverty. As the trends in extreme poverty are similar to those of general poverty, the messages about changes in poverty

do not appear to be sensitive to the precise poverty line used. What is most striking in Annex Table B.1 is the very high levels of extreme poverty in the Southern Province in general, and specifically in the former provinces of Butare and Gikongoro.

	ро	verty depth	
	EICV1	EICV2	
by stratum			
Kigali	34.4%	29.3%	
Other urban	36.0%	37.3%	
Rural	42.1%	40.4%	
by province			
City of Kigali	39.9%	32.1%	
Southern province	42.5%	42.7%	
Western province	40.0%	41.0%	
Northern province	42.4%	40.1%	
Eastern province	41.5%	36.1%	
National	41.5%	40.0%	

#### Depth of poverty by location (% of poverty line) Table 2.2

Source: computed from EICV1 and EICV2

The average poor person had a consumption level 41.5% below the poverty line in EICV1. The corresponding figure, a measure of the depth of poverty, fell marginally to 40.0% in EICV2 (Table 2.2). The largest reductions in the depth of poverty occurred in the City of Kigali and the Eastern Province, while the depth of poverty increased modestly in the Western Province.

#### 2.3 Geographic patterns of inequality and their evolution over time

Over the period between the two surveys consumption per adult grew at a national annualised average rate of 3.0% (Table 2.3). The average consumption growth rate was positive in each stratum, but somewhat higher in rural areas compared to urban areas. It was positive in all provinces, and unsurprisingly highest in the Eastern province at 6.1%.

This growth in average consumption at the national level and across each of the provinces. though, was not shared equally. Inequality in Rwanda was already high in 2000/01, as represented by a Gini coefficient of around 0.47, and this increased to around 0.50 in 2005/06. These are high levels of Gini coefficients by global standards. The level and change in inequality is represented by the Lorenz curves plotted in Figure 2.3; the Lorenz curve for EICV2 lies outside that for EICV1 for most of the range, consistent with an increase in inequality.





Source: computed from EICV1 and EICV2 survey results.

At a disaggregated level, the Gini coefficients fell in urban areas over this period, and the ruralurban differential fell. There was a large increase in inequality in rural areas, and increases in the Gini coefficient in three of the four provinces outside Kigali (Table 2.3). Although growth in average consumption levels in the Southern Province was above average, there was a particularly large increase in the Gini coefficient. Growth in this Province was clearly very unequally distributed, to such an extent that poverty rose slightly despite the overall growth. Very few of the poor in the Southern Province appear to have participated in the growth.

The fast growth in the Eastern Province was also accompanied by increasing inequality so moderating the poverty reduction impact of growth there; with a similar pattern applying in the slower growing Western province. Growth in consumption in the Eastern and Western provinces was also unequally distributed. Only Kigali and Northern Provinces have shown decreases in inequality

Growth in Rwanda has reduced poverty, but it has also been unequally distributed. He high existing level of inequality limits the extent to which growth can be translated into poverty reduction. Because growth over this period has been accompanied by increasing inequality, this has reduced its impact on the reduction of poverty levels.

	estimated annualised consumption growth rate, 2000/01 to 2005/06	gini coefficient	
		EICV1	EICV2
By stratum			
Kigali	2.1%	0.486	0.474
Other urban	1.5%	0.521	0.515
Rural	3.7%	0.374	0.439
By province			
City of Kigali	1.7%	0.520	0.499
Southern province	4.3%	0.394	0.510
Western province	2.0%	0.418	0.465
Northern province	1.2%	0.417	0.407
Eastern province	6.1%	0.382	0.434
National	3.0%	0.473	0.508

## Table 2.3Consumption growth rates and inequality: 2000/01 to 2005/06

The shares of the different quintile groups by locality (Table 2.4) illustrate more clearly the changes in inequality. By stratum, in 2001 71% of the population of the City of Kigali was in the richest quintile group, and this increased to 73% by 2006. Very few Kigali residents are in the first quintile group. Other urban households are generally disproportionately located in the higher quintile groups, but much less strikingly so than in the case of Kigali. Rural households are overrepresented in lower quintile groups, and underrepresented in the top quintile. In rural areas the proportions in each quintile group change very little over the period 2000/01 - 2005/06.

There are larger changes at the level of the new provinces, corresponding to patterns described above. The proportion of the population of the Southern and Western provinces that are in the lowest quintile increased sharply over the period, and the numbers in higher quintile groups reduced. An opposite pattern is observed in the Eastern province, where there are fewer households found in the first quintile group and more in the middle and upper national quintiles. More than 60% of households in the new Kigali province are in the richest quintile, and this increased slightly over the period. Separate calculations show that 30% of households in the fifth quintile are in the new Kigali province, though this only represents around 10% of the national population.

	Year	Expendit	ure quintil	е			All
		Lowest Quintile	2nd Quintile	3rd Quintile	4th Quintile	Highest Quintile	
by stratum							
Kigali	EICV1	3.7	4.5	7.5	13.0	71.3	100.0
	EICV2	1.9	5.1	6.5	13.5	72.9	100.0
Other urban	EICV1	11.0	16.4	19.1	22.1	31.5	100.0
	EICV2	12.1	15.0	16.4	20.3	36.2	100.0
Rural	EICV1	22.4	21.9	21.3	20.5	13.9	100.0
	EICV2	22.5	21.9	21.6	20.6	13.5	100.0
by new province							
City of Kigali	EICV1	8.2	7.0	8.7	15.4	60.7	100.0
	EICV2	3.8	8.3	8.5	16.3	63.1	100.0
Southern province	EICV1	22.8	21.5	20.8	20.6	14.3	100.0
	EICV2	26.2	24.9	18.8	16.7	13.3	100.0
Western province	EICV1	18.8	21.9	22.1	21.4	15.9	100.0
	EICV2	23.1	21.6	20.3	20.5	14.6	100.0
Northern province	EICV1	22.6	22.6	21.3	18.6	14.9	100.0
	EICV2	22.5	21.1	22.4	20.1	13.9	100.0
Eastern province	EICV1	21.1	19.5	20.9	21.5	17.0	100.0
-	EICV2	14.4	16.9	24.0	24.9	19.9	100.0

# Table 2.4Geographic distribution of population by quintile group (%)

Source: computed from EICV1 and EICV2 surveys.

This pattern of growth in average consumption over the period is consistent with a reduction in the food share nationally, and across all regions (Table B.2), even without taking account of the increased relative price of food compared to non-food over this period. Nationally the share of food in the consumption basket fell from 66.6% in EICV1 to 62.3% in EICV2.

# 2.4 Patterns of ownership of core durable goods

Households' ownership of durable goods provides further insight into the living conditions of households and offers comparisons with their consumption poverty status. Households provided information about their ownership of a list of common household durable goods. From this list of goods, several key items were selected for analysis. These included basic household furniture, communication equipment, and basic means of transport. Ownership of all these goods increased between the two surveys, although, depending on the items, patterns differ between poor and non-poor households.

	Non-poor					
Ownership	Poor households		households		National	
	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2
Bicycle	3.5	6.5	10.7	20.4	6.6	12.9
Radio	22.8	40.6	53.3	67.2	35.9	52.9
Television	0	0	3.6	5.2	1.5	2.4
Telephone or Cell Phone	*	0.5	*	13.0	*	6.2
Computer	*	0	*	0.7	*	0.3
Living Room Suite	0.8	1.6	14.9	19.0	6.8	9.6
Bed Source: EICV1 and EICV2	29.3	40.3	63.0	71.2	43.8	54.5

#### Table 2.5 Household ownership of selected durable goods (%)

\* Data not collected

Bicycle ownership increased from 7% in 2000/01 to 13% in 2005/06. Although ownership levels among both and non-poor almost doubled, the ownership gap between the two did not change: 20% of non-poor households own a bicycle in 2006 compared to 6.5% among the poor.

By 2005/06 more than half of all Rwanda households owned a radio (53%). Seventeen percent more poor households now own a radio than was the case in 2000/01. While radios are to be found in both poor and non-poor households, ownership of a television set is still very low (2%) and concentrated among the non-poor. Telephone or cell phone ownership at national level stood at only 6% in 2005/06, with the ownership pattern illustrating the telecommunications gap between the poor (less than 1%) and the non-poor (13%). Nationally, less than 1% of households had a computer available a home, and this will be a challenge in developing a national information technology culture.

Ownership of basic furniture has also improved nationally: by 2005/06 more that 54% of households had at a least one standard bed, compared to 44% in 2000/01. The poor are acquiring beds at a faster rate than their non-poor counterparts, although still only 40% of poor households had one in 2005/06. Formal living room furniture is still very uncommon, with only 10% of households owning a suite of furniture by 2005/6, an increase of less than 3% since 2000/01.

#### 2.5 The situation of specific vulnerable groups

The changes in the poverty status of vulnerable sub-population groups illustrates the effectiveness of policies designed to reach the most vulnerable in society. In the survey it is possible to distinguish three types of vulnerable groups: households headed by women, by widows, and by children (children are defined here as persons of less than 21 years). Between 2000/01 and 2005/06, poverty levels in all three vulnerable groups fell, as did the share of the population living in these vulnerable households. However, the pattern of change differed by group, bringing some groups closer in terms of poverty levels. The population in female and widow headed households started out with different poverty levels (68% for widow headed households and 66% for female headed ones) but by 2005/06 poverty levels in both groups were at approximately 60%. These two groups tend to have higher than average poverty levels, even in 2005/06, however, the decline in poverty was better than the national average: around 6% compared to 3.5% at national level. Poverty levels among child headed households closely resembled the national trend; the change in poverty levels between the two surveys was virtually the same as the national trend.

Household type		Population share	Poverty Status
Female headed	EICV1	27.6	66.3
	EICV2	23.4	60.2
Widow headed	EICV1	22.0	67.7
	EICV2	18.7	59.9
Child headed	EICV1	1.3	60.1
	EICV2	0.7	56.9
National	EICV1	100.0	60.4
	EICV2	100.0	56.9

## Table 2.6Population share and poverty status of vulnerable groups (%)

Source: EICV1 and ECV2

Compared to the other two groups, the population share of child headed households is extremely small and showed a 50% decline between the two years (1.3 % in 2000/01, 0.7% in 2005/06). The downward trend in child headed households shows the recovery from the events of 1994 for this vulnerable group. The urban–rural profile of child headed households is also different from the general population, showing a higher rise in urban residence (from 19% to 23%) compared to the 16% to 17% national level. On the other hand, female and widow-headed households reflect the national pattern of predominantly rural residence, with no change in this pattern between the two surveys.

Household type		Urban	Rural	National
Female headed	EICV1	16.9	83.1	100.0
	EICV2	17.3	82.7	100.0
Widow headed	EICV1	15.9	84.1	100.0
	EICV2	16.0	84.0	100.0
Child headed	EICV1	19.0	81.0	100.0
	EICV2	22.9	77.1	100.0
National	EICV1	16.1	83.9	100.0
	EICV2	16.6	83.4	100.0

## Table 2.7Distribution of vulnerable groups by urban and rural (%)

# 3. Social indicators

# 3.1 Education

## Enrolment

Enrolment rates in both primary and secondary schools have increased substantially between 2000/01 and 2005/06. More than eight out of every ten children of the official primary school age (i.e. aged 7–12 years) are now reported to be attending primary school (Table 3.1). The considerable improvement in this net enrolment rate between the two surveys indicates that Rwanda is making good progress towards the second Millennium Development Goal (MDG) of universal primary education. The data suggest, too, that the net primary enrolment rate for female students, which had already achieved parity with those of male students in 2000/01, has now slightly overtaken the male enrolment rate, with 87% of female students of primary age reportedly attending primary school, compared with 85% of male students. The City of Kigali still has higher enrolment rates than other urban and rural areas, but the rural areas have narrowed the gap considerably since the time of EICV1, with an enrolment rate now approximately five percentage points lower than that of the capital compared with 10 percentage points at the time of EICV1.

Stratum		EICV1			EICV2	
	Male	Female	All	Male	Female	All
City of Kigali	81.5	83.9	82.7	89.8	91.0	90.4
Other urban	75.5	72.8	74.1	89.0	91.3	90.1
Rural	72.9	73.0	72.9	84.0	86.2	85.1
National	73.7	73.7	73.7	84.8	86.9	85.9

### Table 3.1Net enrolment rate at primary school, by gender and stratum (%)

Source: EICV1 and EICV2 data. Notes: (1) Net enrolment rate shows children aged 7–12 who are reported to be attending primary school, as a proportion of all children aged 7–12. (2) Figures for EICV1 have been recalculated to make them comparable with EICV2. This results in a small difference (1 percentage point) between the figures presented here and those in the EICV1 report. (3) The strata have been reclassified since the EICV1 survey. This table uses the new strata for both sets of data.

The improvement in enrolment rates reported by households between the two time periods confirms the upward trend noted in the regular administrative data collected by the Ministry of Education (MINEDUC). Differences in actual rates may be a result of variations in the method of calculation<sup>4</sup> and the point in the school year at which figures are collected.

An even greater increase in primary enrolment is observed when looking at gross enrolment, which takes into account students who are outside the official primary school age as well as those aged 7–12 (Table 3.2). In 2005/06 the gross enrolment rate had reached 140% of the primary-age population. Since the net rate is 86%, this means that students of non-primary school age who attended primary school amount to an additional 54%. More than one-third of all students in primary schools are therefore under the age of seven or over 12 years. Schools in urban areas other than Kigali have a particularly high proportion of over- or under-age students.

<sup>&</sup>lt;sup>4</sup> Statistics from administrative records use denominators obtained from population projections, whereas survey estimates use a numerator and denominator derived from the same source, the survey itself.

Stratum		EICV1			EICV2	
	Male	Female	All	Male	Female	All
City of Kigali	107.4	118.3	112.8	129.3	131.7	130.5
Other urban	117.8	112.6	115.2	149.4	149.7	149.6
Rural	111.2	108.7	109.9	140.2	139.6	139.9
National	111.4	109.6	110.5	140.4	140.0	140.2

## Table 3.2Gross enrolment rate at primary school, by gender and stratum (%)

Source: EICV1 and EICV2 data. Notes: (1) Gross enrolment rate shows students of any age who are reported to be attending primary school, as a proportion of all children aged 7–12. (2) Figures for EICV1 have been recalculated using the denominator of all children aged 7–12, to make them comparable with EICV2. They therefore differ from those in the EICV1 report, for which children aged 13 were also included in the denominator. (3) The strata have been reclassified since the EICV1 survey. This table uses the new strata for both sets of data.

Figure 3.1 below confirms the picture presented above. Considerably more than half of all 13–15 year-olds are still in primary education; even some young adults are still attending primary school. This is likely to be due to a combination of repetition of classes and late starting or interruption of education.



Figure 3.1 School attendance, by single years of age (%)

Source: EICV2. Note: 'above primary' includes vocational (post-primary), academic (secondary) and tertiary education.

Almost all primary students attend free public or subsidised schools; just 4% of students are reported to attend private schools.

Continuation of education beyond primary level, in contrast, is extremely low (Figure 3.1 and Table 3.3). Across Rwanda, only one in 10 people of secondary age attends secondary school. Secondary enrolment in Kigali is almost four times as high as in rural areas. The figures show that there has been a small improvement in net secondary enrolment since 2000/01: the proportion of

13–18 year-old males attending secondary school in rural areas has doubled from 4.5% to 8.9%, and the proportion of females has also increased, though by a smaller amount, so their enrolment rate outside urban areas is now slightly behind that of male students. Nonetheless, the total figures are still very small.

Stratum		EICV1			EICV2	
	Male	Female	All	Male	Female	All
City of Kigali	24.9	22.7	23.6	29.2	29.0	29.1
Other urban	7.4	11.3	9.3	12.6	14.9	13.8
Rural	4.5	5.4	5.0	8.9	7.0	7.9
National	6.2	7.5	6.9	10.6	9.5	10.0

## Table 3.3 Net enrolment rate at secondary school, by gender and stratum (%)

Source: EICV1 and EICV2 data. Notes: (1) Net enrolment rate shows children aged 13–18 who are reported to be attending secondary school, as a proportion of all children aged 13–18. (2) Figures for EICV1 have been recalculated to make them comparable with EICV2. This results in a small difference (about 0.5 percentage points) between the overall figures presented here and those in the EICV1 report. (3) The strata have been reclassified since the EICV1 survey. This table uses the new strata for both sets of data. (4) Figures do not include students on vocational 'post-primary' courses.

The improvement in enrolment rates between 2000/01 and 2005/06 is part of a much longer trend of gradually increasing school enrolment in Rwanda. Children, and especially females, of the official school age in 2005/06 are much more likely to have ever been to school than children in previous generations (Figure 3.2).

## Figure 3.2 Percentage of people ever having attended school, by current age (%)



Source: EICV2.

One contributing factor in determining whether students remain in education, or attend at all, is the cost. This is discussed next.

# Expenditure

Tuition at public primary schools is free, and the Government of Rwanda is in the process of extending free tuition to the first three years of public secondary schooling (*tronc commun*). However, almost all households with members in school still incur some expenditure for their education. For students in private schools this includes the direct cost of tuition; for all students, regardless of school type, there may be indirect costs such as the purchase of school materials and supplies.

Expenditure on students in primary education has changed little in real terms since the previous survey: median expenditure over a 12-month period, at FRw 1,845 per student, compares closely to the median value of FRw 1,798 in 2000/01 (Table 3.4). There remains almost no difference in expenditure between male and female students. Median expenditure on students in the highest consumption quintile is about three times as high as that in the lowest quintile.

# Table 3.4Median education expenditure per student in primary education in past<br/>12 months, by gender and consumption quintile (FRw)

Quintile		EICV1				
	Male	Female	All	Male	Female	All
Lowest	975	928	950	1,233	1,136	1,174
Second	1,335	1,417	1,412	1,516	1,729	1,616
Third	1,775	1,856	1,817	1,827	1,810	1,817
Fourth	2,363	2,261	2,300	2,050	2,161	2,117
Highest	3,558	3,491	3,505	3,653	3,327	3,466
All	1,817	1,795	1,798	1,844	1,854	1,845

Source: EICV1 and EICV2 data. Notes: (1) All values are expressed in January 2006 prices using the consumer price index (CPI).

The total costs of primary education, however, are very unevenly distributed. For example, the average education expenditure for students in public or subsidised schools, at just under FRw 2,500, is 14 times lower than the average expenditure on the few percent of students who attend private (fee-paying) primary schools (FRw 35,000). The overall mean, which amounts to FRw 3,724 at January 2006 prices, is heavily skewed towards students in the highest quintile, which reflects the fact that they make up by far the highest proportion, some 47%, of students at private schools.

Mean expenditure shows a 36% increase in real terms compared with EICV1. This shows that *mean* education expenditure has risen at a far greater rate between the two survey periods than the *median* expenditure: in other words, while most people are spending similar amounts on education, the people with the highest expenditure in 2005/06 are now spending far more in real terms than those with the highest expenditure in 2000/01. Expenditure for students in private schools has increased massively between the two surveys, which may account for much of the difference.

On average, for each household in 2005/06, uniforms constitute the largest expense in primary education, at 42% of mean household expenditure on education. Books and stationery together contribute another 37% of the total cost. Remaining expenditure is devoted to a range of items including donations to the school for specific items or events, food and transport. For students in private schools, enrolment fees make up a large component of overall education expenditure.

Expenditure on secondary school students is much higher than on primary students. Median expenditure in the past year is over FRw 68,000, which is 37 times as much as households spend on primary students (Table 3.5). The pattern of expenditure is similar to that in primary schools. Again, there is little difference in cost for male and for female students: median expenditure for male students in EICV2 is FRw 65,000, while for females is just under FRw 70,000 (not shown). Households in the highest consumption quintile spend far more on education than those in any other quintile, which is due in part to the fact that they contain more than half the students in private schools. The increase in expenditure for the poorest households is very small compared with the increased expenditure for households in the other quintiles.

Quintile	EICV1	EICV2		
Lowest	32,344	20,916		
Second	32,373	47,972		
Third	27,315	60,195		
Fourth	51,300	63,700		
Highest	66,834	81,971		
All	50,920	68,298		

# Table 3.5Median education expenditure per student in secondary education in<br/>past 12 months, by gender and consumption quintile (FRw)

Source: EICV1 and EICV2 data. Notes: (1) Figures do not include students on vocational 'post-primary' courses. (2) All values are expressed in January 2006 prices using the consumer price index (CPI).

## Literacy

Approximately two-thirds of people aged 15 and over declare themselves to be literate (Table 3.6). The literacy rate reported by males is much higher than that of females, and literacy in Kigali is much more widespread than in rural areas. The rates reported here are much higher than those reported in 2000/01, when just over half (52%) of people considered themselves literate. The 2000/01 is thought to be too low<sup>5</sup>. They also show an improvement on the levels of literacy found by the census in August 2002, and by the Core Welfare Indicators Questionnaire (CWIQ) in 2003, when 59–60% of the population aged 15 and over was classified as literate.

	A	ll aged 15+		A	ged 15–24	
Stratum	Male	Female	All	Male	Female	All
City of Kigali	89.5	83.6	86.5	88.8	87.6	88.1
Other urban	75.6	67.0	70.9	78.4	84.5	81.5
Rural	69.1	57.1	62.5	75.5	74.7	75.1
National	71.5	60.1	65.3	76.9	76.8	76.8

Source: EICV2. Note: (1) Data are based on reported literacy rather than tested literacy.

A key indicator for measuring progress towards the MDGs is the literacy rate among young people aged 15–24. This may serve as a simple proxy of the effectiveness of primary education, and of

<sup>&</sup>lt;sup>5</sup> It is thought that the rate derived from the EICV1 is unreliable; the rate obtained from the 2000 DHS is 76% for men and 66% for women aged 15-49 years.

economic and social progress. The overall rate for this age group is some 12 percentage points higher than that for the population as a whole, with the difference being particularly notable in rural areas.

# 3.2 Health

Other urban

Rural

National

22.4

23.5

22.7

## **Illness and injury**

In any two-week period during 2005/06 almost 20% of the population reported themselves as suffering from an illness or injury (Table 3.7)<sup>6</sup>. This self-reporting of illness is not a reliable indicator of the health status of the population, as it was not the result of any professional diagnosis or careful investigation of the symptoms; however the information sets the context for the analysis of people's access and satisfaction with health services which follows in this section. The reported illnesses in 2005/06 show a five-percentage-point reduction on the equivalent figure for 2000/01 (25%). Women are slightly more prone to report illness than men, and people in rural areas more than those in the City of Kigali, but these differences have narrowed during the period between the two surveys.

g	ender and	stratum (%)				
Strata		EICV1			EICV2	
	Male	Female	All	Male	Female	All
City of Kigali	14.6	20.2	17.6	16.0	18.6	17.3

# Table 3.7Percentage of population reporting illness in the last two weeks, by<br/>gender and stratum (%)

28.0

26.9

26.5

Source: EICV1 and EICV2 data. Note: (1) Data are based on a subjective assessment of what it means to be ill. (2) The strata have been reclassified since the EICV1 survey. This table uses the new strata for both sets of data.

25.4

25.4

24.7

16.1

18.7

18.3

21.6

21.0

20.9

19.0

19.9

19.6

The prevalence of illness is approximately the same in every consumption quintile (not shown). However, there is a marked contrast in the tendency for people in the different quintiles to consult medical practitioners. Table 3.8 shows that people in the highest consumption quintile are more than twice as likely to have a medical consultation as those in the lowest (though in all cases, people tend to undertake such consultations more in 2005/06 than was the case in 2000/01). The same is true when one looks just at the people who report themselves to be ill, rather than at all people who have consultations (even if they are not ill): only 20.1% of ill people in the poorest quintile saw a medical practitioner, compared with 43.3% of ill people in the highest quintile. One factor that may influence the likelihood of consultation is proximity of medical facilities. People in the lowest quintile live an average of 15 minutes further away from the nearest health care centre, and an hour's walk further from the nearest district hospital, than those in the highest quintile.

<sup>&</sup>lt;sup>6</sup> For the sake of brevity in the remainder of this subsection 'illness' refers to both illness and injury. This selfreporting of illness is not thought to be a reliable indicator of health status, more accurate reporting of health conditions may be found in the 2005 DHS.

		EICV1				
Quintile	Male	Female	All	Male	Female	All
Lowest	4.0	3.3	3.6	3.8	4.2	4.0
Second	4.1	4.2	4.1	5.6	5.5	5.6
Third	5.8	5.2	5.5	6.4	6.1	6.3
Fourth	5.6	7.9	6.8	6.9	7.5	7.2
Highest	7.0	9.2	8.1	7.8	10.8	9.3
All	5.3	5.9	5.6	6.1	6.8	6.5

# Table 3.8Percentage of population consulting a medical practitioner in the last<br/>two weeks, by gender and consumption quintile (%)

Source: EICV1 and EICV2 data. Note: (1) Figures show the proportion of people consulting a medical practitioner, regardless of whether or not they were ill.

Over one-third of illnesses are ascribed by the household to malaria; a greater incidence of malaria is reported in rural areas than in Kigali (Table 3.9). In contrast, respiratory infections and accidents are more common in Kigali (relative to other illnesses) than in other areas of Rwanda.

illness	City of Kigali	Other urban	Rural	All
Malaria	26.0	32.6	34.9	34.1
Intestinal parasites	17.0	19.6	21.9	21.4
Respiratory infection	30.6	22.6	16.8	18.2
Skin disease	3.6	3.0	4.0	3.9
Accident or injury	4.1	1.8	2.7	2.7
Dental problem	0.8	0.7	2.3	2.1
Diarrhoea	1.2	1.3	1.3	1.3
Gynaecological problem	1.6	1.9	1.1	1.2
Other	15.0	16.4	15.0	15.1
Total	100	100	100	100

## Table 3.9 Main illness in last two weeks (% of those that were ill)

Source: EICV2. Note: (1) Symptoms as described by the household, not necessarily by a medical practitioner. (2) Data not available for EICV1.

# Antenatal care

Nearly all women of reproductive age in Rwanda who have ever been pregnant received antenatal care during their last pregnancy (Table 3.10). The improvement in this indicator since 2000/01 is substantial for both poor and non-poor women, and the differences in the rate of receiving care between consumption quintiles have almost been eliminated.

Table 3.10	Women receiving antenatal care during last pregnancy, by
	consumption quintile (%)

Quintile	EICV1	EICV2
Lowest	81.0	93.3
Second	81.1	95.2
Third	75.5	94.5
Fourth	86.2	96.5
Highest	86.5	95.1
All	82.4	94.9

Source: EICV1 and EICV2. Notes: (1) Data refer to women aged 12–49 who have ever been pregnant. (2) Figures for EICV1 have been recalculated to make them comparable with EICV2. This results in small differences in the figures for individual quintiles compared with those in the EICV1 report. (3) Figures for EICV2 are very closely comparable with those of the Demographic and Health Survey 2005, for which the reference group is all women who have had a live birth in the last five years.

### Health insurance

Since the time of EICV1 there has been a great effort on the part of the public authorities in Rwanda to encourage households to take up insurance in order to mitigate the impact of health care costs. The result has been a widespread adoption of mutual insurance, especially in rural areas, which now reaches 38.2% of the population (Table 3.11). A further 5.3% of the population is covered by other forms of insurance.

		With ins	urance		No insurance	
—	Mutual	RAMA	Employer	Other		Total
Quintile						
Lowest	30.0	0.4	0.0	2.7	67.0	100
Second	33.9	0.8	0.1	2.7	62.6	100
Third	43.0	0.1	0.1	1.7	55.2	100
Fourth	46.3	1.6	0.2	2.5	49.4	100
Highest	37.8	8.0	0.8	4.8	48.6	100
Stratum						
City of Kigali	23.1	8.3	1.8	5.4	61.3	100
Other urban	25.2	5.5	0.5	8.5	60.2	100
Rural	41.0	1.3	0.1	2.0	55.7	100
All	38.2	2.2	0.2	2.9	56.6	100

# Table 3.11Prevalence of health insurance, by consumption quintile and by<br/>stratum (%)

Source: EICV2. Note: (1) 'Other' includes private insurance policies.

Non-poor households are more likely to have insurance than poor households. In particular, the Rwandan national insurance, RAMA, which covers 85% of the health care costs of state

employees, is found in a much greater proportion of households from the highest consumption quintile than from any other. Considerably more than half the population, however, still have no health insurance at all.

# Expenditure

About one in every 10 people in Rwanda incurs some expenditure on health-related items in a twoweek period. There is a clear trend of non-poor households spending more on health care than poor households. The median amount spent within a two-week period in 2005/06, for those who have spent anything on health care, is FRw 419 (at January 2006 prices). This represents a decrease of some 25%, in real terms, since 2000/01 (Table 3.12). One explanation for this may be the greater coverage of health insurance. For people with no insurance, the median expenditure of FRw 559 remains close to the overall median found in EICV1, whereas for people who are insured the median amount spent drops to half this figure (FRw 274)<sup>7</sup>.

Health-related costs vary very widely between individuals, even when considering only those who do pay something. Costs can mount rapidly. While some people spend just a few Rwandan francs on health care in a two-week period, others spend tens of thousands: mean expenditure, at FRw 1,319, is some FRw 900 greater than the median. In fact, the 1% of individuals with the highest costs had a mean expenditure of nearly FRw 38,000 each.

		EICV1			EICV2							
Quintile	Male	Female	All	Male	Female	Insured	Not insured	All				
Lowest	399	266	348	289	281	186	369	281				
Second	410	405	405	342	300	183	422	305				
Third	521	449	487	373	380	204	475	380				
Fourth	532	644	580	382	408	204	685	400				
Highest	1,005	1,058	1,028	830	652	473	1,020	745				
All	557	547	557	422	408	274	559	419				

# Table 3.12Median health-related expenditure in previous two weeks, by<br/>consumption quintile (FRw)

Source: EICV1 and EICV2 data. Notes: (1) Data refer to people who have incurred any health-related expenditure during the given time period. (2) All values are deflated to January 2006 prices using the consumer price index (CPI). (3) Figures include the cost of consultation, medical tests, hospitalisation, medicine and transport to medical appointments. They do not include payment of insurance premiums. (4) EICV1 does not include information on whether or not households have insurance.

# 3.3 User satisfaction with services

Households were asked how satisfied they were with the public services that they used. In general most people who use each facility declare themselves to be satisfied with the services provided (Table 3.13). Satisfaction with health services is particularly high in rural areas compared with in Kigali; on the other hand, user satisfaction with transport facilities is greater in the capital than in

<sup>&</sup>lt;sup>7</sup> This excludes the cost of the insurance premium itself. Note also that the figures for EICV1 do not take into account whether or not the person is insured.

rural areas. The least satisfactory service is the provision of drinking water, with which only half of all users declare themselves to be satisfied.

Service	Users s	satisfied v	vith servio	ce (%)	Users observing improvement in service in last 12 months (%)					
	City of Kigali	Other urban	Rural	All	City of Kigali	Other urban	Rural	All		
District administration	73.9	82.5	80.5	80.2	37.4	42.8	44.0	43.4		
Primary school	75.8	77.4	77.9	77.8	31.4	31.6	36.6	35.9		
Health care centre	69.0	75.3	77.9	77.1	24.0	31.9	37.9	36.5		
District hospital	57.6	72.0	75.7	73.9	20.4	28.5	32.8	31.4		
All-season road	74.1	74.3	65.2	66.7	28.2	24.4	23.5	24.0		
Food market	57.3	66.6	64.2	64.0	15.2	20.0	20.4	20.0		
Public transport	70.9	68.8	61.5	63.0	24.7	21.4	19.1	19.8		
Secondary school	69.7	56.9	55.4	56.7	31.6	23.7	23.6	24.2		
Drinking water	51.3	51.6	49.9	50.1	14.7	16.5	15.5	15.6		

### Table 3.13 User satisfaction with services, by service type and stratum (%)

Source: EICV2. Note: (1) Figures are calculated for people that use each facility. (2) Data refers to the quality of the nearest available service of each type.

Table 3.13 also notes whether users have seen an improvement in the provision of the various facilities in the last 12 months. This is correlated with overall levels of satisfaction: the facilities showing the greatest improvement are those with which users are now most satisfied, namely the district administration, health care facilities and primary schools. Again, drinking water facilities perform least well, with only one in six users observing an improvement in the last 12 months.

# 3.4 Housing and access to water and sanitation

The surveys asked about household dwellings and access to basic services. It is important to note that the numbers of dwellings have grown between the surveys by approximately 280,000. This growth has been roughly proportionate between the strata, but the number of dwellings in 'other urban areas' has grown at a slightly faster rate, which may explain the slight deterioration in the provision of some basic services in these towns.





A few indicators have been selected for analysis in this report. The indicators chosen are roofing materials, toilet facilities, access to drinking water, and fuels for lighting and cooking. The roofing material used by households gives a good indication of the status of the household occupying the dwelling. Corrugated iron roofs are a largely urban feature, with 97% of households in the City of Kigali having an iron roof to their homes, and 55% with iron roofs in other urban areas. In other urban areas another 32% of households use tiles for their roofs, in rural areas the pattern of roofing materials is more mixed, with almost 50% using tiles, around 40% using iron and the remainder using thatch. Nationally tiled roofs have slightly increased their usage, compensated by a decline in thatched roofing. Iron roofs have remained at a constant 44% between the surveys.

Roofing material	City of Kigali		Other U	rban	Rur	al	National		
	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	
Corrugated									
sheet metal	96.6	97.4	54.4	55.2	38.9	37.8	44.7	43.7	
Tile	0.6	1.6	37.2	32.1	42.7	48.1	38.9	43.3	
Thatch	1.9	0.6	5.9	4.6	12.4	11.2	11.0	9.8	
Other	0.2	0.1	2.5	8.0	5.8	2.8	5.1	3.1	
Concrete	0.7	0.4	0.0	0.1	0.1	0.0	0.2	0.1	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

### Table 3.14 Household roofing materials by stratum (%)

Source: EICV1 and EICV2

There has been little change overall in the provision of safe of drinking water to households nationally. 64% of households now have access to a safe source, the same percentage as in 2000/01 (Table 3.15). Almost 10% fewer households now collect their water from a free public pump or standpipe. More are collecting water from a protected spring or buying their water. The change from the use of free public pipes to purchased water is particularly marked in other urban areas, where supply by Electrogaz has also increased. For those using unsafe water sources, there has been an increase in Kigali in the use of boreholes or unprotected springs, which is probably measures to reduce water costs.

Water Source	City of	Kigali	Other U	rban	Rural		Nationa	al
	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2
Free public standpipe	8.9	5.4	39.0	25.5	40.8	29.9	38.1	27.7
Protected spring	6.2	5.0	10.4	12.3	17.4	22.7	16.0	20.5
Purchased from vendor Electrogaz	51.6 21.2	53.1 18.0	12.7 6.7	26.5 9.5	3.4 0.2	8.8 0.2	7.9 2.4	13.6 2.3
2100110902	88.0	81.6	68.8	73.7	61.7	61.6	64.4	64.2
River/stream/lake/ pool	6.3	5.7	18.8	12.7	20.5	19.4	19.3	17.8
Unprotected spring	1.2	4.7	4.1	4.6	9.6	10.2	8.5	9.3
Bore hole	2.4	6.3	6.4	7.0	5.9	6.0	5.7	6.1
Plain well	0.1	0.5	1.4	1.1	2.0	1.6	1.8	1.5
Other	1.9	1.2	0.4	0.8	0.2	1.1	0.3	1.1
	12.0	18.4	31.2	26.3	38.3	38.4	35.6	35.8
ALL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

### Table 3.15 Households' drinking water supply by stratum (%)

Source: EICV1 and EICV2.

## Table 3.16 Households' toilet facilities by stratum (%)

<b>Toilet Facilities</b>	City of Kigali		Other Url	Other Urban			National	National		
	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2		
Enclosed pit latrine	76.7	80.3	59.3	63.1	47.2	55.1	50.4	57.7		
Open pit latrine	13.7	11.6	32.9	26.9	44.6	37.7	41.3	34.8		
None	1.3	2.1	4.7	7.0	6.5	6.7	5.9	6.4		
Flush toilet	7.7	6.0	2.9	2.8	0.3	0.2	1.1	0.8		
Other	0.7	0.1	0.3	0.1	1.4	0.3	1.3	0.3		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		

The majority of households use a latrine (92%); however there has been an improvement from open pit latrines to enclosed latrines over the period between the surveys (Table 3.17). In the City

of Kigali the situation has improved a little, with fewer households using open pit latrines although slightly more households are using no formal toilet at all. This situation is magnified in other urban areas, where 3% more households are using no formal facility. Toilet facilities have improved most for households in rural areas, with 8% more households having access to enclosed latrines than was the case in 2000/01.

	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	
	City of	f Kigali	Other	Other urban		ıral	Natio	National	
Public utility (Electrogaz)	41.9	37.2	8.1	12.0	0.7	0.7	4.5	4.3	
Generator	0.1				0.1	0.0	0.1	0.0	
Kerosene lantern	34.5	32.3	19.8	25.9	8.1	9.5	11.1	12.7	
Gas Lamp	0.4	0.0		0.0	0.1	0.0	0.1	0.0	
Firewood	0.8	0.1	11.4	5.7	25.7	17.6	22.6	15.2	
Candle	3.9	7.8	0.7	2.4	0.6	1.0	0.9	1.6	
Traditional lamp (Agatadowa)	18.5	22.3	59.6	51.4	62.9	69.5	59.1	64.4	
Other		0.3	0.4	2.5	1.8	1.7	1.6	1.7	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

# Table 3.17 Household fuel for Lighting (%)

Source EICV1 and EICV2. All Households

The use of electricity for lighting has remained relatively constant between the two surveys (Table 3.17), although its use has increased in urban areas. In Kigali there has been a modest fall in the proportion of households using electricity. Nationally over two-thirds of households use the traditional lamp, a proportion that has risen since 2000/01. Firewood as a lighting fuel has also declined, especially in the rural areas, where households are now using the traditional lamp in greater proportions. The pattern of fuel use for cooking is relatively unchanged between the two surveys, although there is a slight decrease in the use of fossil fuels.

## Table 3.18 Household fuel use for cooking (%)

	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2
	City of Kigali	of Kigali Other urban Rur		Rural	National			
Wood	21.4	23.1	81.7	73.7	97.7	95.5	90.4	88.2
Charcoal	75.8	72.4	16.3	19.6	0.8	1.1	8.0	7.9
Gas	0.5	0.2	0.2	0.1	0.0		0.1	0.0
Electricity	0.5	0.2	0.2	0.3	0.2	0.0	0.2	0.1
Kerosene	0.3	0.8	0.1	0.3	0.1	0.0	0.1	0.1
Miscellaneous burning	0.0	0.1	0.9	2.5	0.7	3.0	0.7	2.7
Other	1.5	3.3	0.6	3.4	0.5	0.4	0.6	0.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source EICV1 and EICV2. All Households

# 4. Economic activity and time use

This chapter explores the characteristics of the labour force, and changes observed since 2000/01; it also examines time use on both economic activities and domestic duties, and looks at some key agricultural indicators and expenditure on fuel. Further analysis of labour force and agricultural topics will take place in separate publications. The economic sections in the questionnaire of the EICV2 survey were not directly comparable with the questions asked in 2000/01; changes were made at the design stage in order to collect more complex information about the patterns of the population's economic activities. The data presented in this report use simple classifications of the working population's usual main jobs over a 12-month reference period in both surveys. A more detailed analysis will take place in another publication.

# 4.1 Jobs

The data have been collated on the main jobs of persons aged 16 years and over, who had worked in the 12 month period previous to each survey. The results are presented by occupation, that is, the actual job a person does, and then by the industry in which the individual works. An office clerk working in a drinks factory would therefore take the occupation 'office clerk' and the industry 'manufacturing'. For farmers the industry and occupation tends to be the same.

The overwhelming majority of the country's working population is employed in agriculture, working as own account farmers. Some 90% of the country's population live in households in which at least one person works in agriculture, a proportion which has changed very little in the years between the surveys. There has been a significant movement<sup>8</sup> in the distribution of the main jobs of the working labour force<sup>9</sup>, with the largest change from the agricultural to other occupations, notably the service and trade sectors. The total number of persons whose main job is in agriculture has also grown significantly, the change in the proportions of occupations does not mean that the number of agricultural jobs has fallen, rather that more jobs are now available in other professions and industries. Further detail will be available in the forthcoming labour market report of the EICV surveys.

Some 80% of adults work in agriculture as their main occupation, but in the City of Kigali this falls to 15%, a proportion which has changed little over the period between the surveys. Movement away from agricultural has occurred mainly in other urban and rural areas.

The proportion of the employed labour force engaged in agricultural occupations fell by 9% nationally over the period between the surveys (Table 4.1). The fall is most dramatic in 'other urban' areas, but is also significant in rural locations. The occupational groups which now employ a larger proportion of working persons are sales personnel, skilled service workers and unskilled labourers not working in agriculture. The growth in these kinds of jobs is more marked in Kigali. There are also higher proportions of persons in trade and service industries in the higher income quintiles.

<sup>&</sup>lt;sup>8</sup> The EICV1 asked respondents to report on their main and secondary jobs, whereas EICV2 asked people to report on all their jobs over a twelve month period. The 'main' job for EICV2 was created synthetically using the time spent over both the long and short reference periods. In the event of time ties, employment status was used to determine the main job, with paid employment ranked highest and unpaid family work ranked lowest. Despite the comparability issues, there has been a substantial increase in the number of non-agricultural jobs created and in the number of agricultural jobs carried out nationally.

<sup>&</sup>lt;sup>9</sup> Working labour force are those who have worked over the 12 month reference period.

Occupation	Оссира	Occupation in Main Usual Job Over 12 Month Reference Period									
	City o	of Kigali	Other	Other urban		ural	National				
	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2			
Professionals	6.5	7.5	3.9	4.5	1.4	1.3	1.9	2.0			
Senior Officials and Managers	0.2	0.9	0.1	0.1	0.0	0.0	0.0	0.1			
Office Clerks	6.0	4.2	1.3	1.5	0.2	0.2	0.7	0.6			
Commercial and Sales	21.3	19.4	4.7	11.8	1.1	4.2	2.7	5.9			
Skilled Service Sector	24.5	30.6	6.3	16.1	0.9	2.4	2.8	5.5			
Agricultural & Fishery Workers	16.9	14.7	79.0	56.0	94.8	87.3	88.6	79.6			
Unskilled Elementary	24.6	22.7	4.7	10.0	1.5	4.7	3.3	6.4			
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0			

# Table 4.1Main occupation of usually working persons aged 16 years and above<br/>(%)

Source: EICV1 and EICV2. All Persons Aged 16 and Over Working in Previous 12 Months

	Ма	ale	Ferr	nale	Po	or	Non-	poor	Nati	onal
	Col %									
	EICV1	EICV2								
Professionals	2.4	2.6	1.5	1.5	0.5	0.4	3.9	3.8	1.9	2.0
Senior Officials and Managers	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1
Office Clerks	0.9	0.6	0.5	0.5	0.0	0.1	1.6	1.2	0.7	0.6
Commercial and Sales	3.3	6.5	2.3	5.4	0.8	3.2	5.6	9.1	2.7	5.9
Skilled Service Sector	3.4	7.2	2.4	4.1	0.4	2.5	6.3	9.2	2.8	5.5
Agricultural & Fishery Workers	83.5	71.2	92.4	86.3	96.4	88.9	77.1	68.2	88.6	79.6
Unskilled Elementary	6.4	11.8	0.8	2.1	1.8	4.9	5.3	8.3	3.3	6.4
Table Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

## Table 4.2Occupation by gender and poverty status (%)

Source: EICV1 & EICV2. All Persons Aged 16 and Over Working in Previous 12 Months

Both the poor and the non-poor have moved away from agricultural occupations in roughly equal proportions, although it appears than men have been able to move away from agriculture at a higher rate than women (Table 4.2). Larger proportions of men have moved into skilled service jobs than have women, and men in particular have moved into unskilled labouring jobs. The poor are concentrated in agricultural occupations (90%).
This pattern is repeated in the industries in which people work, the results by industrial group are shown in Table 4.3. Nine percent fewer adults are working in agriculture than was the case in 2000/01; this matches the change in the occupational structure. Because of the overwhelming proportion of people working in agriculture it is difficult to determine a statistically significant pattern for job movement, but significant growth areas are the wholesale and retail trades, and the service sectors.

Industry	City of	Kigali	Other u	ırban	Rural		Nationa	I
	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2
A Agriculture, hunting and forestry	16.6	14.8	79.5	55.4	94.9	87.0	88.6	79.3
B Mining & Quarrying	0.3	0.4	0.4	0.1	0.2	0.4	0.2	0.4
C Manufacturing	5.2	5.1	1.4	1.7	0.5	1.4	0.8	1.7
D Gas, Water & Electricity Supply	0.7	0.4	0.2	0.3	0.1	0.0	0.1	0.1
E Construction	7.4	7.5	0.6	3.7	0.3	1.0	0.8	1.6
F Wholesale & Retail Trade	24.0	23.1	5.1	13.1	1.2	4.9	3.0	6.9
G Transport & Communications	6.8	6.5	1.5	3.2	0.2	0.7	0.7	1.3
H Banking Financial & Business Services	3.8	2.4	0.8	1.0	0.1	0.1	0.4	0.3
I Government, Admin & Social Services	10.2	11.9	4.4	8.0	1.6	1.9	2.4	3.1
J Recreation & Tourism	0.4	0.4	0.1	0.7	0.1	0.1	0.1	0.2
K Domestic Services	23.9	26.9	5.6	12.3	0.9	1.9	2.7	4.5
Inadequately Described	0.6	0.8	0.2	0.5	0.1	0.7	0.1	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

# Table 4.3Industry of work for usually working persons aged 16 years and above<br/>(%)

Source: EICV1 & EICV2. All Persons Aged 16 and over working in the previous 12 Months

# 4.2 Time Usage

The mean number of hours worked by adults in all their occupations averages 31 hours a week nationally (Table 4.4), however those working in agriculture work on average only 27 hours a week, compared to people in other occupations who average over 40 hours. This may indicate underemployment in the agricultural sector, although the physical nature of the work may limit the number of hours which can be worked in these occupations. Persons working in the skilled service sector work the longest hours of all, on average 58 hours a week. Comparable figures are not available from the EICV1 as information was not collected on all the jobs held by an individual. Women work shorter hours than men, but this is accounted for by the shorter hours worked in agricultural and labouring occupations. This is a reflection of the heavy nature of the work and the domestic duties of women, which are described below.

	Male	Female	National
Professionals	40	41	41
Senior Officials and Managers	44	*	40
Office Clerks	45	47	46
Commercial and Sales	47	42	44
Skilled Service Sector	59	57	58
Agricultural & Fishery Workers	30	25	27
Unskilled Elementary	44	34	42
Table Total	35	28	31

# Table 4.4Mean hours worked by adults in last 7 days

Source: EICV2 All Persons Aged 16 and over working in the previous 12 Months. Comparable EICV1 data not available. \* Cell size too small for reliable interpretation.

## Table 4.5 Number of jobs worked by adults in the previous 12 months

Number of Jobs	City of Kig	ali	Other urba	n	Rural		National
	Male	Female	Male	Female	Male	Female	
1	84.5	80.7	66.0	70.1	48.0	62.7	59.1
2	13.5	16.8	30.2	25.5	44.9	34.0	36.2
3	1.8	2.6	3.9	3.5	6.3	2.9	4.2
4 or more	0.2	0.0	0.0	0.8	0.7	0.3	0.5
Table Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: All Persons 16 years and above Working in 12 Months

Just over 40% of adults work in more than one job over the year (Table 4.5), and this is more pronounced in the rural stratum where almost half of people have more than one job. The multiplicity of jobs in rural areas probably reflects the seasonal nature of the work, but may also be another indication of underemployment in the agricultural sector, with people undertaking several jobs to boost their own farm incomes. Many fewer people work in multiple jobs in Kigali, although rather more do so in other urban areas. There is a gender dimension to multiple working with men in the rural areas being much more likely to have a second job than women, which partly explains the shorter hours worked by women.

Age Group	Working During the Week	Table	Total
	Not Working	Working	
7 to 10 years	98.9	1.1	100.0
11 to 15 years	89.4	10.6	100.0
16 to 20 years	48.8	51.2	100.0
Over 21 years	19.4	80.6	100.0
National	46.8	53.2	100.0

## Table 4.6Economic activity rates – all ages (%)

Source: EICV2 All persons 7 years and above.

Table 4.6 shows the proportion of all persons who worked in an income generating activity<sup>10</sup> for one or more hours in the seven days before the survey. Child labour is very rare in age groups under 11 years of age, with just 1% having worked, more children aged between 11 and 15 years worked, with 11% working. Over 50% of people aged 16 to 21 worked in the reference period, rising to 81% of adults over the age of 21.

Although a low proportion of children are economically active, children contribute significant amounts of domestic labour to the household. Table 4.7 shows that in 2005/6 children under ten worked an average of nine hours a week on domestic chores, with girls spending several more hours on their tasks than boys. In the 11 to 15 year-old age group, the total rises to almost 14 hours, with girls working five or six hours a week more than their male counterparts. This trend for females to do more domestic work than males accelerates over the older adult groups, with women over 21 years devoting around five times the amount of time to domestic duties, compared with men. The pattern does not vary greatly between members of poor and non-poor households. The previous section showed women working seven hours a week less than men in their economic activities, but this is more than offset by the 20 additional hours of work that adult women perform in running their homes and families.

# Table 4.7 Mean number of hours spent during week on domestic duties

Age group	Poor		Non-po	National	
	Male	Female	Male	Female	
7 to 10	7.9	10.4	6.9	9.3	8.8
11 to 15	10.7	16.3	11.6	17.2	13.8
16 to 20	7.1	20.4	9.8	23.2	15.3
Over 21 years	4.0	24.2	5.4	25.9	15.9
Table Total	6.5	20.3	7.2	22.2	14.5

Source: EICV2.

<sup>&</sup>lt;sup>10</sup> This is either paid work, self-employment or unpaid work in a family farm or business.

The EICV2 survey provides information on the type of domestic duty carried out by household members over the age of six years. People over six years old spend an average of 15 hours per week on domestic tasks, aggregated by all age groups nationally; females spend 21 hours and males seven. The results shown in Table 4.8 and show that cooking and childcare explain a large proportion of the gender difference found in 2005/6. Women and girls spend 15 hours a week on these two tasks alone; the time spent on cooking varies very little through the strata, however fetching wood and water take much longer in rural areas, while cleaning and childcare take more time in urban areas.

Domestic Duties – Weekly	Se	x		Strata	Natio	onal
	Male	Female	City of Kigali	Other urban	Rural	
Weekly Time Fetching Wood	1.4	2.2	0.3	1.5	2.0	1.8
Weekly Time Fetching Water	2.4	3.0	1.8	2.3	2.8	2.7
Weekly Time Going to Market	0.6	1.1	1.1	0.9	0.9	0.9
Weekly Time Cooking	1.3	9.2	5.6	5.7	5.5	5.5
Weekly Time Cleaning Laundering & Childcare	1.2	5.6	5.0	4.0	3.4	3.6
Total Weekly Time on Domestic Duties	6.9	21.1	13.9	14.3	14.5	14.5

# Table 4.8Mean number of hours spent per week on domestic duties: by gender<br/>and stratum

Source: EICV2.



Figure 4.1 Time use per week – adults over 21 years

Figure 4.2 Time use per week – Children 11 to 15 years



# 4.3 Agriculture

## **Agricultural Activity**

Although section 4.1 showed a decline in the proportion working in agriculture as their main job, the proportion of persons who are dependent on agriculture for their livelihoods is unchanged. In rural areas a high proportion of adults have more than one job, and most households' income has an agricultural component.

In 2000/01 90.6% of persons lived in households where one or more persons worked in agriculture, this changed very little in 2005/06 as 89.6% of persons lived in agricultural households. This pattern will be explored further in a subsequent report.

### Livestock ownership

The percentage of households owning any livestock rose between the surveys, from 60% to 71%. Livestock ownership varies by the gender of the head of household, with fewer female headed households owning livestock than male headed households. In 2000/01, 64% of male headed households reported owning livestock whereas only 52% of female headed households reported ownership of livestock, a gap of about 12%. By 2005/06 the gender gap in ownership narrowed to just 6%.

Table 4.9 illustrates the percentage of households reporting ownership of livestock through the various consumption quintiles. Between the surveys there have been increases in reported livestock ownership in all the income quintiles. The third quintile represents the highest percentage increase between the surveys, with an increase of 15% in livestock ownership. This suggests that middle-income households are acquiring livestock at a faster rate than other households.

Quintile	EICV 1	EICV 2
Lowest	52.7	62.5
2nd quintile	61.1	74.6
3rd quintile	63.0	78.6
4th quintile	67.9	77.6
Highest	54.3	62.9
Total	59.9	71.3

## Table 4.9Households reporting ownership of livestock by quintile (%)

Source: EICV1 and EICV2

Three specific types of livestock were selected for further study from the households reporting ownership of livestock; these were cattle, goats and chickens. Figure 4.3 displays the average number owned of livestock across poor and non-poor households.





Figure 4.3 illustrates the number of households reporting ownership of the three categories of livestock, by poverty status. Nationally the proportion of households owning cattle and goats has increased significantly, however this is not the case for chicken ownership. The average number of animals owned increases for wealthier households, particularly cattle. However there has been a substantial increase in goat ownership among poor households. Differences in regional ownership were evident in 2000/01, with higher incidence of livestock ownership in Eastern and Southern Provinces. In 2005/06, the difference between the provinces has largely been eliminated, with the exception of the City of Kigali, where wealthier households may have animals in farm beyond the city boundaries.

	Catt	Cattle		ts	Chickens		
	EICV 1	EICV 2	EICV 1	EICV 2	EICV 1	EICV 2	
National	2.9	2.7	2.5	2.4	2.8	3.3	
Kigali	3.5	3.5	2.7	2.9	3.8	5.2	
Southern	2.0	1.9	2.1	2.2	2.5	3.0	
Western	1.7	1.8	2.2	2.1	2.7	2.8	
Northern	1.9	1.9	2.9	2.2	3.1	3.0	
Eastern	8.0	6.0	2.9	2.9	2.9	3.7	

## Table 4.10 Mean number of livestock owned by livestock-owning households

Source: EICV1 and EICV2

## **Agricultural Inputs**

In both surveys approximately 90% of households reported involvement in agricultural production, whether large or small scale activities, despite the trend away from agricultural jobs noted earlier in the employment section. Of the households involved in agricultural activity, there was a significant increase in the reported use of agricultural inputs, with a rise of in the use of inputs between the two surveys. Almost all agricultural households use inputs, with 88% reporting their use in 2005/06.

Patterns of use for the four most popular agricultural inputs are displayed in Figure 4.4. All households reported higher use of inputs between the surveys, with use of seeds showing the largest increase. While the poorer households have been able to increase inputs, they still report less usage of chemical fertilizers, insecticides and packing materials than more prosperous households.





Some noticeable change in the pattern of the use of seeds is apparent in the EICV2, with around 70% of households in all income quintiles reporting seed input use. EICV1 showed a decreasing tendency to use seeds through the quintiles (not shown), a trend which has now been corrected. Fertilizer use is still low, and chemical fertilizers are more popular than organic, but these have also significantly increased; although the use of products other than seeds and plants seems to be highly related to income.

	Non-p	oor	Po	or	Nation	al
	EICV1	EICV2	EICV1	EICV2	EICV1	EICV2
Chemical Fertilizers	8.0	13.9	3.5	8.3	5.2	10.8
Organic Fertilizers	3.6	8.2	1.5	5.8	2.4	6.8
Insecticides	15.3	32.0	7.9	17.6	10.8	23.9

## Table 4.11 Household use of fertilizers and insecticides

# 4.4 Credit

Both EICV1 and EICV2 asked questions related to household financial stocks and flows, and the information from EICV2 is presented here. The information includes household debt, savings and transfers between households. Figure 4.5 illustrates the differences in savings and debt for EICV2.



Figure 4.5 Households reporting any debt or savings by quintile (%)

Source: EICV2. Households reporting debt or **Debt Savings** savings.

As can be seen from Figure 4.5 there are two distinct patterns of credit and debt across the income quintiles. Around 40% of households in all quintile groups have some form of debt, but savings increase through the income quintiles. However even among the poorest households, over 20% reported savings. More detailed study of these findings will be undertaken in the forthcoming poverty profile.

Use of the loan	EICV 1	EICV 2
Consumer goods	43.1	37.7
Agriculture	13.2	13.9
Other	14.3	11.9
Health	14.3	10.8
Business	4.5	10.0
Home	4.1	6.2
Education	2.8	5.9
Ceremonies	3.6	3.6
Total	100.0	100.0

## Table 4.12 Purpose of loan or credit (% of loans)

Source: EICV1 and EICV2. All households with a loan or credit

Table 4.12 provides information on the purpose of the households' loans or credit, and a comparison can be made between 2000/01 and 2005/06. Purchasing consumer goods was the main purpose given for taking out loans in both years. By 2005/06 agricultural purposes are the second most prevalent reason to borrow, and business loans were also much more common. Borrowing to pay health expenses has fallen considerably, although borrowing for education increased by 3% between the surveys. This may be due to the increasing prevalence of health insurance noted in Chapter 3.

Table 4.13 illustrates the source of the loan and classifies them as formal or informal<sup>11</sup>. By 2005/06 formal loan access was more prevalent in urban areas and among the higher income quintiles, however the primary source of loans is still the informal sector, with 65% of credit provided by a parent or friend.

<sup>&</sup>lt;sup>11</sup> Formal institutions are defined as: state banks, private banks, popular banks, rural credit organizations, agricultural societies, cooperative, NGO (microfinance), employer loans and other sources from the modern sector. Informal loans are defined as: private lenders, parents or friends, tontine (community) and other traditional sources.

	Formal	Informal	
City of Kigali	48.6	51.4	
Other urban	38.4	61.6	
Rural	25.2	74.8	
Total	27.2	72.8	
Poverty Status			
Poor	21.6	78.4	
Non poor	33.7	66.3	
Total	27.2	72.8	

## Table 4.13 Formal loans as a percentage of all credit (%)

Source: EICV2

# 4.5 Energy expenditures

Table 4.14 provides information on the proportion of fuel expenditure to total non food expenditure for the urban and rural strata and for income quintiles. One important aspect in comparing fuel expenditures between the surveys is the imputed value of wood which has been foraged. As the EICV1 did not collect information on the value of wood foraged by households, a comparison between the surveys is not possible. The EICV2 survey includes the imputed value for foraged wood based on the market value of the wood rather than the time taken to find it.

Table 4.14 illustrates the importance of foraged wood, with almost 80% of the value of fuel being obtained from foraged sources. Fuel expenditure accounts for 14% of all non-food expenditure, but is a higher proportion for poorer households.

	Value of foraged wood as a proportion of non-food expenditure	Proportion of foraged wood to total wood consumed
City of Kigali	12.3	39.9
Other urban	15.5	66.2
Rural	14.2	82.9
Total	14.2	79.7
Quintile		
Lowest	14.8	88.0
2nd	14.7	89.3
3rd	15.8	83.9
4th	14.9	78.0
Highest	11.1	64.8
Total	14.2	79.1

Table 4.14	Proportion of non food expenditures used on fuel by strata and quintile
	(%)

December 2006

In the analysis of the 2005/06 data, expenditures on energy and fuel were grouped as primary lighting fuels, primary cooking fuels, auxiliary items and other fuels. A distinct pattern arose in the combination of fuels used by households, depending on their location and income quintile status. In urban areas and among higher income households, the cooking fuel used is predominantly charcoal and there is very little foraging for fuel. Rural households and poorer households spend less on cooking fuel and spend more on lighting fuels, such as kerosene and auxiliary items such as batteries and matches. Households can be classified according to fuel combinations for lighting and cooking respectively. These are: electricity-charcoal, kerosene-wood and wood-wood. Electricity-charcoal users are more likely to be urban in character and belong to higher income groups. Wood-wood lighting and cooking users are mostly rural and among the poorest households; and the most common fuel combination for lighting and cooking is kerosene-wood. Figure 4.6 illustrates this pattern across the strata and income quintiles.



Figure 4.6 Households' combination of fuels for lighting and cooking (%)

the City of Kigali could be classified in the fuel category: Electricity-Charcoal. In other urban areas only 20% of households used the electricity-charcoal combination, kerosene-wood being much more common. In rural areas over 80% of households used the kerosene-wood combination, and among the lowest quintile over 30% used wood for both lighting and cooking. The incidence of using wood for both cooking and lighting decreases though the quintiles.

# 4.6 Migration

Migration patterns over the period between the surveys were explored. About 50% of adults have always lived in the district where they were interviewed. Of those who had moved, over 80% had not moved within the last 5 years. Urban dwellers are much more likely to have moved recently, with almost 40% of Kigali residents and just over a quarter of other urban residents having moved. The non-poor are more likely to move than the poor.

		Kigali urban	Other urban	Rural	Poor	Non-poor	Nationa I
Always lived in this	Yes	14.8	48.4	54.0	55.9	44.4	50.3
district?	No	85.2	51.6	46.0	44.1	55.6	49.7
		100.0	100.0	100.0	100.0	100.0	100.0
Number of Years Resident	1 year	8.3	5.5	2.7	2.5	4.8	3.7
	2 years	8.8	5.9	3.6	4.1	4.9	4.5
	3 years	7.8	6.0	3.6	3.7	5.0	4.4
	4 years	6.5	4.8	2.5	2.1	4.2	3.2
	5 years	7.7	4.2	2.5	2.6	4.1	3.4
	Over 5 years	60.9	73.5	85.0	85.1	77.0	80.7
able Total		100.0	100.0	100.0	100.0	100.0	100.0

### Table 4.15 Migration patterns and length of residence

Source: EICV2. All persons 15 years of age and over.

Among those who moved within Rwanda during the 5 years prior to the survey, the main reasons were given. The most common was being assigned to a new job posting, and family reasons. For those now living in urban areas a change of job posting was by far the most common reason, whereas among the poor family reasons, lack of land or jobs the more common reasons.

Main reason for migration	Kigali urban	Other urban	Rural	Non-poor	Poor	Table Total
Assigned to post	37.3	32.4	11.3	28.5	6.9	21.0
Family reasons	16.8	12.2	24.6	17.2	28.1	21.0
Lack of land	1.8	4.0	15.0	5.9	17.9	10.1
Lack of employment	7.5	7.4	11.0	8.7	11.4	9.6
Marriage	4.8	7.2	10.8	9.0	8.2	8.7
Health	5.6	7.9	7.3	6.1	8.3	6.9
Studies	10.8	7.1	2.5	7.4	1.6	5.3
Conflict or disasters	2.5	3.5	0.9	1.8	1.4	1.7
Spouse employment	1.5	3.5	0.6	1.5	0.5	1.2
Desire to return to country	0.2	1.2	1.4	0.8	1.5	1.1
Commerce	0.7	1.2	0.4	0.9	0.1	0.6
Loss of employment	0.3	0.6	0.7	0.5	0.6	0.6
Other	10.2	12.1	13.2	11.7	13.3	12.3
Group Total	100.0	100.0	100.0	100.0	100.0	100.0

## Table 4.16 Reasons for move for internal migrants within 5 years (%)

Source: EICV2. All persons aged 15 years and over who moved within Rwanda in the previous 5 years.

The survey also collected information on the origin and destination of recent migrants. The table shows that the majority of those moving are within Kigali itself. Internal migrants in previous 5 years.



## Figure 4.7 Number of migrants by old province

Figure 4.7 shows in-migrants and out-migrants from the former Provinces<sup>12</sup>. The old Kigali Province is the most popular location for in-migrants and out-migrants, most of the other Provinces are net exporters of people, with the exceptions of Umutara and Kibungo.

Table 4.17 shows the origin and destination of all migrants in the past 5 years. Some 9% of migrants are from neighbouring countries, with the majority coming from D R Congo and Tanzania. Those from the Congo tend to relocate in Western Province and those from Tanzania tend to settle in the Eastern Province (Table 4.17). The migration patterns of those who left Rwanda cannot be determined from this survey.

Kigali is the most popular destination for migrants, followed by Eastern Province. The smallest proportion of migrants move to Northern Province (5.5%).

<sup>&</sup>lt;sup>12</sup> The survey started prior to the formation of the new Provinces, and while the destination of the migrants can be given by new Province, the origins are not available.

Destination	City of Kigali	Eastern province	Southern province	Western province	Northern province	National
Province of Origin						
City of Kigali	11.5	1.6	3.7	1.8	0.8	19.4
Gitarama	7.0	0.8	2.5	0.8	0.2	11.3
Kigali Ngali	4.3	4.3	0.5	0.4	0.7	10.3
Butare	4.2	0.3	2.7	0.1	0.1	7.5
Byumba	1.1	5.3		0.0	0.8	7.2
Ruhengeri	1.6	3.6	0.2	0.9	0.6	6.9
Cyangugu	2.7	0.1	0.4	2.9		6.1
Kibungo	2.1	2.7	0.4	0.6	0.2	6.0
Gisenyi	1.4	0.7	0.4	1.4	0.6	4.5
Gikongoro	1.2	0.9	1.9	0.2	0.1	4.3
Kibuye	1.5	0.5	0.4	1.5	0.0	3.9
Umutara	1.1	1.7	0.1	0.3	0.7	3.8
Democratic Republic of the						
Congo	0.9	0.1	0.4	1.7	0.5	3.4
Tanzania	0.4	1.1	0.5			2.1
Burundians	0.4	0.5	0.9	0.0		1.7
Uganda	0.7	0.4	0.1	0.1	0.1	1.4
Other African	0.1		0.0	0.0	0.0	0.2
	42.2	24.5	14.9	12.8	5.5	100.0

## Table 4.17 Origin and destination of migrants in last 5 years (table %)

Source: EICV2. All 15 years and over moving within the last 5 years.

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

As explained in the text, the assessment of poverty and inequality in this chapter was based on household consumption expenditure, per adult, expressed in constant prices. This is the same indicator as was used for the EICV1 poverty profile (Government of Rwanda, 2002), and full methodological details are in Annex 2 of that report. For this report the consumption measure has been re-computed for both EICV1 and EICV2 on an identical basis. The EICV1 figures in this report are almost identical to any data published in the previous poverty profile; any very minor differences reflect minor changes to the questionnaire between the two surveys.

# A.1 Construction of the household consumption measure

Following standard international practice, and the previous poverty profile, the poverty and inequality analysis are based on household consumption data. The first part therefore of constructing the core standard of living measure therefore is to compute the value of total household consumption, including both market purchases and imputations for consumption obtained from non-market sources, in particular consumption of own production. The precise contents of the consumption measure are explained in Table A.1.

Consumption item	Comments		
Purchases of food	Detailed data on purchases of over 100 food items, based on patterns of spending over several short recall periods in past month		
Consumption of own produced food	Consumption of products from own production, again based on several short recall periods, with valuations provided by respondents		
Expenditure on purchased non- food items	Detailed commodity level data on non-food purchases, with differen recall periods used depending on frequency of purchase		
Value of payments in kind received by employees	Value of payments in form of food commodities and other in kind forms, for any wage employment		
Expenses on health and education	Expenses on regular consultations, medical tests and hospital visits; total of all schooling expenses		
Expenses on housing and utilities	Rent, imputed rent for owner occupied dwellings, expenses on water and electricity		
Estimated consumption stream from durable goods	Estimate of services received from durable goods based on current values and standard depreciation rates		
Other items	Transfers paid out; gifts and contributions to charities; consumption of own produced tobacco		

## Table A.1 Contents of household consumption measure

The recall period used to collect consumption data varies according to the frequency with which at item is purchased, but all consumption data is ultimately reported on an annual basis for comparability. The use of short recall periods in the surveys for frequent purchases means that there will be seasonal effects depending on when a specific household was surveyed, but the sample design means that this should not affect sample means for groups of households. The consumption calculations exclude purchases of durable goods and exceptional one-off expenses such as ceremonies in order to enable comparability across households.

# A.2 Adjusting for price differences and changes

The consumption measures are reported in the values actually paid or provided by respondents, but it is well known that prices in Rwanda vary significantly by location, by month of the year; and of the level of prices has changed substantially over the five year period between the surveys. This must be adjusted for in comparing consumption levels across households and between the two surveys. The price adjustment made for this follow a similar method to that used for the EICV1 poverty profile. The consumption weights used before from the EICV1 survey were again used to construct a Laspeyres price index, but now conducted at the level of the five new provinces rather than the 12 former provinces. The consumption weights were computed though specifically for poorer households, by using the average composition of the basket for household in the three lowest quintiles of (undeflated) total consumption expenditure per adult. The baskets are then influenced by commodities of particular importance for the poor. For the food basket for instance, 55% of the basket by value is accounted for by five staple commodities: sweet potatoes, beans, irish potatoes, manioc and cooking bananas. The food price data were obtained from the Mercuriale (formerly PASAR) programme in MINAGRI, which collects price data on a monthly basis on around 40 commodities in 36 markets throughout the country. As in the last survey this was used to construct a food index at the level of the 12 old provinces, distinguishing urban and rural areas in some cases. As the price data were collected in the same way in the periods of the EICV1 and EICV2 surveys this could be used to construct an estimate of food price inflation, specific to each location. For non-food prices, the raw price data collected for the CPI was used. This collects data in urban markets only.

The food index shows a significant price differential across localities, with again Kigali being the most expensive location and Ruhengeri and Gisenyi being some of the cheapest; urban prices are generally higher than rural prices. There is a significant seasonal pattern. And the *Mercuriale*/PASAR data imply high rates of food price inflation over the period, with prices having increased by between 70-80% over the period between the two surveys. Non-food prices are also highest in Kigali than elsewhere, but have shown lower inflation over this period, with prices having increased by around 40 to 50% over the period between the two surveys.

The trends in the food index are presented in Figure A.1. This shows large differentials in food prices by location (with Kigali generally being the most expensive and the Northern and Western provinces being the least expensive for food items. It also shows an important seasonal effect, but also significant food price inflation over the period covered by the EICV2 survey.

The food and non-food indices were combined into a single national index, with weights reflecting their relative contribution to the budget of this same group of households (the 60% of the population with the lowest values of total consumption expenditure per adult). For this group food consumption accounts for 71.8% of the budget and non-food only 28.2%; so the variations in food prices have a big impact on the estimated standard of living measures of households. The relatively high food price inflation over this period is expected to have had an important impact on poverty trends.



Figure A.1 Trends in the food price index by province, 1999 to 2006

Source: computed from PASAR/Mercuriale price data, and EICV1 consumption weights.

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

Differences in household size and composition were taken account of by dividing the deflated household consumption measure by household size measured in equivalent adults, using the same adult equivalence scale used for the EICV1 poverty profile, and which has long been in use in Rwanda. The adult equivalence scale takes account of the different consumption needs of different household members, reflecting their age and to some extent gender.

This then forms the household consumption measure used for poverty and inequality analysis, and to divide the population into quintile groups. Quintile groups are defined such that the lowest quintile contains the poorest 20% of the Rwandan population, the second quintile the next poorest 20% and so on until the fifth quintile which contains the richest 20% of the Rwandan population. Note that these quintile groups are defined over individuals, not households; and the same applies to all measures of poverty and inequality presented in this report. In the report text these quintiles are referred to as income quintiles.

# A.4 The poverty line

To measure poverty in Rwanda requires a threshold level of consumption below which individuals are considered to be poor. The previous Poverty Profile computed an absolute poverty line following the widely internationally used Cost of Basic Needs methods. This was based on a food basket, reflecting the consumption pattern of the poorest three quintiles in EICV1, which was

sufficient to provide 2500kcal, taken as a requirement for a prime age adult. This basket had a monetary value or, in round figures, 45,000FRw per adult per year in the January 2001 references prices used then. An estimated non-food component was added to this, based on the consumption patterns of those households whose food expenditure was within plus or minus ten percent of the food poverty line. This gave an overall poverty line of 64,000FRw in January 2001 prices. An extreme poverty line of 45,000FRw was also used

In order to look at changes in poverty line it is important to use the same threshold in real terms. The same poverty lines was therefore used for the poverty analysis in this report, but now rescaled such that it is expressed in January 2006 prices. This gives 90,000FRw per adult per year for the poverty line, and 63,500FRw for the extreme poverty line. These figures translate into 250FRW and 175 FRw/adult/day respectively.

# A.5 Adjusting for urban and rural boundary changes

A stratified two-stage sample design was used for both EICV surveys, with the census *zones de denombrement* (ZDs) selected at the first stage and households selected a the second stage. Because of the timing of the surveys, the sampling frame for EICV1 was based on the 1991 Rwanda Census of Population and Housing, and that for EICV2 was based on the 2002 Rwanda Census. This has implications for some of the geographic comparisons between the results of the two surveys. The domain that was most affected by these changes was the other urban stratum, where the population went from 3.0 percent in the original EICV1 data to 9.1 percent in the EICV2 data. This was due to the new urban classification used for the 2002 Census, in which some areas previously considered rural were changed to other urban. In order to make the results from the two surveys more comparable, a new stratum recode was introduced in the EICV1 data files using the urban classification from the 2002 Census; the EICV1 results by residence stratum in this report are based on this recode.

# Annex B: Supplementary tables

	extreme poverty headco of population, %)	unt (share	share of national extreme poverty headcount (%)		
by stratum					
Kigali	8.4	6.3	1.7	1.3	
Other urban	28.5	25.3	5.4	6.3	
Rural	45.7	40.9	92.9	92.5	
by province					
City of Kigali	15.4	11.1	3.7	2.9	
Southern province	45.9	47.2	27.7	32.7	
Western province	41.8	40.9	24.2	26.8	
Northern province	47.2	40.8	24.3	20.3	
Eastern province	41.7	28.7	20.1	17.3	
by old province					
City of Kigali	8.4	6.3	1.7	1.3	
Kigali Ngali	54.0	26.4	13.3	7.3	
Gitarama	34.5	31.2	8.8	8.4	
Butare	52.5	53.4	10.5	13.3	
Gikongoro	56.5	62.9	8.7	11.1	
Cyangugu	45.2	40.9	8.3	7.5	
Kibuye	47.1	41.7	6.5	6.7	
Gisenyi	36.0	42.3	8.3	12.1	
Ruhengeri	49.4	41.1	13.9	11.1	
Byumba	43.8	43.3	9.8	9.8	
Umutara	33.2	24.1	3.3	3.9	
Kibungo	33.2	30.1	6.9	7.5	
Total	41.3	36.9	100.0	100.0	

# Table B.1 Extreme poverty headcounts by location

share of consumption accounted for by food					
	EICV1	EICV2			
by stratum					
Kigali	41.2%	40.0%			
Other urban	59.0%	54.1%			
Rural	69.9%	65.2%			
by province					
City of Kigali	45.6%	44.7%			
Southern province	65.9%	64.6%			
Western province	72.1%	64.4%			
Northern province	70.5%	66.0%			
Eastern province	67.5%	61.9%			
by old province					
City of Kigali	41.2%	40.0%			
Kigali Ngali	65.1%	61.5%			
Gitarama	64.8%	64.1%			
Butare	65.8%	65.2%			
Gikongoro	68.3%	64.6%			
Cyangugu	68.8%	63.0%			
Kibuye	75.8%	63.6%			
Gisenyi	72.6%	65.7%			
Ruhengeri	68.5%	66.8%			
Byumba	74.9%	64.8%			
Umutara	70.1%	63.1%			
Kibungo	67.1%	61.8%			
National	66.6%	62.3%			

# Table B.2 Share of consumption accounted for by food