REPUBLIC OF RWANDA
MINISTRY OF FINANCE AND ECONOMIC PLANNING
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Final Report

INTEGRATED HOUSEHOLD LIVING CONDITIONS SURVEY IN RWANDA (2000-2001)

Kigali, september 2002

In memory of Dr Christopher SCOTT who designed the sampling plan for this Household Living Conditions Survey on one of his last consultations assignments before his passing away. Dr. Scott dedicated his life to the development of Statistics.

PREFACE

Rwanda's recent history has been marked by the war and genocide of 1994, which gave rise to:

- ✓ significant changes in its socio-demographic structure, as a result of the genocide and the massacres of thousands of individuals, the increase in the number of orphans and widows, and the mass return of many refugees.

- ✓ a decline in the living conditions of the population: loss of employment and the destruction of education and health infrastructures and housing.

- ✓ the loss of many statistical documents.

- ✓ a reduction in the country's economic capacity.

With the support of its development partners, the Government of National Unity has implemented large-scale programmes to improve people's living conditions, in particular by implementing poverty reduction programmes, reintegrating refugees and building housing *(imidugudu)* and social infrastructures.

The decision to carry out a comprehensive Household Living Conditions Survey (HLCS) is intended to provide a better understanding of the extent and nature of poverty. In a broader context, it indicates a desire to assess the impact of the policies and programmes geared towards improving the living conditions of the population in general.

The Household Living Conditions Survey was conducted by the Department of Statistics of the Ministry of Finance and Economic Planning *(MINECOFIN)* with the joint financial assistance of the World Bank, UNICEF, the UNDP, the ADB and the DFID. We offer our sincerest thanks to those partners, the experts and staff who participated in this study.

Minister of State for Finance and Economic Planning.

Célestin KABANDA

FOREWORD

In its task of providing the public with reliable, up-to-date statistical information, the Department of Statistics of MINECOFIN is pleased to make available to users the General Report on the Household Living Conditions Survey (HLCS).

The information contained in this large-scale survey fills a gap in the available data on poverty and living conditions of the population. The results of this survey have been helpful in drawing up the framework document for the National Poverty Reduction Strategy and in defining the poverty profile of Rwanda. In addition, it has been used to measure the purchasing power of the population, which is a key indicator of living conditions.

For its implementation, the survey received – in addition to government funds – the joint support of the following donors: World Bank, UNDP, UNICEF, DFID and ADB. We extend our heartfelt thanks and sincere appreciation to them.

This work would not have succeeded without the selfless efforts of a strong, unified team from the Department of Statistics - from the design and analysis through to the data collection and processing staff. The Department of Statistics ceaselessly gave their best in order to ensure that the work succeeded. We would take this opportunity to thank Geoffrey GREENWELL, DFID Head of Project and IT Expert, who spared no effort to ensure that the survey results came out on time. We want also to thank Robert NGONG, Statistical Adviser in the Department of Statistics for his advice on the survey from inception throughout its implementation

This final document has been prepared by a team of eight senior staff of the Department of Statistics, coordinated by Oumar SARR, Statistics Expert at the Department of Statistics. The team comprised Jacques GASHAKA, Philippe GAFISHI NGANGO, Innocent NYABYENDA, Obald HAKIZIMANA, Juvénal MUNYARUGERERO, Pacifique RUTY, Evariste TEGERA NKUSI and Miss Claire RWAKUNDA. We would also like to mention the support given to us at every stage by the MINECOFIN authorities to whom we express our gratitude. Jacques GASHAKA has assured the translation from French to English.

This report gives only an overview of the immense volume of information that came out of the survey. In order to provide further service to users, the Department of Statistics plans to carry out an in-depth sectoral analysis, making additional use of other information from recently-conducted surveys such as the Demographic and Health Survey (DHS– ONAPO/2000), the agricultural survey (FSRP/MINAGRI-2000) and CWIQ survey (Poverty Observatoire, 2001), in addition to routine information compiled by the various departments of the administration. A database is also being set up and will be accessible to the public shortly.

Director of Statistics

PACIFIQUE RUTY

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ACRONYMS and ABBREVIATIONS

AE: Adult Equivalent

ADB: African Development Bank

ATV: Anti-Tetanus Vaccine

Cellule: the lowest administrative unit in Rwanda and is used in this survey qs the primary sampling unit. (In Kigali city, the equivalent is called “zone”.

CWIQ: Core Welfare Indicators Questionnaire

DFID: Department For International Development

DTW: Diphtheria, Tetanus and Whooping Cough

DHSR: Demographic and Health Survey of Rwanda

FSRP: Food Security Research Project

GPHC: General Population and Household Census

HLCS: Household Living Condition Survey

MICS: Multiple Indicators Cluster Survey

MIH: Maternal and Infant Health

MINAGRI: Ministry of Agriculture, Livestock Farming and Forests

MINECOFIN: Ministry of Finance and Economic Planning

NGO: Non Governmental Organisation
NSHCB: National Survey of Household Consumption and Budgets
NPEP: Net School Enrolment Rate

ONAPO: National Population Office

SDS: Socio-Demographic Survey

UNICEF: United Nations Children’s Fund
UNDP: United Nations Development Programme

WHO: World Health Organization
WVP: Wider Vaccination Programme

Summary of the main results

Poverty in Rwanda is extensive: over 60% of individuals and 57% of households live below the poverty line. More than two in five people do not meet their dietary requirements. Poverty is more firmly established in rural areas than in urban areas and has a far greater impact on the female headed households, in particular widows or divorcees, than on others. Inequality runs deep, with the richest 10% of the population holding approximately 50% of the national wealth compared with 50% of the population sharing just 15% of the wealth.

The country has a high female population (53%), of which large proportions are widows and/or single women. A significant majority of the population are young people (mean age of 21 years and more than one in two people under 25 years old). This situation calls for considerable efforts to be made in respect of the education of young people and the protection and promotion of women.

Three out of four children of primary school age attend school. School attendance for all still remains to be achieved, in particular in rural areas where the attendance rate is lower. The vaccination rate for children under five years old is approximately 75%, which means that the state must continue to give priority to preventive to mothers, of whom only 70% received an anti-tetanus vaccine during their last pregnancy. Particular attention should be given to protection against sexually transmitted diseases due to the low rate of use of condoms by men and women of reproductive age. In rural areas, people live with malaria, amoebiasis and diarrhoea.

In such circumstances, economic activities are inevitably a concern, in as much as almost nine out of ten workers are in the agricultural sector and three out of five are employed in the informal sector, which is characterised by insecure jobs and low incomes. There is considerable demographic pressure on agricultural land: over 58% of households have holdings of less than 0.5 ha and small farmers to maximise production on small plots of land hence not allowing land to lie fallow, with consequences for soil degradation, and reliance on inputs. Thus, 83.2% of plots of less than 0.5 ha use inputs, compared to 5% of plots of 1-1.5 ha and to 0.4% of plots of 3-5 ha. In short, the smaller an agricultural holding is, the more likely the owner uses fertilisers.

However, these difficulties are mitigated by the strong solidarity among rural workers themselves, between rural and urban workers and between the poor and the non- poor. Urban workers provide money in return for the food produce that they receive from rural workers. Other contributing revenues come from property rental or from dowries and inheritances.

In the absence of adequate incomes, people migrate internally in search of better living conditions. Although seven out of ten inhabitants of Kigali have never left the town, the same proportion of inhabitants of rural areas state that they have moved at least once from their place of birth. The average age of first time internal migrants is 24 years. The internal migration follows the following pattern: Kigali- city to the rural area, to other rural area and from other towns to Kigali city. The main reason for the latter move is a return to the country, which is not unrelated to the country's recent history.

With regard to housing, a quarter of households that owned their home during the period 2000-2001 no longer did so a year ago and 27.5% of tenants are now owners of their homes. Approximately two out of three people have drinking water and only 5% have electricity at home. Seven out of ten households have little regard for rubbish disposal of waste material and very few are prepared to pay for its removal. Modest efforts have been made to build infrastructures since 1994, in most cases using voluntary contributions. In rural areas, an average of 58 houses and 3.6 km of road were constructed in each *cellule* between1994 to 2001.

CHAPTER I. SURVEY METHODOLOGY

1.1. BACKGROUND

The Household Living Conditions Survey (HLCS) was conducted by the Statistics Department of the Ministry of Finance and Economic Planning. The previous similar survey was conducted between 1983 and 1985 and was called National Household Budget and Consumption Survey (NHBCS).

At the beginning of 1993, the Department of Statistics initiated a priority survey but its activities were interrupted by the events of 1994 just after the data collection stage.

Following the war and the genocide, there was significant population movements, there were also changes in the consumption habits of households.

Aware of these changes and anxious to improve household living conditions, the Government wanted to have up-to-date information in this area a prerequisite for development planning.

In April 1997, the Department of Statistics began preparatory work for the HLCS with financial support from the World Bank. By December 1997 all of the technical documents and data entry programmes had been prepared. However, activities had to be halted since the required additional funding could not be raised.

Work recommenced in 1999 with the Rwandan Government undertaking to fund data collection operations in urban areas. DFID funded similar operations in rural areas and all the other stages of the survey.

1.2. SURVEY OBJECTIVES

The HLCS, with an expanded budgets and consumption module, was primarily intended to provide policy planners and decision-makers with basic data on household living standards in Rwanda.

In addition, the survey was to be used to:
- Calculate weights for the Consumer Price Index and estimate final household consumption,
- measure the effect of macro-economic policies and projects on the conditions and living standards of the population,
- produce key indicators of household welfare in order to assist policy-makers and development partners to improve the design of their development strategy,
- identify policy target groups with a view to ensuring that state interventions are better targeted.
- provide information on the socio-economic characteristics of households with a view to setting up a socio-economic data base.
- carry out in-depth studies, for example on poverty, nutrition, housing conditions, etc,
- improve the national capability to conduct statistical surveys, however complex they may be.

1.3. SAMPLING PLAN

The sampling plan was drawn up with the technical support of the late Christopher SCOTT, Survey Consultant, during his mission in July 1997.

1.3.1. Constraints

The two main factors considered in designing the sampling plan were:
- the objectives of the survey,
- the fieldwork methodology given the available logistical resources.

For the survey one objective was determinant: the Government wanted statistically reliable results at the level of each province, Kigali city and the "other urban sector". Thus, the objective called for 13 domain of analysis. Experience of conducting this type of survey shows that a minimum sample of 500 households per domain of study is required for sound analyses.

Sample size

The sample size is shown in the following table and takes into account the methodology of fieldwork.

Table 1.1: Number of sample *cellules* and households by strata.

Strata	Domain of study	Number of sample *cellules*	Number of sample households
Kigali city	Kigali city	80	720
Other towns	Other towns	50	450
Rural areas	In each province	40	5280

The sample size was therefore **6,450 households**, with 1,170 households for urban areas and 5,280 households for rural areas.

1.3.2. Two stage sampling

A two stage stratified sample was used: sampling at area level and at household level.

1.3.2.1. Sampling base

At the area level, the chosen sampling base (or at the enumeration district) was the "*cellule*"in the rural areas and the zone in urban areas, since they are usually fairly homogeneous in size and are well demarcated.

Knowledge of the size of each *cellule* enabled the use of the classical method of sampling with probability proportional to size at the first stage. A list of all *cellules* including estimates of the number of households in each was compiled from information provided by the local authorities.

For sampling at the household level, an up-dated list of households was prepared for each of the selected first stage *cellule* by carrying out a listing in each sampled *cellule* simultaneously but with a lag in data collection before or while collecting the data. Part of this operation was carried out in collaboration with the National Population Office (ONAPO) and the Food Security Research Project (FSRP) of MINAGRI.

1.3.2.2. Drawing of sample units

The first stage selection involved drawing *cellules* using systematic sampling (i.e. fixed interval drawing), with probability proportional to size. In order to ensure a good spatial distribution of the sample, the selected *cellules* were ordered according to geographical location.

The second stage involved selecting households by systematic sampling. A list of households by *cellule* was drawn up according to proximity by listing agents.

This ordering of sampling units before selection constitute an implicit stratification, which makes the sample more representative.

1.4. METHOD OF COLLECTION

1.4.1. Questionnaires

Three types of questionnaire were used in the field for data collection:
- the household questionnaire comprising of 12 modules divided in two parts, A and B.
- the community questionnaire for collecting data on economic and social infrastructures in the sample units in rural areas and
- a conversion form for non-standard units used by households.

Household questionnaires

Part A collects data on each member of the household. It covered the following areas:
- demographic and migration characteristics,
- education and health,
- employment and housing.

Part B deals with the economic activity of the household. It comprises of the following five modules:
- agro-pastoral activities and own-produce consumption,
- household expenditure,
- non-agricultural economic activities,
- transfers,
- durable goods, access to credit and savings.

(See annex 2 for details of the information contained in the household questionnaire)

1.4.2. Data collection.

Reference period

The long and complex nature of the questionnaire was a determining factor in distributing the work over time. In effect, two of the modules comprise a long list of questions on products purchased and consumed. For frequently-consumed products, those answering the survey may have difficulty in remembering activities that took place more than three days previously.

For the reference period, a period of 30 days was preferred in urban areas, in order to ensure that payday effect was included for each wage earner.

In rural areas, where wage earners are rare, it is less important to maintain the 30-day reference period. Thus, the reference period was brought down to 16 days.

Field interviews

The calendar year was divided into ten cycles and interviews were conducted all through the year.

In urban areas, the first collection cycle began on 24 October 1999 and the last collection cycle ended on 24 December 2000.

In rural areas, collection began on 19 July 2000 and ended on 10 July 2001.

Visits to households

Within each cycle, data collection was organised into a number of visits to households:
- in urban areas, 11 visits at 3-day intervals,
- in rural areas, 8 visits at 2-day intervals.

At each visit, certain modules of the questionnaire had to be completed.

In urban areas, households to be surveyed were divided into three lots and interviews were held on the following days:

Lot	Interview days
1	1 4 7 10 13 16 19 22 25 28 31
2	2 5 8 11 14 17 20 23 26 29 32
3	3 6 9 12 15 18 21 24 27 30 33

In rural areas, interviews were held according to the following programme of visits:

Lot	Interview days
1	1 3 5 7 9 11 13 15
2	2 4 6 8 10 12 14 16

1.4.3. Field staff

Collection teams

Thirteen teams were assigned to the various provinces and, of those, three teams were assigned to urban areas. Each team was composed of:
- 1 area supervisor
- 1 controller
- 5 interviewers.

Training

Training of approximately 5 weeks was organised for all staff. It comprised a theoretical component delivered in the classroom and a practical component in the field in order to practise how to conduct interviews.

1.5. Data Entry and Processing

1.5.1. Data Entry

- Data Entry programme

Data for the household and community questionnaires were entered using IMPS (Integrated Microcomputer Processing System) software. Data from the conversion form for non-standard units was entered using MS ACCESS software.

- Simultaneous Data entry

Data from the questionnaires were entered simultaneously as field data collection progressed. After 8 and 15 days of collection in both rural and urban areas respectively, Part A is sent to the data entry unit, which entered the data and made a printout of error messages. Questionnaires containing errors were sent back to the field for correction.

Data files

Over 1,140 files of captured data were created and linked together in series based on the various sections of the questionnaire totalling 5.5 million individual entries and approximately 1,000 variables for each individual entry.

Data processing

In the process of filling in the questionnaires and data entry, various types of error slipped into the data. Controls were carried out on a number of levels: in the field by the controllers and supervisors and at the Statistics Department after data entry.

More detailed checks and controls were carried out after data entry, since the process can itself introduce errors.

Data processing is a very important stage in a survey. This often-neglected phase is the cause of delays in the publication of the results.

In addition to corrections made at the time of data entry, data processing goes through the following 6 main stages:

- **Exhaustivity control**

This involved checking the use of identical geographical codes in various data files and verification that questionnaires had not been entred more than once or omitted.

- **Consistency between variables**

With the aid of absolute frequency tables, verification is made whether eligible respondents for all the questions replied and whether those not eligible did not in effect reply.

- **Standardisation**

Some quantitative variables were aggregated over the year before validation. Variables arising from local measurements were converted to the conventional measurement system.

- **Re-coding**

Certain continuous quantitative variables were divided into classes:

- **Creation of derived variables**

This involved variables (which are derived from other variables.) not in the questionnaire or the data dictionary

- **Imputation of values**

During processing, extreme values were encountered for some variables. These were confined to values that deviated more than three standard deviations from the mean. After verification, they were replaced by the mean value of the variable.

IT programmes

A number of programming software and languages were used from capturing the data to preparing tables of results, inter alia IMPS, CS PRO, MS ACCESS, Visual Basic and COBOL, SPSS.

1.6. WEIGHTING

There are two kinds of weighting: spatial weighting and temporal weighting. Use of these methods enabled annual estimates to be obtained for the whole of the Rwandan population.

1.6.1. Spatial weighting

Spatial weighting enables results relating to the sample to be extrapolated for the whole of the population for the same period. It was calculated using the inverse of the overall probability of selection of a particular household. The details of the theory for calculating the various probabilities are shown in Annex I.

Starting from the overall probability formula $F_{hi}=p_{1hi} \times p_{2hi}$

where p_{1hi} is the probability proportional to size of drawing *cellule* i in stratum h
and p_{2hi} is the conditional probability of drawing a household knowing that unit i of stratum h has been selected. The numbers 1 and 2 indicate the stage or level of sampling.

Spatial weighting is given by the formula $W_{hi}=1/F_{hi}=M_{hi}/a_h b_{hi}$

where M_{hi} is the total number of households in unit i of stratum h
and a_h is the number of sample units in stratum h
and b_{hi} is the number of households surveyed in unit i of stratum h .

1.6.2. Temporal weighting

Temporal weighting is intended to produce annual estimates of values relating to the survey period. Thus, the temporal weighting coefficient depends on the length of the collection period.

By using CPT_{mj} to designate the coefficient of temporal weighting of the variable y_{mj} for household m, and J_{mj} to designate the number of collection days

$Y_{mj}=CPT_{mj} \times y_{mj}$ or $CPT_{mj}=365/J_{mj}$

Y_{mi} being the annual value of the variable y_{mj} for household m.

1.7. COVERAGE OF THE SAMPLE

In the course of the survey, some households did not respond, for one reason or the other. Of 6,450 households 6,431 responded, giving a response rate of 99.7%. In the course of processing the data, an additional 11 questionnaires were rejected because they did not contain useable information, in particular in respect to expenditure and consumption.

Hence, the analysis was based on 6,420 households, giving a coverage rate of 99.5% of the sample households.

1.8. CONCEPTS AND VARIABLES USED IN THE STUDY

1.8.1. Definition of a household

A household is considered to be a group of people who may or may not be related, who recognise the authority of the same individual called the head of household, and who for the most part share common resources. These people generally eat at least one meal together.

1.8.2. Adult equivalent (AE)

The adult equivalent is a concept based on the calorie needs of one adult, aged 20-39 years, engaging in moderate activities. For persons outside the 20-39 years age bracket (a coefficient the ratio of the needs of an adult person compared to their needs) is assigned. These coefficients are shown in the following table:

Table 1.2: Equivalence scales according to age and sex

Age groups	Sex	
	Male	Female
Less than 1 year	0.41	0.41
1 to 3 years	0.56	0.56
4 to 6 years	0.76	0.76
7 to 9 years	0.91	0.91
10 to 12 years	0.97	1.08
13 to 15 years	0.97	1.13
16 to 19 years	1.02	1.05
20 to 39 years	1.00	1.00
40 to 49 years	0.95	0.95
50 to 59 years	0.90	0.90
60 to 69 years	0.80	0.80
More than 70 years	0.70	0.70

1.8.3. Expenditure quintiles

Estimates of consumption expenditure include all outlays in cash and in kind by the household for its benefit, plus the value of the household's own produced consumption and any gifts received. Expenditure was calculated per AE by calculating the simple mean of total consumption expenditure and the number of adult equivalents in the household. Each individual was allocated the deflated consumption per adult equivalent corresponding to the household.

Individuals were then divided into five groups (called quintiles), each comprising 20% of the population, according to the level of expenditure per adult equivalent.

Table 1.3: Mean expenditure per adult equivalent by expenditure quintile

Quintiles	Level of expenditure in FRw	Mean annual expenditure per AE
1st quintile	< 29.716	21.106
2nd quintile	29.716 – 43.870	36.544
3rd quintile	43.871 – 63.582	53.211
4th quintile	63.583 – 98.515	78.633
5th quintile	More than 98.515	200.462

1.8.4. Poverty levels

Poverty levels are defined on the basis of the food and total poverty lines calculated on the basis of household consumption (based on expenditure and own production activities)

- The food poverty line is equal to FRw 45,000 per year per adult equivalent. The total poverty line is equal to FRw 64,000 per year per adult equivalent. It was defined on the basis of household consumption. The cost of living index was used in order to take care of the effects of price variations associated with the period or place of data collection.

The following three levels of poverty were thus defined:
- Extremely poor: persons whose total consumption is less than FRw 45,000,
- Poor: persons whose total consumption is between FRw 45,000 and FRw 64,000,
- Not poor: persons whose total consumption is greater than FRw 64,000.

CHAPTER II: CONSUMPTION EXPENDITURE AND POVERTY

2.1. BRIEF OUTLINE OF THE BASIC CONCEPTS

The international awareness that centered on poverty in the last decade of the 20th Century is even stronger now at the beginning of the new millennium. Reducing the scale and effects of poverty has become one of the main concerns of the international community and the initiative to reduce the debt of the highly indebted poor countries is an illustration of that will. However, there are many facets to poverty depending on the context on the one hand and on the analyst in the other. While some people emphasise monetary poverty alone, others include more qualitative concepts such as human development and even the level of an individual's participation in the conduct of affairs in their own society. However, everyone agrees that pronounced monetary poverty and human poverty go together.

In order to understand poverty it is first necessary to clarify the conceptual and methodological context, since lack of social progress can be understood in relation to monetary or non-monetary poverty.

Without overlooking the relevance of humanist arguments, well-founded theories enable the analysis of poverty to be based on household expenditure and consumption, which are considered to be a good guide to general welfare in the absence of figures for income, which is almost impossible to collect accurately in developing countries. In that context, the poverty line was defined by the cost-of-basic-needs method, then proceeding to a definition of the food and non-food poverty line at national level.

In a particular society, poverty implies that households or individuals are unable to attain a standard of living corresponding to the minimum level that is acceptable by the standards of that society. Those standards are reflected in the definition of a minimum level of consumption, called the threshold or line, in respect of which individuals are classified as poor or non- poor. The line varies according to time and place, with each country adopting its own line that reflects its level of development and the standards and values of its society.

In that respect, current practice, which is generally based on the use of national household surveys, involves a three-stage strategy:

- first, identification of a simple monetary indicator of household welfare,
- secondly, definition of a poverty line, that is, evaluation of the estimated cost to households of attaining the standard of living required in order to surmount poverty,
- lastly, an aggregate measurement of poverty in order to measure data as relates to the welfare indicator and the poverty line.

Those conceptual and methodological aspects of the analysis of poverty in Rwanda are presented in detail in the Poverty profile of Rwanda report. Only a broad outline of the process is presented here.

Welfare indicator and equivalence scale

Welfare is essentially multifaceted, since it depends not only on access to tangible private or public goods and services but also on access to political and social rights such as, for example, participation in society. In the case of monetary poverty, current consumption of goods and services is for the most part considered to be the preferred welfare indicator, income being used only as a rough estimate of consumption. Consumer expenditure reflects not only what a household may spend according to its current income but also the opportunities for that household to obtain credit or to

draw on its savings when its income is low or negative, possibly due to seasonal variations or a poor harvest: it is the permanent income. Consumption gives a better idea of the long term living conditions.

Moreover, in order to account for economies of scale in the household resulting from the composition of the household, that is, the non-proportionality of costs borne by the household when the number of its members increases, the total expenditure per adult equivalent is often taken into consideration.

In the present study, the measurement of welfare relates to the total household consumption, which is the sum of all monetary expenditures - both food and non-food expenditures[1], account including gifts received, internal consumption of food, various imputed amounts (rents, depreciation and durable goods) and transfers[2].

Poverty line and cost of basic needs

Determining or simply fixing the poverty line is a difficult task. The poverty line represents the monetary cost of attaining a standard of living above which individuals or households are not considered to be poor. This enables poverty comparisons to be made and for comparisons 2 relative levels of regional poverty of a country.

In effect, where comparisons of poverty levels are required to support the drafting of economic and social policies, one of the basic principles must be consistency with the objectives that are integral to those policies. It is thus a question of reducing poverty by increasing the consumption of individuals' basic needs. That requires the poverty line to have a particular purchasing power in relation to the goods or assets considered.

In that context, among the proposed options in developing countries, the approach of absolute poverty is the most used, although there is a good deal of controversy associated with it. An absolute poverty line reflects a welfare threshold determined in terms of the living standards indicator used, and set in respect of poverty comparison. Therefore, comparisons of absolute poverty will classify as "poor" or "not poor" two individuals or households that have the same level of actual consumption, regardless of time and place. In that regard, the most suitable approach for setting the poverty line in developing countries is an approach based on the cost of basic needs.

In broad outline, the procedure involves determining a basket of consumer goods deemed sufficient to meet basic consumer needs and calculating its cost. The calculation is carried out in two stages:

1. The content of a basket of food goods is determined on the basis of the consumption model of an appropriate reference group. The choice of the reference group is a value judgment since it determines the manner in which adequate nutritional energy is provided. In that regard, nutritional needs are an important basis for determining basic food requirements. Thus, a person is poor if they live in a household that is not able to meet the cost of a reference basket of food goods chosen to provide adequate nutritional energy in accordance with the diet of those assumed to be poor. Having selected a basket of goods, local prices are evaluated in order to establish a food poverty line.

2. It is then a matter of determining the share of non-food expenditure.

In Rwanda, according to the above procedure, a person is extremely poor if they live in a household that is not able to meet the cost of a reference basket of food goods chosen to provide adequate

[1] Non-food expenditure includes expenditure on accommodation (including rent and equipment), clothing and personal effects, energy, water, maintenance and repair, health and education, leisure, transport and communication, and durable goods.
[2] Transfers from/to other households or individuals.

nutritional energy of 2,200 calories per day. With this approach, in 2000, the nominal food poverty line in Rwanda is **FRw 45,000** per capita per annum and amounts to approximately 70% of the total expenditure.

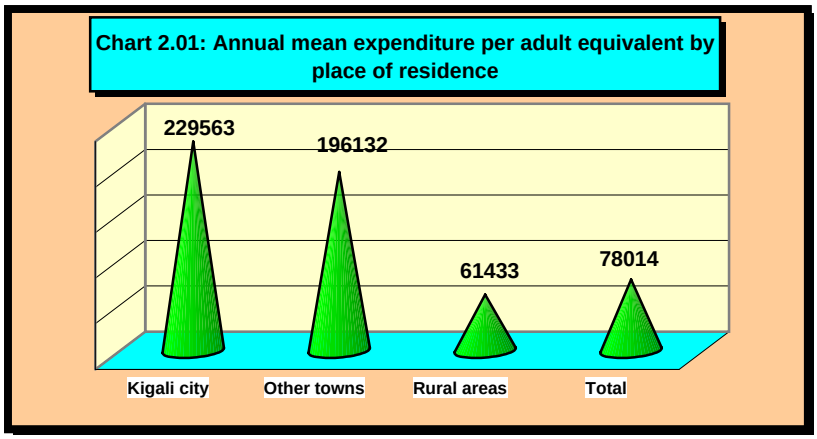
The share of non-food expenditure makes up the other 30% and when added to the reference basket of food goods, the nominal total poverty line (food and non-food goods) in Rwanda is **FRw 64,000** per capita per annum.

2.2. CONSUMPTION EXPENDITURE

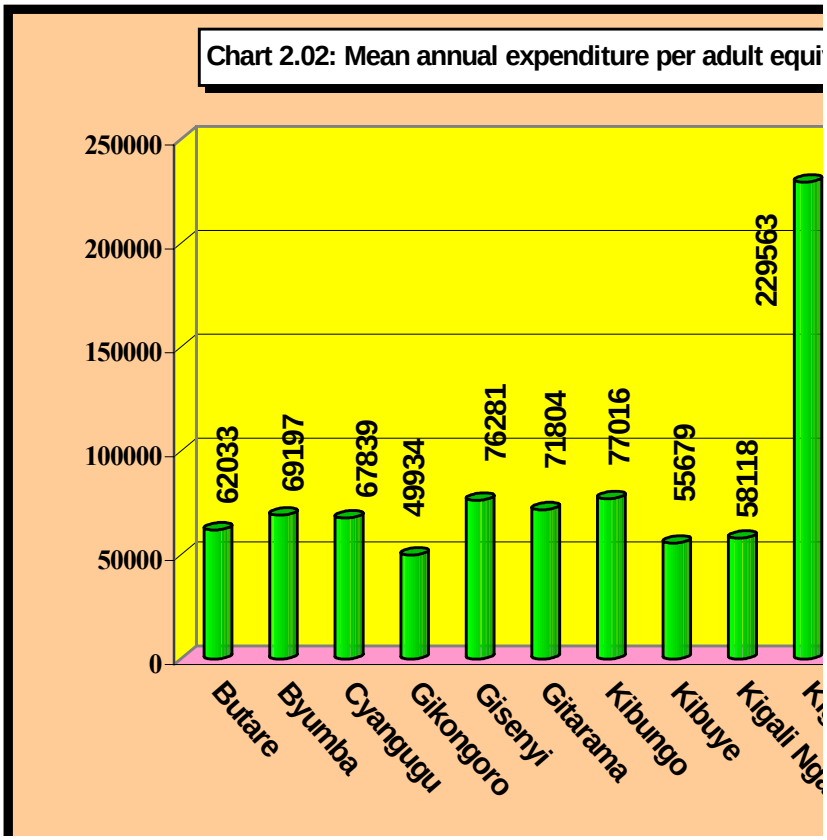
2.2.1. CONSUMPTION EXPENDITURE PER ADULT EQUIVALENT

Consumption expenditure by households identified by the household survey includes expenditure on food and own-produce consumption, in addition to expenditure on non-food items. The mean expenditure per person (adult equivalent) per annum at national level amounts to FRw 78,014 but this figure hides very marked disparities by place of residence.

In effect, an inhabitant of Kigali city has a mean annual expenditure of FRw 229,563 while consumption for an inhabitant of other towns is FRw 196,132 and for an inhabitant of rural areas just FRw 61,433, which is below the poverty line. This shows that poverty in Rwanda is more in the rural than the urban area and clearly illustrates the marked inequality in expenditure between both areas – *expenditure is approximately 4 times higher in Kigali than in rural areas and three times higher in other towns than in rural areas*.



With regard to the provinces, those with the lowest mean annual consumption expenditure per adult equivalent – below the poverty line – are respectively Gikongoro (FRw 49,934), followed by Kibuye (FRw 55,679), Kigali Ngali (FRw 58,118), Ruhengri (FRw 59,862) and Butare (FRw 62,033). The provinces whose mean annual consumption expenditure per adult equivalent is above the poverty line are Kigali city (FRw 229,563), with the highest expenditure, followed by Umutara (FRw 78,261), Kibungo (FRw 77,016), Gisenyi (FRw 76, 281), Gitarama (FRw 71,804), Byumba (FRw 69,197) and Cyangugu (FRw 67,839).



2.2.2. CONSUMPTION EXPENDITURE AND POVERTY LEVEL

At national level, an adult equivalent regarded as extremely poor had annual mean consumption expenditure of FRw 29,437, an adult equivalent regarded as poor had annual mean expenditure of FRw 54,158 and an adult equivalent not regarded as poor had mean expenditure of FRw 140,150.

Table 2.1: Annual mean expenditure per adult equivalent by place of residence

Place of residence	Annual mean expenditure per adult equivalent			
	Extremely poor	Poor	Not poor	Total
Kigali city	35393	54214	255047	229563
Other towns	35299	55136	232435	196132
Rural areas	29346	54140	108447	61433
Total	29437	54158	140150	78014

The results according to place of residence show that annual mean expenditure in Rwandan Francs by poverty level is higher in urban areas, confirming that urban areas are less poor in relative terms than rural areas, as illustrated by the adjucent table. Variations in consumption expenditure (income) according to area are greater in the "not poor" group. In contrast, mean expenditure by the less poor and the poorest is the same in relative terms, regardless of the place of residence.

The analysis by province as illustrated by the following chart shows that there are significant variations between provinces in respect of mean annual expenditure per person in the "not poor" category. For those who are extremely poor, the difference in expenditure is not very great.

Chart 2.03: Annual mean expenditure by province and by poverty level

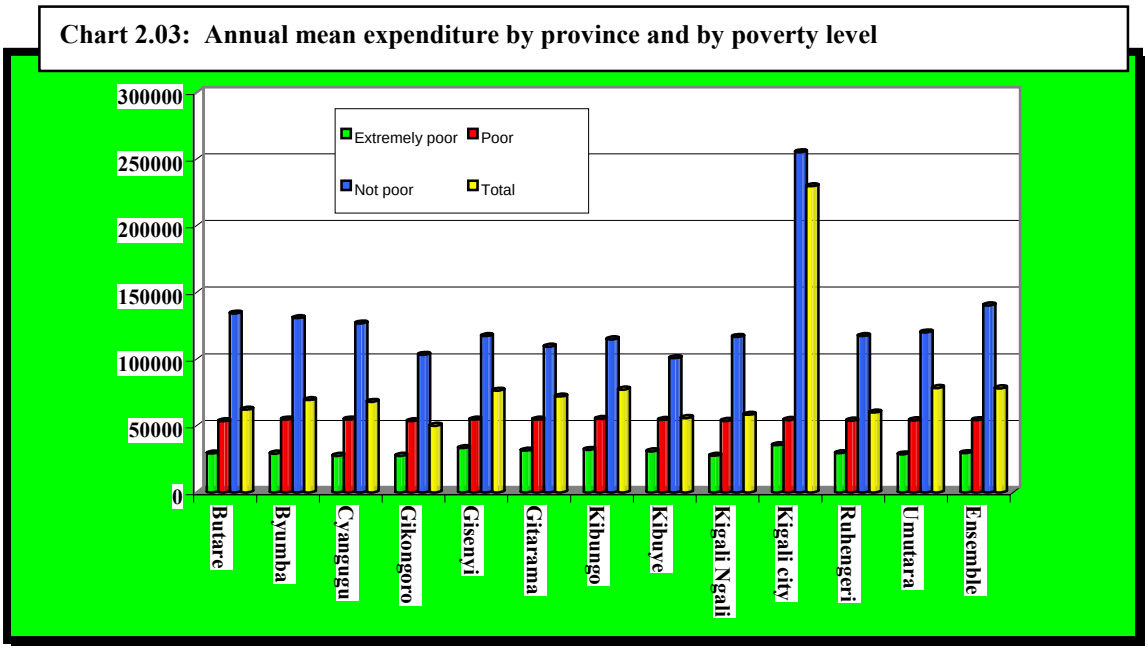


Table 2.2. Mean expenditure by category of consumption

Category of expenditures	Place			
	Kigali	Other towns	Rural areas	Total
Consumption own-produced food	10762	44299	104884	96550
Food expenditure	408085	296351	68460	98800
Non-food expenditure	432317	284693	42794	77030
Other expenditure (allocated expenditure)	55117	35323	8568	12597

Population distribution by expenditurequintile

The results show that, in rural areas, 22.2% of persons are in the first quintile, that is, they are unable to raise at least FRw 29,715 for their annual expenditure needs, while only 13.9% are in the fifth quintile.

This trend is reversed in urban areas. In Kigali, the first quintile contains 0.7% and the fifth quintile 74.8% of residents, while in the other towns, the proportions of those two groups are 1.7% and 66.8% respectively.

The distribution of the population according to place, province and expenditure quintile could be found in the annex.

2.3. POVERTY

2.3.1. Incidence of poverty

Also called the poverty rate (***P0***), the incidence of poverty is the standard indicator most widely used. It corresponds to the percentage of the population whose income or consumption expenditure per inhabitant is below the poverty line.

More than three in five persons, or 60.29%, live below the poverty line. This effectively corresponds to about 4,812,000 persons who do not have the means to buy the basket of basic goods.

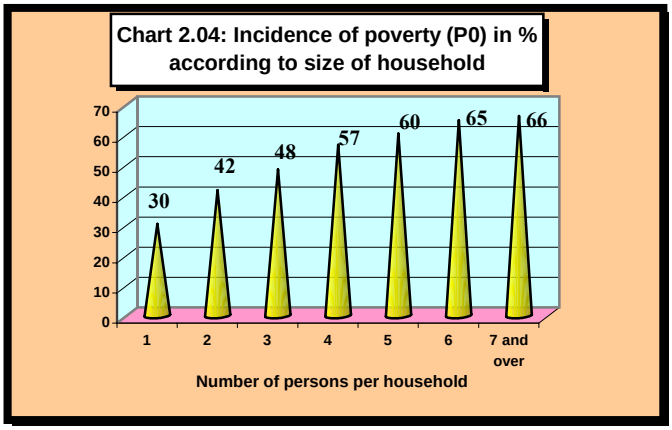
With regard to place of residence, it is observed that the poverty rate is 65.66% in rural areas, 19.38% in the other towns and 12.27% in Kigali. This shows once again that poverty in Rwanda is more predominant in rural areas.

By province, poverty is more pronounced in Gikongoro (77.18%), Butare (73.62%), Kibuye (72.48%), Kigali Ngali (70.88%) and Ruhengeri (70.27%); to a lesser degree, it affects Byumba (65.26%), Cyangugu (64.26%), Gitarama (53.74%), Gisenyi (53.50%), Kibungo (50.80%) and Umutara (50.52%). In Kigali, the poverty affects 12.27% of residents.

If we consider that individuals give priority to ensuring that their food requirements are met so that they reach the food threshold, then the incidence of extreme poverty is 41.64% at national level: in other words, approximately 3,320,000 Rwandans are unable to meet their food requirements. Rural areas are most affected with a rate of 45.81% while in other towns and Kigali the rate of food poverty is 9.78% and 4.52% respectively. With regard to the provinces, those most affected are Gikongoro (56.83%), Kigali Ngali (52.82%), Ruhengeri (52.31%), Butare (52.04%) and Kibuye (48.32%).

Taking the "household" as the unit of analysis, it is observed that 56.83% of households, *or approximately 915,047 households*, live below the total poverty line. By place of residence, households without the means to buy a basket of basic goods account for 61.68% in rural areas, 17.80% in the other towns and 10.44% in Kigali. Moreover, 35.78% of Rwandan households, or approximately 608,315 households, are unable to meet their basic food needs: in rural areas, 41.35% of households are in that position, while in Kigali and the other towns the figure is 3.70% and 8.77% respectively.

It should also be observed that poverty increases with the size of household. From that perspective, the incidence of poverty is relatively low for small households, as the chart below shows. This can be understood in so far as people who are well off generally have small households and tend not to have other people to live with them.



2.3.2. Depth of poverty

Also called the "scale of poverty" (***P1***), this indicator measures the gravity of the situation in which poor people live. It indicates the level on which poor people are situated below the poverty line: it in fact measures the mean distance from the poverty line and thus enables the total deficit of all the poor to be calculated.

In Rwanda, the scale of poverty is 25.36% at national level. Viewed by place of residence, the distance from the poverty line is 27.86% in rural areas, 5.71% in the other towns and 3.21% in Kigali city. The relative distance given by the table below shows that poverty gives most cause for concern in rural areas where the annual income of poor people deviates from the poverty line by 42.4%.

Milieu	P1/P0
Kigali City	26,1%
Others towns	29,5%
Rural areas	42,4%
Total	42,1%

Mean deviations from the poverty line are highest in the provinces of Gikongoro (35.92%), Kigali Ngali (33.12%), Butare (31.95%), Ruhengeri (31.16%), Cyangugu (28.97%), Kibuye (28.76%) and Byumba (27.47%). The provinces where the gravity is relatively smaller are Kibungo (18.65%), Gisenyi (19.48%), Gitarama (20.46%) and Umutara (20.99%).

On average, the gap in respect of the poverty line for a poor person is FRw 16,230. The total deficit, corresponding to the total amount required by poor people in order to attain the poverty line of FRw 64,000, is calculated at FRw 78 thousand million in 2000.

The table below shows the calculation by province of the mean nominal deficit required in order to bring each poor person up to the poverty line of FRw 64,000.

Table 2.3: Mean deficit per person by province

Province	*Mean deficit per person (in FRw)*
Butare	20,450
Byumba	17,580
Cyangugu	18,543
Gikongoro	22,991
Gisenyi	12,465
Gitarama	13,093
Kibungo	11,939
Kibuye	18,406
Kigali Ngali	21,195
Kigali City	2,052
Ruhengeri	19,945
Umutara	13,435
Total	16,230

This deficit represents the minimum annual amount required in order to bring the poor up to the poverty line and keep them there, if total responsibility were taken for supporting them. If the poor are to be integrated into the production system, productive investments must be set up capable of ensuring annual savings at least equal to the deficit in respect of the poverty line, in order to maintain the poor at least at the level of the poverty line.

2.3.3. Severity of poverty

The severity of poverty (***P2***) is a measurement closely associated with distance from the poverty line, although it gives those who are furthest from the line – *the poorest* – greater "weighting" in the aggregation than those who are closer to the line – *the less poor*. It thus has the advantage of enabling inequalities among the poor to be studied.

The severity of poverty is 13.65%. It is more marked in rural areas (15%) and is only 2.4% and 1.2% respectively in the other towns and Kigali city.

With regard to the provinces, it is greater in Gikongoro (35.9%), Kigali Ngali (33.1%), Butare (32%) and Ruhengeri (31.2%). Details of the variations in the severity of poverty at provincial level are given in the following table comparing the poverty indices.

In short, the rural areas are where the poverty is rampant. Regardless of the chosen indicator, the rural context gives most cause for concern: a greater number of poor people, greater depth of poverty and greater dispersion among the poor.

Table 2.4a: Poverty indices by place of residence *(Poverty line = FRw 64,000)*

Context	***P0***	***Ranking***	***P1***	***Ranking***	***P2***	***Ranking***
Kigali City	12.27%	3	3.21%	3	1.20%	3
Other towns	19.38%	2	5.71%	2	2.36%	2
Rural area	65.66%	**1**	27.86%	**1**	15.07 %	**1**
Total	***60.29%***		***25.36%***		***13.65 %***	

Table 2.4b: Poverty indices by province*(Poverty line = FRw 64,000)*

Province	***P0***	***Ranking***	***P1***	***Ranking***	***P2***	***Ranking***
Butare	73.62%	**2**	31.95%	**3**	17.44%	**3**
Byumba	65.82%	6	27.47%	7	14.84%	6
Cyangugu	64.26%	7	28.97%	**5**	16.79%	**5**
Gikongoro	77.18%	**1**	35.92%	**1**	20.56%	**1**
Gisenyi	53.50%	9	19.48%	10	9.20%	11
Gitarama	53.74%	8	20.46%	9	10.23%	9
Kibungo	50.80%	10	18.65%	11	9.22%	10
Kibuye	72.48%	**3**	28.76%	6	14.63%	7
Kigali Ngali	70.88%	**4**	33.12%	**2**	19.09%	**2**
Kigali City	12.27%	12	3.21%	12	1.20%	12
Ruhengeri	70.27%	**5**	31.16%	**4**	16.87%	**4**
Umutara	50.52%	11	20.99%	8	11.62%	8
Total	***60.29%***		***25.36%***		***13.65%***	

2.4. INEQUALITY MEASUREMENT

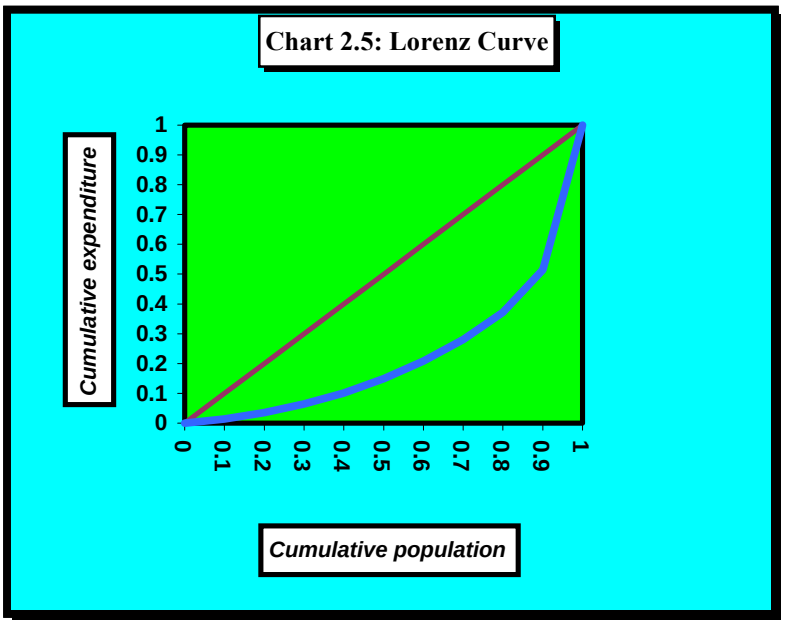
In general, inequality is studied in the context of general analyses of poverty and welfare. Inequality is a broader concept than poverty, since it is defined in relation to the population as a whole rather than the population of individuals or households below the poverty line.

Indicators of inequality are more subtle than indicators of monetary poverty, in so far as they summarise a two-dimensional variable in one dimension.

The indicator of inequality most commonly used is the *GINI coefficient*, which varies from 0 (representing complete equality of income or expenditure) to and 1 (representing complete inequality of income or expenditure), which is when an individual has all the income or expenditure leaving others with nothing. Diagramatically, the GINI coefficient is represented by the *Lorenz curve*, which

shows the share of cumulative income/expenditure on the vertical axis in relation to the population distribution on the horizontal axis.

In Rwanda in 2000, the GINI coefficient is 0.45, indicating that incomes are very unequally distributed at national level. The inequalities have increased by 55% compared to the situation in 1984/1986, when the GINI coefficient was 0.29.



The Lorenz curve shows that 60% of the Rwandan population accounts for only 20% of consumption expenditure (total income), while just 10% of the population accouts for 50% of total consumption expenditure (total income).

2.4.1. Spatial contribution to national poverty by place of residence

With a poverty line of FRw 64,000

Table 2.5: Contribution to national poverty by place of residence

Context	C0	C1	C2
Kigali	1.51	0.94	0.65
Other towns	0.96	0.68	0.52
Rural areas	97.58	98.43	98.92
Total	100.00	100.00	100.00

Rural areas contribute 97.6% to the incidence of poverty (***C0***), 98.4% to the depth of poverty (***C1***) and 98.9% to the severity of poverty (***C2***), as shown by the table here. Any policy to reduce poverty must therefore focus on improving the living conditions of people living in rural areas.

2.4.2. Spatial contribution to national poverty by province

At provincial level, Ruhengeri contributes the highest to national poverty in terms of the poverty rate (incidence of poverty), that is, the number of poor people is highest there. The same province is the second most important contributor in terms of the level (depth) and severity of national poverty. Kigali Ngali is the second most important contributor to national poverty in terms of incidence and the highest contributor in terms of depth and severity.

The province of Gikongoro, which is the poorest of all the provinces in terms of the incidence, depth and severity of poverty occupies only 8th, 5th and 5th place respectively in terms of its contribution to the incidence, depth and severity of national poverty.

Apart from Kigali city, the provinces of Umutara and Kibungo hold a stable place (Umutara in particular) and make a relatively small contribution. This trend seems to show that the most populated provinces are also those where the poor are concentrated. The contribution of provinces to the incidence of national poverty seems to depend on the size of the population by province. The various levels of contribution by the provinces to national poverty are shown in the following table.

Table 2.6. Contribution of the provinces to national poverty

Province	***Contribution to incidence of poverty: C0***	***Ranking***	***Contribution to depth of poverty: C1***	***Ranking***	***Contribution to the severity of poverty: C2***	***Ranking***
Butare	10.01	**4**	10.33	**3**	10.48	**3**
Byumba	10.37	**3**	10.29	**4**	10.33	**4**
Cyangugu	8.10	**7**	8.68	**6**	9.35	**6**
Gikongoro	8.06	**8**	8.92	**5**	9.49	**5**
Gisenyi	8.43	**6**	7.30	**8**	6.40	**8**
Gitarama	9.36	**5**	8.47	**7**	7.87	**7**
Kibungo	6.91	**9**	6.03	**10**	5.54	**10**
Kibuye	6.85	**10**	6.46	**9**	6.11	**9**
Kigali Ngali	13.40	**2**	14.89	**1**	15.94	**1**
Kigali City	1.51	**12**	0.94	**12**	0.65	**12**
Ruhengeri	13.64	**1**	14.38	**2**	14.46	**2**
Umutara	3.27	**11**	3.23	**11**	3.32	**11**
Total	***100***		***100***		***100***	

2.4.3. Sensitivity around the poverty line

Individuals or households with incomes around the poverty line (ten percent under or over) are more sensitive to policies to reduce poverty. The results of the HLCS show that a positive or negative impact can bring more than 5.6% of the population or 6% of households *(5.9% in rural areas and 2.5% in urban areas)* respectively up to a level at least equal to the poverty line or distance them further from that line (towards extreme poverty). The same is true for 5.2% of the population or 5.5% of households *(5.5% in rural areas and 3% in urban areas)* at a high risk of falling below the poverty line.

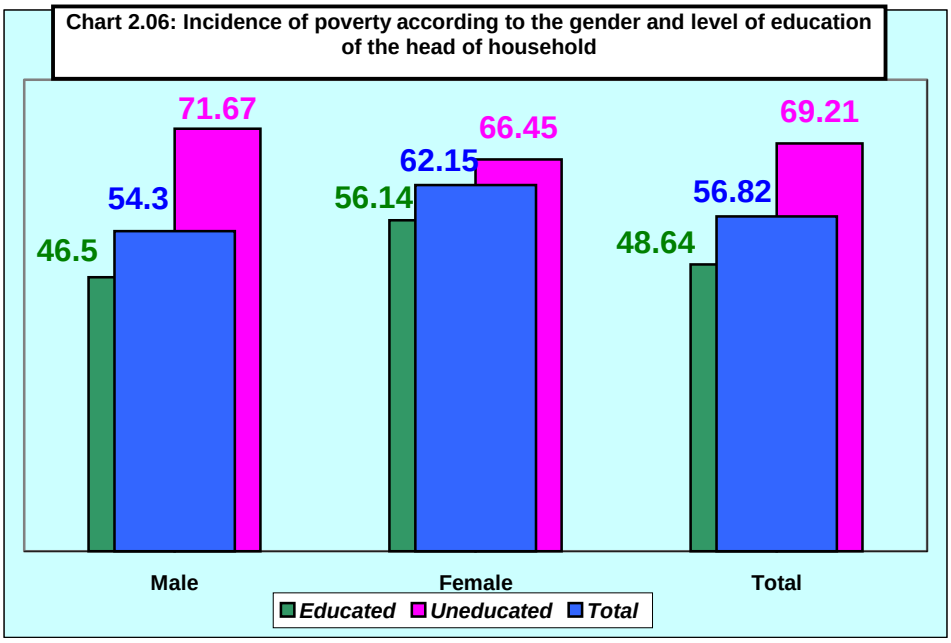
Moreover, with regard to the proportion of "poor people", individuals or households whose income is between the poverty line (FRw 64,000) and the food poverty line (FRw 45,000), accounting for 18.6% of the population and 19.1% of households, are very sensitive to political and economic measures, which may, in a sense, tip them into extreme poverty.

2.5. POVERTY AND BASIC NEEDS

2.5.1. Poverty and education

Education is closely linked to poverty. Education is one of the most important pillars in the policy to reduce poverty.

In Rwanda, more than 69% of households where the head of household has no formal education are poor, whereas 51% of households where the head of household has received an education are not poor. It can also be observed that female headed households are more vulnerable (62.2%), with the most impoverished being those where the head has not been to school (66.5%).



The incidence of poverty is more marked in male headed households where the head has not received an education (71.7%), compared to female headed household where the head has not received an education (66.5%).

The level of education of the head of household is inversely related to the level of poverty, regardless of their gender.

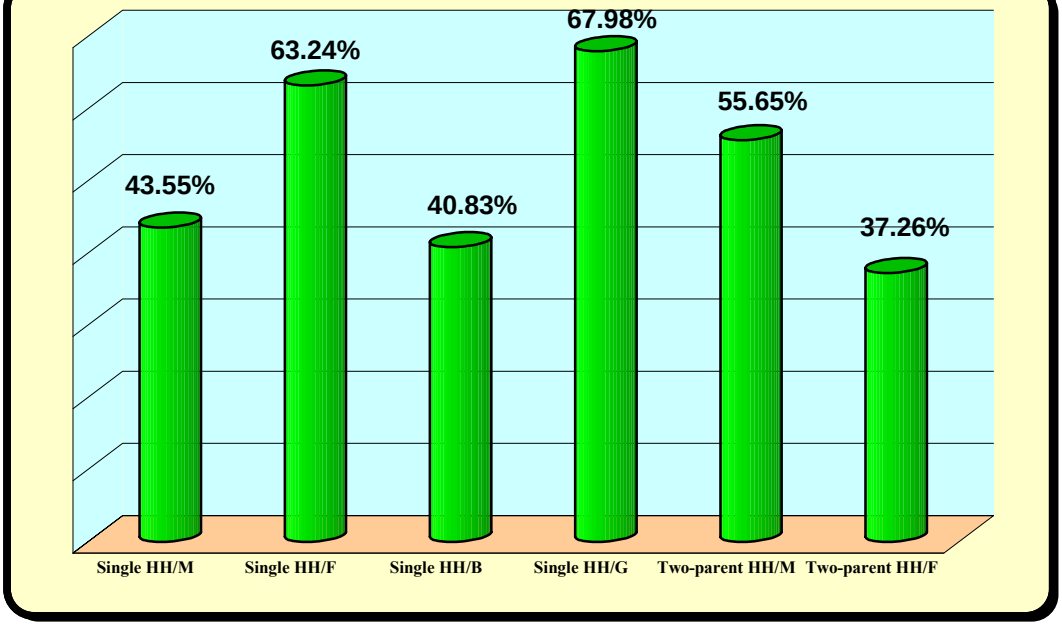
Table 2.7: Percentage distribution of heads of household according to level of education and level of poverty

Level of education	Level of poverty			
	Extremely poor	Poor	Not poor	Total
Primary	42.2	19.1	38.8	100
Post-primary	17.7	14.0	68.3	100
Secondary	10.3	9.4	80.4	100
Higher	2.1	1.0	96.9	100
Unknown	77.0		23.0	100
No education	50.6	19.7	29.7	100
Total	41.8	18.5	39.7	100

2.6. GENDER, MARITAL STATUS AND POVERTY

The results show that women are among the poorest of the poor: 42.16% could not meet their food needs and 61.16% live below the total poverty line, whereas for men, the respective proportions are 41.05% and 59.28%. In all contexts, women are more impoverished than men and total they account for 54% of poor people. The largest proportion of poor people is among women in rural areas of whom 46.32% struggle to survive and over two in three are poor.

Chart 2.7: Distribution of households below the poverty line according to marital status



The same picture of poverty prevails at the household level. Once again, the poorest are female headed households of which 62.15% are poor and 43.5% live in extreme poverty; while for male headed households the figures are 54.32% and 35.08% respectively. The most serious cases are seen among single-parent households headed by girls of less than 20 years old where 52.16% live in complete destitution and 74.15% live below the total poverty line. In second place come single-parent families in rural areas headed by women, with 47.15% living in extreme poverty and over two-thirds falling below the poverty line.

In the case of two-parent families, the situation is very mixed: in urban areas, there appear to be relatively more female headed households living in extreme poverty but fewer in total poverty, while in rural areas they are less affected by the two groups of poverty. It may be that in rural areas women are the de facto heads of household while their husbands are away working in the towns.

Table 2.8: Poverty indices by gender of the head of household and the place of residence

Place of residence	Poverty line = FRw 64.000			Poverty line = FRw 45.000		
	P0	P1	P2	P0	P1	P2
National	56.83%	23.17%	12.32%	37.78%	12.90%	6.13%
Male	54.32%	21.31%	10.99%	35.08%	11.41%	5.20%
Female	62.15%	27.10%	15.12%	43.50%	16.06%	8.10%
Kigali	10.44%	2.66%	1.02%	3.70%	0.82%	0.30%
Male	7.88%	2.08%	0.77%	2.72%	0.63%	0.19%
Female	17.40%	4.25%	1.69%	6.35%	1.33%	0.58%
Other towns	17.80%	5.41%	2.31%	8.77%	2.12%	0.82%
Male	13.69%	4.25%	1.73%	7.21%	1.55%	0.52%
Female	27.15%	8.05%	3.63%	12.32%	3.40%	1.51%
Rural areas	61.68%	25.33%	13.52%	41.35%	14.18%	6.75%
Male	59.56%	23.49%	12.16%	38.72%	12.64%	5.78%
Female	66.08%	29.14%	16.33%	46.82%	17.38%	8.78%

Equality between the sexes based on improving the level of education, increasing the opportunities for remunerative employment and reducing the burden of domestic work for women coupled by a stronger presence with regard to decision-making at all levels would undoubtably eliminate the "feminisation" of poverty. A poor woman is one proned to illness, uneducated producing poorly cared-for uneducated children thus leading in turn to a population that is prey to all ills: sickness, lack of education, lack of income, lack of shelter, etc.

Table 2.9: Incidence of poverty by marital status and gender of the head of household

Matrimonial status	Incidence of total poverty		
	Male	Female	Total
Married	55.63%	38.71%	55.21%
Divorced	25.26%	65.15%	58.47%
Separated	54.39%	65.92%	63.03%
Single	28.96%	60.28%	40.76%
Widowed	59.43%	63.27%	62.91%
Total	54.32%	62.15%	56.83%

Of all the groups, female headed households separated from their husbands are most affected by poverty, followed by divorcees and widows. In the case of men, it is widowers who have the greatest difficulty in meeting the needs of their household.

Chapter III: DEMOGRAPHIC CONSIDERATIONS AND MIGRATION

INTRODUCTION

The links between population and development are often reduced to the simple influence of demographic growth in terms of a slow-down or acceleration of economic growth. Writers have shown that demographic factors may in effect impact on economic growth, but more than the growth rate of the total population, it is the change in the distribution of the active population that has particular influence. This is all the more the case at local level, since migration, more than natural population movements, is a powerful factor in altering the population. In fact, natural growth is merely one component of demographic growth and account must also be taken of migration and population concentrations, in particular within towns, in order to understand the relationship between population and development, in particular at local level[(1)].

In the effort to reduce poverty in Rwanda, the demographic variable cannot be overlooked. It is therefore imperative to discuss population issues wherever available data permit. In effect, population and development issues are as relevant today as they ever were. In view of the country's limited resources, the thorny questions of food supply, education and housing, and the division of family agricultural land into smaller plots, demographic constraint remains at the heart Rwanda's sustainable development strategy. [(2)]

3.1. STATE OF THE POPULATION

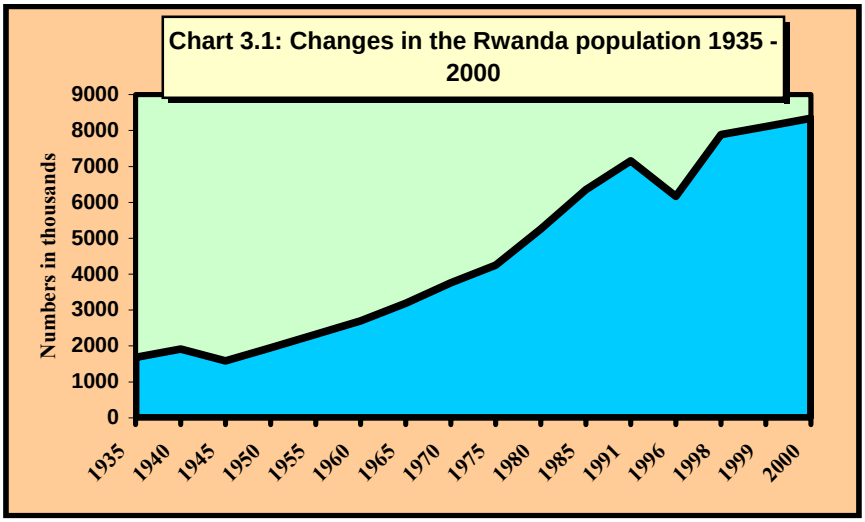
Even if it's objective was not to determine the population size of Rwanda, the HLCS provided substantial information on demography. That is the basis for our consideration of aspects associated with the numbers (or size), structure and geographical distribution of the population.

3.1.1. Total population: size and growth

Determination of the population size was not one of the objectives of HLCS. There are demographic data in HLCS which, together with other available data, may enable us to shed light on the basic characteristics of the Rwandan population.

In 2000, the Rwandan population was estimated at 8,343,000 inhabitants[(3)]. Studies carried out show that the Rwandan population experienced very rapid growth as from the 1940s in particular. From 1,595,400 inhabitants in 1934, it rose to 2,694,990 in 1960, 4,831,527 in 1968 and 7,157,551 in 1991. The unfortunate events of 1994 naturally led to a drop in numbers and significant changed the structure of the population[(4)]. (see Chart 3.1).

[(1)] Philippe Bocquier, La transition urbaine est-elle achevée en Afrique subsaharienne? (Has urban transition been completed in Sub-Saharan Africa ?) *Les Dossiers du CEPED* **N°34, July-September 1999**.
[(2)] Pacifique RUTY, La population Rwandaise face aux enjeux du développement durable (The Rwandan population faced with the issues of sustainable development), Article published in the *Revue Scientifique* of the Université Libre in Kigali, December 2001.
[(3)] MINECOFIN, Socio-demographic survey, Department of Statistics, 1996. Projections.
[(4)] According to data produced by the census of genocide victims, the tragedy of 1994 cost the lives of 1,074,017 people of whom 934,218 were in fact encountered.



This rapid growth rate of the population is the result of a low mortality rate while fertility remains high, in accordance with the theory of demographic transition[(5)].

3.1.2. Geographical distribution

The HLCS shows that Ruhengeri Province is the most populated with 11.6% of the country's total population, followed by Kigali Ngali with 11.4%, followed by Gitarama, Gisenyi and Byumba with 10.5%, 9.5% and 9.5% respectively.

This distribution has experienced fairly significant changes over time, as illustrated by Table 3.1. Butare Province stands out from the others, since its proportion of the country's total population has continuously fallen, from 15.7% to 8.2% between 1970 and 2000. This situation is attributable in part to emigration to other provinces in search of new land.

Kigali Ngali Province has during certain periods experienced a significant increase in its proportion of the total population, in particular in the 1970s. It should be remembered that this province, together with Kibungo province, were immigration areas during those years. Such population movements were part of the policy to redistribute the population over the national area. Similarly, the city of Kigali has experienced continuous growth since 1991.

[(5)] Demographic transition: passage birth and death rates from high to low levels in a population over time. The lowering of the mortality rate ordinarily precedes the lowering of the fertility rate, giving rise to rapid population growth during the transition period.

Table 3.1. Changes in the proportion of the total population by province

Province	% in 1970	% in 1978	% in 1991	% in 1996	% in 2000
Butare	15.7	12.5	10.7	8.4	8.2
Byumba	12.1	10.8	10.9	9.7	9.5
Cyangugu	6.8	6.9	7.2	8.8	7.6
Gikongoro	7.4	7.7	6.5	7.0	6.3
Gisenyi	12.2	9.7	10.3	11.2	9.5
Gitarama	11.9	12.5	11.9	13.0	10.5
Kibungo	5.8	7.5	9.1	5.4	8.2
Kibuye	6.8	7.0	6.6	5.3	5.7
Kigali Ngali	9.6	14.5	12.8	9.6	11.4
Kigali City	-	-	3.3	5.8	7.4
Ruhengeri	11.6	11.0	10.7	12.7	11.7
Umutara	-	-	-	3.0	3.9
RWANDA	100	100	100	100	100

Sources: Demographic survey (1970), GPHC (1978), GPHC (1991), SDS (1996), HLCS (2000).

3.1.3. Population Structure

Analysis of the population structure by age and gender is vitally important. It serves as the basis for drafting social and economic development policies.

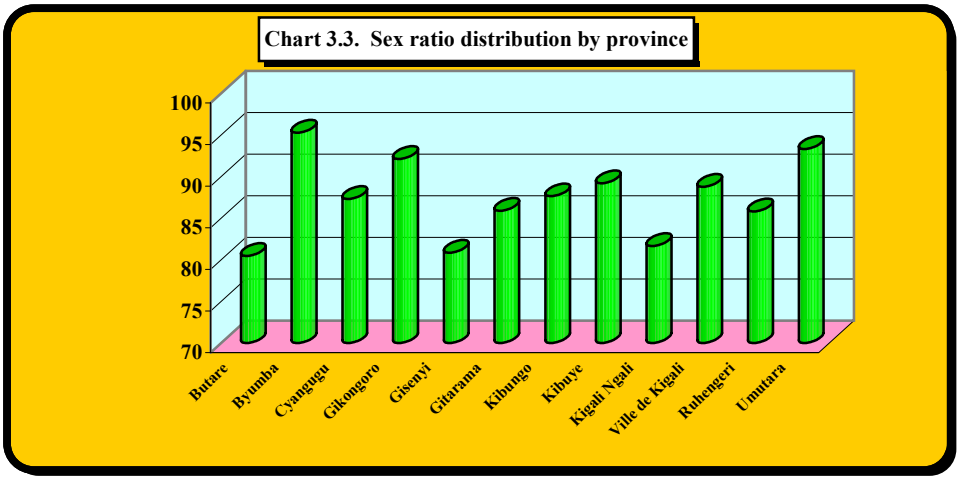
3.1.3.1. Population structure by gender

Within a population, it is rare to find the two sexes in equal numbers. The difference can be observed both in the total numbers and within the various age groups. In any case, Rwanda is a special situation. In effect, like the data from other surveys preceding it, the data from the HLCS confirmed the predominance of women in the total Rwandan population.

The study of structure by gender uses the masculinity ratio or *sex ratio*[5]. The following chart shows the level of that index by age group within the Rwandan population.

Despite a national average of 86.6 men per 100 women, which is low, it is observed that the sex ratio falls below the 80% line in the marriageable age groups (20-29 years). The peak observed for the 75-79 year age group remains unexplained, since at advanced ages, men are generally less numerous than women.

[5] The sex ratio is the number of men compared to women. It is calculated by dividing the number of men by the number of women. If the ratio is equal to 1, the numbers men and women are exactly equal. If the ratio has a value greater than 1, men are predominant and if the ratio is less than 1, women are predominant. However, the index is generally calculated in relation to 100 women, that is, MR=(Men/Women)*100, or the number of men per 100 women.

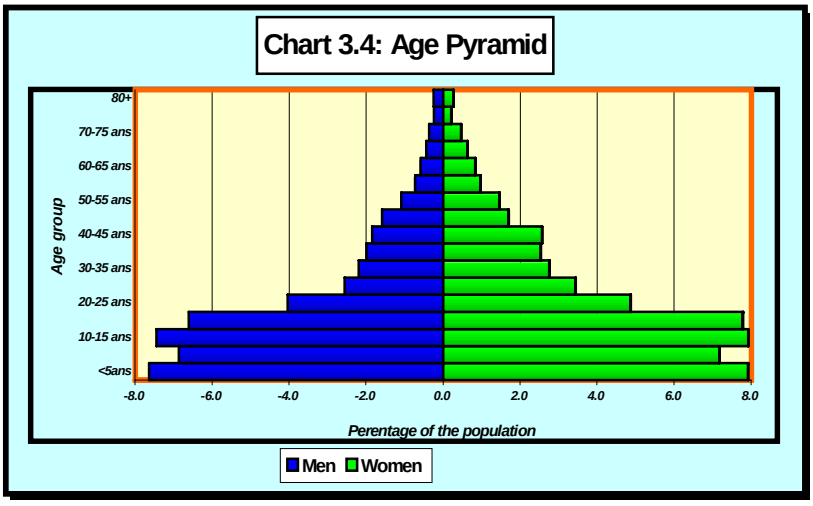


Other studies in this field emphasise that there is no purely demographic explanation for this situation. It maybe thecountry's recent history, with its comparatively high male death rate, that can explain it[(6)]. Clearly, the devastating effects of the genocide will affect the structure of the Rwandan population for a long time to come.

The same kind of imbalance is observed at provincial level. Some provinces are more affected than others. For a sex ratio of 87 men per 100 women at national level, the maximum is recorded in the provinces of Byumba, Umutara and Gikongoro, with 95, 93 and 92 [men per 100 women] respectively, while the minimum is found in the provinces of Butare, Gisenyi and Kigali Ngali, with 80, 81 and 82 men per 100 women respectively.

3.1.3.2. Age structure

With regard to age structure, although the Rwandan population is overall youngoverall, differences are observed at provincial level. In some provinces the population is either relatively old or young. Thus, while the city of Kigali and the provinces of Gisenyi and Ruhengeri are characterised by a young population, each with a mean age of 19.9 years, the province of Gikongoro has the highest mean age of 22.4 years, followed by Gitarama and Butare, with 22.1 years and 22.0 years respectively.



[(6)] According to the data of the census of genocide victims, the figures were 56.6% for men compared to 43.3% for women.

Table 3.2. Mean age and median age according to context

	National	Kigali City	Other towns	Rural area
Mean age	21.0	19.9	20.0	21.2
Median Age	16.0	18.0	16.0	16.0

Overall, the female population is older in relative terms than the male population. Even in normal circumstances, due to the comparatively high adult male death rate, the mean age of women is generally higher, as can be seen from table 3.3, which shows figures from the 1978 and 1991 censuses. (Cf. Document RGPH 92 (of the General Census of Population and Housing)).

Table 3.3. Mean and median age of the Rwandan population by gender: comparison of the 1978 and 1991 censuses

Gender		***1978***	***1991***	***2000***
Mean age	*Male*	*21.0*	*20.4*	*20.2*
	Female	*22.0*	*21.2*	*21.7*
	Total	*21.5*	*20.8*	*21.0*
Median age	*Male*	*16.4*	*15.1*	*15.0*
	Female	*17.2*	*15.3*	*17.0*
	Total	*16.8*	*15.2*	*16.0*

Another indicator of the structure by age is the median age[7]. At national level, half of the population is under 16 years old. Kigali city has the highest median age at 18 years. This could be explained by the fact that migrants coming to the town are mainly young adults.

There may be two reasons for the youthfull population in a province: either the province has a high fertility rate compared to other provinces, or there is immigration by young people, or a combination of the two. On the other hand, the reverse would apply in the case of an older population (low fertility and/or emmigration by young people). In our case, it can be confidently asserted that Kigali city has essentially been rejuvenated by immigration, since the fertility rate there is rather low compared to the other provinces. In effect, according to the DHSR[7], the overall fertility index in Kigali city is 4.9 children per woman while in rural areas the same index is 5.9, or one child more than in an urban context.

It should also be observed that provinces that are characterised by low agricultural productivity and hence, often suffer food shortages, like Gikongoro for example, are also characterised by a population with a high mean age. There are grounds for linking this age structure with the migration of youths to regions with more opportunities, in particular the towns.

3.1.4. Households

A household is generally composed of one or more persons, who may or may not be related and who live in the same accommodation, with one person being acknowledged as the head of the household. It reflects the living arrangements of individuals and families: one person living alone constitutes a household; a husband and wife who do not live together belong to different households, several families (man, wife (or wives) and child(ren) may belong to one household, etc.

[7] The age that divides a population into two numerically equal groups: that is, half the population is younger than that age and half is older.
[7] Demographic and Health Survey conducted by ONAPO in 2000.

We will only focus here on standard households[4]. Note that households shouldnot necessarily be equated with families (whether limited or extended) and that they do not automatically correspond to units of production or consumption.

According to the survey data Rwanda has 1,610,147 households, distributed as follows:

Table 3.4: Distribution of households by province

Province	Number	Percentage
Butare	141.071	8,8
Byumba	152.475	9,5
Cyangugu	112.511	7,0
Gikongoro	101.889	6,3
Gisenyi	152.389	9,5
Gitarama	170.983	10,6
Kibungo	133.324	8,3
Kibuye	96.310	6,0
Kigali Ngali	187.095	11,6
Kigali City	112.711	7,0
Ruhengeri	187.188	11,6
Umutara	62.201	3,9
Total	**1.610.147**	**100,0**

Ruhengeri province has a slightly higher number of households than Kigali Ngali. Umutara province has the lowest.

3.1.4.1. Gender of the head of household

Traditionally, household heads have been men. However, for some time, due to circumstances, a significant proportion of women are household heads in Rwanda. This is not without its problems, since they have not generally been prepared to carry out such a responsibility. One can therefore imagine the magnitude of the problems with which these women are confronted and the precarious living conditions of their households.

Table 3.5: Distribution of households by gender of household head and the place of residence

Place of residence	Male	Female	Total
Kigali City	73.1	26.9	100.0
Other towns	69.4	30.6	100.0
Rural area	67.5	32.5	100.0
Total	67.9	32.1	100.0

Nearly one third, or 32.1%, of Rwandan households are headed by women, with a relatively small proportion in Kigali. As will be seen when we analyse marital status, those women are mainly widows although there are also those whose husbands are, for various reasons, absent from the household for long periods. It can be seen that the proportion of female heads of household is greatest in rural areas.

3.1.4.2. Size of household

❶ Size of household according to the gender of the head of household and the context

The mean size of the Rwandan household is approximately 5 members. However, as the following table shows, household size varies not only by place of residence but also, to a far greater extent, by the gender of the household head.

[4] As opposed to collective households.

Table 3.6: Household size by place of residence and the gender of the household head

Context	Sex of head of household		
	Male	Female	Total
Kigali City	5.34	5.03	5.26
Other towns	5.43	4.78	5.23
Rural area	5.28	4.19	4.92
Total	5.29	4.26	4.96

With regard to the gender of the household head, in both rural and urban areas, male headed households are larger in size. On average, they have one more member than female headed ones.

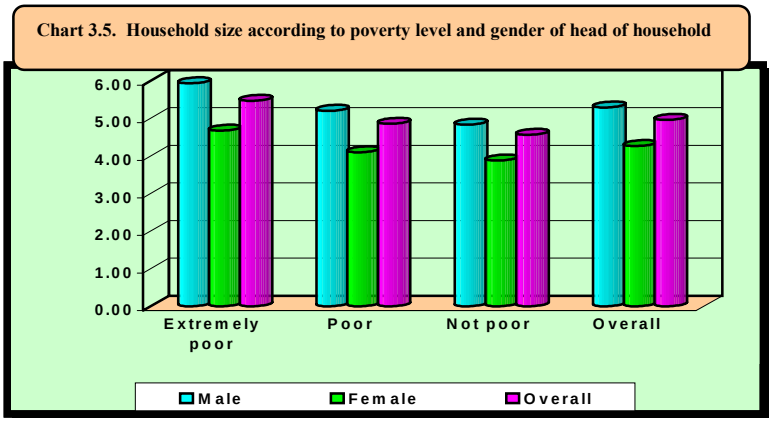
Depending on the place of residence, urban households are larger than rural areas. As Marc PILON[5] observed, in Africa, the nuclear households that normally goes with urbanisation and progress towards "modernity" does not seem to be happening. On the one hand, both in rural areas and in the towns, an overall increase can be observed in the mean size of households, with reference to both children and adults, due to the combined effect of several factors (continued high fertility and low mortality, late marriage age, difficulty of access to urban accommodation).

The reasons for the large size of urban households could be found in the concentration of social facilities (schools) and employment opportunities in the towns, coupled with continued high fertility. Thus, as Marc PILON emphasises, the practice of the movement of children is consistent with the transfer of children from rural to urban areas for the purpose of education (in particular for boys) and domestic help (in particular for girls). large numbers of young people come to the towns, in particular Kigali, hoping to find employment.

❷ household size and poverty

Poverty is often considered to be a key factor in causing strong demographic growth and high fertility and one of the factors obstructing or slowing down demographic transition[6]. There is a saying that "the poor man's bed is prolific". Do the available data confirm this? It appears that the answer is yes. In effect, while the mean size is 5 persons per household at national level, households that are extremely poor have 5.5 members whereas not-poor households have 4.6 members. Even if the members of a household are not all necessarily the children of the head of household, the mean size of household gives some indication, albeit not enough in itself, that fertility continues to be high in the country. The following chart illustrates this situation.

Chart 3.5. Household size according to poverty level and gender of head of household



[5] Marc PILON, Familles africaines en plein remue-ménage (African families in a state of upheaval), *La chronique du CEPED (ECDC Chronicle)*, April-June 1996, N°21.
[6] Bruno SHOUMAKER and Dominique TABUTIN, Relations entre pauvreté et fécondité dans les pays du sud connaissances, méthodologie, et illustrations (Relationship between poverty and fertility in the countries of the South: experience, methodology and illustrations), *Document de Travail N°2* (Working Document N°2) February 1999, Department of Population Sciences and Development, UCL, page 2.

The above chart shows that households that are not poor have one person less than extremely poor households. This could be because first, poor households are essentially those in which the head has had no or very little education and there is a relationship between the level of education and the level of fertility - in effect, the higher the level of education, the smaller the size of family tends to be. For example, 97% of heads of household with a university education are not poor. Secondly, the higher the level of education one has and the less poor one is, the more one tends not to have dependants living in one's home.

❸ Poverty and fertility: explanatory trends

The principal explanation for the high level of fertility among poor people, as stated by many researchers (Bruno SHOUMAKER and Dominique TABUTIN),[7] is the need for (surviving) children. This is much greater among those who are impoverished and decreases as living standards increase. There are therefore two types of explanation in the main theoretical trends concerning fertility, one based on cultural and the other on economic factors.

The cultural approach views high fertility rates among the poor to be a result of their ignorance, their submission to the rules and customs of traditional life and even to the religious authorities, their irrationality and the fact that they are part of a "culture of poverty" characterised, in particular, by a lack of long-term vision.

The economic approach, on the other hand, considers that reproductive behaviours are governed by the conscious, calculated interests of those involved. The basic idea is simple: children generate for the parents (or parent) benefits greater than the cost of raising them. The benefits may take several forms and may be immediate or anticipated. The benefits traditionally cited are those generated from the children's labour, which frees the parents from household chores and agricultural work and may also be a source of additional income for the household.

In addition, children are often presented as a source of physical security, or as a source of security in the parents' old age. The effect of mortality is to cause people to "over-insure" themselves for their old age by having more children than necessary, guaranteeing sufficient probability that at least one will survive. Clearly, that "traditional" line of reasoning changes with higher living standards, changes in production systems and methods and opportunity costs (women's work), and the cultural changes that go with these things (education, child "quality", etc). This process leads to a decrease in the demand for children and to birth control among the more privileged groups.

3.1.4.3. Marital status

Marital status will first be analysed for the population as a whole from the legally marriageable age of 21 years (see following table):

Table 3.7. Marital status of the population as a whole

Marital status	12-21 years	Over 21 years	Total
Married	4.6	65.7	39.0
Divorced	0.2	1.6	1.0
Separated	0.2	2.2	1.3
Single	94.8	13.1	48.9
Widowed	0.1	17.4	9.8
	100.0	100.0	100.0

It can be seen from this table that very few Rwandans marry below the legal age limit. Only a small number of persons little, under 5%, break the law in that regard. The other important figure is the figure for widow(er)s, which accounts for 17.5% of the population over 21 years.

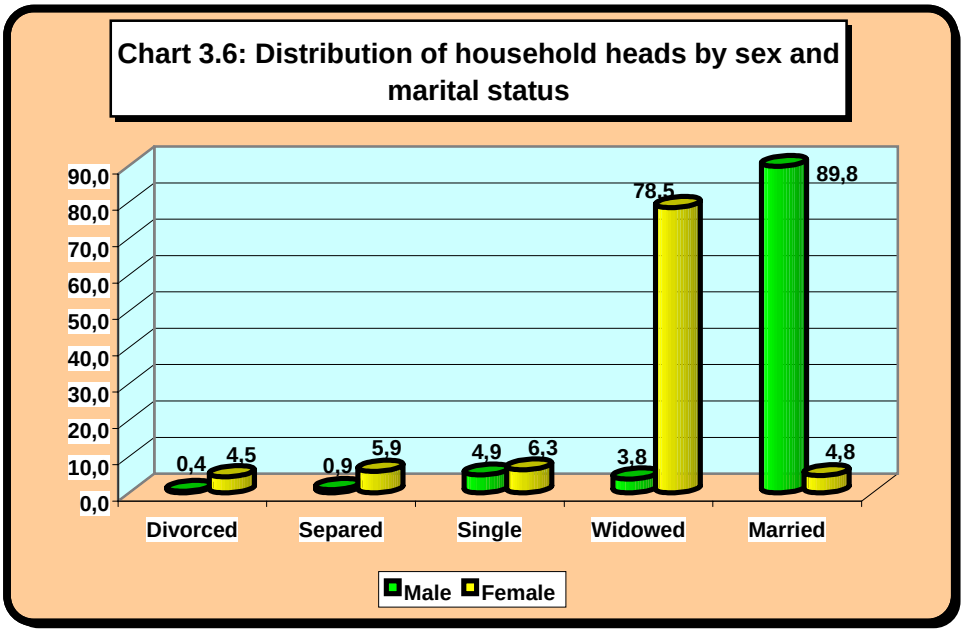
[7] Op cit, pp 9-10.

Table 3.8. Marital status of household heads

Marital status	12-21 years	Over 21 years	Total	Total		
				Male	Female	Total
Married	43.2	63.2	62.5	89.8	4.8	62.5
Divorced	0.7	1.8	1.7	0.4	4.5	1.7
Separated	0.5	2.6	2.5	0.9	5.9	2.5
Single	55.5	3.6	5.4	4.9	6.3	5.4
Widowed	-	28.8	27.8	3.8	78.5	27.8
Total	100.0	100.0	100.0	100	100	100

Table 3.8 shows that among household heads, those who are married are the most numerous, accounting for 62.5%. However, notice also the relatively very large proportion of widowed household heads, 27.8% overall heads.

With regard to the distribution of gender of household heads by marital status, charts 3.6 and 3.7 below shows that married persons account for 90% of male household heads compared to only 5% of female household heads. , female household heads are primarily widows (78%).



3.2. OVERVIEW OF MIGRATION PHENOMENON

3.2.1. Overview of population movements in Rwanda

Analysts divide the determinants of international migration in Rwanda into two groups: political and economic. Economic factors determine migration in three essential ways: emigration of rural workers in search of land, emigration of workers in search of employment and emigration following famines.

Another reason of emigration has been that associated with internal conflicts. In effect, immediately prior to and during the first years of independence, huge numbers of people crossed the borders seeking refuge in neighbouring countries. The years that followed were also marked by this kind of forced migration.

As for internal movements, this has always been limited as has been confirmed by the figures produced by the population censuses of 1978 and 1991. The following analysis focuses on this form of migration.

It should be pointed out that demographic issues have prompted leaders to adopt a number of demographic measures including migration. Thus, during the Interim Plan (1966-1970), demographic policies were adopted to encourage, on the one hand, internal migratory movements to improve the spatial population distribution and, on the other hand, permanent emigration to neighbouring countries, in particular Tanzania, Uganda and the Democratic Republic of the Congo.

3.2.2. Internal migratory movements

Knowing the current place of residence, information regarding spatial mobility was obtained from the survey on the basis of data on the place of birth. Clearly, those data are insufficient for the purpose of studying return migrations or analysing stages of migration between the place of birth and the current place of residence. Similarly, migration by individuals who have since died and migrants who went abroad are not taken into account. This approach does not, therefore, allow us to study the phenomenon in its entirety, although will almost certainly be underestimated.

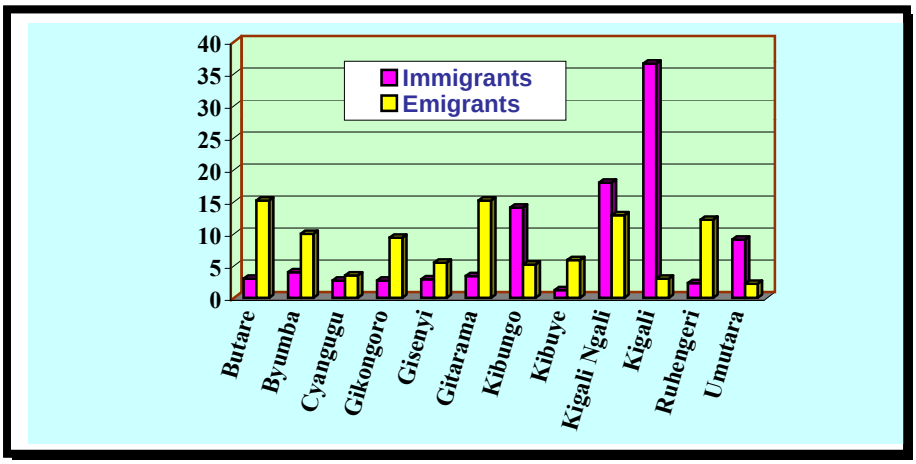
Nevertheless, the information obtained gives some idea of the migrant flows between various provinces. In the course of the survey, any person residing in a province other than the province where they were born was considered to be a "lifetime internal migrant". It is apparent from the data that the population that have changed province accounts for only 9% of the population of those born and resident in Rwanda. That means that 91% of the population was living in the province of their birth at the time of the survey.

The "crossover" of current places of residence and places of origin enables the main directions of migrant flows to be clearly observed in respect of exchanges between provinces.

❶ Direction of migrant flows

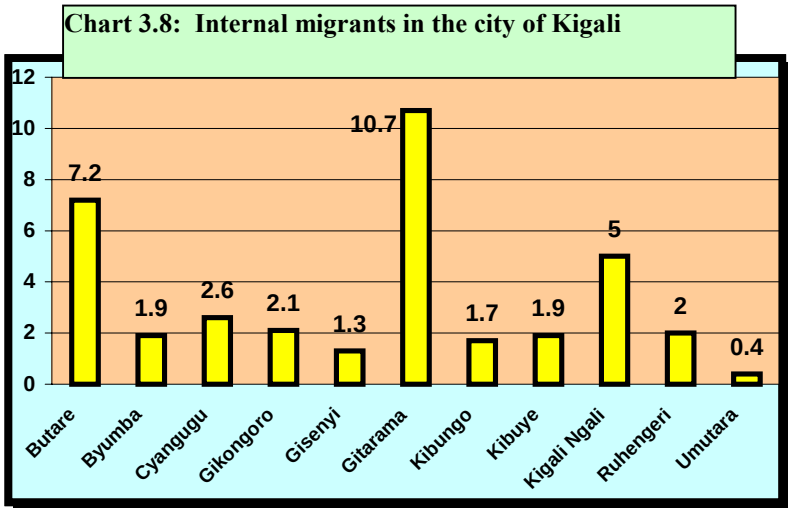
Certain provinces are marked by high levels of emigration: Gitarama and Butare have the highest levels, each accounting for 15.2% of the total number of emigrants. Other provinces experiencing emigration are Kigali Ngali, Ruhengeri, Byumba and Gikongoro, with 12.9%, 12.2%, 10.0% and 9.4% respectively. Clearly, emigration affects the most densely populated provinces and those characterised by food insecurity and (emigration) is thus explained by rational survival strategies.

Chart 3.7: Internal migration: Distribution of emigrants and immigrants by province



As regards immigration, the chart shows that the city of Kigali is the main convergence point for migratory movements, which is quite normal, since Kigali is the only real city in the country. As will be seen in the section on urbanisation, the growth of the city of Kigali is linked to the high levels of immigration that occurred following the country's independence. The following chart shows that the

provinces of Butare, Kigali Ngali and above all Gitarama have made a significant contribution to the population of the city.



The provinces that have contributed the least to the population of the city are Umutara and Gisenyi.

❷ Assessment of lifetime internal migrations

If one studies the numerical difference between those entering and leaving a province, one obtains a balance reflecting the population gain or loss of that province. If one considers the migratory balance for each province, only 4 provinces record a positive balance. All the other provinces record a negative balance, but the cases that attract the attention are, in order, Butare (-83.222), Gitarama (-80.633), Ruhengeri (-67.498), Gikongoro (-45.696), Byumba (-40.594) and Kibuye (-31.648).

Table 3.9. Numbers of emigrants and immigrants (persons resident in a province other than their province of origin)

	Immigration	Emigration	Balance
Butare	20748	103970	-83222
Byumba	27519	68112	-40594
Cyangugu	18421	24185	-5765
Gikongoro	18488	64184	-45696
Gisenyi	19500	37467	-17968
Gitarama	23071	103704	-80633
Kibungo	96478	35402	61076
Kibuye	8388	40071	-31683
Kigali Ngali	122925	88276	34649
Kigali City	250523	20266	230257
Ruhengeri	15688	83186	-67498
Umutara	62421	15347	47075
Total	684170	684170	0

The above table shows that Kigali is unquestionably the largest immigration area. That city alone contains 36.6% of the total number of internal migrants. The other immigration provinces are Kibungo, Umutara and Kigali Ngali.

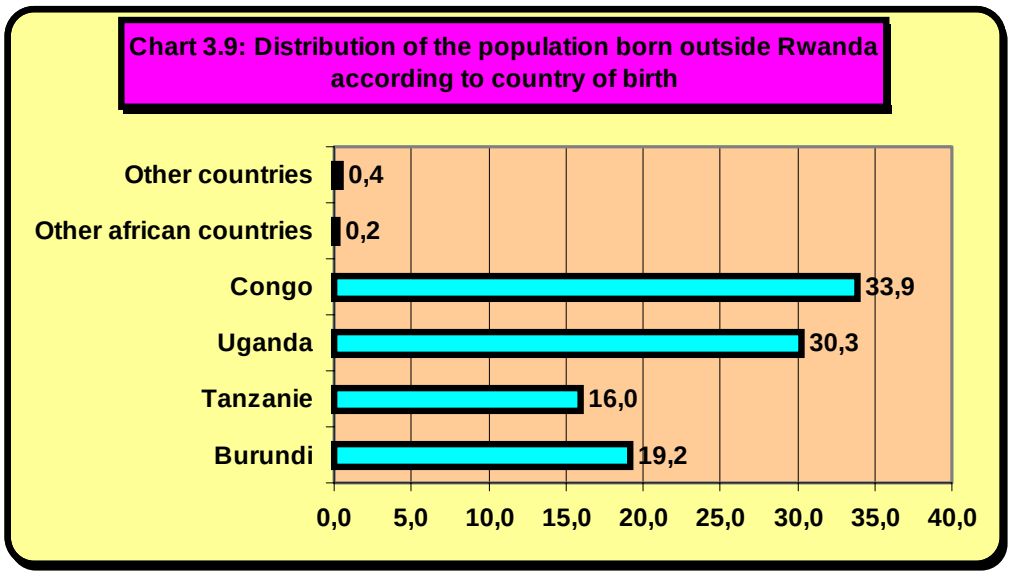
With regard to data on the phenomenon of migration and its development over time (the last two censuses), it is apparent that there is very little mobility within the Rwandan population. In effect, as

already emphasised, “lifetime” internal migration concerned only 9% of the country’s total indigenous population at the time of the survey, compared to 8.1% and 8.7% respectively at the time of the 1978 and 1991 surveys.

3.2.3. International migration

As indicated above, Rwanda has experienced several waves of international migration, some voluntary, others forced. We will only consider here movements of persons born outside the country.

❶ Proportion of inhabitants born outside the national territory



It can be seen that the population born outside the national territory comes from neighbouring countries.

❷ Where do these migrants live?

Overall, those born abroad mainly live in the province of Kibungo (21%), followed by the city of Kigali and Umutara (each with 19.9%). The lowest proportion is recorded in Gikongoro (0.4%).

According to the country of birth, it is observed that with regard to those born in

- Burundi, 30.1% live in the city of Kigali, 26.9% in the province of Kibungo, 24.9% in Kigali Ngali and 14.2% in Butare;
- DRC, 24.5% live in the city of Kigali, 23.5% in the province of Gisenyi and the remainder are distributed among the other provinces;
- Uganda, 55.6% live in Umutara, 15.1% in the city of Kigali and 10.9% in Kibungo;
- lastly, Tanzania, 60.4% live in the province of Kibungo, 13.5% in Umutara and 11.8% in the city of Kigali.

3.3. URBANISATION

3.3.1. General remarks

Urbanisation can be observed first and foremost from the proportion of the population living in the towns. The growth in the urban population may be due to the following factors:
- natural growth (where births exceed deaths)
- migration (where there are more people coming into the town than leaving it) and
- occasionally, where there are changes in the administrative boundaries of the town to include formally rural areas.

Taking account of the available data, one can only outline the main characteristics. It is important to note that Rwanda is marked by the enormous size of its rural population which some people consider (perhaps wrongly) to be the source of all the country's ills.

3.3.2. Urbanisation of Rwanda

Urbanisation is a universal phenomenon. In Rwanda, as in a number of other developing countries, urban development is inseparable from migration. In effect, although the growth of Rwandan towns is slow, it is essentially linked to the intake of rural populations. This rural exodus is motivated by a search for improved welfare by rural workers, because migration – it should not be forgotten – is often a rational, dynamic attempt to seek new opportunities.

Urbanisation is inherently linked to economic and social development and developing countries go through a transition stage from mainly rural societies to mainly urban societies. The figures show that Rwanda is on the periphery of that trend: the urban phenomenon is recent there although the change has for a long time remained rather slow.

Rwanda has always had a slow rate of urbanisation. On the eve of independence, it is estimated that the rate of urbanisation at national level was no more than 0.6%. Officially, places recognized as urban centres were limited to the administrative centres of the provinces and the centres of NYABISINDU and RWAMAGANA, in accordance with the decree-law of March 1979, or a total of 14 towns. Under the new administrative configuration, two other centres were included as towns, namely KABUGA and RUHANGO. However, despite the high number of towns, in 1991 the urban population accounted for only 5.5% of the Rwandan population and five provinces each had less than 2% of their population in the towns.

On the basis HLCS data, the urban population in Rwanda was calculated at 10.4%. That particular characteristic makes Rwanda the least urbanised country in Africa, where the mean is a little over 35%. Moreover, previous data (from the demographic survey in 1970 and the two censuses in 1978 and 1991) reveal that the urban districts with a few exceptions in Rwanda have experienced rather slow growth, if one considers the rapid urban growth occurring in other developing countries.

Furthermore, certain other so-called urban centres display characteristics similar to those of a rural area (the main activity of the inhabitants is still agriculture), to the extent that they are really half rural and half urban. Only Kigali in fact has the characteristics of an urban centre. Moreover, the slow emergence of other centres over the last two decades reflects a lack of dynamism.

Although we do not have recent data for these urban centres as a whole, we believe that the towns have experienced rapid growth in recent years, in particular since the end of the genocide. One thing is certain: the most significant intake was observed in the city of Kigali, where the population increased from 235,664 inhabitants in 1991 to 358,200 in 1996 to 600,000 in 2000, amounting to growth of 52% between 1991 and 2000. For the period 1991-2000, a mere 9 years, the rate was 154%.

3.3.3. Recent trends in respect of urbanisation

After the genocide, the "urban myth" maintained for so long collapsed. The towns, in particular Kigali, experienced a massive influx of people from rural areas since there was relative peace while insecurity raged across the country. The towns attracted, and still continue to attract, large numbers of orphaned and non-orphaned children from rural areas, swelling the ranks of street children, for whom the socially-correct term is "Rwanda rw'ejo", or "Future of Rwanda".

However, with the effects of the genocide, the factors driving people away multiplied in rural areas. Difficult living conditions, poverty and deprivation encouraged rural inhabitants to leave the countryside in the hope of finding employment or carrying out a more profitable activity in the informal sector. Moreover, another significant factor in the rural exodus is the increasing lack of farming land caused by demographic pressure and the degradation of famed land. Thus, more and more young people, who are essentially illiterate and have nothing to do, are moving into the towns.

The rapidity of urban growth, in particular in the city of Kigali, is striking. The city is growing at a very fast rate and is continuing to spread. Consideration should be given to the kind of housing that should be appropriate in a country where space is becoming scarce. Preference should now be given to the construction of large apartment blocks while discouraging the building of enormous villas on extensive plots of land

In conclusion, the current trend towards urbanisation could ease demographic pressure on farming land by establishing non farm enterprises that generate income. However, adequate mechanisms must be put in place with regard to training the population and investing in social infrastructures in order for this to succeed.

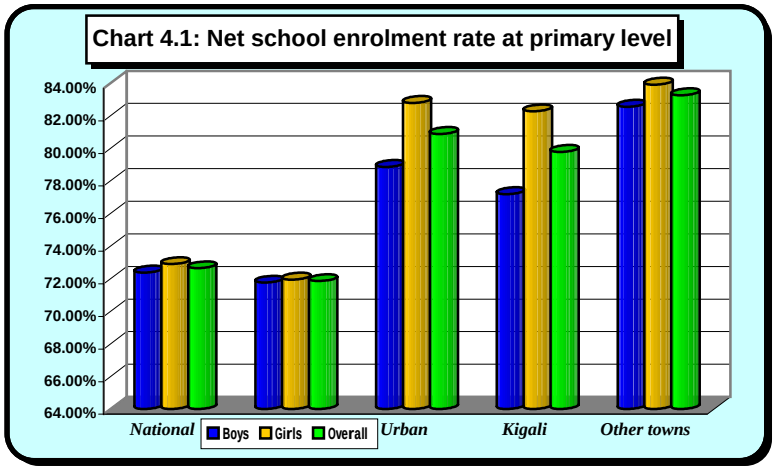
CHAPTER IV: EDUCATION

The data on education refer to school enrolment and education levels and to constraints on the development of the education system ranging from dropouts, to cost and to infrastructure accessibility. The information provided also refers to literacy levels.

4.1. PRIMARY EDUCATION

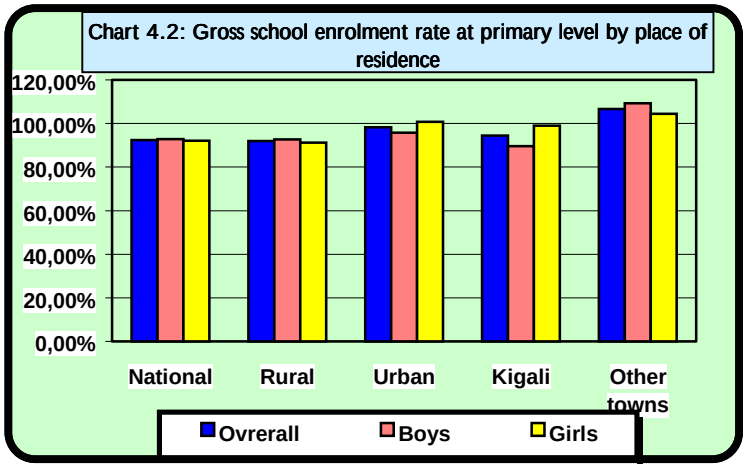
4.1.1. Enrolment at primary school

The net school enrolment rate at primary level is 72.6% for the country as a whole; the figure is higher in urban areas (80.9%) than in the countryside (71.9%). Although there are almost equal enrolment of boys and girls in rural areas, in urban areas there is an advantage in favour of girls, with a rate of 82.8% compared to 78.8% for boys. However, in relative terms, girls are less well represented among the poorest householdsand in the provinces Gisenyi, Gitarama, Kibuye and Ruhengeri,



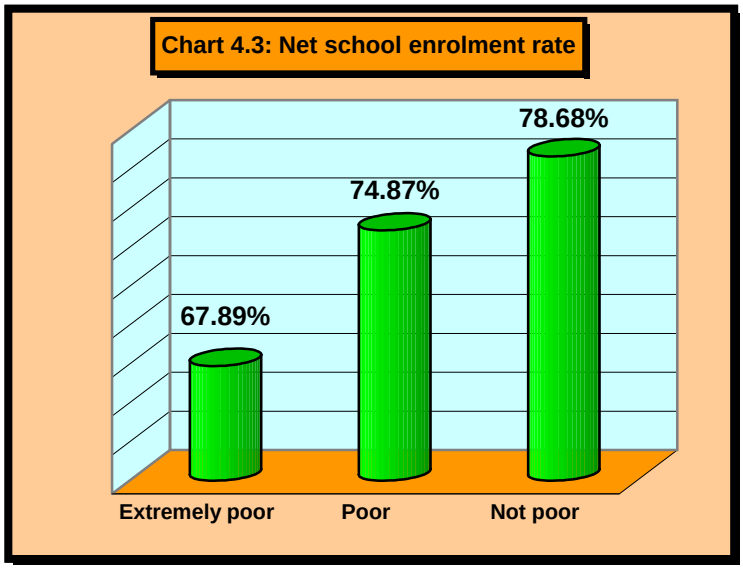
After Kigali, where the rate is 79.8%, Gitarama is the province where the most children are sent to school (with a rate of 78.4%). Kigali Ngali, Kibuye and Ruhengeri follow close behind with 75.5%, 74.6% and 74% respectively. Kibungo (66.7%) and Gisenyi (66.2%) have the lowest rates. There is a perfect correlation between the primary enrolment rate and the living standards: children from the less poor households are more likely to attend school than children from the poorest households.

The gross school enrolment rate at primary level is far higher than the net rate, indicating considerable delays in school enrolment, in particular in respect of girls, living in the urban areas. These delays in enrolment are confirmed if one looks at the age-grade mix at primary school: over 20% of children are over the age limit of 13 years.



While residents of Kibungo and, above all, Gisenyi are least likely to send their children to school, those in Gitarama, Kigali, Kigali Ngali and Ruhengeri show increasing enthusiasm as they send the children even with late age. Umutara presents very considerable delays in school enrolment, in particular for girls.

The willingness to send children to school is most obvious among the less poor, who bother less with age. Besides difficulties normally found in the education system, it would seem the interest is to make up for time lost during recent troubled years. In effect, for the poorest 20% the rate is 80.96%, compared to 104.56% for the richest 20%. Similarly, urban areas are the most advantaged, with a rate of 98.32% compared to 91.89% for rural areas.



4.1.2. Dropout rate at primary level

Approximately 3.5% of children abandon school before completing their primary education with a higher incidence among girls than boys, and in the rural area than urban.

Byumba, Umutara and Butare are the provinces most affected by declining school attendance, while Ruhengeri, Kibuye and Gisenyi are the least affected. Girls are more likely to abandon in the provinces of Byumba, Umutara and Butare, with rates of 10.9%, 6.5% and 6.1% respectively. In Kigali, girls dropout less often than boys.

The poor are more likely to be forced to dropout than those who are better off.

For approximately one third of persons aged from 7 to 40 years, the principal reason for leaving school at primary level is the cost, while a further quarter cite lack of interest in education. Illness and the war have caused 9.3% and 8.1% of children respectively to leave school, while 6.6% were excluded and 16.1% considered it more important to support their family. By gender, cost together with lack of interest are more common reasons for boys than for girls, while supporting the family and illness are more common for girls than for boys.

Table 4.1: Percentage distribution of pupils who dropped out of primary school by the reason and place of residence

Reason for leaving	Urban	Rural	Total
Cost	64,1	29,0	32,8
Work	0,9	0,8	0,8
Marriage	0,4	0,7	0,6
Change of residence	0,7	0,4	0,4
Exclusion	6,0	6,7	6,6
Lack of interest	9,7	27,2	25,3
Family support	7,7	17,1	16,1
War	6,9	8,2	8,1
Illness	3,7	10,0	9,3
Total	100,0	100,0	100,0

An examination of incidences of dropout during the last school year show that cost is most often cited (36.9% of cases). While the percentages for lack of interest and family support are fairly stable, that for illness has almost doubled, to the detriment of exclusion and, obviously, war. It is striking that cost has become a relatively more significant factor in dropout for girls than for boys.

Table 4.2. Distribution of pupils who dropout during the last school year by the reason and place of residence

Reason for dropping out of primary school	Male	Female	Total
Cost	32,4	40,6	36,9
Work	3,4		1,5
Change of residence	0,4	1,5	1,0
Exclusion	3,1	2,3	2,6
Lack of interest	33,0	19,9	25,7
Family support	11,5	17,2	14,6
War	1,3	1,7	1,5
Illness	15,0	17,0	16,1
Total	100,0	100,0	100,0

4.1.3. Classroom hours lost per week at primary level

The mean rate of classroom hours lost per week per child is 3.55 hours at primary school, or half a day per week.

The poorest are most inclined to miss classes (4.95 hours compared to 1.90 hours for the fifth quintile).

4.2. SECONDARY EDUCATION

4.2.1. Enrolment at secondary school

The net school enrolment rate at secondary level is about 7.57% for the country as a whole, with girls having a slight lead.

Table 4.3: net enrolment at secondary school by sex and place of residence

Place of residence	Boys	Girls	Total
National	7,09%	7,99%	7,57%
Urban	22,70%	22,40%	22,52%
Kigali City	26,82%	23,52%	24,85%
Other towns	14,29%	19,51%	17,11%
Rural	5,43%	6,06%	5,76%

There is a considerable difference between urban and rural areas, which have rates of 22.5% and 5.8% respectively.
For the provinces apart from Kigali city, where the net school enrolment rate is 25%, everywhere else less than one child in ten attends secondary school. The rates in the other provinces vary from 2.4% in Ruhengeri to 9.8% in Gitarama, with 4.5% in Kibuye, 4.8% in Gisenyi, 7.2% in Butare and 8% in Cyangugu and Umutara.

As with primary school, secondary school is far more likely to be the privilege of the better off than the poorest. The estimated rates are 2.15%, 5.03% and 15.29% respectively for the extremely poor, the poor and the not-poor.

Contrary to the situation at primary school level, the gross rate is very close to the net rate. It is about 11% for the country as a whole, with a slightly higher enrolment rate for girls. While this figure may seem low, it nevertheless hides significant delays and important disparities according to place of residence and standard of living.

In effect, the rate falls from 30.7% in urban areas to 8.1% in rural areas. The impression of equality between the sexes at national level masks differences arising from the place of residence. Thus, in Kigali, the rate is 38.7% for boys and 29.8% for girls, while in the other towns it is 21.2% compared to 27.4%, and in rural areas it is 7.8% compared to 8.4%. Secondary education for poor girls is less highly regarded than for boys.

With over a third of children, Kigali city stands apart from the other provinces, while Ruhengeri has the lowest rate at 5%. For the rest of the country, the rates vary from 6.34% in Kibuye to 10.56% in Cyangugu, with 6.7% in Byumba, 7.4% in Gisenyi, 10.34% in Kigali Ngali and 10.43% in Umutara.

4.2.2. Dropouts at secondary level

The dropout rates at secondary level seem to be same as that observed at primary level, with the highest rates occurring in the provinces of Umutara, Byumba and Butare.

Within the 7-40 year age group, more than two out of five and 16.9% of children dropped out due to cost and the war. For girls, 11.6% dropout due to marriage and 4.5% due to lack of interest in education.

Cost is currently cited by more than seven out of ten children. Marriage remains at the same level both for girls (11.6%) and for the two sexes overall (6.0%). A larger proportion is due to exclusion (22.1%).

4.3. OTHER ASPECTS OF EDUCATION

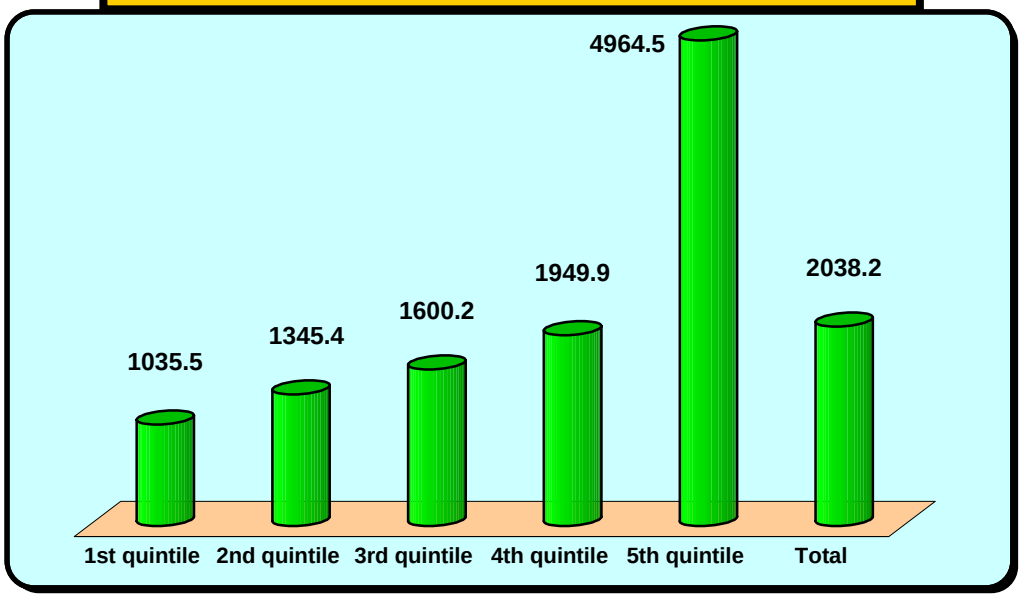
4.3.1. Funding of studies

Almost four in five children attending primary school are financially supported by their parents (mother or father). This contribution by the parents is even more pronounced in rural areas, while charitable organisations play a relatively larger role in urban areas. Contributions by the government are made to benefit of the poor more than the well off.
At secondary level, parents remain the principal providers of financial support to their children. Contributions by the government are relatively more frequent in rural areas and in respect of the poorest people, while organisations more commonly work in urban areas.

Higher education is funded, in most cases, by the government (in 46.7% of cases), supported by charitable organisations (20.1%); only the non- poor support their children.

Study costs are dependent on the level of education, the place of residence and the standard of living of households. A pupil costs on average FRw 2,038 at primary level, rising to FRw 46,332 at secondary level and FRw 136,433 at higher level. Urban inhabitants spend more than rural inhabitants and the wealthiest spend more than the poorest for the education of their children, as can be seen from the following graph showing the mean cost per pupil by quintile at primary school level.

Chart 4.4: Mean cost per pupil at primary level by quintile



4.3.2. Type of school

At the level of primary education, State schools receive more than four in five children. Approximately 16.2% of school children attend independent schools and 2.7% attend private establishments.

Howeverthis differs by place of residence. In Kigali, private schools occupy a more important place, with 12.3% of pupils, while in rural areas 18.1% of children are sent to independent schools and only 1.5% to private schools. In the other towns, private and independent schools receive approximately the same proportion of pupils.

Table 4.4: Percentage distribution of pupils at primary level according to type of school and place of residence.

Type of primary school	Place of residence			
	Kigali City	Other towns	Rural areas	Total
State	85.8	87.3	80.4	81.1
Private	12.3	7.3	1.5	2.7
Subsidised independent	1.9	5.4	18.1	16.2
Total	100.0	100.0	100.0	100.0

The distribution by type of secondary establishment attended is quite different: only 55% of pupils attend a State school while private schools receive 31% and independent schools 13.5%. In Kigali, less than half of the pupils attend State schools, almost two in five children go to private schools and one in ten attend independent schools. In the other towns, almost three in five children attend State schools, while 35.8% attend private schools. The private sector is less present in rural areas, with a little over a quarter of pupils. This low percentage can be explained by the fact that only 5.3% of schools in rural areas are private. Only a fifth of the poorest attend private schools, compared to over a third of the not-poor.

Table 4.5: Percentage distribution of pupils at secondary level by type of school and place of residence

Type secondary school	Place of residence			
	Kigali City	Other towns	Rural areas	Total
State	49.7	59.0	57.5	55.5
Private	39.8	35.8	26.7	31.0
Subsidised independent	10.5	5.3	15.8	13.5
Total	100.0	100.0	100.0	100.0

4.3.3. Level of Education

Almost three out of four Rwandans have been in a classroom least once: 78.8% of men and 70.1% of women. These percentages are greater in urban areas, rising to 89% and 85.2% overall in Kigali and the other towns respectively; while in rural areas the figure falls to 72.5%.

In general, a little under two thirds of the population have reached primary school level while 5.7% have received secondary education and an incongruously small percentage of 0.5% have received further education. In Kigali, of those who have gone beyond primary level, 6.6% have received post-primary instruction, 22.6% secondary-level instruction and 4.1% have received instruction at higher level. As expected, the higher levels are almost absent in rural areas, where only 3.8% of individuals receive secondary-level education and only 0.1% have attended the university studies.

It appears that the higher the level of education, the lesser the likelihood of being poor. In effect, 31.4% of those who are extremely poor have never been to school, while for the poor and the not-poor, the figures are 27.5% and 19.4% respectively. All those who go on to higher education are in the non- poor category.

Two in five household heads have never been to school and almost half ceased their studies at primary level. Less than one person in a hundred has received higher education. With regard to gender, female heads of household are among the most illiterate, with 58.3% never havingattended

any school. Over half of household heads living in extreme poverty have never attended school, with the percentage being 64.9% for women compared to 42.5% for men.

4.3.4. Eradication of Illiteracy

More than two in five people aged 15 years and over (43.7% of the population) do not know how to read or write, as opposed to 52.4% who can. Women are at the greatest disadvantage, with 48.6% being unable to read. Curiously, illiteracy is higher in urban than in rural areas, with 46.9% for the former compared to 43.2% for the latter. The reason may lie in the effort put into programmes to eliminate illiteracy in rural areas, where approximately 51.9% of inhabitants state that their unit has benefited and an average of 39 adults per rural *cellule* have received training.

Illiteracy is said to be one of the principal determinants of poverty; in fact, it affects over half of those living in extreme poverty, compared to 42.6% of those who are poor and 38.2% of the non- poor. Within those groups, poor women are the most disadvantaged.

4.3.5. Vocational training

With regard to levels of occupational apprenticeship, a clear difference can be seen in favour of men (9.12% compared to 5.79% for women), although there is no discernible difference among expenditure groups. Kigali stands out with a rate of 24.43%, which may indicate a clear correlation between the urban environment and occupational development schemes.

With regard to short-term training, men are at an advantage compared to women (7.28% compared to 2.60%), although the overall mean rate is very low (4.65%). A positive correlation can also be seen with the level of well- being (9.31% for the wealthiest compared to
1.86% for the poorest)
The final conclusion is that a full primary education constitutes the minimum, taking account of the general conditions prevailing in the country, and that in the long term it will probably be important for basic education to include a secondary level.

However, the secondary level cannot be regarded as an integral part of basic education until significant progress has been made at primary level in terms of effective cover, in particular for those who are currently the most excluded, namely rural inhabitants in general, girls and poor populations.

4.3.6. School infrastructure in rural areas

Less than a third of the rural population state that they have a primary school in the *cellule* where they reside. That situation does not help to achieve the objective of school enrolment for everyone, in particular if one considers that the average distance to school in rural areas is 2.5km. In some provinces, such as Gikongoro and Kibuye, the situation is more serious, as shown by their cover rates of 13.8% and 15.1% respectively.

There is an urgent need to develop infrastructures in order to achieve the objective of primary education for all. In that context, rural populations stated that they had built an average of 12 classrooms in their *cellule* since 1994. The rural population in Ruhengeri and Kibungo, built 16 and 14 classrooms respectively during that period.

Conclusion

A general conclusion appears to be that more human resources is needed at all levels in order to contribute to the growth of the education system. When the level of education increases, the level of poverty decreases. A significant investment should be allocated to education, in particular in rural

areas, where most of the population lives and the lowest enrolment rate is recorded together with the highest dropout rate due to high costs, lack of interest and the need to provide family support.

Despite the considerable progress already achieved, much effort still has to be made by the Government in order to improve not only access to funding and infrastructures but also the quality of teaching and teachers. Particular attention should be given to providing schoolbooks. In addition, monitoring mechanisms should be put in place in order to ensure that pupils are not sent away because of the school fees or because the parents are keeping them back for domestic work.

Lastly, the high incidence of repetition should be dealt with quickly by improving pupils' training – a requirement itself linked to good teacher training.

CHAPTER V: HEALTH

The HLCS had a significant number of questions on the issue of health. This chapter presents the results, in particular in relation to the following points:

- the immunisation of children under 5 years old
- family planning
- medical consultations
- prenatal care
- immunisation with ATV of pregnant women
- breast-feeding
- nutritional awareness to protect against blindness
- fertility
- the results of the community questionnaire regarding health

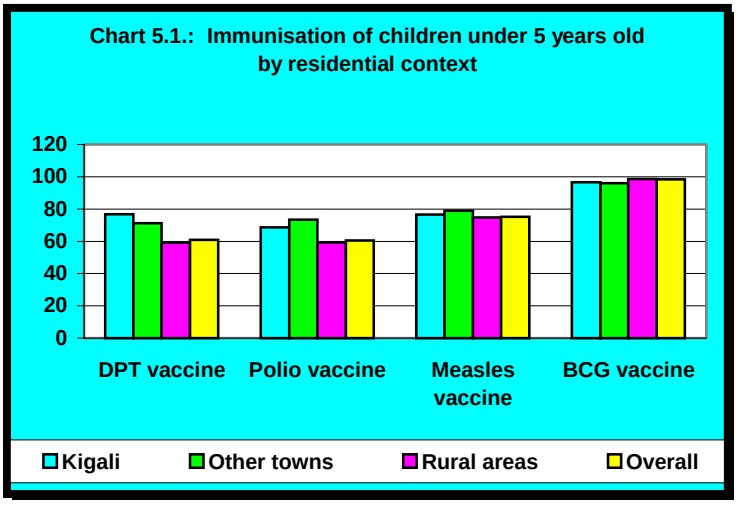
5.1. Immunisation of children under 5 years old

The World Health Organization (WHO), through the Expanded Programme on Immunisation (EPI), recommends the use of vaccines targeting six childhood illnesses. According to the EPI schedule, children must be given for their protection: the DPT vaccine (against diphtheria, pertussis [whooping cough] and tetanus) in three doses, and the vaccine against poliomyelitis, also in three doses but with an additional dose recommended at birth. The same schedule also provides for a single dose for the vaccines against measles and tuberculosis.

The data regarding the immunisation of children less than 5 years old relate to the information contained on the child's immunisation form.

5.1.1. Immunisation coverage by place of residence

Chart 5.1 shows that in the country as a whole, approximately 61% of children under 5 years old have been given the DPT vaccine.



It is apparent that the urban population responded better to the immunisation campaign than the rural population with 76.7% for Kigali, 71.3% for the other towns and 59.1% for rural areas; 35.1% of children did not receive the recommended dose of the vaccine, with the percentage being higher in rural areas (37.1%) than in urban areas (23.1% in the other towns and 17% in Kigali).

While the damaging effects of poliomyelitis are well-known, the survey results show that for the country as a whole, the immunisation coverage for that illness is approximately 61%. That rather unsatisfactory rate is the same as for the DPT vaccine because both are administered to the child at the same time. According

to place of residence, it can be seen that the "other towns" have the best coverage (73.4%), followed by Kigali (68.6%), and lastly the rural areas (59.3%). As for the DPT vaccine, 37.3% of children are found to have been given an incomplete dose. In addition, the incomplete dose rate is higher in rural areas (38.8%) than in urban areas (24%).

For the measles vaccine, the country as a whole has a coverage of 75.1%, while by place of residence, the other towns have the highest coverage with 79%, followed by Kigali (76.5%) and lastly by the rural areas (74.8%).

The BCG vaccine has the highest coverage of all vaccines. In effect, 95.7% of children under 5 years old have been immunised against tuberculosis, with the rural areas taking the lead with 96.2%, followed by Kigali in second place with 91.5% and lastly the other towns, with a cover rate of 89.3%.

5.1.2. Immunisation coverage by province

Table 5.01: Immunisation coverage for children under 5 years old by province

Province	DPT vaccine	Polio vaccine	Measles vaccine	BCG vaccine
Butare	59.7	59.4	79.8	99.2
Byumba	50.4	49.5	73.0	99.6
Cyangugu	70.3	71.1	76.6	98.7
Gikongoro	75.1	74.7	79.8	99.4
Gisenyi	69.9	71.2	79.0	96.6
Gitarama	64.7	63.1	80.6	99.3
Kibungo	55.0	55.4	71.2	99.6
Kibuye	60.5	62.7	75.4	97.8
Kigali Ngali	52.0	53.1	70.9	97.7
Kigali City	76.7	68.6	76.5	96.6
Ruhengeri	56.3	58.6	70.4	96.0
Umutara	34.1	31.4	61.2	99.5
Total	**60.8**	**60.5**	**75.1**	**98.3**

The immunisation cover rates according to province show that people's awareness must be raised in certain provinces, in particular in the province of Umutara, which has a low rate for the DPT, polio and measles vaccines. For each type of vaccine, the range of variation in coverage is as follows:

- DPT: from 34.1% (Umutara) to 76.7% (Kigali).
- Polio: from 31.4% (Umutara) to 74.7% (Gikongoro)
- Measles: from 75.1% (Umutara) to 80.6% (Gitarama)
- BCG: from 96.0% (Ruhengeri) to 99.6% (Byumba and Kibungo).

5.1.3. Immunisation coverage by level of poverty

Table 5.02: Immunisation coverage for children under 5 years old by level of poverty

Type of vaccine	Extreme poverty	Poor	Not poor	Total
DPT vaccine	60.1	59.4	62.1	**60.8**
Polio vaccine	60.2	59.1	61.4	**60.5**
Measles vaccine	74.3	74.4	76.0	**75.1**
BCG vaccine	97.9	99.0	98.3	**98.3**

From the above table, the level of poverty does not appear to have an effect on the immunisation of children. This is probably due to the fact that immunisation is free.

5.1.4. Reasons for failure to immunise

Table 5.03: Reasons for failure to immunise according to place of residence

Reasons for failure to immunise	Kigali City	Other towns	Rural areas	Total
Not informed		45.3	4	**4.2**
Absent			6.9	**6.7**
No medical centre			1.4	**1.4**
Centre too far away		33.7	11.6	**11.5**
Lack of money			3.6	**3.5**
Lack of vaccines			4	**3.9**
Not necessary	27.4		8	**8.4**
Other	72.6	21	60.5	**60.5**
Total	**100**	**100**	**100**	**100**

After undefined reasons (other) given in the case of more than three in five children, distance from the medical centre (11.5%) is the predominant reason, while 8.4% consider that it is not necessary to be immunised. According to place of residence, the reasons most often cited are: for Kigali, that it is not necessary (27.4%); for the other towns, the lack of information (45.3%); and for rural areas, the distance of the medical centre (11.6%).

Table 5.04: Reasons for failure to immunise according to level of poverty

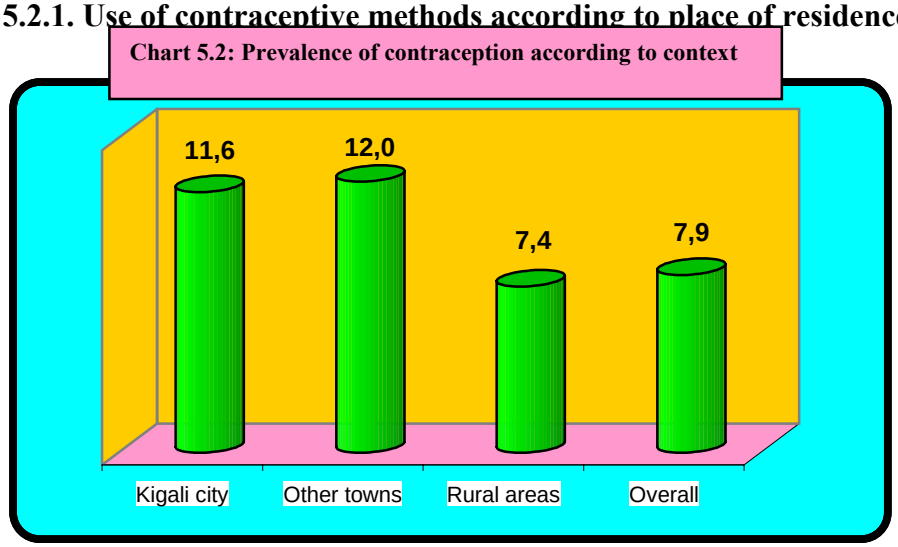
Reasons for failure to immunise	Extremely poor	Poor	Not poor	Total
Not informed	4.5	7.7	2.4	**4.2**
Absent	2	9.4	10.1	**6.7**
No medical centre	3.2		0.2	**1.4**
Centre too far away	8.1	4.6	17.5	**11.5**
Lack of money	6.4		2.1	**3.5**
Lack of vaccine	1.3	6	5.5	**3.9**
Not necessary	13.7	8.6	3.3	**8.4**
Other	60.8	63.7	59	**60.5**
Total	**100**	**100**	**100**	**100**

The opinion that vaccination is not necessary is more common among the poor, 13.7% and 8.6% for the extremely poor and the poor respectively. 11.5% of those who are not poor cite the distance of the immunisation centre. The child's absence at the time of the campaign led to a failure to immunise 9.4% and 10.1%, of children who are poor and non- poor respectively.

A lack of money, and therefore poverty, is no reason for the failure to immunise children, since immunisation is in fact free in public establishments and costs relatively little in private establishments.

5.2. Family planning

5.2.1. Use of contraceptive methods according to place of residence



The above chart illustrates that the prevalence of contraception is low: 11.6% in Kigali, 12% in the other towns and 7.4% in rural areas. This gives a mean rate of 7.9% of women using contraceptive methods in Rwanda.

Overall, as Table 5.05 shows, the three principal birth control methods used are abstinence (54.1%), periodic abstinence or rhythm method (12%) and contraception by injection (11.4%).

Abstinence is the non-modern method most used in the three place of residence, with the figures being higher in rural areas (58.5%) than in urban areas, namely Kigali (35.2%) and the other towns (28.5%). With regard to modern methods, those most used are the pills in Kigali (12.2%) and the injection in the other towns (12.3%) and rural areas (11.7%).

Table 5.05: Method of contraception according to place of residence

Method of contraception	Kigali City	Other towns	Rural	Total
Pill	12.2	8.8	4.4	**5.6**
Condom (precaution)	3.2	10.0	1.8	**2.4**
Intra-uterine device	4.8	2.6		**0.7**
Injection	8.9	12.3	11.7	**11.4**
Douche/jelly	1.1		0.4	**0.4**
Periodic abstinence	22.7	22.9	9.6	**12.0**
Withdrawal	6.5	8.5	4.6	**5.0**
Abstinence	35.2	28.5	58.5	**54.1**
Sterilisation	3.3		3.6	**3.4**
Traditional methods	1.3	2.6	4.1	**3.7**
Other methods	0.9	3.7	1.3	**1.4**
Total	**100.0**	**100.0**	**100.0**	**100.0**

5.2.2. Use of contraceptive method according to level of poverty

The survey results show that the rate of use of contraceptive methods is 10% for non- poor and 6.5% for the "poor" and the "extremely poor".

Table 5.06. Method of contraception by level of poverty

Method of contraception	Extremely poverty	Poor	Non poor	Total
Pill	4.7	8.2	5.4	**5.6**
Condom (precaution)	1.3	1.6	3.3	**2.4**
Intra-uterine device			1.4	**0.7**
Injection	10.0	9.6	12.7	**11.4**
Douche/jelly	0.9	0.9		**0.4**
Periodic abstinence	7.1	13.4	14.6	**12.0**
Withdrawal	3.8	4.7	5.9	**5.0**
Abstinence	62.9	52.4	48.9	**54.1**
Sterilisation	3.1	1.1	4.2	**3.4**
Traditional methods	3.4	6.4	3.1	**3.7**
Other methods	2.9	1.7	0.4	**1.4**
Total	**100.0**	**100.0**	**100.0**	**100.0**

Although abstinence is still the method most used regardless of the level of poverty, the percentage decreases as living standards improve: 62.9% for those who are "extremely poor", 52.4% for those who are "poor" and 48.9% for those who are "not poor". Of the modern methods, the most used is injection for all income groups, with the rate ranging from 9.6% (poor) to 12.7% (not poor). It will be observed that the rate of use of condoms though low, increases as living standards increase.

5.2.3. Reasons for non-use of contraceptive methods by place of residence

Table 5.07: Reasons for non-use of contraceptives by place residence

Reasons for non-use	Kigali City	Other towns	Rural areas	Total
Insufficient number of children	14.1	15.5	14.6	**14.6**
Religion	5.9	1.7	1.3	**1.7**
Refusal by spouse	0.2	1.2	0.8	**0.8**
Too expensive	0.2	0.2	0.2	**0.2**
Not informed	5.1	7.0	9.7	**9.2**
Afraid of secondary effects	4.1	2.3	1.6	**1.9**
Health	1.4	2.4	1.6	**1.6**
Currently pregnant/breastfeeding	1.9	4.7	6.8	**6.3**
Periods have not returned	1.7	0.5	1.3	**1.3**
Not married	46.7	48.7	42.1	**42.7**
Other (unspecified)	18.8	15.8	20.1	**19.9**
Total	**100.0**	**100.0**	**100.0**	**100.0**

Non-use of contraceptive methods is justified by various reasons. Table 5.07 shows the frequency rates by place of residence. At national level, of the 92 in 100 women who do not use contraceptive methods, almost 43% cite the fact that they are not married and almost 15% state that they do not yet have enough children. Those are the two main reasons for non-use of contraception in the three places of residenceand with the same proportions.
Unspecified reasons account for almost 20% at national level and between 15.8% and 20.1% in the various places of residence.

Reasons for non-use of contraceptive methods according to level of poverty

In Table 5.08, the survey data show that regardless of the level of poverty of the population concerned, the fact that a person is not married is the most advanced reason (41% to 44%) for non-use of contraceptive methods. With the exception of the poorest people, 12% of whom cite a lack of information on contraception as their second most important specified reason, the two other groups state that they do not yet have a sufficient number of children (15% for the poor and 19% for the not-poor). It may be that reasons for non-use should be sought in cultural or religious attitudes rather than in the level of poverty, since cost is rarely cited as an argument (0.2%).

Table 5.08: Reasons for non-use of contraception by level of poverty

Reasons for non-use	Extremely poor	Poor	Not poor	Total
Insufficient number of children	9.9	15.0	19.0	**14.6**
Religion	1.2	1.2	2.4	**1.7**
Refusal by spouse	0.8	0.9	0.7	**0.8**
Too expensive	0.1	0.3	0.2	**0.2**
Not informed	12.1	10.0	6.0	**9.2**
Afraid of secondary effects	1.7	1.6	2.1	**1.9**
Health	1.6	1.1	1.9	**1.6**
Currently pregnant/breastfeeding	6.1	6.7	6.4	**6.3**
Periods have not returned	1.1	1.5	1.4	**1.3**
Not married	43.8	41.4	42.1	**42.7**
Other (unspecified)	21.8	20.5	17.7	**19.9**
Total	**100.0**	**100.0**	**100.0**	**100.0**

5.3. Medical consultations

5.3.1. Distribution of patients according to the reason for medical consultation

5.3.1.1. Distribution of patients according to the reason for medical consultation and place of residence

The results shown in Table 5.09 indicate that the vast majority of patients in Rwanda have consulted a doctor for reasons of illness (82.1%), or for the purpose of a general examination (11.3%). The same reasons are given in the same order regardless of place of residence: (78% and 18.1% for Kigali, 74.5% and 21.6% for the other towns and 83% and 9.9% for rural areas).

Table 5.09. Distribution of patients by reason for medical consultation and by place of residence

Reason for consultation	Kigali City	Other towns	Rural areas	Total
General examination	18.1	21.6	9.9	**11.3**
Illness	78.0	74.5	83.0	**82.1**
Injury	1.2	2.3	2.8	**2.7**
Illness and injury	2.0	1.6	3.1	**2.9**
Pre-natal care	0.6		1.0	**0.9**
Post-natal care			0.1	**0.1**
Total	**100.0**	**100.0**	**100.0**	**100.0**

5.3.1.2. Distribution of patients according to the reason for medical consultation and the level of poverty

An analysis according to the level of poverty shows, (Table 5.10), that illness is still the main reason for medical consultation, with percentages ranging from 80% to 85%. General examinations also take second place, with percentages ranging from 8% to 13%. Note that the poor consult a doctor more often for reasons of illness, while the non- poor consult more often for general examinations.

Table 5.10: Distribution of patients by reason for medical consultation and by level of poverty

Reasons for consultation	Extremely poverty	Poor	Not poor	Total
General examination	8.2	12.3	12.8	**11.3**
Illness	84.7	84.6	79.8	**82.1**
Injury	3.1	1.3	2.9	**2.7**
Illness and injury	3.3	1.9	3.1	**2.9**
Pre-natal care	0.7		1.3	**0.9**
Post-natal care			0.1	**0.1**
Total	**100.0**	**100.0**	**100.0**	**100.0**

5.3.2. Medical consultations according to personnel consulted

5.3.2.1. Medical consultations according to personnel consulted and place of residence

Total, Table 5.11 shows that the personnel most frequently consulted are, in order of importance: nurses (53.9%), doctors (23.2%) and healers (17.4%). Doctors are most often consulted in Kigali (58.2%), while nurses receive more patients in the other towns (48%) and rural areas (56.4%). In all cases, doctors and nurses take turns to examine patients. It is important to point out that, naturally, the services of a healer are more often requested in rural areas (19.9%) than in the towns (5.1% in the other towns and 2.3% in Kigali City).

Table 5.11: Medical consultations by personnel consulted and by place of residence

Type of personnel	Kigali City	Other towns	Rural areas	Total
Doctor	58.2	45.0	17.9	**23.2**
Nurse	35.9	48.0	56.4	**53.9**
Pharmacist	2.8	1.5	4.4	**4.1**
Midwife		0.4	0.2	**0.2**
Health aide			0.7	**0.6**
Conventional midwife			0.2	**0.1**
Healer	2.3	5.1	19.9	**17.4**
Other	0.7		0.3	**0.4**
Total	**100.0**	**100.0**	**100.0**	**100.0**

The figures in Table 5.12 show that regardless of the level of poverty, the majority of the population consults nurses, with percentages ranging from 52% to 58%. Doctors are next in order of preference the not-poor (30.9%), and healers for the poor (25.3% for the extreme poverty and 20.8% the "poor"). It should be emphasised that even those who are "not poor" consult healers in 11.7% of cases.

Table 5.12: Medical consultations by personnel consulted and by level of poverty

Type of personnel	Extremely poor	Poor	Not poor	Total
Doctor	13.7	16.9	30.9	**23.2**
Nurse	55.3	57.7	51.8	**53.9**
Pharmacist	4.4	3.4	4.3	**4.1**
Midwife			0.3	**0.2**
Health aide	0.6	0.6	0.6	**0.6**
Conventional midwife	0.2		0.1	**0.1**
Healer	25.3	20.8	11.7	**17.4**
Other	0.4	0.5	0.3	**0.4**
Total	**100.0**	**100.0**	**100.0**	**100.0**

5.3.3. Distribution of patients according to place of consultation

5.3.3.1. Distribution of patients according to place of consultation and place of residence

According to table 5.13 the three most frequent places of consultation for the country as a whole are, in order of importance, health centres (30.8%), day/health care centres (dispensary) (24.8%) and hospitals (15.1%). In rural areas, that order is almost observed, in the same proportions. However, urban areas have percentages far lower than the national average for health centres and far higher than the average for dispensary and hospitals. It should be pointed out that private clinics are visited by 16.9% of the population in Kigali.

Table 5.13: Distribution of patients by place of consultation and by place of residence

Place of consultation	Kigali City	Other towns	Rural areas	Total
Consultant's premises	5.3	5.1	10.7	**9.9**
Patient's home	0.7	0.6	3.0	**2.7**
Hospital	22.2	34.5	13.3	**15.1**
Pharmacy	3.2	4.5	5.8	**5.5**
Private clinic	16.9	7.5	0.7	**2.6**
Health/day care centre (dispensary)	37.5	30.6	23.0	**24.8**
Maternity hospital	0.6		0.6	**0.6**
Health centre	10.2	11.1	34.3	**30.8**
Other	3.5	6.1	8.7	**8.0**
Total	**100.0**	**100.0**	**100.0**	**100.0**

5.3.3.2. Distribution of patients according to place of consultation and level of poverty

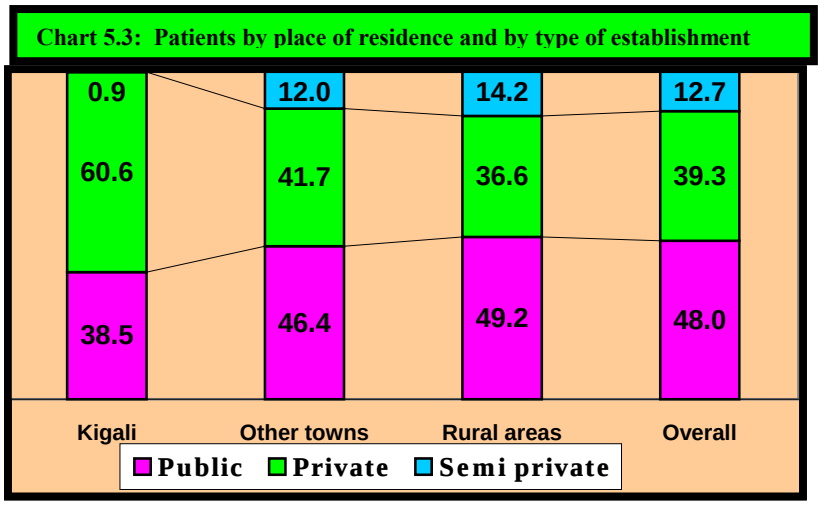
The order of most-frequented places for the country as a whole, that is, health centres, dispensary and hospitals, is observed in the case of the poor (34.2%, 24.3% and 11.5%) and not-poor (28.6%, 26.2% and 18.9%). For the extremely poor, the order is not observed with regard to the third choice: health centre (32.7%), dispensary (22.6%) and consultant's address (12.9%).

Table 5.14: Distribution of patients according to the place of consultation and poveryty level

Place of consultation	Extremely poor	Poor	Not poor	Total
Consultant's premises	12.9	10.7	7.8	**9.9**
Patient's home	3.9	2.9	1.9	**2.7**
Hospital	10.8	11.5	18.9	**15.1**
Pharmacy	5.8	5.0	5.5	**5.5**
Private clinic		0.7	4.8	**2.6**
***Health/day care centre* (dispensary)**	22.6	24.3	26.2	**24.8**
Maternity hospital	0.6	0.6	0.6	**0.6**
Health centre	32.7	34.2	28.6	**30.8**
Other	10.8	10.2	5.7	**8.0**
Total	**100.0**	**100.0**	**100.0**	**100.0**

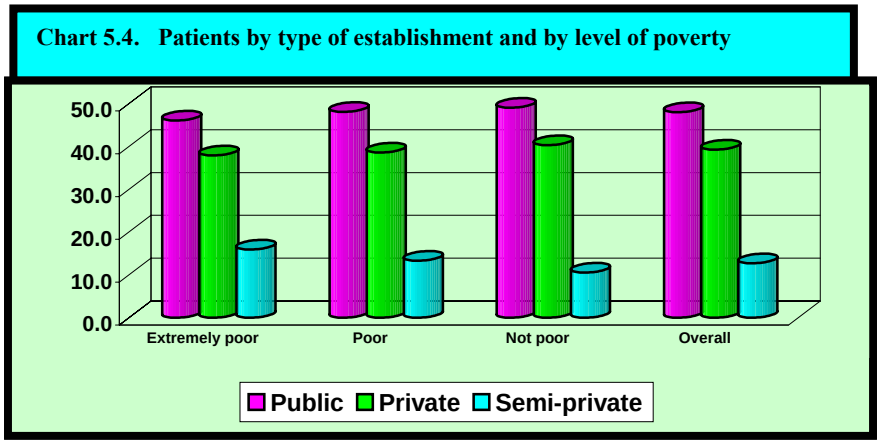
5.3.4. Distribution of patients according to the type of consultation establishment

5.3.4.1. Distribution of patients according to type of establishment and place of residence



It can be seen from the adjacent graph that patients in Rwanda attended consultations in public establishments in 48% of cases, in private establishments in 39.3% of cases and in semi-private establishments in 12.7% of cases. Almost 61% of patients in Kigali attended private establishments, compared to 39% for public establishments. In contrast, in the other towns and in rural areas, the majority of patients attend public establishments (46% and 49% respectively) more often than private establishments (42% and 37% respectively). In general, semi-private establishments are the least often attended.

5.3.4.2. Distribution of patients according to type of establishment and level of poverty



The majority of Rwandese, regardless of the level of poverty, attended public establishments, with the percentage ranging from 46% to 49%across income groups while Private establishments come next, with a percentage ranging from 38% to 40%.

5.4. Pre-natal care

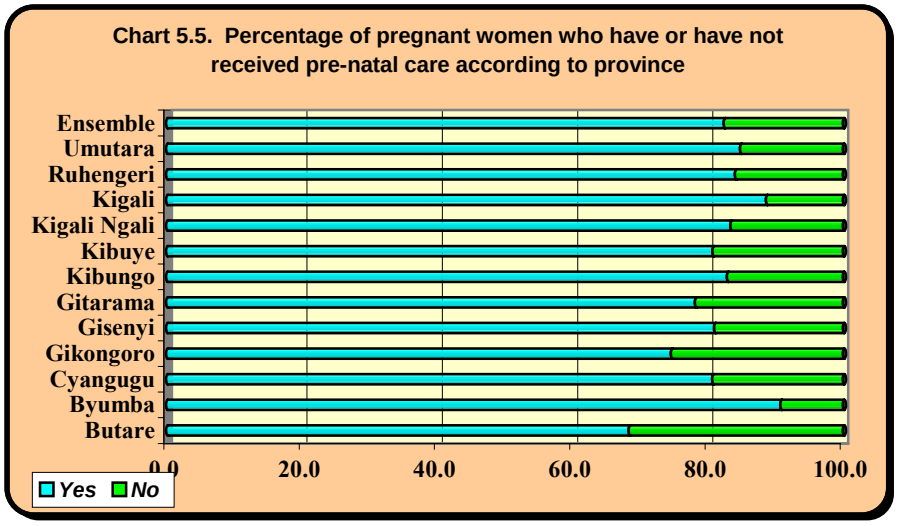
Pre-natal care for pregnant women is a means of alleviating the various dangers present for the mother and child during pregnancy and childbirth.

5.4.1. Proportion of pregnant women receiving pre-natal care according to place of residence and province

Table 5.15. Proportion of women who have or have not received pre-natal care

Place of reisdence	Yes	No	Total
Kigali City	88.7	11.3	**100.0**
Other towns	92.2	7.8	**100.0**
Rural areas	81.8	18.2	**100.0**
Total	**82.4**	**17.6**	**100.0**

This table shows that the recommendation that pregnant women should avoid themselves with pre-natal care was followed in 82.4% of cases in the country as a whole and that urban areas responded more than rural areas (92.2% in the other towns, 88.7% in Kigali and 81.8% in rural areas).



By province, the percentage of those who responded to this appeal ranges from 68% (Butare) to 91% (Byumba), as the adjacent graph shows.

5.4.2. Proportion of pregnant women receiving pre-natal care by quintile level

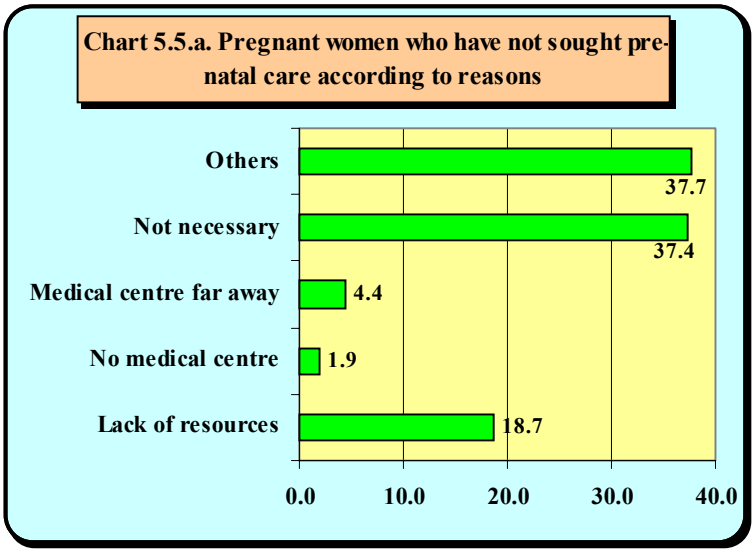
The table below indicates that there is a correlation between the standard of living and the propensity to seek pre-natal care, except for the middle class. The reason may be that in rural areas, where the vast majority of the poor live, pre-natal care is virtually free, while in urban areas (and Kigali in particular), which are assumed to be the place of residence of the middle class, the costs are relatively high and thus deter women in that category.

Table 5.16: Proportion of women having received pre-natal care according to expenditure quintile

Expenditure quintiles	Yes	No	Total
1st quintile	80.8	19.2	**100.0**
2nd quintile	82.0	18.0	**100.0**
3rd quintile	77.0	23.0	**100.0**
4th quintile	83.9	16.1	**100.0**
5th quintile	86.9	13.1	**100.0**
Total	**82.4**	**17.6**	**100.0**

5.4.3. Proportion of pregnant women who have not sought pre-natal care according to the reason, place of residence and province

The main reasons advanced by women who have not received pre-natal care are: lack of resources, absence of a health centre, distance of the health centre, not necessary and other unspecified reasons.



The chart shows that, of all the reasons stated, the highest percentage is associated with the belief that pre-natal care is not necessary (37%), followed by lack of resources (19%). Moreover, if we look at place of residence, the belief that pre-natal care is not necessary is the main reason cited in all places of residence: 58% in Kigali, 10% in the other towns and 37% in rural areas.

By province, lack of resources was cited as the reason, more so in Butare (36%), Cyangugu (30%) and Gitarama (28%). The absence of a health centre is the reason in 10% of cases in Umutara and Byumba provinces, where the existing health centres are too far from the population, (17% and 22% respectively). The belief that pre-natal care is not necessary is the main reason in the provinces of Gikongoro (53%), Gitarama (52%) and Cyangugu (51%).

5.4.4. Proportion of pregnant women who have not sought pre-natal care according to the reason and by the level of poverty

Table 5.17. Proportion of pregnant women who have not sought pre-natal care by the reason and by level of poverty

Reason for not seeking pre-natal care	Extremely poor	Poor	Not poor	Total
Lack of resources	35.3	13.0	8.3	18.7
No medical centre	1.6	3.8	0.7	1.9
Medical centre far away	5.1	4.5	3.8	4.4
Not necessary	33.4	38.7	39.8	37.4
Other	24.6	40.0	47.4	37.7
Total	100.0	100.0	100.0	100.0

Lack of resources is also regarded as the main reason for not seeking pre-natal care in “extremely poor” households (35%), with the belief that care is not necessary being the main reason for the two other groups (poor and not-poor) (39%). The absence or distance of medical centres is cited relatively more often by the poor.

5.4.5. Proportion of women receiving pre-natal care according to the place of care delivery and the place of residence

Table 5.18. Proportion of women receiving pre-natal care by place of consultation and the place of residence

Place of pre-natal care delivery	Kigali City	Other towns	Rural areas	Total
Hospital/maternity hospital	30.3	50.7	27.9	**28.6**
Private clinic	22.3	6.0	4.0	**5.3**
MIH/Dispensary	44.3	41.7	67.5	**65.3**
Healer			0.2	**0.1**
Other	3.0	1.5	0.4	**0.6**
Total	**100.0**	**100.0**	**100.0**	**100.0**

MIH: Maternal and Infant Health

The majority of women receive care from the MIH/dispensary (65%) and hospital/maternity (29%). In rural areas and in Kigali, women visit the MIH/dispensary more often (68% and 44% respectively), while in the other towns 51% of women receive care at the hospital/maternity.

5.4.5. Proportion of women receiving pre-natal care according to the place of care delivery and the level of poverty

Table 5.19. Proportion of women receiving pre-natal care by place of consultation and by level of poverty

Place of pre-natal care delivery	Extremely poor	Poor	Not poor	Total
Hospital/maternity hospital	28.0	25.2	30.3	**28.6**
Private clinic	3.0	4.0	7.2	**5.3**
MIH/Dispensary	68.6	70.5	61.4	**65.3**
Healer	0.4			**0.1**
Other		0.3	1.1	**0.6**
Total	**100.0**	**100.0**	**100.0**	**100.0**

Table 5.19 shows that the level of poverty has no impact on the choice of place of consultation regardless of the level of poverty Most women visited the MIH/dispensary (over 60%), followed by the hospital/maternity (25-30%) poverty.

5.5. Immunisation with the Anti-Tetanus Vaccine (ATV) of pregnant women

WHO recommends that pregnant women be immunised with the Anti-Tetanus Vaccine (ATV) to protect mother and child during childbirth. The relevant data were collected from mothers of infants aged 0-11 months, on the one hand, and from mothers of children aged 12-59 months, on the other hand.

5.5.1. Immunisation with the ATV of mothers of infants aged 0-11 months

5.5.1.1. Immunisation with the ATV of mothers of infants aged 0-11 months according to place of residence and province

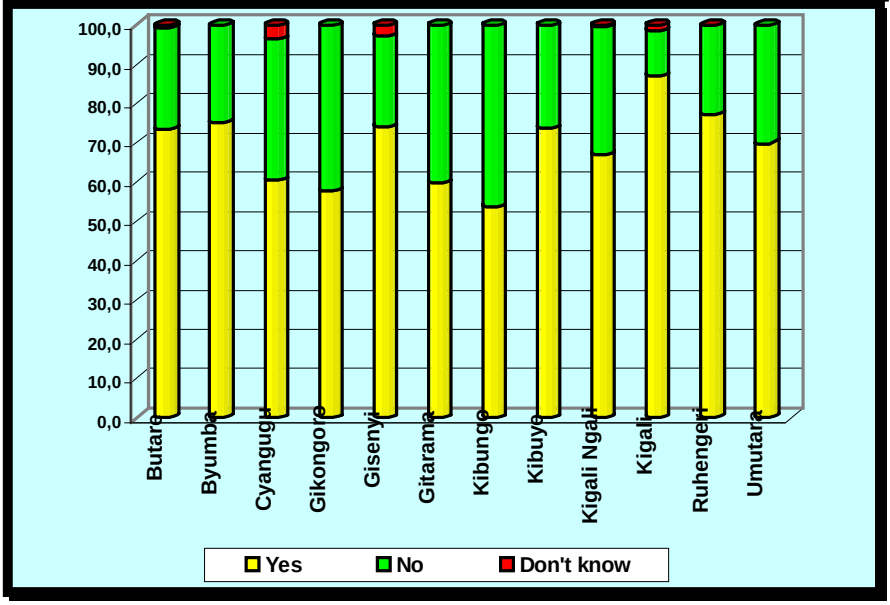
Table 5.20: Anti-tetanus vaccines for mothers of infants aged 0-11 months by place of residence

place of residence	Yes	No	Don't know	Total
Kigali City	87.0	11.6	1.4	**100.0**
Other towns	70.0	26.8	3.3	**100.0**
Rural areas	69.0	30.5	0.5	**100.0**
Total	**70.2**	**29.2**	**0.6**	**100.0**

The proportion of mothers of infants aged 0-11 months who were given the ATV during their last pregnancy is 70%. By place of residence, it can be seen that pregnant women responded better to the recommendation in urban areas (87% in Kigali and 70% in the other towns) than in rural areas (69%).

At provincial level, the rate of ATV coverage ranges from 53.9% to 87%. As can be seen from the graph below, the rate is higher than 75% in Kigali (87%) and in the provinces of Ruhengeri (77.2%) and Byumba (75.1%) and below 60% in the provinces of Kibungo (53.9%), Gikongoro (57.8%) and Gitarama (59.8%).

Chart 5.06. Anti-tetanus vaccines for mothers of infants aged 0-11 months by place of residence



5.5.1.2. Immunisation with ATV of mothers of infants aged 0-11 months according to expenditure quintiles

Table 5.21: Immunisation with ATV of mothers of infants aged 0-11 months by expenditure quintiles

Quintiles of expenditures	Yes	No	Don't know	Total
1st quintile	55.6	43.7	0.6	**100.0**
2nd quintile	67.9	32.1		**100.0**
3rd quintile	71.0	28.9	0.1	**100.0**
4th quintile	70.8	27.5	1.6	**100.0**
5th quintile	80.9	18.5	0.6	**100.0**

The level of poverty influences the rate of cover of the ATV in mothers of infants aged 0-11 months. In general terms, the proportion of pregnant women immunised with the ATV increases in line with household living standards.

5.5.2. Immunisation with the ATV of mothers of children aged 12-59 months

5.5.2.1. Immunisation with the ATV of mothers of children aged 12-59 months according to place of residenceand province

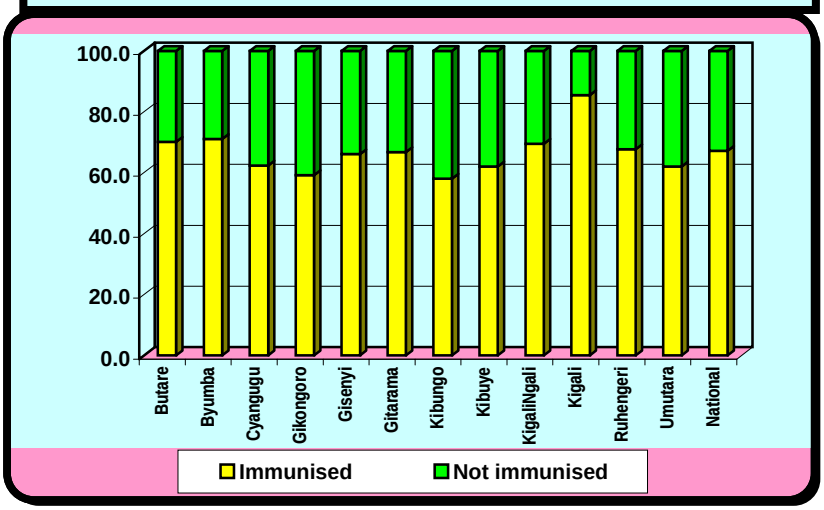
Table 5.22: Anti-tetanus vaccine for mothers of children aged 12-59 months by place of residence

place of residence	Yes	No	Total
Kigali City	85.5	14.5	**100.0**
Other towns	74.6	25.4	**100.0**
Rural areas	65.4	34.6	**100.0**
Total	**67.2**	**32.8**	**100.0**

Over 67% of mothers of children aged 12-59 months state that they have been given the ATV and within that group, mothers living in urban areas were the main beneficiaries: 86%, 75% and 65% respectively for Kigali, the other towns and rural areas.

At provincial level, the cover rate ranges from 58% to 86%. The highest rates are observed in Kigali (86%), Byumba (71%) and Butare (70%). The lowest rates are found in Kibungo (58%) and Kibuye (62%).

Chart 5.7: Anti-tetanus vaccine for mothers of children aged 12-59 months by province



5.5.2.2. Immunisation with the ATV of mothers of children aged 12-59 months

As was observed earlier for mothers of children aged 0-11 months, the proportion of mothers of children aged 12-59 months who have been given the ATV increases in line with living standards: 60% for the poorest, 65% for the less poor and 75% for those who are non- poor.

Table 5.23: Anti-tetanus vaccines for mothers of children aged 12-59 months by level of poverty

Level of poverty	Yes	No	Total
Extremely poor	60.1	39.9	100.0
Poor	65.4	34.6	100.0
Not poor	75.3	24.7	100.0

It is important to point out that, for the ATV one cannot conclude that the fact that a mother (and children) reported non receiving it means she was unprotected. A woman who has been given the ATV two to five times is protected (with her child) during childbirth for a period of 1 to 10 years, as the case may be.

5.6. Breastfeeding

5.6.1. Breastfeeding according to place of residenceand province

Almost all infants (98.9%) are breastfed, with the percentage being higher in rural areas (99%) than in urban areas (97%).

Table 5.24. Percentage of cases where children under 5 years are breastfed, according to place of residence

Place of residence	Yes	No	Total
Kigali City	97.3	2.7	**100.0**
Other towns	96.5	3.5	**100.0**
Rural areas	99.2	0.8	**100.0**
Total	**98.9**	**1.1**	**100.0**

The breastfeeding percentages by province range from a minimum of 97% (Kigali) to a maximum of 100% (Gikongoro). The relatively lower rate for Kigali is probably due to a minority of women who tend to substitute breastmilk with milk replacer feed.

With regard to weaning, the survey results give a mean of 6.21 months of exclusive breastfeeding. In the provinces, the duration of exclusive breastfeeding is shorter in Cyangugu (5.58 months), Kibungo (5.88 months) and Kibuye (5.93 months). The mean weaning age is higher in Byumba (6.75 months), Kigali Ngali (6.56 months) and Gisenyi (6.51 months).

As far as the total duration of breastfeeding is concerned, the mean is 22.56 months in Rwanda. In the provinces, it is shorter in Kigali (18.04 months), Umutara (21.24 months) and Ruhengeri (21.73 months), and longer in Gikongoro (25.05 months), Butare (24.61 months) and Gitarama (24.36 months). The mean final weaning age is higher for infants from poor households than for infants from not-poor households.

5.6.2. Reasons for not breastfeeding infants

Illness followed by mother's death (41% and 40% respectively) are the principal reasons why an infant is not breastfed. 12.3% of mothers do not wish to breastfeed their infants, with this attitude being more pronounced among women in urban areas (24% in Kigali and 35% in the other towns). The mother's death is the most palpable reason why infants are not breastfed in urban areas: 39.4% in Kigali and 59.1% in the other towns. In rural areas, maternal illness is the main reason (47.5%).

In the provinces, the two reasons are even more obvious: maternal illness is most often cited in Gikongoro (100%) and Kibuye (60%), while the mother's death is most often cited in Gisenyi (75%) and Ruhengeri (70%). The mother's preference is most often cited as a reason for not breastfeeding in Cyangugu (46%) and Ruhengeri (30%).

Table 5.25. Percentage of cases where children under 5 years are not breastfed, according to the reason and place of residence

Place of residence	Maternal illness	Maternal death	Mother's preference	Refusal by the child	Illness of the child	Total
Kigali City	36.6	39.4	24.0			**100.0**
Other towns		59.0	35.0	6.0		**100.0**
Rural areas	47.5	37.6	5.9	7.7	1.2	**100.0**
Total	**40.6**	**40.2**	**12.3**	**6.0**	**0.9**	**100.0**

5.6.3. Breastfeeding and level of poverty

With regard to the level of poverty, there is a slightly higher tendency to breastfeed among the poorest (99.5%) than among the poor (99.1%) and the not-poor (98.3%). The level of poverty does not appear to have an impact on the duration of breastfeeding, since the mean weaning age is 6.24 months, 6.33 months and 6.14 months respectively for the poorest, the poor and the not-poor.

Table 5.26. Breastfeeding of children under 5 years by level of poverty

Level of poverty	Cases of breast-feeding	Mean weaning age	Mean final weaning age
Extreme poverty	99.5%	6.24 months	24.44 months
Poor	99.1%	6.33 months	22.88 months
Not poor	98.3%	6.14 months	20.82 months
Total	**98.9%**	6.21 months	22.56 months

On the other hand, the results indicate that the poorer one is, the more inclined one is to prolong the period of breastfeeding; this finding is based on the fact that mothers who are not poor are better informed and therefore tend to lower the age at which they finally wean their children, namely 20.82 months, 22.88 months and 24.44 months respectively for the poor and the not-poor.

The mother's death is the principal reason why the majority of the poorest children (61%) and the poor children (50%) are not breastfed, while maternal illness is the main cause for those who are not poor (49%). Failure to breastfeed a child simply due to the mother's preference is less notable among the poor (7.2%) than the less poor (16.6%) and those who are not poor (12.6%). The relatively high proportion of the poorest children who refuse breastfeeding raises the question of whether, underlying that reason, there is an illness in the mother or the child.

Table 5.27. Proportion of cases where children under 5 years are not breastfed, by the reason and by level of poverty

Level of poverty	Maternal illness	Maternal death	Maternal preference	Refusal by the child	Illness in the child	Total
Extremely poor	16.9	61.2	7.2	14.6		**100.0**
Poor	33.5	49.9	16.6			**100.0**
Not poor	49.2	31.7	12.6	5.1	1.4	**100.0**
Total	**40.6**	**40.1**	**12.3**	**6.0**	**0.9**	**100.0**

5.7. Nutritional awareness to protect against blindness

In order to protect children from blindness caused by vitamin A deficiency, the Rwandan Ministry of Health recommends, on the basis of UNICEF and WHO directives, that infants aged 6-12 months should be given a capsule of 100,000 IU every 4 months, and children over one year a higher dose of 200,000 IU every 4 months. The consumption of foods with a natural vitamin A content is also recommended. The data studied were provided by women aged 12 to 49 years who have children with a maximum age of 2 years.

At national level, just over a third of all women (34.4%) know which foods are rich in vitamin A. By place of residence, there is greater awareness of such foods in urban areas (44.5% in Kigali, 42.8% in the other towns) than in rural areas (33.4%).

Table 5.28. Proportion of women aged 12 to 49 years who are aware of foods that protect against blindness, by place of residence

Place of residence	Yes	No	Don't know	Total
Kigali City	44.5	53.5	2.1	100.0
Other towns	42.8	54.1	3.0	100.0
Rural areas	33.4	64.6	2.1	100.0
Total	34.4	63.5	2.1	100.0

Of all the provinces, Kibungo residents, have the lowest level of awareness (15%) of foods containing vitamin A, while Butare has the highest level (58.1% of women).

Chart 5.8. Proportion of women aged 12 to 49 years who are aware of foods that protect against blindness, by province

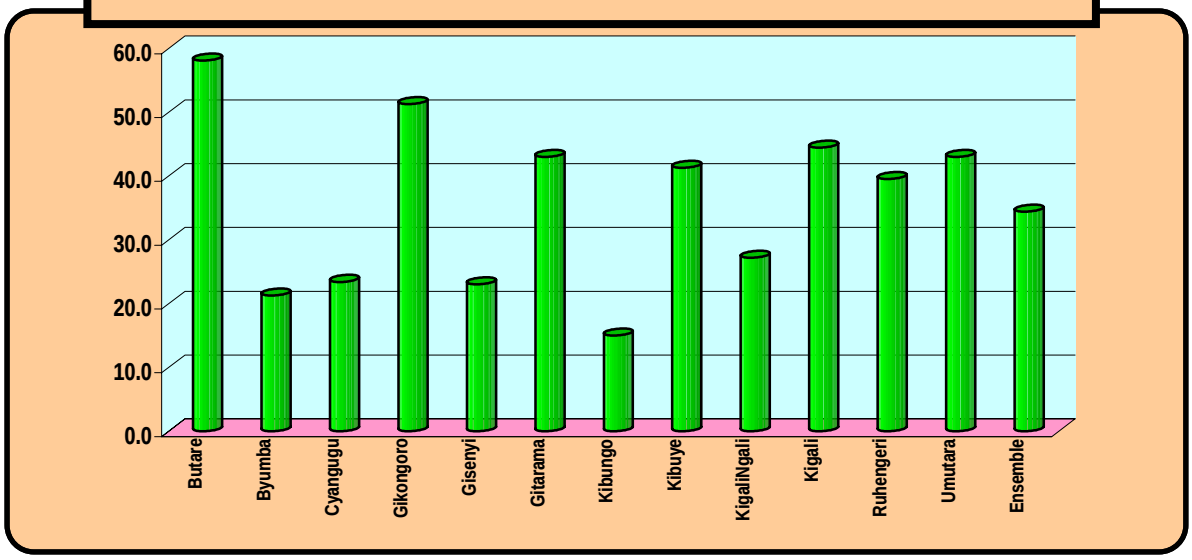


Table 5.29. Proportion of women aged 12 to 49 years who are aware of foods that protect against blindness, by expenditure quintile

Expenditure expenditure quintile	Yes	No	Don't know	Total
1st quintile	30.3	66.6	3.1	100.0
2nd quintile	30.8	67.5	1.7	100.0
3rd quintile	36.7	59.2	4.1	100.0
4th quintile	33.2	65.3	1.5	100.0
5th quintile	39.5	59.9	0.6	100.0
Total	34.4	63.5	2.1	100.0

With the exception of the middle class, which does not follow the overall trend, awareness of foods rich in vitamin A is very much dependent on living standards. In effect, the percentages range from 30.3% for the poorest to 39.5% for the less poor.

5.8. Fertility

5.8.1. Age of mother and mean number of pregnancies

Women have, on average, 4.8 pregnancies, although older women total an average of 8.1. It can be observed that women in rural areas have more pregnancies (5.0) than women in urban areas (4 in the other towns and 3.3 in Kigali). By age group, it can be seen that the mean number of pregnancies is 2

for the youngest women (under 15 years) and 8.2 for the oldest women (over 45 years) in rural areas. The figures for urban areas are lower: they range from 1.6 to 6.1 pregnancies in Kigali and from 1.8 to 7.6 pregnancies in the other towns.

Table 5.30: Age of mother by mean number of pregnancies and by place of residence

Place of residence	Less than 15 years	From 15 to less than 25 years	From 25 to less than 35 years	From 35 to less than 45 years	45 years and over	Total
Kigali City		1.6	2.8	4.8	6.1	**3.3**
Other towns		1.8	3.0	5.3	7.6	**4.0**
Rural areas	2.0	1.9	3.6	6.7	8.2	**5.0**
Total	**2.0**	**1.8**	**3.5**	**6.5**	**8.1**	**4.8**

In the provinces, the highest mean number of pregnancies is found in Cyangugu (5.4), Kibuye (5.1) and Ruhengeri (5.1). The lowest mean number of pregnancies is found in Kigali (3.3), and in the provinces of Butare (4.4) and Gitarama (4.8).

Table 5.31. Mean number of pregnancies according to expenditure quitile and level of poverty

	Mean number of pregnancies
Expenditure quintiles	
1st quintile	*5.9*
2nd quintile	*5.4*
3rd quintile	*4.9*
4th quintile	*4.3*
5th quintile	*3.7*
Level of poverty	
Extremely poor	*5.7*
Poor	*4.9*
Not poor	*4.0*

It can be observed from the results according to expenditure quintile shown in Table 5.31 that the poor have a higher number of pregnancies than the not-poor. In effect, the mean number of pregnancies decreases as one moves up in quintile: This situation is further confirmed by the mean number of pregnancies according to level of poverty. The mean figure is higher for the poorest (5.7) than for the less poor (4.9) and lower still for those who are not poor (4.0). Thus, one is inclined to conclude that poor women tend to conceive more than rich women.

Literacy, level of education, and even the abandonment of studies by women also have a noticeable impact on the number of pregnancies. In effect, there are:

- 5.6 pregnancies on average for women who do not know how to read or write, 5.4 pregnancies for those who know how to read only, and 4.2 pregnancies on average for those who know how to read and write;
- 5.9 pregnancies on average for women without any education, 4.4 pregnancies for those with a primary education, 4.2 pregnancies for those who have a post-primary education, 2.7 and 2.7 pregnancies on average for women who have a secondary and higher education respectively.
- 3.3 pregnancies on average for women who abandoned their studies, compared to 2.7 for women who did not abandon their studies.

5.8.2. Age of mother and mean number of live-born children

In Rwanda, a woman gives birth to an average of 4.4 children during her fertile life, as shown by table 5.32. One live birth is the average for women under 15 years, although such cases are found only in rural areas and in Kibungo province in households living in extreme poverty; while a total of

7.3 live births is the average for women over 45 years old. Women in rural areas have more births than women in urban areas: 3.8 births in the other towns and 3.2 in Kigali.

Table 5.32: Age of mother by mean number of live-born children and by place of residence

Place of residence	Less than 15 years	From 15 years to less than 25 years	From 25 years to less than 35 years	From 35 years to less than 45 years	45 years and over	Total
Kigali City		1.5	2.6	4.6	5.9	**3.2**
Other towns		1.8	2.8	5.0	7.2	**3.8**
Rural areas	1.0	1.7	3.3	6.2	7.4	**4.6**
Total	**1.0**	**1.7**	**3.2**	**6.0**	**7.3**	**4.4**

The figures by province show that the highest mean numbers of live births are found in the province of Cyangugu (5.0), Kibuye and Ruhengeri (both 4.7). The lowest mean numbers are found in Kigali (3.2) and in the provinces of Butare (4.0) and Gitarama (4.3).

Table 5.33: Age of mother by mean number of live-born children byexpenditure quintile and by level of poverty

	Less than 15 years	From 15 years to less than 25 years	From 25 years to less than 35 years	From 35 years to less than 45 years	45 years and over	*Total*
Quintiles of expenditures						
1st quintile	1.0	1.9	3.7	6.5	7.9	**5.5**
2nd quintile		1.7	3.5	6.3	7.4	**5.0**
3rd quintile		1.7	3.2	6.3	7.3	**4.5**
4th quintile		1.6	3.0	5.7	6.9	**3.9**
5th quintile		1.5	2.8	4.9	6.9	**3.4**
Level of poverty						
Extremely poor	1.0	1.8	3.6	6.4	7.6	**5.2**
Poor		1.7	3.1	6.3	7.4	**4.5**
Not poor		1.6	2.9	5.3	6.9	**3.6**
Total	**1.0**	**1.7**	**3.2**	**6.0**	**7.3**	**4.4**

The figures for the level of expenditure and the level of poverty of a household confirm the theory that the poor have more children than the not-poor. In effect, Table 5.33 clearly shows that the number of births decreases as one moves up in quintile, or the number of births decreases as the level of poverty improves.

5.9. Health environment in rural areas

At national level, almost 7% of individuals living in rural *cellules* stated that they had a health centre in their unit. At provincial level, this mean figure varies from 2.6% (Gitarama) to 11.3% (Cyangugu). Moreover, it should be emphasised that the few existing centres are very remote from the population that they serve. At national level, health centres are located at a mean distance of

5.9km from the population. At provincial level, that mean figure varies from 4.3km (Ruhengeri) to 8.4km (Gikongoro).

At national level, 52% of people stated that there was a traditional healer in their rural *cellules*, with the two ends of the scale being Umutara (17.9%) and Gisenyi (70.3%).

With regard to common illnesses, the most common in rural areas were malaria (95%), followed by amoebiasis in second place (35%) and diarrhoea in third place (25.7%).

CHAPTER VI: EMPLOYMENT

A job is one of an individual's most important assets, since it is a source of household income. A large amount of information was collected as part of the HLCS. In this report, we present some variables in respect of employment and a planned in-depth analysis of them will allow us to go into much greater detail.

6.1. Labour force according to occupational category

6.1.1 Labour force according to occupational category and gender

Table 6.1. Distribution of the Labour force according to gender and occupational category (%)

Occupational category	Male	Female	Total
Technical and similar professions	1.9	1.4	1.6
Managerial staff	0.1		0.0
Administrative staff and similar workers	0.8	0.5	0.6
Traders and salesmen	3.2	2.1	2.6
Specialised workers in the services	3.6	3.1	3.3
Agricultural and livestock farmers, forestry workers, fishermen and hunters	84.1	92.0	88.6
Labourers and unskilled worker in the non-agricultural sector, and plant operators	6.0	0.8	3.1
Other workers	0.3	0.1	0.2
Total	100.0	100.0	100.0

The labour force is predominantly made up of agricultural and livestock farmers (88.6%). Within that population, the percentage for women is 92% while the percentage for men is 84.1%. In second place come specialised workers in the services (3.3%). Only 3.6% of men and 3.1% of women are occupied in specialised work in the services.

The category of "technical and similar professions" represents 1.6% of the labour force. 1.9% of men and 1.4% of women fall into that occupational category. The population of labourers and unskilled workers represents 3.1% of the total labour force, with men being clearly more numerous: 6% of men but only 0.8% of women are labourers and unskilled workers.

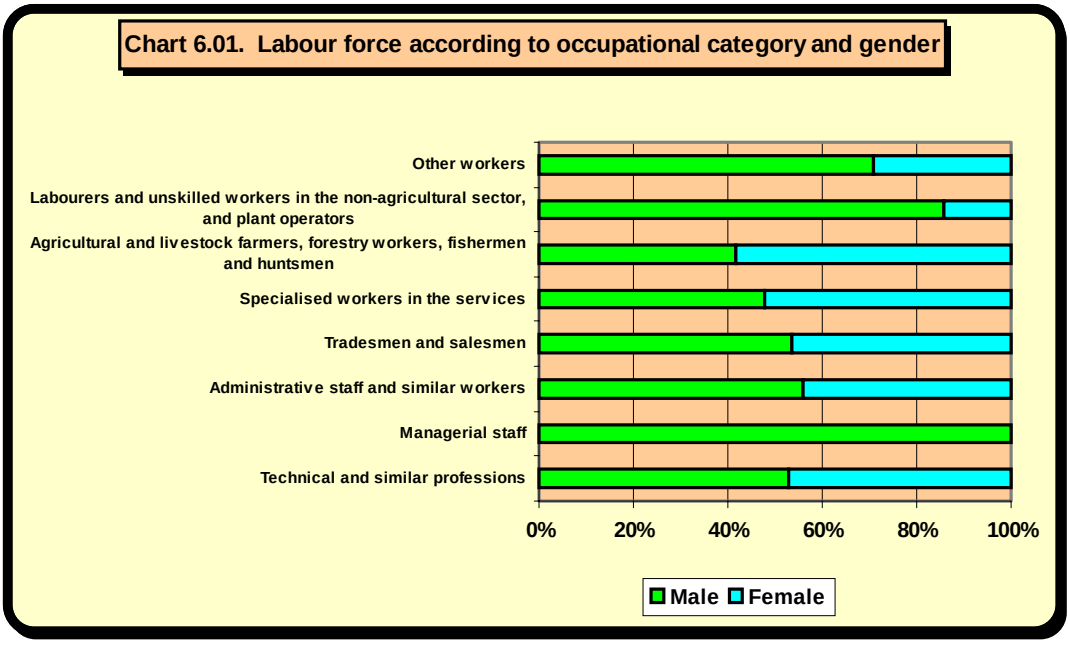


Chart 6.01 above shows that there are practically no women in the "managerial staff" category. Men, on the other hand, predominate in that category.

Moreover, women are again under-represented among labourers and unskilled workers (14.3%), while men are the majority, representing 85.7%. However, it is important to note that the proportion of working men is generally always higher than the proportion of working women in all occupational groups, except in the category of agricultural and livestock farmers and specialised workers in the services.

6.1.2. Labour force according to occupational category and level of education

Table 6.2. Distribution of the labour force according to occupational category and level of education

	Level of education						
Occupational category	**Primary**	**Post-primary**	**Secondary**	**Higher**	**Unknown**	**No education**	**Total**
Technical and similar professions	5.9	16.6	65.7	10.6		1.2	**100.0**
Managerial staff	5.6			94.4			**100.0**
Administrative staff and similar workers	19.7	12.0	48.7	19.5			**100.0**
Traders and salesmen	59.3	9.8	15.7	1.5		13.6	**100.0**
Specialised workers in the services	71.4	5.4	9.6	0.3		13.3	**100.0**
Agricultural and livestock farmers, forestry workers, fishermen and hunters	60.9	2.3	1.6		0.0	35.3	**100.0**
Labourers and unskilled workers in the non-agricultural sector, and plant operators	54.2	14.4	12.0	1.1	0.2	18.1	**100.0**
Other workers	66.9					33.1	**100.0**
Total	**59.8**	**3.2**	**3.9**	**0.4**	**0.0**	**32.6**	**100.0**

This structure shows the predominance of the primary-level educated population, with about 60% of the working population as a whole. Moreover, it should be noted that in the working population as a whole, the higher-level educated population represents only 0.4%.

However, the survey results show that the higher-level educated group is much better represented in the occupational category of managerial staff (approximately 95%) than in the working population as a whole, and that this group is virtually unrepresented in the category of agricultural and livestock farmers.

It should be noted that in the occupational category of agricultural and livestock farmers, the primary-level educated population is in the majority (approximately 61%), followed by the population with no education (35.3% of the overall working population).

Individuals with a secondary-level education are more numerous only in the occupational groups of technical and similar professionals (65.7%) and administrative staff and similar workers (48.7%).

6.1.3. Labour force according to occupational category and province

The table below shows that agricultural and livestock farmers represent approximately 89% of the working population as a whole, followed by specialised workers in the services (3.3%).

Table 6.3. Distribution of the labour force according to occupational category and province

Province	Technical and similar professions	Manag-erial staff.	Admin. Staff and similar workers	Traders and Salesmen	Specialised workers in the services	Agric. and livestock/ forestry/ fishermen/ huntsmen	Non-agric. labourers and unskilled workers, and plant operators	Other workers	Total
Butare	1.9	0.0	0.2	1.0	4.0	90.1	2.4	0.4	100.0
Byumba	2.2	0.2		1.3	1.1	93.7	1.6		100.0
Cyangugu	2.0		0.4	1.7	2.1	91.6	2.1		100.0
Gikongoro	1.3		0.3	0.9	1.7	92.5	3.3		100.0
Gisenyi	1.3	0.0	0.2	1.9	1.0	95.0	0.5	0.2	100.0
Gitarama	1.5		0.1	1.8	2.5	91.4	2.3	0.4	100.0
Kibungo	0.8		1.0	0.7	2.0	94.6	0.8	0.1	100.0
Kibuye	0.9		0.2	0.3	0.6	96.9	1.2		100.0
Kigali Ngali	0.6		0.3	1.5	1.4	94.5	1.4	0.2	100.0
Kigali City	6.1	0.2	6.1	22.1	29.7	10.4	25.0	0.5	100.0
Ruhengeri	1.2		0.5	2.6	1.2	92.2	2.2	0.0	100.0
Umutara	1.1		0.2	1.3	2.1	93.8	1.5		100.0
Total	**1.6**	**0.0**	**0.6**	**2.6**	**3.3**	**88.6**	**3.1**	**0.2**	**100.0**

This discrepancy is clearly significant and shows that the agricultural/livestock sector accounts for a sizeable population in Rwanda. The number of managerial staff is negligible in the context of the working population as a whole. Analysis of the above table reveals that in almost all provinces in Rwanda, the agricultural/livestock sector accounts for more than 90% of the working population, with the exception of Kigali, where individuals working in that sector represent approximately 10%.

In the whole of the working population in Kigali, the occupational category of specialised workers in the services accounts for the highest percentage (29.7%), followed by labourers/unskilled workers and plant operators (25%) and traders and hawkers(22.1%).

6.2. Labour force according to activity branch

6.2.1. Labour force according to gender and activity branch

Table 6.4. Distribution of the labour force according to gender and by activity branch

Type of activity	Male	Female	Total
Agriculture/livestock/forestry/fishing/hunting	84.2	92.1	88.6
Extractive industries	0.3	0.1	0.2
Manufacturing industries	1.5	0.2	0.8
Electricity, water and gas	0.2	0.0	0.1
Buildings and public works	1.5	0.1	0.7
Trade, hotels et restaurants	3.3	2.4	2.8
Transport, storage et communications	1.5	0.0	0.7
Banking, insurance and property	0.6	0.2	0.4
Services to the community	6.6	4.7	5.6
Unspecified activities	0.2	0.1	0.1
Total	**43.8**	**56.2**	**100.0**

This structure shows the predominance of the population working in the "agriculture, livestock and fishing" sector, with over 88% of productive employment. The "collective services" sector occupies second place, with 5.6%.

It should be noted that the number of individuals working in the

"manufacturing industries" sector is relatively small (0.8% of productive employment), whereas according to the conventional understanding of development , these are supposed to be the "engine" of development. The above table shows that the vast majority of the female working population (just over 92%) is in the "agricultural and livestock farming and fishing" sector..

With regard to the male population, approximately 84% work in that sector. Taking the working population as a whole, there are more working women than men, with the percentages being 56.2% and 43.8% respectively.

With the exception of the "agricultural and livestock farming and fishing", "collective services" and "trade, hotels and restaurants" the number of working women is practically zero in the other sectors

6.3. Labour force according to socio-economic group

Table 6.5. Distribution of the labour force according to socio-economic group and province

Province	Socio-economic group					
	Formal sector employees	Informal sector employees	Urban self-employed	Rural self-employed	Domestic helps and apprentices	Total
Butare	3.3	6.4	1.5	62.3	26.5	100.0
Byumba	3.9	6.0	0.8	34.7	54.6	100.0
Cyangugu	3.6	5.9	0.8	56.6	33.0	100.0
Gikongoro	2.7	8.0	0.4	34.9	54.0	100.0
Gisenyi	1.9	2.8	1.3	90.6	3.5	100.0
Gitarama	2.7	3.4	1.1	49.8	42.9	100.0
Kibungo	2.3	3.2	1.5	42.2	50.7	100.0
Kibuye	1.7	2.0	1.5	53.8	40.8	100.0
Kigali Ngali	2.0	3.8	0.8	45.5	47.9	100.0
Kigali City	25.4	35.2	33.0		6.4	100.0
Ruhengeri	3.3	11.7	1.3	38.6	45.1	100.0
Umutara	2.4	4.2	1.2	43.2	49.0	100.0
Total	**4.0**	**7.0**	**2.9**	**47.6**	**38.5**	**100.0**

In almost all provinces, the ruralself-employed group, the domestic helps and apprentices group are in a clear majority in relation to the other socio-economic groups within the working population as a whole.

Thus, within the working population as a whole, "rural self-employed" people are the most numerous (47.6%) followed by "home helps and apprentices" (38.5%). Those employed in the formal and informal sectors represent 4% and 7% respectively. The informal sector is much larger in Kigali than anywhere else in the country.

The majority of the working population in Kigali is employed in the informal sector, followed by the "urban self-employed" group, representing 35.2% and 33% respectively.

6.4. Labour force according to status

Table 6.6. Distribution of the labour force according to employment status, by occupational category

Occupational category	Salaried workers	Employer	Self-employed	Domestic help	Apprentice/trainee	Total
Technical and similar professions	13.6	1.8	0.2	0.0		1.6
Managerial staff	0.3		0.0			0.0
Administrative staff and similar workers	5.7			0.0		0.6
Traders and Salesmen	3.3	7.5	4.2	0.3		2.6
Specialised workers in the services	25.0	3.8	0.4	0.9	2.9	3.3
Agricultural and livestock farming/ forestry./fishing/hunting	33.4	67.2	93.4	98.4	95.8	88.6
Labourers and unskilled workers in the non-agricultural sector, and plant operators	18.2	19.7	1.7	0.3	1.3	3.1
Other workers	0.5		0.2	0.0		0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Taking “employees” as a whole, it can be seen that the occupational category of “agricultural and livestock farmers” is the largest in numerical terms, followed by the category of “specialised workers in the services”, with the percentages being 33.4% and 25% respectively. Among “employees” as a whole, “managerial staff” represent only 0.3%.

The table above shows that the occupational category of “agricultural and livestock farmers, foresters, fishermen and hunters” has the majority of the working population compared to other occupations (88.6%). Within the “employers” group, “agricultural and livestock farmers, etc” occupy only 67.2%, while 93.4% of the “self-employed” group are “agricultural and livestock farmers, etc”.

6.5. Abandonment of main occupation according to reasons

Table 6.7. Distribution of the population by reason for abandonment of main occupation

Reason for abandonment	**Main occupation**								
	Techn. and similar prof.	Manag-erial staff.	Admin. Staff and similar	Trades-men and salesmen.	Spec. workers in the services	Agric./ Livest./ Forest./ Fish./ Hunt.	Labourers and unskilled workers non-agric. sector, and plant operators	Other workers	**Total**
Illness			8.6	1.3	18.9	47.8	13.7		**24.9**
Redundant	52.5		42.6	1.4	5.6	0.6	9.2		**6.9**
Work completed				11.1	14.8	1.0	18.3	71.2	**9.4**
Seasonal work				5.6	2.7	3.0	15.7		**6.2**
Company closed				3.1			3.5		**1.3**
Found or preferred other work	15.8				14.5	30.3	15.3	28.8	**17.8**
Availability/retirement									**0.8**
Low income			26.5	47.4	17.8	5.3	13.9		**15.2**
Other	31.8	100.0	22.3	30.2	25.7	11.9	10.3		**17.5**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**

Of all the reasons cited for abandonment of the main occupation, “illness” is the principal reason for all the individuals surveyed, with second place being taken by those who have found or prefer other work.

Almost all "managerial staff" leave their main occupation for reasons not identified by the survey. However, it should be observed that, according to the survey results, over 50% of those in "technical and similar professions" leave their work after being made redundant and that that is the only occupational category where individuals leave their work for reasons of unavailability or retirement.

6.6. Population out of work

6.6.1. Population out of work for 12 months according to level of education and place of residence

The table below shows that individuals with a primary-level education account for 75% of all those who are out of work. Individuals with no education hold second place, accounting for 14.6% of all those who are out of work.

Table 6.8. Distribution of individuals who have been out of work for more than 12 months by level of education and place of residence

Level of education	Kigali City	Other towns	Rural areas	Total
Primary	59.7	66.0	77.6	75.2
Post-primary	3.2	1.7	0.5	0.8
Secondary	24.0	20.2	6.3	8.8
Higher	3.6	1.3	0.2	0.6
No education	9.5	10.9	15.4	14.6
Total	100.0	100.0	100.0	100.0

It should be pointed out that in the category of individuals with a secondary education, approximately 9% are out of work. This significant percentage of individuals with a secondary education who are out of work shows how many young secondary school leavers there are who are either unemployed or seeking their first job.

However, there is a very small percentage of individuals with a higher education (0.6%) who are out of work. If one looks at this situation according to place of residence, it emerges that individuals with a primary education again account for the majority of those without an occupation. On the other hand, there is a considerable number of people at secondary level out of work in urban areas, accounting for 24% and 20% respectively in Kigali and in other towns.

This high proportion of individuals who have a secondary education but are out of work in urban areas is a result of the concentration and diversity of jobs in urban areas and the fact that secondary school leavers who are unemployed or seeking employment prefer urban centres, where they can find work. In contrast to urban areas, individuals with a secondary education who are out of work in rural areas hold third place after those who have no education.

6.6.2. Population out of work according to level of education and place of residence

Table 6.9. Distribution of the population out of work according to genderand level of education and by place of residence.

	Level of education	Male	Female	Total
Kigali City	Primary	62.8	57.6	59.7
	Post-primary	2.3	3.8	3.2
	Secondary	24.6	23.5	24.0
	Higher	2.4	4.4	3.6
	No education	7.9	10.6	9.5
	Total	**100.0**	**100.0**	**100.0**
Other towns	Primary	68.9	63.6	66.0
	Post-primary	3.1	0.5	1.7
	Secondary	17.0	22.7	20.2
	Higher	2.2	0.6	1.3
	No education	8.8	12.6	10.9
	Total	**100.0**	**100.0**	**100.0**
Rural areas	Primary	78.3	76.9	77.6
	Post-primary	0.6	0.3	0.5
	Secondary	5.9	6.8	6.3
	Higher	0.3	0.0	0.2
	No education	14.9	15.9	15.4
	Total	**100.0**	**100.0**	**100.0**

This structure shows that there are clearly more men with a primary education than others within the whole out-of-work male population regardless of level of education in Kigali. Those with a secondary education hold second place within the whole out-of-work male population in Kigali.

The same trend is seen for women in Kigali. There is even a relatively high number of women with a higher education who are out of work in Kigali (4.4%), in contrast to the other urban areas, where the number is negligible compared to individuals with other levels of education.

It should nevertheless be noted that there is a significant number of individuals who have a secondary education but are out of work for both men and women in Kigali and in other urban areas. It should be pointed out that in rural areas individuals with no education and with a primary education account for more than 92% of the out-of-work population as a whole.

6.6.3. Population out of work aged 15 years and over

Table 6.10. Distribution of the population unemployed for over 12 months aged 15 years and over by level of education and place of residence

Level of education	Kigali City	Other towns	Rural areas	Total
Primary	55.2	41.0	61.4	54.6
Post-primary	6.5	7.9	4.0	6.1
Secondary	22.7	43.3	16.3	24.1
Higher	9.3			5.9
No education	6.3	7.8	18.3	9.2
Total	**100.0**	**100.0**	**100.0**	**100.0**

The majority of the unemployed population in Kigali are those with a primary education, followed by those with a secondary education (22.7%). However, it should be observed that it is only in Kigali that one finds a significant proportion of unemployed people with a higher education (9.3%), while there are hardly any in other place of residence.

Table 6.11. Distribution of the unemployed population aged 15 years and over according to level of education, gender and by place of residence

	Level of education	Male	Female	Total
Kigali City	Primary	64.0	51.0	**55.2**
	Post-primary	2.4	8.4	**6.5**
	Secondary	23.1	22.4	**22.7**
	Higher	1.0	13.2	**9.3**
	No education	9.4	4.9	**6.3**
	Total	**100.0**	**100.0**	**100.0**
Other towns	Primary	39.4	41.8	**41.0**
	Post-primary	22.6		**7.9**
	Secondary	34.6	48.0	**43.3**
	No education	3.3	10.2	**7.8**
	Total	**100.0**	**100.0**	**100.0**
Rural areas	Primary	53.1	76.0	**61.4**
	Post-primary	4.8	2.7	**4.1**
	Secondary	18.8	11.9	**16.3**
	No education	23.3	9.4	**18.3**
	Total	**100.0**	**100.0**	**100.0**

In the other urban centres, there are clearly more unemployed people with a secondary education, unlike in Kigali and the rural areas.

Approximately 73% of the unemployed male population in Kigali have a primary education or no education and account for 64% and 9.4% respectively of the unemployed male population as a whole.

There is a significant proportion of the unemployed female population with a higher education (13.2%) in Kigali, although those with a primary education hold first place (51%) followed by those with a secondary education (22.4%). In the other urban areas it should be noted that for the unemployed female population as a whole, the vast majority are women with a secondary education. In rural areas, approximately 80% of the unemployed population are individuals with a primary education and those with no education.

6.6.4. Population seeking a first job according to gender and sector

Table 6.12. Distribution of the population in search of a first job according to sector and gender

Sector	Male	Female	Total
Agric./livestock/forestry/fishing/hunting	84.2	92.1	88.6
Extractive industries	0.3	0.1	0.2
Manufacturing industries	1.5	0.2	0.8
Electricity, water and gas	0.2	0.0	0.1
Buildings and public works	1.5	0.1	0.7
Trade, hotels et restaurants	3.3	2.4	2.8
Transport, storage et communications	1.5	0.0	0.7
Banking, insurance and property	0.6	0.2	0.4
Collective services	6.6	4.7	5.6
Unspecified activities	0.2	0.1	0.1
Total	**100.0**	**100.0**	**100.0**

The above table shows that, within the population seeking a first job, the majority (slightly more than 88%) of individuals wish to work in the "agric./livestock/forestry/fishing/hunting" sector.

This high level of demand is associated with job seekers' low level of education, whether they have a primary education or no education, according to the preceding tables. The "collective services" sector is the second most sought-after (5.6%), with little risk of being mistaken for the same reason cited above.

It should be observed that the sectors requiring a high level of education receive fewer applications in numerical terms compared to other sectors. The same trend can be seen for both men and women

and it should be pointed out that for women approximately 92% of applicants for a first job wish to work in the "agric./livestock/forestry/fishing/hunting" sector, while for men the percentage is a little over 84%.

6.7. POVERTY AND EMPLOYMENT

Because a job is one of the most important assets an individual has, in particular for the poorest, it is important to specify the relationship between employment and poverty or vulnerability.

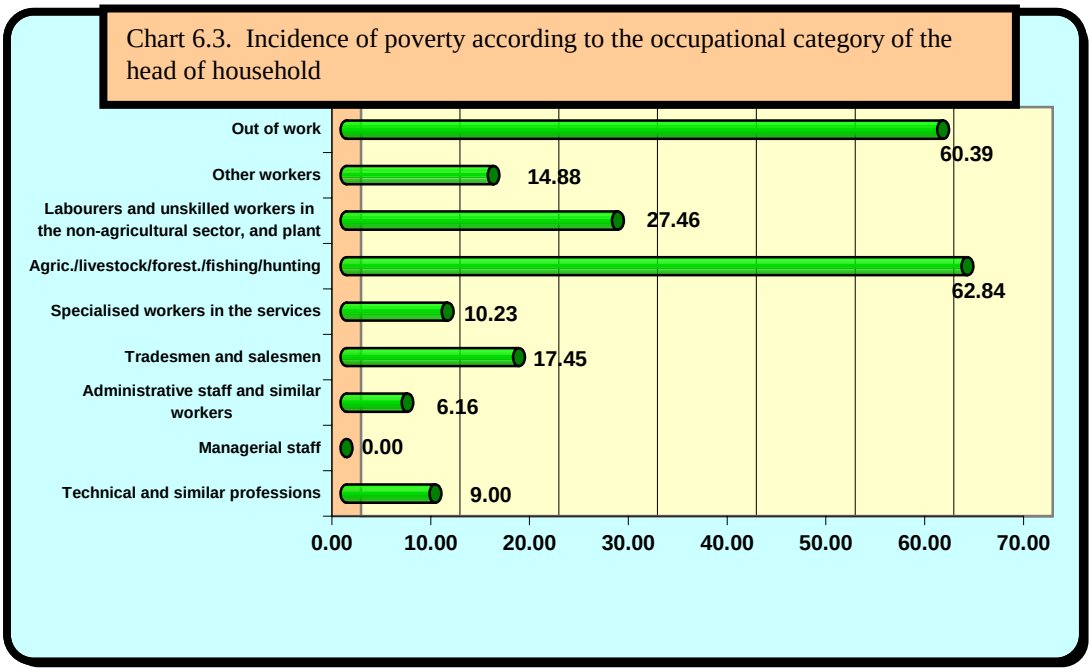
6.7.1. Poverty and occupation of the head of household

In Rwanda in 2000, it can be seen that 56.8% of working households and are fall in the poor category and 60.4% of households out of work fall in the poor category. Among working households, poverty is most felt in households in the sector of "agricultural and livestock farmers/fishermen/hunters" (62.8%) and the sector of "labourers/unskilled workers in the non-agricultural sector and plant operators" (27.5%).

This indicates that agriculture as it exists at present in Rwanda is ineffective at generating an income capable of reducing poverty. The policy of reducing poverty should therefore focus on creating jobs in the non-agricultural sector.

The following graph summarises the incidence of poverty according to the main occupation of the head of household.

Chart 6.3. Incidence of poverty according to the occupational category of the head of household



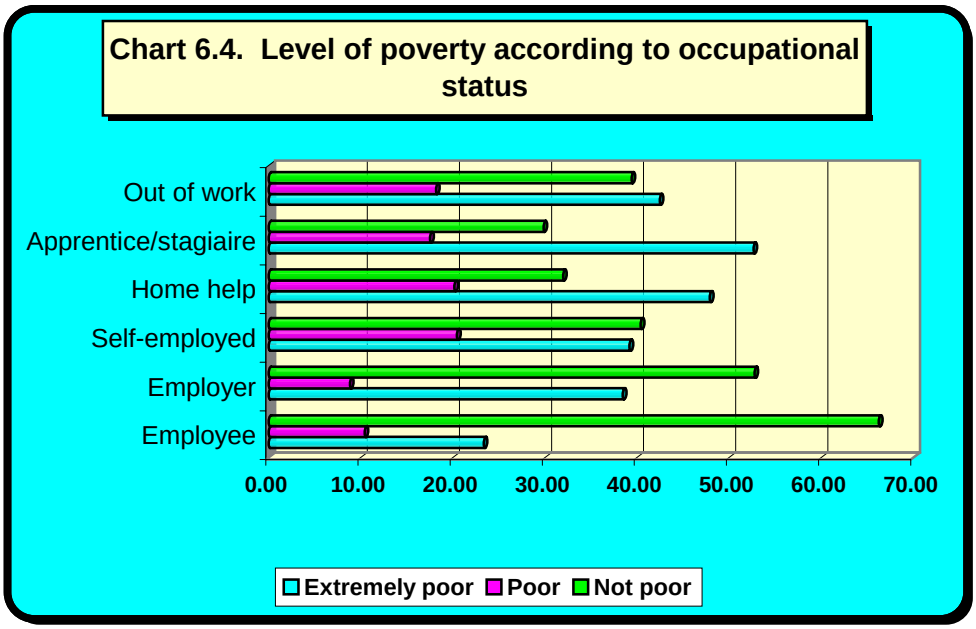
With regard to the occupational status of the head of household, it can be seen that households in which the head is self-employed or a home help are poorer (68.7% and 59.7%) than households in which the head is an employer or employee (47.2% and 36.3%) in respect of the poverty line of FRw 64,000. In respect of the food poverty line, households in which the head is self-employed are more vulnerable, as the following Table 6.13 shows.

6.7.2. Poverty and occupational status

Table 6.13. and Graph 6.4. show that within the working population 68.72% of home helps are below the overall poverty line. The category of "employees" has the lowest percentage of individuals living below the poverty line (36.33%).

Table 6.13. Incidence of poverty according to the occupational status of the head of household

Occupational status of HH	Threshold of FRw 64,000	Threshold of FRw 45,000
Employee	36.33%	24.27%
Employer	47.21%	37.06%
Self-employed	59.71%	39.50%
Home help	68.72%	35.69%
Total	56.83%	37.78%



Of the households where the head of household is an employee, those in the informal sector are poorer, regardless of the poverty line considered (59.3% in respect of the poverty line of FRw 64,000 and 41.3% in respect of the food poverty line). Households where the head of household is an employee in the public sector or formal private sector are less poor.

6.7.3. Poverty and sector of activity of employed head of household

Table 6.14. Incidence of poverty among employed heads of household

Type of sector	Threshold of FRw 64,000	Threshold of FRw 45,000
Public	10.47%	5.51%
Formal private	14.38%	7.45%
Informal private	59.26%	41.29%
Total	36.33%	24.27%

More than 59% of household heads who are employees in the "informal private" sector, fall below the overall poverty line. In the public sector, 10.47% are below the overall poverty line and 5.51% do not manage to meet their needs in terms of food.

6.7.4. Labour force according to level of education and level of poverty

6.15. Poverty according to the level of education of the head of household

Level of education	Extremely poor	Poor	Not poor	Total
Primary	78,6	79,6	69,5	75,2
Post-primary	0,2	0,5	1,5	0,8
Secondary	2,3	4,7	17,8	8,8
University	0,1	0,1	1,4	0,6
No education	18,7	15,1	9,8	14,6
Total	100,0	100,0	100,0	100,0

This structure shows that there is significantly more poverty in households where the head has a primary level of education. This is explained by the low income of such households, since individuals with a primary education are generally employed in the "agriculture/livestock" sector, which is less renumerative. It should be pointed out that poverty is not structured according to level of education.

6.7.5. Labour force according to sector of activity and expenditure quintile

Table 6.16. Distribution of household expenditure by expenditure quintile according to type of activity

Sector	Quintiles of expenditures					
	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Total
Agriculture/livestock/forestry/fishing/ hunting	97.3	96.9	95.3	91.0	62.9	88.6
Extractive industries	0.3	0.3	0.1	0.1	0.1	0.2
Manufacturing industries	0.5	0.3	0.4	0.9	1.8	0.8
Electricity, water, gas			0.0	0.1	0.4	0.1
Buildings and public works	0.2	0.5	0.5	0.6	1.8	0.7
Trade, hotels and restaurants	0.5	0.8	1.2	2.2	9.3	2.8
Transport, storage and communications	0.0	0.1	0.3	0.6	2.4	0.7
Banks, insurance and property	0.1	0.1	0.1	0.2	1.4	0.4
Collective services	1.0	0.9	1.9	4.1	19.7	5.6
Unspecified activities	0.1	0.1	0.1	0.1	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

In Rwanda, household expenditure as a whole is essentially agricultural (approximately 89%). This allocation of the bulk of the family budget to expenditure on food products shows how poor households are in this country. The "collective services" sector holds second place in terms of expenditure (5.6%). Taking the quintiles of expenditure as a whole, there is a progressive reduction in food expenditure after the first quintile.

This reflects the fact that the poorer the households are, the more likely they are to allocate almost all their income to food expenditure. Households that are not poor allocate only about 63% of their expenditure to the sector of "agriculture/livestock/forestry/fishing/hunting", while poor households spend over 95% of their expenditure on food requirements.

CHAPTER VII: HOUSING, ENVIRONMENT AND COMMUNITY DEVELOPMENT

7.1. General remarks and status of housing occupation

7.1.1. Type of housing

The below table shows that 91.6% of households in rural areas, 69.5% of households in other towns and 52.3% of households in Kigali live in detached houses holding a single household.

Table 7.01: Distribution of housing by type and place of residence

Actual type of housing	Place of residence: Kigali City	Other towns	Rural	Total
Detached house holding a single household	52.3	69.5	91.6	88.2
Detached house holding several households	14.9	5.4	1.4	2.4
Two-storey house	0.5	0.1	0.0	0.1
Group of houses holding several households	23.4	16.8	1.5	3.5
Group of houses holding a single household	8.8	8.0	5.3	5.6
Other	0.1	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0

14.9% of households in Kigali live in detached houses holding several households, while two-storey houses are occupied by 0.5% of households. Overall, 88.2% of Rwandan households live in detached houses holding a single household.

At provincial level, detached houses holding a single household predominate, with the percentage of households ranging from52.3% in Kigali to 98.9% in Kibungo province. Other types of housing account for a significant percentage in Kigali.

According to expenditure quintile, detached houses holding a single household take first place with 94.5% of households in the 1st quintile and 74.9% in the 5th quintile. Groups of houses holding a single household come second, with 2.7% of households in the 1st quintile and 9.9% in the 5th quintile.

Table 7.02: Distribution of housing by type and level of poverty

Type of housing	Level of poverty: Extremely poor	Poor	Not poor	Total
Detached house holding a single household	93.1	91.6	82.4	88.2
Detached house holding several households	1.3	1.7	3.7	2.4
Two-storey house		0.1	0.1	0.1
Group of houses holding several households	1.4	1.7	6.1	3.5
Group of houses holding a single household	3.8	4.8	7.6	5.6
Other	0.3	0.2	0.1	0.2
Total	100.0	100.0	100.0	100.0

The type of housing according to level of poverty confirms the trend referred to above. It should be pointed out that two-storey houses are occupied by 0.1% of poor people and those who are not poor. Overall, dwellings contain an average of 3.6 rooms not including bathrooms, toilets and kitchens.

7.1.1.2. Moving home

The reasons for moving home relate to households that have changed their place of residence 12 months previously. Overall, the answers obtained are varied, with 43.7% having moved home for reasons other than those proposed.

Table 7.03: Reasons for moving home according to place of residence

Reason for moving home	Context			Total
	Kigali City	Other towns	Rural	
Family	9.5	7.6	6.4	7.0
Cost	17.6	10.3	1.7	4.7
Employment	12.3	19.8	2.0	4.6
Acquired own home	18.1	16.7	15.7	16.2
Quality of housing	14.5	11.6	26.6	23.8
Other	28.1	34.1	47.5	43.7
Total	100.0	100.0	100.0	100.0

In rural areas, 47.5% of households move home for unknown reasons. In Kigali, 18.1% of households move because they have acquired their own home, compared to 17.6% who move due to the cost of their rented accommodation. In the other towns, 19.8% of households move for reasons concerning their employment while 7.6% move for family reasons.

Reason for moving home according to expenditure quintile

In the 3rd quintile, 9.6% of households move for family reasons, while 22.0% move because they have acquired their own property. 29.0% of households in the 1st quintile move for reasons of housing quality, while 55.1% move for other, unspecified reasons. Only 0.6% of households in the 2nd quintile move due to housing costs, while 0.5% of households in the 3rd quintile move for reasons concerning their employment. Overall, 43.7% of households move for other, unspecified reasons and 23.8% move due to housing quality.

Table 7.04: Reasons for moving home according to level of poverty

Reasons for moving home	Level of poverty			Total
	Extremely poor	Poor	Not poor	
Family	4.9	5.1	9.0	7.0
Cost	1.2	3.7	7.5	4.7
Employment	0.8	0.5	8.7	4.6
Acquired own home	12.2	11.9	20.4	16.2
Quality of housing	27.3	27.4	20.2	23.8
Other	53.6	51.4	34.1	43.7
Total	100.0	100.0	100.0	100.0

Of those who are poor, 27.4% of households move due to housing quality. Of those who move home for reasons concerning employment, 0.8% are extremely poor households, 0.5% are poor and 8.7% are not poor.

7.1.1.2. Occupancy status

Currently, 89.9% of Rwandan households own their own home, 4.4% do not pay and 4.2% pay rents.

According to place of residenceplace of residence, 94.2% of households in rural areas own their own home, while 38.0% of households in Kigali rent accommodation. The survey shows that 5.7% of households in Kigali are squatters.

Table 7.05: Occupancy status by place of residenceplace of residence

Occupancy status	Place of residence			
	Kigali City	Other towns	Rural	Total
Owner	48.3	59.4	94.2	89.9
Tenant	38.0	28.9	0.7	4.2
Housing provided by the service	0.8	1.8	0.2	0.3
Housing provided free	7.0	6.4	4.1	4.4
Squatters	5.7	3.1	0.5	1.0
Renting out / sale			0.0	0.0
Other	0.3	0.4	0.2	0.2
	100.0	100.0	100.0	100.0

The distribution of households according to occupancy status and by province is similar for all the provinces with the exception of the city of Kigali: Home owners account for over 88% in the provinces, while in Kigali they account for 48.3%.

7.1.2. Access to services and facilities

7.1.3.1. Water supply

Table 7.06: Water supply according to source and area

Present source of water supply	area		TotalTotal
	Urban	Rural	
Electrogaz	26.3	0.2	2.9
Ordinary well	0.3	2.0	1.8
Sunk well	1.3	6.1	5.6
River/stream/lake	5.9	20.2	18.7
Exploited spring	7.2	16.9	15.9
Unexploited spring	1.5	9.3	8.5
Purchased at tap	48.6	3.4	8.1
Free public fountain	6.8	41.7	38.0
Other	2.1	0.2	0.4
Total	100.0	100.0	100.0

The survey shows that in urban areas over 80% of the population use tap water while the remainder obtain water from a nearby river, a well (ordinary sunk) well or a spring (exploited or unexploited). 26.3% of the urban population are supplied by Electrogaz, 48.6% purchase water at a tap and 6.8% obtain water from public taps, while 7.2% of the population fetch water from an exploited spring, 5.9% use river water, 1.3% obtain water from a sunk well, 0.3% find water in ordinary wells and 1.5% are supplied from an unexploited spring.

In rural areas, in contrast, the above table shows that 41.7% of the population obtain water from a public fountain and 20.2% from a nearby river, 16.9% fetch water from exploited springs and 9.3% from unexploited springs. Other sources of supply account for 2.1% in urban areas and 0.2% in rural areas.

For the country as a whole, only 2.9% are supplied by Electrogaz. The most commonly used source of water is the public tap, where 38.6% of the population obtain supplies, while river water takes second place, accounting for 18.7%, and other sources of supply accounting for 0.4%. In addition, it

should be noted that 26.3% of the urban population are supplied by Electrogaz, compared to 0.2% of the population in rural areas.

At provincial level, 61.6% of the population of Gikongoro use public taps for their water supply. That source supplies 59.4% of the population of Byumba, in second place, while Kigali comes last with 4.9%. However, Kigali has the highest proportion of people who purchase water at a tap (51.5%). The province of Umutara and Kibungo represent respectively 40.5% and 29.6% of the population who use river water. A high percentage for the population using water from exploited springs is recorded in the provinces of Ruhengeri and Cyangugu, with 38.9% and 37.8% respectively.

Table 7.07: Source of water supply according to level of poverty

Present source of water supply	Level of poverty			
	Extremely poor	Poor	Not poor	TotalTotal
Electrogaz	0.2	0.0	7.2	2.9
Ordinary well	1.5	1.7	2.3	1.8
Sunk well	6.3	5.9	4.6	5.6
River/stream/lake	20.1	19.3	17.0	18.7
Exploited spring	17.5	17.4	13.5	15.9
Unexploited spring	9.2	9.3	7.4	8.5
Purchase at tap	2.7	5.3	15.2	8.1
Free public fountain	42.4	40.9	32.1	38.0
Other	0.1	0.2	0.7	0.4
	100.0	100.0	100.0	100.0

Of the population served by Electrogaz, 0.2% are from the extremely poor class while 7.2% are from the not-poor. Of those using ordinary wells, there is little disparity (1.5% of the poorest compared to 2.3% of the least poor). Other sources of water supply account for 0.4% of the whole, with a higher proportion being observed for those who are not poor.

7.1.2.2. Main source of lighting

7.1.2.2.1. Main source of lighting by province

The main source of lighting for Kigali is electricity from Electrogaz, which supplies 47.4% of the population. Also be mentioned that Kigali has the highest percentage (38.7%) of the population who use oil lamps and with Cyangugu province taking second place with 27.9%. However, Gisenyi province takes second place after Kigali in respect of the use of electricity supplied by Electrogaz and merits particular attention with regard to the use of electricity generators, since it accounts for 50% of the population using this source of lighting at national level. Gitarama, Kibungo and Umutara have a high percentage of the population using wick lanterns (80.6%, 80.3% and 80.6% respectively). Other types of lighting are used to a large extent in Gikongoro province.

It should be noted that, to a large extent, most people living in urban areas use electricity supplied by Electrogaz and oil lamps. For rural areas, many people use wick lanterns or wood fires to light their homes. Candles are used by 2.2% of the population in urban areas, compared to 0.6% of the population in the countryside.

7.1.2.2.2. Main source of lighting by expenditure quintile

According to expenditure quintile71.3% of the population in the 3rd quintile, 67.7% in the 4th quintile, 66.3% in the 2nd quintile, 50.2% in the 1st quintile and 40.3% in the 5th quintile use wick lanterns as a source of lighting for their homes. Only 0.1% of individuals in the 2nd quintile use electricity supplied by Electrogaz, with 0.3% using electricity generators.

Overall, 59.2% of the population use wick lanterns, 20.1% use wood fires, 13.0% use oil lamps and only 5.1% use electricity supplied by Electrogaz.

7.1.2.2.3. Main source of lighting according to level of poverty

Electricity supplied by Electrogaz is used by 12.6% of those who are not poor, 4% of those who are poor and 0.0% of those who are extremely poor. Oil lamps are used by 3.8% of those who are extremely poor, 8.9% of those who are poor and 24.6% of those who are not poor. Gas lamps are used by 0.1% of those who are extremely poor, 0.1% of those who are poor and 0.2% of those who are not poor, while wood fires are used by 34.3% of those who are extremely poor, 16.4% of those who are poor and 7% of those who are not poor. Wicks are used by 58.6% of those who are extremely poor, 71.8% of those who are poor and 53.9% of those who are not poor. Candles are used by 0.3% of those who are extremely poor, 0.9% of those who are poor and 1.1% of those who are not poor. Other sources of lighting are used by 2.7% of those who are extremely poor, 1.5% of those who are poor and 0.5% of those who are not poor.

7.1.2.2.4. Main source of lighting by place of residence

Table 7.08: Main source of lighting by place of residence

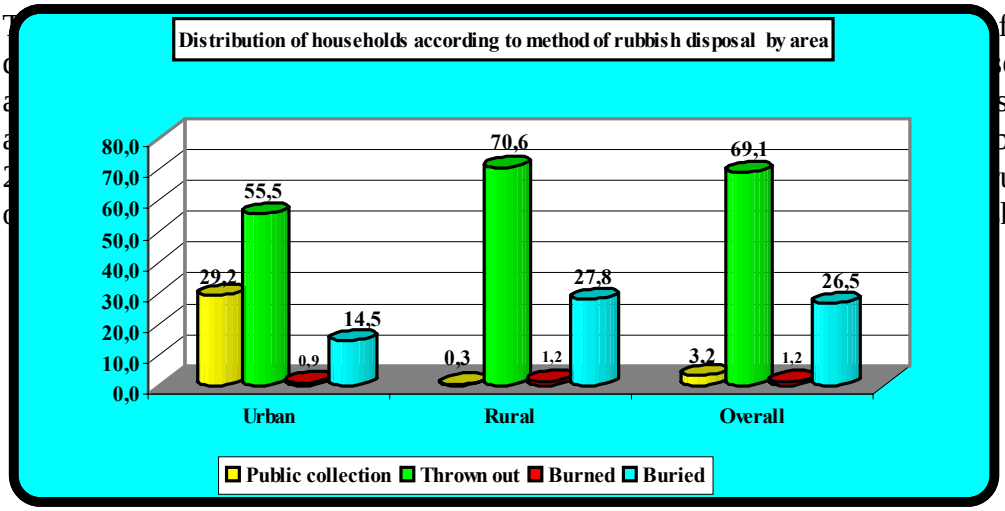
Principal current source of lighting	Place of residence			TotalTotal
	Kigali City	Other towns	Rural	
Electricity supplied by Electrogaz	47.4	31.6	0.7	5.1
Electricity generator	0.2		0.1	0.1
Oil lamp	38.7	38.5	10.0	13.0
Gas lamp	0.5		0.1	0.1
Wood fire		1.6	22.4	20.1
Candle	2.1	2.4	0.6	0.7
wick lantern	11.2	25.5	64.3	59.2
Other		0.4	1.8	1.6
	100.0	100.0	100.0	100.0

Electricity supplied by Electrogaz is used by 47.4% of those living in Kigali, 31.6% of those living in other towns and 0.7% of rural areas. 38.7% of those living in Kigali, 38.5% of other towns and 10.0% of those living in rural areas use oil lamps. Only 0.1% of the population have electricity generators in the towns and rural areas and that percentage is insignificant when compared to the 20.1% using wood fires as the main source of lighting.

The same applies to gas lamps, which are used by 0.1% of the population at national level. 11.2% of those living in Kigali, 25.5% of those living in other towns and 64.3% of those living in rural areas use wick lanterns as a source of light in their homes.

7.1.2.3. Method of rubbish disposal

7.1.2.3.1. Distribution of households according to method of rubbish disposal, by area



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7.1.2.3.2. Distribution of households according to method of rubbish disposal, by place of residence

Table 7.09: Method of disposal by sub-population

Household waste	Place of residence			
	Kigali City	Other towns	Rural	TotalTotal
Public collection	37.3	9.5	0.3	3.2
Dump	50.7	67.3	70.6	69.1
Burned	0.6	1.7	1.2	1.2
Buried	11.5	21.5	27.8	26.5
	100.0	**100.0**	**100.0**	**100.0**

On the basis of the three places of residence, namely Kigali, the other towns and rural areas, it can be seen that public rubbish collection is proportionate to the level of development. In effect, a high percentage of households using this means of disposal is recorded in Kigali (37.3%), followed by the other towns (9.5%) and, lastly, the rural areas (0.3%). In contrast, the proportion of households that dump their waste is inversely proportionate to the level of development, since it is 70.6% for rural areas, 67.3% for the other towns and 50.7% for Kigali. There are more households that burn their waste in the other towns (1.7%) than in Kigali (0.6%) and the rural areas (1.2%).

7.1.2.3.3. Distribution of households according to method of rubbish disposal, by province

In Kibungo province, 0.1% of households use public rubbish collection, compared to 37.3% in Kigali. 95.8% of households in Byumba dump their waste. That province is followed by Ruhengeri, with 86.2%. Butare is the province with a high percentage (5.7%) of households that burn their waste. 55.9% of households in Umutara bury their rubbish followed by Butare (54.3% of households).

7.1.2.3.4. Distribution of households according to method of rubbish disposal, by expenditure quintileand level of poverty

In the 1st quintile, 74.0% of households that dump their waste while 0.2% use public collection. 10.9% of households in the 5th quintile accept public collection. It should be pointed out that 28.1% of households in the 4th quintile bury their rubbish. Total, 69.1% of households dumptheir waste.

Table 7.10: Method of rubbish disposal by level of poverty

	Household waste				
	Public collection	Dump	Burned	Buried	Total
Extremely poor	0.4	72.0	1.6	26.0	100.0
Poor	0.8	70.8	1.3	27.2	100.0
Not poor	6.7	65.8	0.9	26.7	100.0
Total	3.2	69.1	1.2	26.5	100.0

0.4% of extremely poor households, 0.8% of poor households and 6.7% of households that are not poor use public rubbish collection. 72.0% of extremely poor households, 70.8% of poor households 65.8% of households that are not poor dump their household waste. 1.6% of extremely poor households, 1.3% of households that are not poor and 0.9% of poor households burn their waste, while 26.0% of extremely poor households, 27.2% of poor households and 26.7% of households that are not poor bury their waste.

7.1.2.4. Type of toilet used by households

7.1.2.4.1. Distribution of households according to type of toilet used, by place of residence

Table 7.11: type of toilet used by place of residence

Type of toilet	Place of residence			
	Kigali City	Other towns	Rural	Total
Flush toilet with septic tank	8.4	7.1	0.3	1.1
Protected latrines	81.7	73.1	47.3	50.4
Unprotected latrines	8.0	16.9	44.6	41.3
Other	0.8	0.3	1.3	1.3
No toilet	1.2	2.6	6.4	5.9
	100.0	**100.0**	**100.0**	**100.0**

It can be seen that 0.3% of rural households have flush toilets with a septic tank, compared to 8.4% of households in Kigali and 7.1% of households in the other towns. 44.6% of rural households have unprotected latrines, while 6.4% of rural households have no toilet.

7.1.2.4.2. Distribution of households according to type of toilet used, by province

0.2% and 0.1% of households in Kibuye and Gikongoro respectively have flush toilets with a septic tank. 64.6% of households in Byumba have unprotected latrines. That province is followed by Kibungo, with 61.0% of households. 3.7% of households in Umutara use other types of toilet, while 10.1% of households in Gikongoro and 9.0% of households in Umutara have no toilet.

7.1.2.4.3. Distribution of households according to type of toilet used, by expenditure quintile and level of poverty

The survey results show that 0.2% of households in the 2nd and 3rd quintiles have flush toilets with a septic tank. In the 5th quintile, 68.7% of households have a protected latrine, compared to 54.0% of households in the 1st quintile with an unprotected latrine. 10.2% of households in the 1st quintile do not have a toilet. Total, 41.3% of households have a protected toilet, while 5.9% do not have a toilet at all.

Table 7.12: Type of toilet used by level of poverty

Type of toilet	Level of poverty			
	Extremely poor	Poor	Not poor	TotalTotal
Flush toilet with septic tank	0.3	0.2	2.1	1.1
Protected latrines	37.6	49.8	62.0	50.4
Unprotected latrines	51.9	41.8	31.7	41.3
Other	1.8	1.0	0.9	1.3
No toilet	8.4	7.2	3.2	5.9
	100.0	100.0	100.0	100.0

Only 0.2% of poor households have flush toilets with a septic tank. 51.9% of extremely poor households have unprotected latrines. 8.4% and 7.2% of extremely poor and poor households respectively do not have a toilet.

7.1.4 Physical characteristics of dwelling

7.1.4.1.Materials for the construction of walls

Distribution of housing according to main construction material of the walls, by place of residence

Table 7.13: Materials for the construction of walls by place of residence

Material used in wall construction	place of residence			Total
	Kigali City	Other towns	Rural	Total
Adobe bricks	18.2	12.8	27.6	26.5
Cemented adobe bricks	39.8	36.1	5.3	8.6
Mud and wattle cemented	27.7	13.1	4.6	6.5
Uncemented mud and wattle	9.0	24.0	59.4	54.9
Boards	0.0	0.4	0.2	0.2
Baked earth bricks	4.0	11.4	0.9	1.4
Cement bricks	1.3	0.1	0.0	0.1
Stone	0.0	0.7	0.3	0.3
Other	0.0	1.4	1.7	1.6
Total	**100.0**	**100.0**	**100.0**	**100.0**

In Kigali, 18.2% of homes are built using adobe bricks, compared to 12.8% in the other towns and 27.6% in rural areas. Cemented adobe bricks are used in 39.8% of homes in Kigali, 36.1% of homes in the other towns and 5.3% of homes in rural areas. Mud and wattle cemented walls are found in 27.7% of homes in Kigali, 13.1% of homes in the other towns and 4.6% of homes in rural areas. Uncemented mud and wattle is found above all in rural areas (39.4% of homes). Total, 54.69% of homes are built using uncemented mud and wattle and 26.5% using adobe bricks.

7.1.4.2. Materials used for the construction of roofing

In the country as a whole, 44.7% of homes are constructed with corrugated iron roofing and 38.9% are constructed with tiled roofing. In rural areas, 12.0% of homes have a thatched or straw roof and 42.6% a tiled roof. In the other towns, 77.6% of homes are built with corrugated iron roofing, while in Kigali corrugated iron is used as the roofing material for 96.9% of homes. Concrete roofing is mainly found in Kigali (0.7% of homes).

Table 7.14: Materials used for the construction of roofing by place of residence

Roof construction materials	place of residence			Total
	Kigali City	Other towns	Rural	
Thatch/straw	1.7	3.1	12.0	11.0
Corrugated iron	96.9	77.6	39.6	44.7
Concrete	0.7	0.3	0.1	0.2
Tiles	0.6	17.3	42.6	38.9
Other	0.1	1.6	5.6	5.1
	100.0	100.0	100.0	100.0

7.2. COMMUNITY DEVELOPMENT

7.2.1. Infrastructures built in rural areas by province since 1994

In Butare province, 9.2% of the rural population live in a *cellule* where at least one school has been built since 1994, although there has been no construction of health centres, markets, cultural centres or water supply systems in the rural *cellules* of that province. In rural areas in Gitarama province, 30.2% of the population live in a *cellule* where a school has been built since 1994. In contrast, in Gikongoro province, only 2.8% of the population live in a *cellule* where a school has been built.

2.7% of the population living in rural areas in Gisenyi province stated that at least one health centre has been built in their *cellule*. The survey shows that, since 1994, no health centres have been built in rural areas in most provinces. That is the case in Butare, Byumba, Cyangugu, Gitarama, Kigali Ngali and Ruhengeri. 16.8% of the rural population in Kigali Ngali, state that at least one bridge has been built in their *cellule* since 1994. This proportion is almost the same (16.0%) in Butare province. 42.9% of the rural population in Kibungo province state that roads have been built in their *cellule* since 1994.

In Umutara province, 6.9% of individuals live in a rural *cellule* where at least one mosque has been built since 1994, compared to 4.8% in Kibungo for the same period. Moreover, 4.6% of the rural population in Kigali Ngali acknowledge that at least one mosque has been built in their *cellule*. With regard to churches, in Kibungo province a high percentage of the rural population (65.1%) state that at least one church has been built in their *cellule* since 1994. In Byumba province, 5.3% of the rural population live in a *cellule* where at least one market has been built since 1994, while in Ruhengeri the figure is 2.5% and in the other provinces no markets have been built. In all the rural *cellules* in the country as a whole, since 1994 no cultural centres have been built. The construction of water supply systems has been more or less notable in Cyangugu province. In effect, 34.1% of the rural population in that province live in a *cellule* that has benefited from at least one water supply system since 1994. 86.5% of the rural population in Kibungo state that in one of the rural *cellules imidugudu* have been built since 1994. 48.7% of the rural population in Kigali Ngali reported same.

Overall, 17.4% of the individuals interviewed in rural areas affirm that schools have been built in their *cellule* while 0.7% state that health centres have been built since 1994. 8.7% state that bridges have been built and 12.4% state that roads have been built. 2.5% of the rural population state that mosques have been built in their *cellules* and 37.6% state that churches have been built in their rural *cellules* since 1994. 0.9% of the rural population state that markets have been built, while 13.4% state that water systems have been built in the imidugudu. 33.4% of the rural population state that no cultural *cellules* have been built in their *cellule*.

7.2.2. Number of infrastructure built according to province since 1994

Type of infrastructure		Province											**Total**
		Butare	Byumba	Cyangugu	Gikongoro	Gisenyi	Gitarama	Kibungo	Kibuye	Kigali Ngali	Ruhengeri	Umutara	
School	units	3.0	1.1	2.5	7.0	1.1	4.9	5.1	2.7	3.2	1.8	1.2	**3.0**
Dispensary	units				1.0	1.0		1.0	1.0			1.0	**1.0**
Bridge	units	2.2	1.0	10.0	2.0	1.0	2.2	10.0	2.0	1.7	3.7	1.1	**2.9**
Road	Km	2.3	2.0	4.7	1.7	5.0	5.9	3.4		2.6		3.8	**3.6**
Mosque	units	1.0	1.0	1.0			1.0	1.4		1.0	1.0	1.0	**1.1**
Church	units	1.4	1.3	1.2	1.2	1.3	1.4	1.5	1.5	1.1	1.3	1.7	**1.3**
Market	units		1.0								1.0		**1.0**
Water supply system	Km		7.7	2.5	2.4	7.0	4.6	2.0	8.7	1.4	2.4	3.8	**3.3**
Imidugudu	houses	35.6	49.7	55.6	23.9	32.2	20.4	89.7	40.9	38.1	83.8	78.2	**58.8**

The above results from the HLCS community questionnaire show that:

- ✓ In the case of the construction of schools, an average of 3 schools have been built in each rural *cellule* of the country. Gikongoro province takes the lead with an average of 7 schools, followed by Kibuye and Gitarama provinces with approximately 5 schools.

- ✓ The construction of dispensaries is notable in the provinces of Gikongoro, Gitarama, Kibungo and Kibuye.

- ✓ The construction of houses in grouped settlements: just under 60 houses were built in rural *cellules*. Kibungo province takes the lead with an average of approximately 90 houses per *cellule* that carried out construction work. It is followed by Ruhengeri and Umutara provinces.

7.2.3. Principal sources of financing of infrastructures

With regard to the financing of infrastructures, 50.5% of the rural population of Butare state that the building of schools received voluntary funding, while 49.5% state that it was financed by NGOs. We would note that 100.0% of that population state that Butare's roads, mosques and churches were built with voluntary funding. 100% of the rural population of Byumba cite associations of residents of rural *cellules* as the source of funding for the construction of roads. 100% of the rural population of Gikongoro state that associations of residents are the primary source of funding for the construction of schools and churches.

In rural areas overall, infrastructure construction is financed through voluntary funding and NGOs. However, the Government is the primary source of funding for the construction of schools in Umutara province and the construction of bridges in Kibuye province.

7.3. ECONOMIC INFRASTRUCTURES

7.3.1 Roads

7.3.1.1. Presence of roads by province

In all provinces, over 87% of the rural population live in a *cellule* where there is a road, with the exception of Kibuye, where only 67.1% of the rural population live in a *cellule* that has a local road. Of those questioned in rural areas, the following percentages stated that there was a road in their *cellule*: 100% in Umutara, 98.9% in Kibungo, 97.9% in Butare, 97.8% in Kigali Ngali, 96.8% in Gitarama, 96.7% in Gisenyi, 92.4% in Byumba, 89.9% in Gikongoro, 88.5% in Cyangugu, 87.1% in Ruhengeri and 67.1% in Kibuye.

7.3.1.2. Year round accessibility

The survey shows that all provinces have rural *cellules* that are not accessible for the whole year. 93.5% of the rural population in Butare, 70.6% of the population in Gitarama and 49.3% of the population in Byumba state that there is no permanent accessibility.

7.3.1.3. Months during which there is no accessibility

With reference to the annual period, it should be observed that in rural Butare province a *cellule* is inaccessible for 6 months and that Cyangugu province is inaccessible for 5 months. Gitarama province becomes inaccessible for 4 months, while other parts of the country are inaccessible for 2 to 3 months.

7.3.1.4. Distance from a road

The mean distance between a rural *cellule* and a road is between 1 km to 3.5 km depending on the provinces. The distance is 1 km for a rural *cellule* in Gitarama and 3.5 km for Cyangugu.

7.3.2. Water supply systems

7.3.2.1. Presence of a water supply system

For Umutara province, 47.9% of the rural population live in a *cellule* that does not have a water supply system. The same applies for 43.1% of the rural population in Butare. On the contrary 83.6% of the rural population in Gisenyi state that there is a water supply system in the *cellule* where they live. Overall, 30.5% of the rural population live in a *cellule* without a water supply system.

7.3.2.2. Distance of the water source in the dry season

During the dry season, the distance to a water source is 3.8 km for a rural *cellule* in Umutara province. The distance is 2.8 km in Ruhengeri province and 2.8 km in Kibungo province. This is a considerable distance to cover in order to reach a water source during the dry season.

7.3.3. Electric grid

7.3.3.1. Presence of an electricity supply

The survey results show that the power supply is not sufficiently available in rural areas. 96.0% of the rural population in Butare and 94.9% of the rural population in Kibuye state that they live in a *cellule* that does not have an electricity supply, while 24.1% in Ruhengeri state they have an electricity supply in their *cellule*.

7.3.3.2. Source of lighting

Overall, 86.2% of the rural population use kerosene lamps as a source of lighting. With the exception of Kibuye, Gisenyi and Gikongoro provinces, in the other provinces over 85% of the population use kerosene lamps. 37.1% of the population of rural *cellules* in Kibuye use candles and 1.9% in Butare have an electricity supply. Electricity generators are used above all in Kibuye by 3.3% of the rural population.

7.3.4. Markets

7.3.4.1. Type of market by province

In Butare province, 7.6% of the rural population live in a *cellule* that has a daily market, compared to only 0.1% in Umutara province. 3.1% of the rural population in Ruhengeri have a weekly market in their *cellule*, while for Byumba the figure is 26.7%. 94.4% of individuals living in rural *cellules* in Ruhengeri have no market. Overall, 85.3% of the rural population lives in a *cellule* with no market.

7.3.4.2. Type of market by level of poverty

It should be observed that the presence of a market in a rural *cellule* is not related to the level of poverty there. It appears that the average for the rural population living in a *cellule* where there is no market is 85% for all levels of poverty. The figure is 85.3% for those who are extremely poor, 85.2% for those who are poor and 85.4% for those who are not poor.

7.3.4.3. Distance of the market by province

In rural areas, it should be noted that in all provinces the population is distant from the market. The mean distance to market in a rural *cellule* in Cyangugu is 7.9 km. The distance is 6.7 km in Butare and 6.4 km in Kibungo. Overall, the shortest distance is 4.2 km for Byumba and Ruhengeri provinces and the longest distance is 7.9 km for Cyangugu province.

7.3.4.4. Distance of the market by level of poverty

The distance of the market in a rural *cellule* is seemingly related to the level of poverty. Although this is not a relationship of cause and effect, it should be observed that there is mean distance of 5.5 km for those who are extremely poor, 5.1 km for those who are poor and 4.8 km for those who are not poor. The mean distance of 5.2 km to market in rural areas shows to the extent to which the rural population has difficulty in selling their produce.

7.4. ENVIRONMENT

7.4.1. Means of rubbish disposal

7.4.1.1. Means of rubbish disposal by province

It is apparent that in rural areas, other unidentified means are the most used for household rubbish disposal, in all provinces. In Gitarama, 21.7% of the population living in rural *cellules* use compost as a means of household waste disposal, while 26.0% in Byumba and 23.7% in Kibungo dump their household rubbish. In Umutara, 49.2% of the population living in rural *cellules* burn their rubbish.

7.4.1.2. Existence of a rubbish collection service, by province

With the exception of a small section of the population living in rural *cellules* in Kibuye (3.0%), Cyangugu (2.3%) and Kigali Ngali (2.3%), the remainder of the rural population in all provinces states that there is no rubbish collection service.

7.4.1.3. Funding for rubbish removal

48.2% of households in Kigali city, 22.0% of households in the other towns and 1.5% of households in rural areas are willing to pay for the collection of waste, while 98.5% of households in rural areas, 78.0% of households in the other towns and 51.8% of households in Kigali do not agree to pay for the collection of rubbish. Overall, 94.7% of households do not agree to pay for the collection of household rubbish.

By expenditure quintile, 18.6% of households in the 5^{th} quintile, 3.4% of households in the 4^{th} quintile, 1.1% of households in the 3^{rd} quintile, 0.8% of households in the 2^{nd} quintile and 0.3% of households in the 1^{st} quintile agree to pay for waste collection.

7.4.1.4. Willingness to provide funding, by province

It was necessary to ascertain whether households were willing to pay the cost of a rubbish collection service. Thus, of all the households living in rural areas, 5.2% in Gikongoro, 5.0% in Umutara, 4.3% in Kibungo, 3.2% in Gitarama and 2.2% in Butarewere willing to provide funding. Rural households in other provinces were willing to provide funding. Overall, only 1.5% of rural households are willing to provide funding.

7.4.2. Bush fires

Of the rural population as a whole, 77.4% live in a *cellule* where there have been no bush fires. 39.3% of the rural population in Kibungo live in a *cellule* where there have been bush fires, compared to 37.8% in Butare province. In Gisenyi province, 91.7% of the population live in a *cellule* where there were no bush fires in the last 12 months. Overall, 77.4% of the population living in rural *cellules* have never witnessed a bush fire.

7.4.3. Deforestation

Deforestation is understood to mean that there are timber compaies operating in a *cellule*. 77.7% and 69.9% of the rural population in Gisenyi and Byumba provinces respectively live in *cellules* where there are timber companies. In Ruhengeri province, 61.6% of the rural population lives in *cellule* where there are no timber companies. Overall, 51.9% of the rural population live in a *cellule* where there are timber companies.

7.4.4. Reforestation

In 2000, reforestation work had not developed very far according to the local community authorities in the *cellules*.

7.4.4.1. Reforestation by province

In Kibuye and Byumba provinces respectively, 63.6% and 61.7% of the rural population live in a *cellule* where reforestation is practised. In contrast, in Ruhengeri province 81.6% of the rural population live in a *cellule* where reforestation has not taken place in the last 12 months. At national level, 60.1% of the rural population lives in a *cellule* where reforestation is not practised.

7.4.4.2. Area reforested by province

As stated above, there is little reforestation at national level. In effect, the mean surface area reforested is 4.3 hectares per *cellule* in rural areas. It should be observed that Kibuye and Kibungo provinces have a high mean rates, with 10.9 hectares and 9.4 hectares respectively of reforested land. They are followed by Byumba and Ruhengeri, with 4.4 hectares each, while Butare has only 0.7 hectares of reforested land and Gikongoro has 1.7 hectares.

CHAPTER VIII: HOUSEHOLD ECONOMIC ACTIVITIES OF HOUSEHOLDS

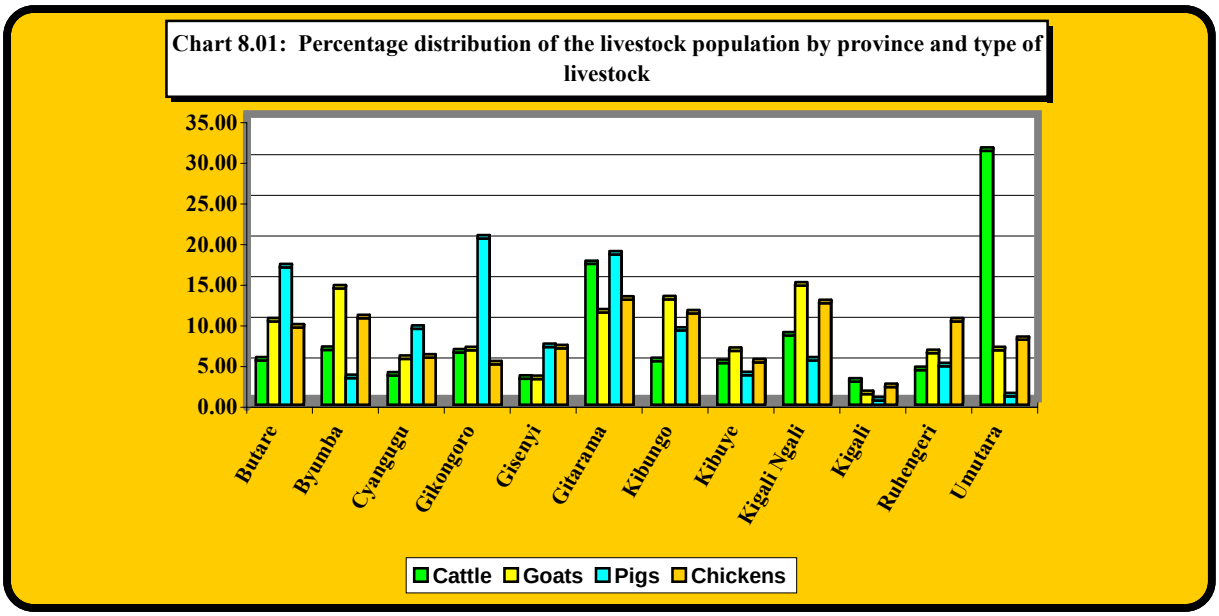
This chapter deals with economic activities carried out within households. It presents some of the characteristics of activities such as agriculture, livestock farming and non-agricultural family enterprise.

8.1. AGRICULTURAL AND STOCKRAISING ACTIVITIES

8.1.1. Livestock farming

8.1.1.1. Livestock population

Overall, the distribution of the livestock population is very unequal among the provinces, for all types of livestock. Chart 8.01 shows that in Gitarama province the different types of livestock are much more balanced and that actions to promote livestock farming should be carried out in Gisenyi, Ruhengeri and Cyangugu provinces as far as cattle are concerned. With regard to the keeping of small animals, it is necessary to raise awareness in Umutara province. Moreover, it seems that cattle farming in that province is putting a strain on the land and that an improvement in quality rather than quantity is required.



a) Cattle

Umutara province has a clear lead with regard to numbers, with a livestock population of 264,193 head of cattle, or 31.2% of the national total of 846,656. It is followed by Gitarama province with 17.3% and Kigali Ngali with 8.5%. The provinces with the lowest head count are Kigali with 2.86% and Gisenyi with 3.19%.

b) Goats

Of a total of 1,308,416 head, Kigali Ngali province takes the lead with 14.66%, followed by Byumba with 14.28%, Kibungo with 12.97% and Gitarama with 11.36%. The lowest head counts are found in Kigali (1.3%) and Gisenyi province (3.16%).

c) Pigs

Of a total of 296,314 head, Gikongoro province takes the lead with 20.43%, followed by Gitarama with 18.47%, Butare with 16.90% and Cyangugu with 9.34%. The lowest head counts are found in Kigali (0.52%) and Umutara province (1.03%).

d) Chickens

Of a total of 1.293.846 birds, Gitarama province takes the lead with 12.91%, followed by Kigali Ngali with 12.48%, Kibungo with 11.24% and Byumba with 10.63%. The lowest percentages are found in Kigali (2.16%) and Gikongoro province (4.96%).

e) Sheep

Of a total of 371,446 head, Ruhengeri province takes the lead with 19.08%, followed by Byumba with 18.99%, Kibuye with 15.05% and Gikongoro with 12.54%. The lowest head counts are found in Kigali (0.74%) and Kibungo province (0.97%).

f) Rabbits

Of a total of 494,978 head, Ruhengeri province takes the lead with 20.82%, followed by Gitarama with 17.33%, Gisenyi with 11.73% and Butare with 11.44%. The lowest percentages are found in Kigali (1.16%) and Umutara province (1.42%).

g) Other poultry

Of a total of 98,572 head, Kibungo province takes the lead with 27.47%, followed by Byumba with 18.36%, Gisenyi with 11.47% and Ruhengeri with 11.26%. The lowest percentages are found in the provinces of Kibuye (almost 0.0%) and Gikongoro (0.83%).

h) Other animals

Kigali takes the lead with 66.44%, followed by Cyangugu with 9.84%, Ruhengeri with 7.28% and Byumba with 7.20%. The lowest percentages are found in the provinces of Umutara (0.01%) and Kibungo (0.42%).

8.1.1.2. Average cattle prices

Three types of price were collected, namely the mean unit price that those surveyed would like to obtain if they sold their stock now, the purchase price paid by those surveyed, the mean sale price obtained at sale and the mean price paid at purchase. For example, for cattle the national mean price that individuals would like to obtain is far higher than the other two mean prices. It is FRw 50,402 compared to FRw 37,150 (sale price) and FRw 38,881 (purchase price), or a difference of FRw 13,252 and FRw 11,521 respectively.

At provincial level, there are significant disparities between the mean sale prices for cattle and there seems to be an inversely proportional relationship between numbers and prices. Thus, Kigali has the lowest numbers (2.86%) and the highest sale price (FRw 53,939). Conversely, Umutara province has the lowest price (FRw 27,865). The only exception to this rule is Gisenyi province and an explanation should be sought. The same applies in the case of purchase prices, which are lower relative to sale prices, although the difference is not significant. We would note that the national average is FRw 37,150 for the mean sale price and FRw 38,881 for the mean purchase price. The

purchase price is higher because at purchase farmers generally buy good quality stock for stockraising, while they bring lower quality stock to sale.

The provinces where cattle sell for the highest prices are: the city of Kigali (FRw 53,939), Ruhengeri (FRw 48,154), Gisenyi (FRw 45,659) and Butare (FRw 45,040). The provinces with the lowest prices are Umutara (FRw 27,865), Gikongoro (FRw 30,696), Kigali Ngali (FRw 32,608) and Byumba (FRw 35,090). The provinces with the highest purchase prices are: Kigali (FRw 51,742), Butare (FRw 49,362), Cyangugu (FRw 47,033) and Ruhengeri (FRw 40,271). Those with the lowest purchase prices are: Gisenyi (FRw 26,049), Umutara (FRw 31,266), Kigali Ngali (FRw 31,427) and Byumba (FRw 36,165).

8.1.1.3. Livestock farming costs

a) Livestock farming costs according to type of cost

Stockraising costs are predominantly composed of shepherding costs (salaries) (31.1%), followed by enclosure maintenance costs (21.4%). Veterinary care takes third place (15.3%), followed by feed (8.8%) and salt (8.4%). If the quality of livestock farming is to be improved, the amount allocated to feed, salt and veterinary care will need to be increased.

b) Livestock farming costs by province

Kigali takes the lead with 20.8% of costs. Umutara province takes second place with 16.9%, followed by Gitarama with 14.2% and Byumba with 10.7%. The provinces with the lowest costs are Kibuye with 1.8%, Gisenyi with 2.9%, Cyangugu with 3.2% and Ruhengeri with 3.3% of costs.

Assuming that there is a direct, positive relationship between livestock farming costs and the health and yield of the livestock population, it is clear that the livestock population of Kigali has a better yield than the other provinces. In effect, with less than 2,86% in terms of numbers (all types taken together), Kigali accounts for over 20% of livestock farming costs. Advisory work must therefore be carried out in the other provinces if livestock farming yields are to be improved.

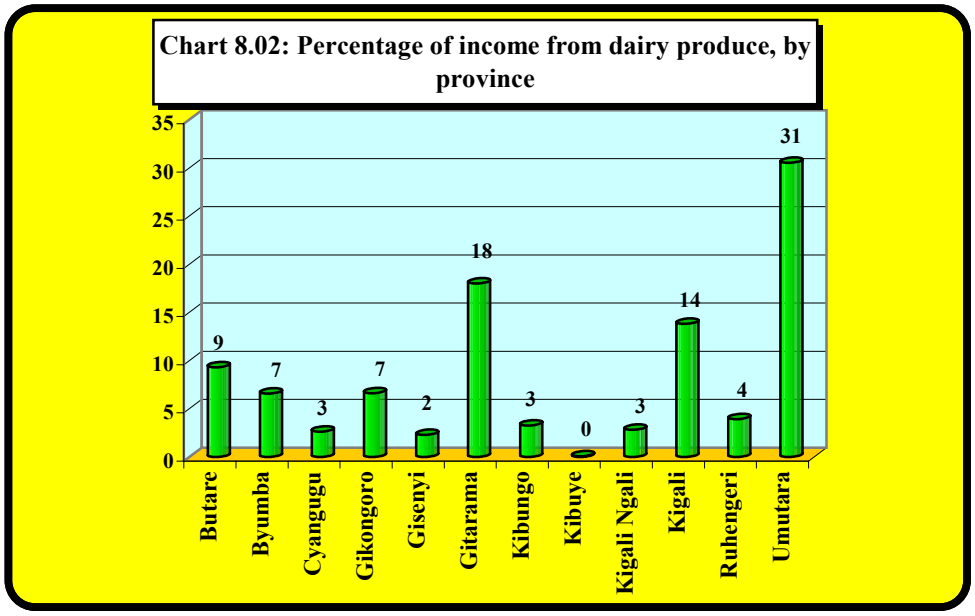
8.1.1.4. Livestock farming income

a) Income from livestock farming activities

The total income from livestock farming is FRw 1,251,447,797. This income is for the most part derived from dairy produce (86.3%) and eggs (9.03%). Other products provide only 4.66%.

b) Income from dairy produce, by province

Of a total estimated national income of FRw 1,079,734,569 obtained by households from the main dairy products, Umutara province derives the most, with 31%. It is followed by Gitarama with 18.0%, Kigali with 14% and Butare with 9%. The lowest incomes are seen in the provinces of Kibuye, with 0.09%, Gisenyi, with 2.31%, and Cyangugu, with 2.65%.



If the income from dairy products is calculated by head of cattle (see table below), it can be seen that cattle belonging to households in Kigali yield an average income of FRw 6,166 (over 4 times the national average of FRw 1,275). Kigali is followed by the provinces of Butare (FRw 2,190), Gitarama (FRw 1,377) and Byumba (FRw 1,249). The lowest figures are seen in Kibuye (FRw 23), Kigali Ngali (FRw 424) and Cyangugu (FRw 938). The low yield in those provinces is partially explained by the low expenditure allocated to livestock farming.

Table 8.01: Income from dairy products by province

Province	Head of cattle number	Income from dairy products (Frw)				Per capita income
		Fresh milk	Sour milk	Butter	Total	
Butare	45 948	98 363 264	0	2 276 177	100 639 440	2 190
Byumba	56 941	71 079 515	68 062		71 147 577	1 249
Cyangugu	30 541	16 588 813	12 047 503		28 636 316	938
Gikongoro	54 542	71 571 511	57 262		71 628 773	1 313
Gisenyi	26 970	24 804 441	0	96 981	24 901 422	923
Gitarama	146 503	181 484 573	12 915 953		194 400 525	1 327
Kibungo	45 262	32 290 651	542 418	2 589 294	35 422 364	783
Kibuye	43 414	637 331	243 278	116 773	997 381	23
Kigali Ngali	72 033	28 900 063	1 043 491	629 987	30 573 541	424
Kigali City	24 213	145 015 032	4 283 517		149 298 549	6 166
Ruhengeri	36 095	42 036 077	479 352		42 515 429	1 178
Umutara	264 193	318 742 732	0	10 830 520	329 573 252	1 247
Total	846 655	1 031 514 002	31 680 835	16 539 732	1 079 734 569	1 275

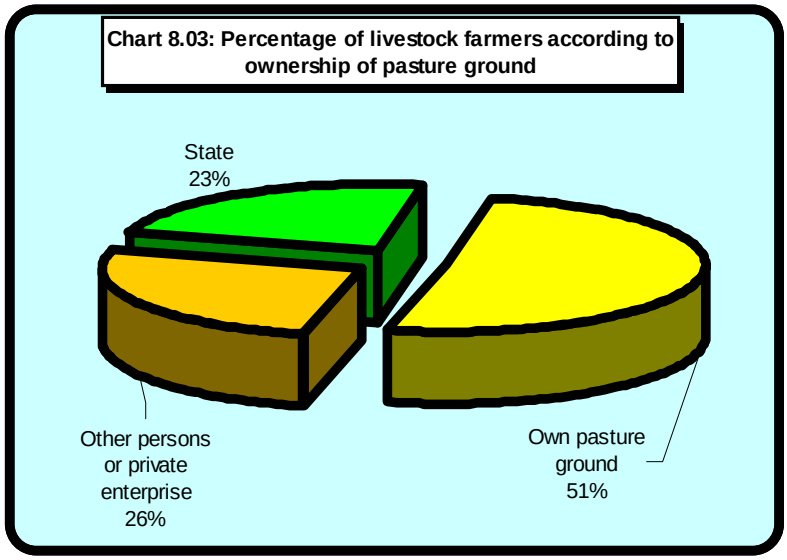
c) Average income per livestock-farming household

At national level, the average income of a livestock-farming household is FRw 6,937, although there are significant disparities between place of residence. The figure is FRw 68,036 in Kigali, compared to FRw 34,795 in the other towns and only FRw 5,786 in rural areas. This shows that significant action needs to be carried out in order to raise income levels in rural areas and thus reduce poverty. With regard to products, households selling fresh milk derive the most income, although the same

disparities are present between place of residence. FRw 144,005 in Kigali, FRw 91,614 in the other towns and FRw 22,121 in rural areas.

8.1.1.5. Features of pasture ground

69.5% of maintained pasture grounds are found in rural areas, while 19% are found in the other towns and 11.1% in Kigali City.



With regard to the ownership of pasture grounds, the chart shows that 50.7% belong to the farmer, 25.9% belong to some other person or private enterprises and 23.4% belong to the State. Overall, the mean cost of pasture ground is FRw 73,349, although there is a difference in mean cost according to whether the ground belongs to the farmer (FRw 134,423), another person or enterprise or undertakings (FRw 5,763) or to the State (FRw 15,707). This means that farmers maintain pasture ground that belongs to them more.

The mean period of use during the last 12 months was 8.7 months, with an average of 9.4 months for pasture grounds that belongs to the farmer, 7.9 months forthat that belongs to private individuals or undertakings and 8.3 months for that that belongs to the State.

8.1.2. Agriculture

8.1.2.1 Mean size of family holding

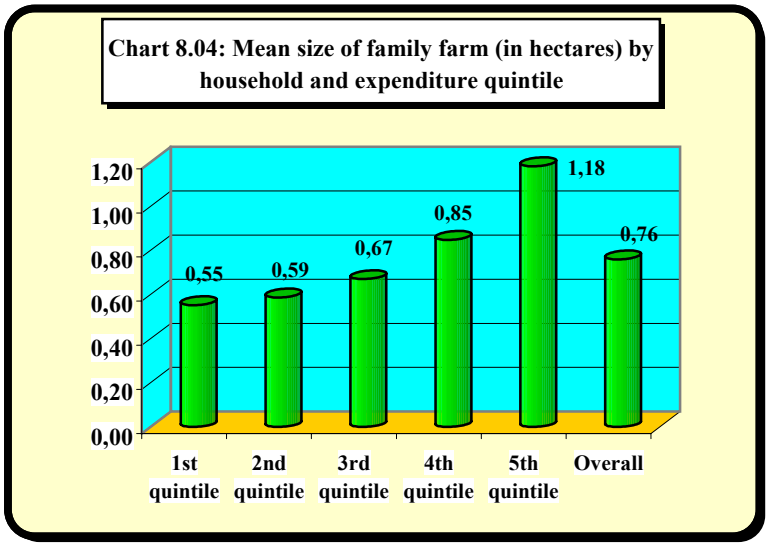
In Rwanda, the lack of land is a crucial problem. At national level, the mean size of a family holding is 0.76 ha. The provinces that have the largest family holding are Kibungo with an average of 1 ha, Umutara with 0.99 ha, Kigali Ngali with 0.91 ha and Gitarama with 0.86 ha. The provinces with the smallest are Butare with 0.36 ha, Gikongoro with 0.50 ha, Kibuye with 0.64 ha and Cyangugu with 0.72 ha.

Table 8.02: Distribution of households according to size of farm and place of residence

Size of family farm	Context			
	Kigali City	Other towns	Rural areas	Total
Less than 0.5 Ha	96.4	81.7	54.9	58.6
0.5 to 1 Ha	0.7	7.9	20.7	19.0
1 to 1.5 Ha	1.0	2.6	11.6	10.6
1.5 to 2 Ha	0.4	2.6	6.4	5.8
2 to 3 Ha	0.4	0.9	3.8	3.5
3 to 4 Ha	0.4	1.4	1.3	1.2
4 to 5 Ha	0.2	0.7	0.6	0.5
Over 5 Ha	0.6	2.1	0.8	0.8
	100.0	100.0	100.0	100.0

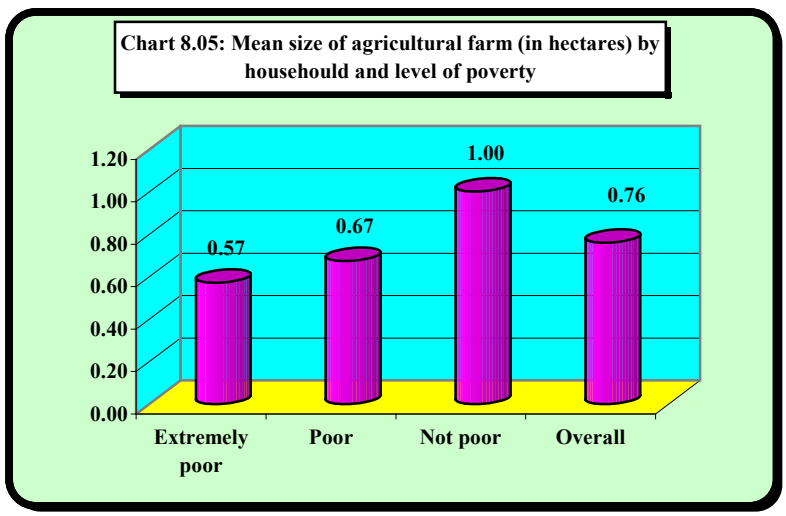
The above table shows that over 58.6% of households own a farm of less than 0.5 ha. It can also be seen that 94% of households have farms of less than 2 ha.

8.1.2.1.1. Size of family holding by expenditure quintile



If households are divided into expenditure quintiles, it can be seen that the mean size of family farm in the 1st quintile (the poorest quintile) is 0.55 ha. For households in the 2nd quintile, the mean size of family farm is 0.59 ha. For households in the 3rd quintile, the mean size of family farm is 0.67 ha. For households in the 4th quintile, the mean size of family farm is 0.85 ha. Lastly, for households in the 5th quintile, the mean size of family farm is 1.18 ha. Thus, it can be seen that the wealthier the category to which the farmer belongs, the larger the mean size of the farm. This indicates that there is a correlation between poverty and the small size of agricultural farm.

8.1.2.1.1. Size of family farm according to level of poverty

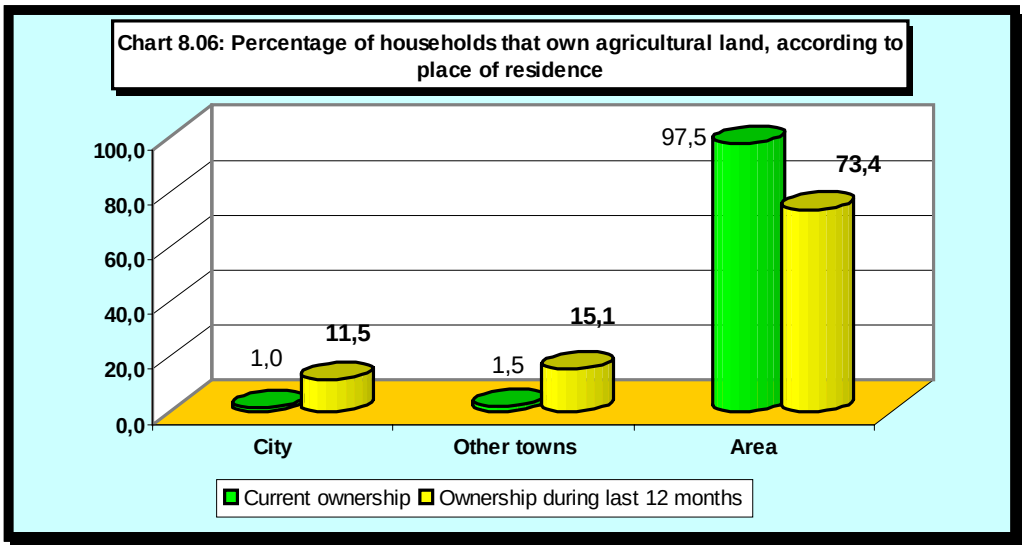


In addition, it seems that for households in extreme poverty, the mean size of the family farm is 0.57 ha, for poor households the mean size is 0.67 ha and for households that are not poor the mean size is 1 ha. It appears that Butare, Gikongoro and Kibuye are in extreme poverty and actions should be undertaken to promote agriculture in those provinces.

With reference to the gender of the

household head, female headed households are poorer than male headed ones, with a mean family farm of 0.66 ha compared to 0.81 ha for males. The conclusion is thus that female heads of household are poorer than their male counterparts.

7. Ownership of agricultural land according to place of residence



The adjacent chart shows that at present 97.5% of households that own agricultural land are in rural areas, compared to 1.5% in the other towns and 1% in Kigali. 12 months ago, 73.4% of households that owned agricultural land were in rural areas, compared to 15.5% in the other towns and 11.5% in Kigali.

8. Use of inputs according to plot size

83.2% of plots under 0.5 ha use inputs, compared to 8.3% of plots of 0.5-1 ha, 5.3% of plots of 1-1.5 ha, 2.7% of plots of 1.5-2 ha, 0.9% of plots of 2-3 ha and 0.4% of plots of 3-5 ha. It therefore seems that inputs are used above all on small plots of land under 0.5 ha. Their use on larger plots could improve yield, increase production and thus contribute to food security.

9. Maintained area according to mode of farming and gender

Overall, farmers involved in share-farming have an average area of 0.13 ha, compared to 0.15 ha for rent, 0.20 ha for rent-free, 0.23 for squatting and 0.33 ha for other types of farming. Males involved in share-farming farm an average area of 0.14 ha, compared to 0.11 ha for females. Males who rent farm an average area of 0.20 ha, compared to 0.04 ha for females. Males who rent free farm an average area of 0.22 ha, compared to 0.16 ha for females. Males who squat farm an average area of 0.29 ha, compared to 0.09 ha for females. Males who use other modes of farming farm an average area of 0.43 ha, compared to 0.11 ha for females. Overall, for all modes of farming, men benefit more than women (0.17 ha for men compared to 0.12 ha for women).

10. Decision making

Overall, household head who makes decisions. Thus, on farms under 0.5 ha, the head of household head decides in 87.7% of households, compared to 11% for the farmer, 0.8% for another member of the household and 0.3% for persons living outside the household.

On farms of 0.5-1 ha, the household head is the decision maker in 90.5% of households, compared to 8.3% by the farmer, 0.9% by another member of the household and 0.3% bypersons living outside the household.

On farms of 1-1.5 ha, the household head is the decision maker in 92.1% of households, compared to 7.1% by the farmer and 0.8% by another member of the household. No decisions are made by persons living outside the household.

On farms of 1.5-2 ha, the household head is the decision maker in 94.4% of households, compared to 3.6% by the farmer, 1.4% by another member of the household and 0.5% bypersons living outside the household.

11. Crop according to size and the main crop cultivated 12 months ago

12 months ago, 5 main crops accounted for 74.8% of cultivated land. These were beans (23.5%), sweet potatoes (14.9%), bananas for beer (14.2%), cassava (11.5%) and sorghum (10.7%).

On farms of less than 0.5 ha, the main crops are beans (24% of the surface area), sweet potatoes (16.2%), bananas for beer (13.2%), cassava (11.1%) and sorghum (10.5%).

On farms of 0.5-1 ha, the main crops are beans (21.0% of the surface area), bananas for beer (19.2%), cassava (14.6%) and sorghum (11.4%).

On farms of 4-5 ha, the main crops are beans (26.1% of the surface area), bananas for cooking (17.8%), sorghum (15.3%) and maize (13.7%).

On farms over 5 ha, the main crops are sorghum (31.8% of the surface area), potatoes (26.1%), sweet potatoes (20.0%) and bananas for beer (13.8%). It is apparent that the larger the farm, the more bananas are grown for beer. Farming should be reorganised in favour of crops other than bananas for beer.

During the 1st season of the last 12 months, 5 main crops accounted for 75.9% of cultivated land. These were beans (33.7%), sweet potatoes (14.8%), cassava (9.7%), sorghum (9.3%) and bananas for beer (8.4%). As for the last 12 months, these crops predominate regardless of the surface area size.

During the 2nd season of the last 12 months, the same 5 main crops accounted for 73.7% of cultivated land. These were beans (28.0%), sweet potatoes (15.5%), sorghum (15.5%), cassava (7.7%) and bananas for beer (7.4%). The same crops predominate for all categoriesarea size, with the exception of the over 5 ha category, which comprises potatoes (33.3%), sorghum (23.9%), beans (14.9%), sweet potatoes (12.2%) and bananas (8.5%).

8.2. HOUSEHOLDS NON-FARM ENTERPRISES

The HLCS collected detailed information on non-farm activities carried out by households over the last 12 months. The results are presented in terms of occupations carried out by one or more members of the household.

8.2.1. Proportion of households that have carried out at least one non-farm enterprise activity and their location

Overall, 16% of Rwandan households have carried out at least one non-farm enterprise activity. Of those households, 76.9% are male headed and 23.1% are female headed .

Non-farm enterprise activities are concentrated in rural areas (75.2%), with Kigali accounting for 17.81% and the other towns accounting for 7%.

8.2.2. Main occupations of households according to type of household and gender head household head.

Overall, 61.1% of households carry out commercial activities, falling into the category of petty traders and hawkers. Labourers and unskilled workers in the non-agricultural sector and plant operators take second place with 28.7%. Other categories account for less than 4% of households.

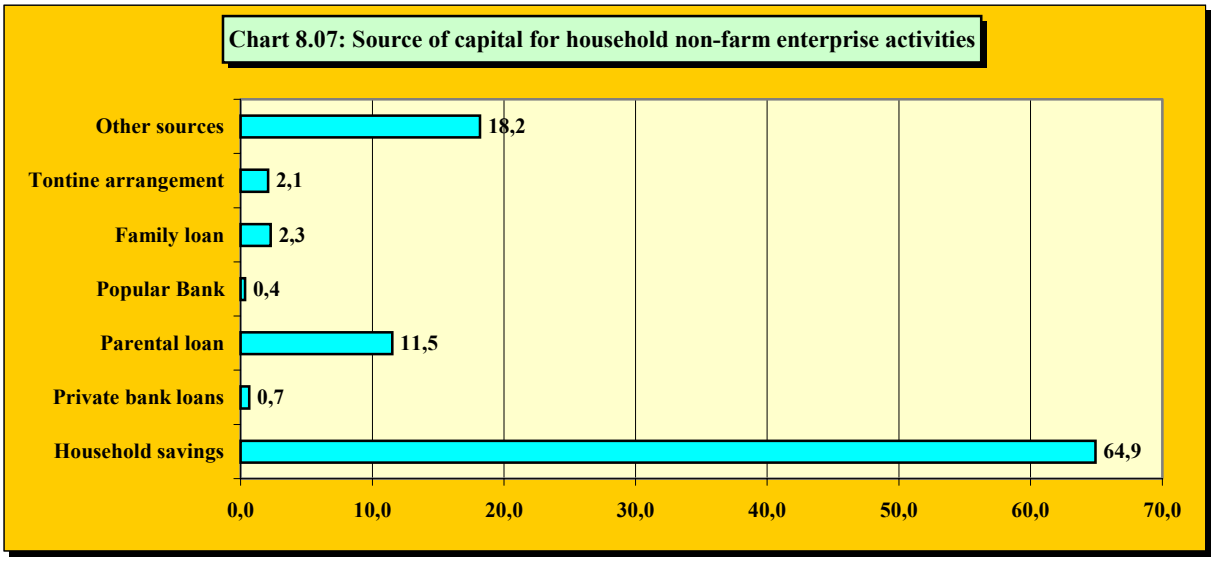
With regard to the gender of the household head, 57.5% of male headed households and 73.4% of female headed households fall into the category of traderspetty traders and hawkers. 30.7% of male headed households and 21.8% of female headed households fall in to the category of labourers and unskilled workers. 3.4% of male headed households and 2.6% of female headed households fall into the category of other workers. 3.2% of male headed households and 1.2% of female headed households fall into the category of specialised workers in the services. 2.2% of male headed households and 0.8% of female headed households fall into the category of farmers (fishing). 2.2% of male headed households and 0.3% of female headed households fall into the category of professional workers. 0.8% of male headed households and 0% of female heade households fall into the category of administrative staff and similar workers.

8.2.3. Head of enterprise, by occupation and gender

In the liberal professions, 89.2% of those in charge of the enterprise are males while 10.8% are females. Among senior staff in the administration, 100% are males. Among administrative staff and similar workers, 78.4% are males while 21.6% are females. Among traderspetty traders and hawkers, 48.9% are males and 51.1% are females. Within specialised workers in the services, 59.7% are males while 40.3% are females. Among agricultural labourers (fishing), 95.4% are males while 4.6% are females. Among labourers and unskilled workers in the non-agricultural sector and plant operators, 71.4% are males and 28.6% are females. Within the other workers category, 81.2% are males and 18.6% are females. Overall, 58.5% of heads of enterprise are males and 41.5% are females. This shows that there is exist inequality between the sexes every where. Actions to promote women should be stepped up. An analysis by gender reveals that for men, petty traders and hawkers are the dominant category with 51.2%, followed by labourers and unskilled workers in the non-agricultural sector and plant operators with 34.7%. Similarly, for women petty traders and hawkers are the dominant category with 75.2%, followed by labourers and unskilled workers in the non-agricultural sector and plant operators with 19.5%.

8.2.4. Principal source of capital according to gender

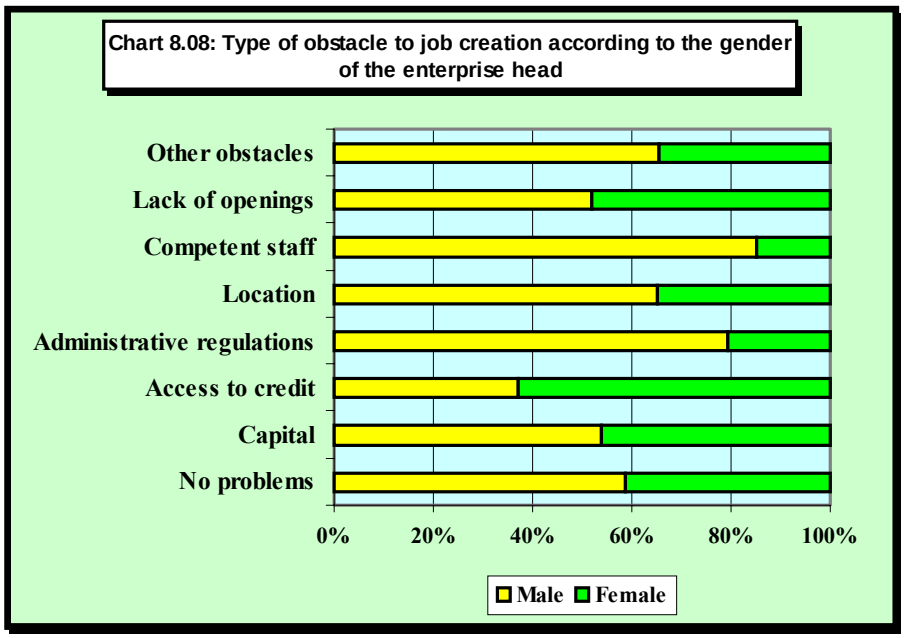
Overall, 64.9% of those in charge state that their source of capital is household savings, with 18.2% citing other sources, 11.5% family loans, 2.3% other loans, 2.1% tontine arrangements, 0.7% private bank loans and 0.4% loans from the popular Bank. The same trend is observed for both males and females.



Thus, 65% of males and 64.8% of females cite household savings. 20.2% of males and 15.3% of females cite other sources. 9.2% of males and 14.3% of females cite family loans, while 1.9% of males and 2.3% of females cite tontine arrangements.

8.2.5. Type of obstacle to job creation, according to the gender of head of enterprise

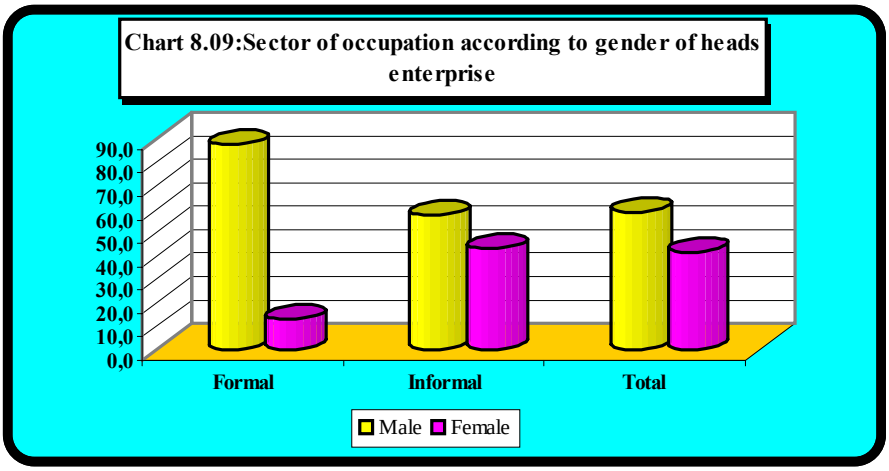
Overall, 35% of enterprise heads state that there is no problem, 26.4% cite a lack of capital, 13.9% "other obstacles", 12% a lack of markets, 8.3% location, 1.9% administrative regulations, 1.2% access to credit and 0.9% competent staff. Of the males, 35.1% state that there is no problem, 24.4% cite a lack of capital, 15.6% "other obstacles", 11% a lack of openings, 9.2% location, 2.6% administrative regulations, 0.8% access to credit and 1.4% competent staff. Of the females, 34.9% state that there is no problem, with 29.2% cite capital, 11.6% "other obstacles", 11.6% a lack of openings, 6.9% location, 1.0% administrative regulations, 1.8% access to credit and 0.3% competent staff. It should be noted that females are more concerned than males with problems of capital and access to credit.



Of those who state that there is no problem with regard to job creation, 58.6% are males and 41.4% are femles. Of those who cite capital, 54% are men and 46% are women. Of those who cite access

to credit, 37.2% are men and 62.8% are women. Of those who cite administrative regulations, 79.5% are men and 20.5% are women. Of those who cite location, 65.3% are men and 34.7% are women. Of those who cite the competence of staff, 85.2% are men and 14.8% are women. Of those who cite a lack of openings, 51.9% are men and 48.1% are women. Lastly, of those who cite other obstacles, 65.4% are men and 34.6% are women.

8.2.6. Sector of occupation according to gender of the person in charge



Of those in charge of undertakings in the formal sector, 87.2% are male and 12.8% are female; in the informal sector, 57.2% are male and 41.5% are female. It can also be seen that overall males account for 58.5% while females account for only 41.5%. Of the male headed under undertakings, 6.6% work in the formal sector, compared to 93.4% for the informal sector. Likewise, female headed undertakings, 1.4% work in the formal sector, compared to 98.6% for the informal sector. Overall, 4.4% of those heading undertakings work in the formal sector, compared to 95.6% for the informal sector.

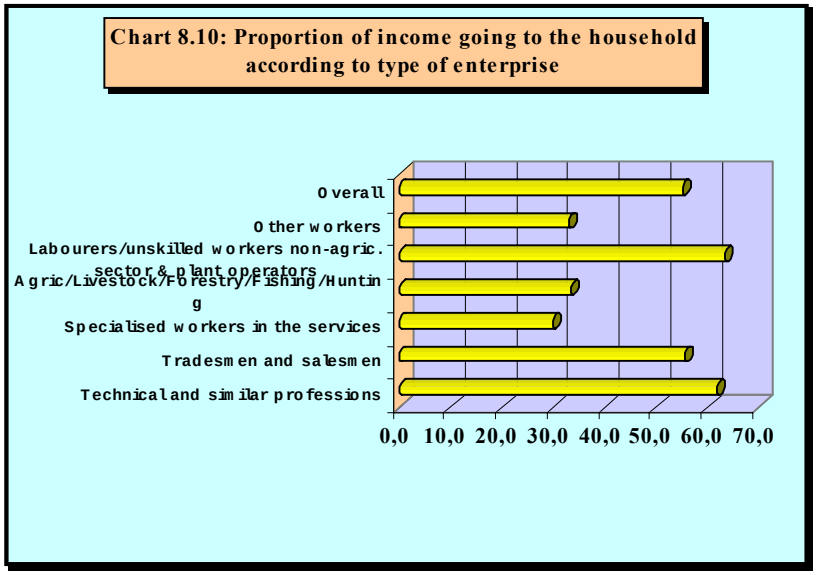
8.2.7. Type of Non-farm enterprise according to main customer

It can be seen that, overall, the main customers of household non-farm enterprises are “individuals from other households”, who account for 86%. Local traders account for 9.1% of all customers, followed by small businesses with 3.2%.

8.2.8. Mean number of customers per month according to enterprisse and gender of enterprise head

The services provided by traders and hawkers account for 78.2% of all declared customers in respect of non-agricultural enterprise activities carried out by households. In this category of service, it can be seen that female-headed enterprises have slightly more customers, with 43.6% compared to 34.6% for commercial activities than male-headed ones. In second place, customers use the services of labourers and unskilled workmen in the non-agricultural sector and plant operators, with 11.3% for males and 3.8% for females. Overall, male-headed services are used by 49.8% of customers, compared to 50.2% for female-headed services.

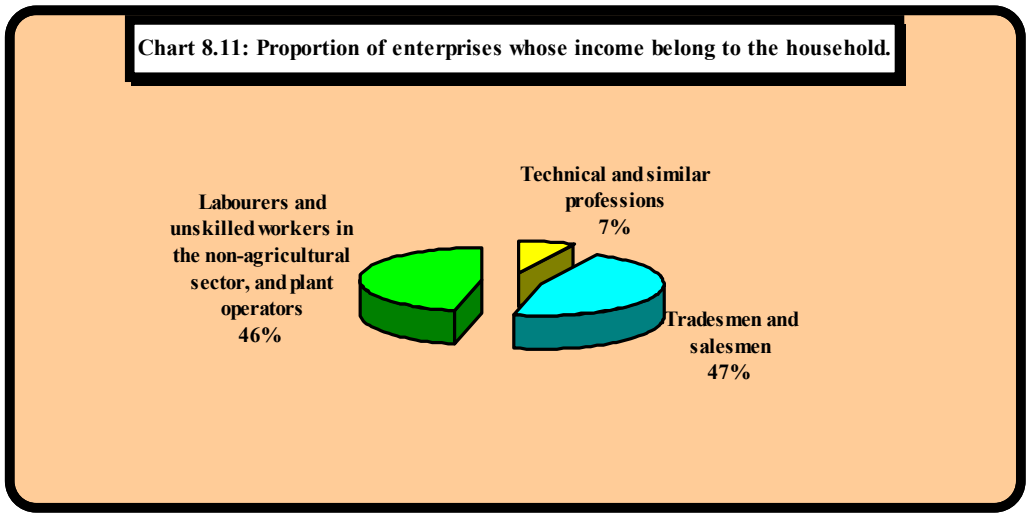
8.2.9. Mean share of income going to the household according to the enterprise and gender of enterprise head



For men and women overall, 61.8% of income from the professions go to households, compared to 55.6% for traders and hawkers, 30% for specialised workers in the services, 33.5% for agriculture (fishing), 63.4% for labourers and unskilled workmen in the non-agricultural sector and 33% for other workers.

For men, the same trend is seen, with 61.8% for the professions, 52.3% for traders, 30% for specialised workers in the services, 33.5% for agriculture, 64.3% for labourers and unskilled workers in the non-agricultural sector and 33% for other workers. Overall for men, 53.5% of income goes to the household. In contrast, for women, 63% of income from staff employed in trade goes to the household, compared to 58% of income from labourers and unskilled workers in the non-agricultural sector. For women overall, 61.8% of income goes to the household.

8.2.10. Enterprises whose income belong to the household, according to the gender of the Head.



For men, 11.4% of jobs in the “technical and similar” professions have an income that belongs to the household, while 17% of jobs in the “traders and hawkers
” category have an income that belongs to the household. Similarly, 71.5% of jobs in the category “labourers and unskilled workers in the non-agricultural sector” give all their income to the household. For women, all jobs in the category “traders and hawkers” give their full income to the

household. Overall, the chart shows that 7% of jobs in the category "technical and similar professions" have an income that belongs to the household and approximately 46% and 47% respectively of jobs in the categories "unskilled workers in the non-agricultural sector" and "traders" have an income that belongs to the household.

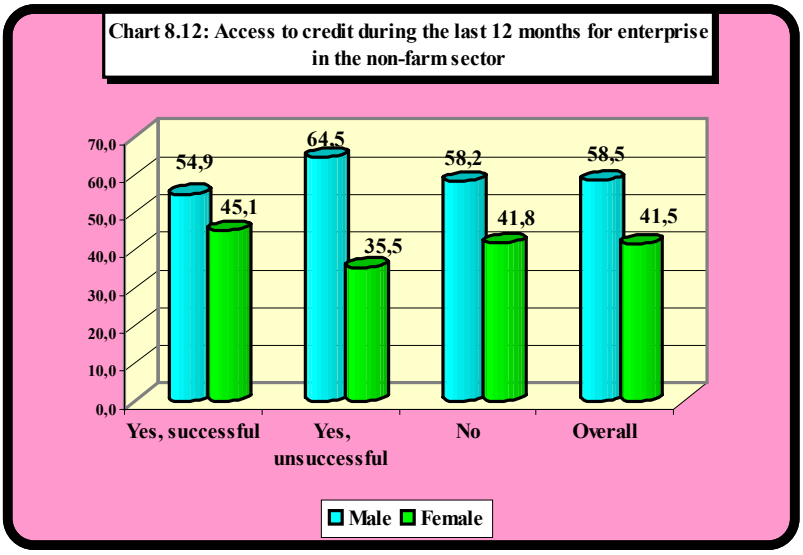
8.2.11. Average period in a job

Where a member of the household states that they have had a job during the last 12 months, they are asked how long they were in that job. Overall, the average period in the non-farm sector is 6.5 years (7.1 years for men and 5.5 years for women).

8.2.12. Mean duration of jobs in the non-farm sector over the last 12 months according to the enterprise and gender of the head of enterprise

Overall, jobs in the non-agricultural sector were carried out for 9 months of the last 12-month period, regardless of the gender of the person in charge. This trend is observed in almost all categories of occupation.

8.2.13. Access to credit during the last 12 months, according to the gender head of enterprise



Non-farm activities do not have access to credit. Only 4.2% of enterprise in the non-farm sector requested and obtained credit, 6.6% requested credit but were unsuccessfull and 89% did not make any request.

The above chart shows access to credit according to the gender of the person in charge of a non-agricultural activity.

Overall, men request and obtain credit more than women, which explains why women experience more poverty in relation to men. Of those in charge of an undertaking who successfully requested credit, 54.9% are male. Of those who stated that they had requested credit without success, 64.5% are men and 35.5% are women. Measures need to be taken to encourage women to request credit, on the one hand, and to make it easier for them to gain access to it, on the other hand.

8.2.14. Volume of borrowing and repayments

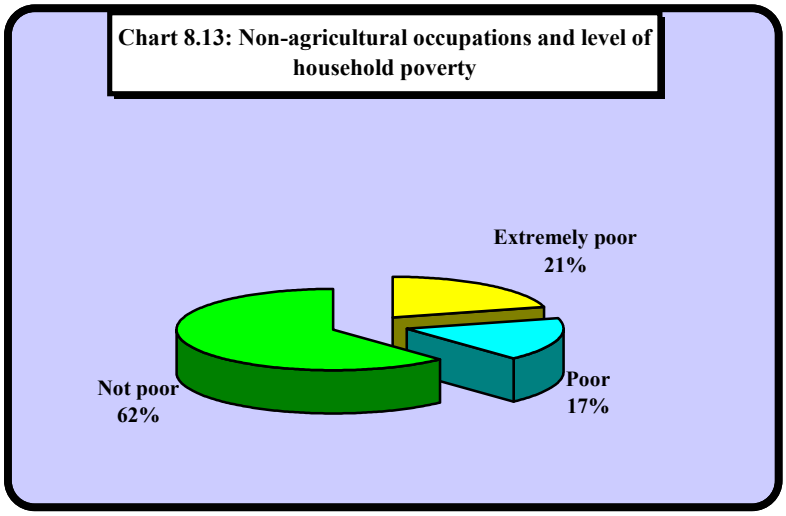
8.2.14.1. Average borrowing over the last 12 months

Overall, men had greater access to credit, with average borrowings of FRw 200,121 over the last 12 months, compared to FRw 41,709 for women. Actions should be undertaken in favour of female in order to ensure that they have greater access to credit. The category that received most credit is that of "traders and hawkers", with FRw 233,856 for males and FRw 43,635 for female. That category is followed by "labourers and unskilled workers in the non-agricultural sector and plant operators", with FRw 152,194 for males and FRw 5,000 for females.

8.2.14.2. Average repayments over the last 12 months

As in the case of borrowings, males repaid more than females, with average repayments of FRw 131,158 and FRw 12,171 respectively. Regardless of gender, the largest repayments were made in the category of "traders and hawkers", with an average of FRw 140,791 and FRw 12,652 respectively. That category is followed, as in the case of borrowings, by "labourers and unskilled workers in the non-agricultural sector and plant operators", with FRw 134,903 for men and FRw 5,000 for women.

8.2.15. Non-agricultural occupations and level of poverty



We have already seen that non-farm enterprise are a source of household income.

This chart shows that 62% of non-farm enterprise are carried out by households that are not poor, while 20.9% and 17.1% respectively are carried out by extremely poor and poor households.

Micro-credits for non-farm enterprise activities should be granted to households as part of programmes to reduce poverty.

PARTIAL CONCLUSION

In view of the considerable demographic pressure on agriculture and the increasing scarcity of land, non-farm enterprise activities need to be created in rural areas. This could form part of programmes to reduce poverty. They are in effect a source of household income. Their creation should be accompanied by measures to ensure easy access to micro-lending in rural areas.

CHAPTER IX: TRANSFERS, INCOME AND MISCELLANEOUS EXPENDITURE

9.1. Transfers

9.1.1. Transfers made

Table 9.1. Transfers according to place of residence

Place of residence	Remittance		
	Yes	No	
Kigali City	45.1	54.9	100.0
Other towns	42.7	57.3	100.0
Rural areas	64.1	35.9	100.0
Total	62.1	37.9	100.0

62.1% of households stated that they had made transfers by way of solidarity in respect of other households. This positive behaviour is displayed by over three in five households in rural areas and slightly over two in five households in urban areas.

Table 9.2. Transfers according to province

Province	Remittance		
	Yes	No	
Butare	42.7	57.3	100.0
Byumba	59.9	40.1	100.0
Cyangugu	57.1	42.9	100.0
Gikongoro	76.3	23.7	100.0
Gisenyi	59.8	40.2	100.0
Gitarama	73.0	27.0	100.0
Kibungo	73.1	26.9	100.0
Kibuye	54.9	45.1	100.0
Kigali Ngali	55.6	44.4	100.0
Kigali	45.1	54.9	100.0
Ruhengeri	85.6	14.4	100.0
Umutara	40.1	59.9	100.0
Total	62.1	37.9	100.0

Ruhengeri province stands out as the most ready to make transfers, with 85.6%. It is followed by Gikongoro, Kibungo and Gitarama. Such mutual assistance occurs less frequently in Umutara, Butare and Kigali, where less than half of all households make transfers.

Table 9.3. Transfers according to level of poverty

Level of poverty	Remittance		
	Yes	No	Total
Extremely poor	53.2	46.8	100.0
Poor	63.4	36.6	100.0
Not poor	69.3	30.7	100.0
Total	62.1	37.9	100.0

A predisposition to make transfers seems to depend on living standards, since the ability to make transfers more often is more marked among the not-poor. This finding leads one to conclude that the not-poor households in rural areas are the most inclined to come to the assistance of other citizens.

However, in terms of value, transfers from rural areas are clearly lower than those from urban areas. Rural transfers amount to less than a quarter of urban transfers (FRw 6,000 compared to FRw 26,759). Gitarama comes just behind Kigali and before Ruhengeri in terms of the volume of transfers made. Kibuye and Umutara come last in this perspective.

Table 9.4. Mean value of transfers according to area

area	Value in cash	Value of food products	Other values in kind	Total transfers made
Urban	21,907	2,017	2,835	26,759
Rural	1,106	4,101	794	6,000
Total	3,161	3,895	995	8,052

Rural areas transfer mainly food products, while urban areas more often give cash. This is corroborated by the table below, which shows that 87% of households in Kigali making transfers do so in cash, while almost the same proportion of rural households make transfers in food products.

Table 9.5. Distribution of households that have or have not made transfers according to place of residence and type of transfer

Place of residence of household	Transfers in cash			Transfers of food			Transfers in kind		
	No	Yes	Total	No	Yes	Total	No	Yes	
Kigali City	13.0	87.0	100.0	78.3	21.7	100.0	72.0	28.0	100.0
Other towns	28.5	71.5	100.0	58.8	41.2	100.0	75.8	24.2	100.0
Rural areas	81.8	18.2	100.0	11.2	88.8	100.0	90.0	10.0	100.0
	74.8	25.2	100.0	17.8	82.2	100.0	88.2	11.8	100.0

Over 35% of the population (2,814,894 individuals) receive transfers made by households. Of these, most (three in five people) live in the countryside. One person in three receiving support is helped by households in the same town or rural area.

There is a strong sense of solidarity within the countryside, where only 6% of transfers go out of the rural area. One household in four in Kigali shows concern for fellow citizens and only another tenth goes to the assistance of others in the towns. Is this associated with proximity, if transfers to Kigali generally come from Umutara, Kigali Ngali and Gitarama?

Table 9.6. Transfers according to place of residence of household and recipient

Place of residence	Place of residence of recipient							
	Same rural area / town	Kigali	Other towns	Other rural areas	Neighbouring numberries	Other African numberries	Countries outside Africa	Total
Kigali City	4.3	20.6	10.7	57.1	4.4	1.5	1.6	100.0
Other towns	14.2	10.1	16.0	53.0	5.7	1.0		100.0
Rural areas	34.3	2.2	3.3	59.7	0.4	0.0	0.1	100.0
Total	33.2	2.9	3.7	59.5	0.6	0.1	0.1	100.0

Transfers are made tofemales more than to males, in particular to females in other African numberries. Assistance to the other towns is weighted more towards males.

Table 9.7. Distribution of recipients of transfers according to place of residence

Place of residence	Gender of recipient		
	Male	Female	
Same rural area or town	51.6	48.4	100.0
Kigali City	43.9	56.1	100.0
Other towns	56.6	43.4	100.0
Other rural areas	46.1	53.9	100.0
Neighbouring countries	45.2	54.8	100.0
Other African countries	17.9	82.1	100.0
Countries outside Africa	50.5	49.5	100.0
Total	48.2	51.8	100.0

9.1.2. Transfers received

Approximately three in five households receive transfers from other members of the household. Those in rural areas gain most from this situation, followed by those in the other towns (64.7% and 32.7% of households respectively).

In Kigali, a little over a quarter of households benefit from these transfers. Ruhengeri, Gikongoro, Gisenyi and Kibungo provinces experience such transfers the most, in terms of assistance both provided and received. Conversely, Umutara does not participate in this form of charity.

With regard to the level of poverty, the poorest receive slightly more often than those who are least poor, and almost all transfers received do not have to be repaid. Transfers received by households essentially come from the numberryside. Households in Kigali receive assistance in over two in five cases (45% of cases) from other residents in Kigali and in 36.4% of cases from the numberryside. 6.2% and 2.4% of rural inhabitants receive assistance from Kigali and the other towns respectively.

Table 9.8. Distribution of out going transfers according to place of residence and gender

Place of residence of sender	Gender of sender		
	Male	Female	
Same rural area or town	47.4	52.6	100.0
Kigali City	68.9	31.1	100.0
Other towns	54.7	45.3	100.0
Other rural areas	41.4	58.6	100.0
Neighbouring countries	46.2	53.8	100.0
Other African countries	29.3	70.7	100.0
Outside Africa	67.6	32.4	100.0
Total	45.9	54.1	100.0

Women play a larger role in these transfers, accounting for 54.1% of senders of transfers to households. While urban residents receive more food products, probably from rural areas, they send money to the countryside in exchange. Although residents of the other towns receive transfers less frequently, they have the highest value.

9.1.3. Miscellaneous incomes

Households in Kigali record more miscellaneous reciepts than other citizens, with an annual average of FRw 4,970, while households in the other towns receive less than a third of that amount and households in rural areas receive even less (FRw 234). Access to various incomes benefits the not-poor more than the poor (who earn ten times less) and benefits male-headed households more than female-headed ones.

Regardless of place of residence, the level of poverty or the gender of the household head, the main source of miscellaneous income is renting out of properties, fetching the highest earnings for residents of Kigali, for the not-poor and male-headed households . Income from dowries or inheritances constitutes the second highest source of household income, and is primarily paid to the father of the family rather than to the mother. The sale of goods is the third highest source of income, bringing the highest earnings for those living in the other towns. Female-headed households obtain a higher income than male-headed onesas regards social security, pensions and insurance payments. This is due to the higher rate of widowhood for females and the fact that some females have a husband in prison (making them the household head).

Table 9.9. Average miscellaneous income according to place of residence, level of poverty, household head gender and type of income

Type of income	Place of residence				poverty level			Gender	
	National	**Kigali City**	**Other towns**	**Rural**	**Extremely poor**	**Poor**	**Not poor**	**Male**	**Female**
Miscellaneous income from public sector									
State social security	342	1801	1588	189	147	7	661	145	761
Severance pay	126	993	551	45	0	18	284	160	55
State pension	260	1215	705	172	15	86	552	152	490
Other public income	390	5249	94	23	5	11	895	471	220
Miscellaneous income from private sector									
Private social security	39	403	0	12	0	0	89	26	64
Private sector pension	13	0	0	14	6	0	24	3	32
Insurance payment	182	1265	44	102	40	305	251	123	305
Dowry or inheritance	962	1716	549	916	158	537	1852	1168	524
Games of chance	33	346	0	10	17	1	62	45	8
National lottery	12	15	29	12	18	1	12	13	11
Sale of land	337	1056	635	271	283	221	435	352	303
Sale of goods	828	5121	6421	316	115	136	1757	1125	199
Other contributions	64	634	551	4	0	3	146	70	51
Property rental	3930	49983	8926	193	267	441	8676	4111	3546
Net income	977	4399	2974	647	464	409	1677	1352	182
Other private income	1192	5322	2751	822	178	434	2415	1562	411
Total	605	**4970**	**1614**	**234**	**107**	**163**	**1237**	**680**	**448**

9.1.4. Miscellaneous expenditure

As far as miscellaneous expenditure is concerned, large amounts are laid out for ceremonies: marriages and dowries average FRw 4,394 per household annually. In second place, resources are taken up with taxes and duties , followed by religious festivals. However, there are disparities according to place of residence, level of poverty and household head gender.

Table 9.10. Mean expenditure according to place of residence, level of poverty, gender and type of expenditure

Type of expenditure	Place of residence				Level of poverty			Household gender	
	National	Kigali City	Other towns	Rural	Extremely poor	Poor	Not poor	Male	Female
Taxes/duties	1610	10868	19412	323	249	332	3366	2075	626
Contribution to projects	668	2815	2667	438	227	313	1212	790	411
Charitable works	579	2948	2185	344	149	206	1120	715	291
Gifts	531	5443	1138	131	49	49	1165	700	173
Marriage/dowry	4394	22280	14814	2673	1344	2011	8115	5375	2318
Baptism	1083	3081	1746	907	654	736	1612	1172	896
Deaths	978	5758	2994	542	192	290	1969	1084	753
Religious festivals	1183	5754	3168	765	335	682	2147	1391	743
Sacrifices	438	2442	2740	209	130	191	816	526	252
Other ceremonies	301	2131	1666	115	20	59	654	369	156
Other expenditure	762	3041	398	597	119	305	1527	982	297
Total	**1139**	**6051**	**4812**	**640**	**315**	**470**	**2155**	**1380**	**629**

In Kigali, marriage costs are over five times higher than the national level, while expenditure relating to a death is equivalent to expenditure on festivals. It can also be seen that a significant proportion of expenditure is allocated to baptisms.

In the other towns, the cost of taxes and duties exceeds all other expenditure and sacrificial costs are higher than in other places of residence.

Rural areas have the lowest expenditure, with expenses essentially being incurred for ceremonies (marriages in particular). Poor households spend less and when they do so it usually on ceremonies. With regard to the household head gender males spend more than females under all headings.

9.2. CREDIT, SAVINGS AND DURABLE GOODS

9.2.1. Durable goods

Households in urban areas own more durable goods than those in rural areas, and households that are not poor own more than those that are poor.

In Kigali, almost one in two households owns a complete living-room set and a radio, while two in five have a radio cassette player. Approximately 15% own a television, 6.2% a car and 2.6% a bicycle. As far as the other place of residence are concerned, 36.4% of households in the other towns and almost a quarter of households in rural areas own a radio, while a third and 7.6% respectively have a radio cassette player and 8.7% and 6.8% a bicycle.

While poor households have virtually no durable goods, households that are not poor have the largest proportion of goods and those that are worth the most: only 16% of extremely poor households and 27.3% of poor households have radios, compared to 37.4% of households that are not poor, while the proportions for bicycle ownership are 2.5%, 5.7% and 10.6% respectively. Almost all goods have been acquired recently (less than a year ago).

9.2.2. Savings

More than one household in five states that at least one of its members has savings. The situation is far from being consistent for all place of residence and levels of poverty. The figures are 43.4% for Kigali, 42.3% for the other towns and 19.7% for rural areas. For the poor, the proportion is only 11.6%, compared to nearly a third for those who are not poor.

Of those who have savings, approximately two in five hold savings accounts, with a higher proportion in urban areas: 90% in Kigali and 85% in the other towns. Savings accounts in rural areas are held by only 28.1% of households that save. Less than one household in ten among the poor holds a savings account, compared to 55.5% among those who are not poor.

In contrast, tontine arrangements, an informal form of savings, are more common among the poor and in rural areas.

9.2.3. Credits

Table 9.11: Household debt by place of residence

Existence of debt in the household	Place of residence			
	Kigali City	Other towns	Rural areas	Total
Yes	16.7	16.0	33.8	32.1
No	83.3	84.0	66.2	67.9
Total	100.0	100.0	100.0	100.0

One in three households in rural areas but only 16% of households in urban areas are in debt. Gitarama, Cyangugu and Ruhengeri provinces have the highest percentage of households in debt, while Kigali, Kibungo and Gisenyi have the lowest percentage. The poorer a person is, the more likely they are to incur debts.

Table 9.12. Household debt by loan guarantee and Place of residence

Loan guarantee	Place of residence			
	Kigali City	Other towns	Rural areas	Total
Land		2.0	2.1	2.0
Herd or flock	5.8	1.7	1.3	1.5
Housing	5.1	8.6	0.7	1.0
Other guarantee	4.5	7.4	2.7	2.8
No guarantee	84.7	80.1	93.2	92.7
	100.0	100.0	100.0	100.0

In the vast majority (92.7%) of cases, a guarantee is not required. On the rare occasions when a guarantee is required, it takes the form of land or livestock.

Table 9.13. Reasons for refusal of a loan according to place of residence

Reasons for loan refusal	Place of residence			
	Kigali City	Other towns	Rural areas	Total
Insufficient income	9.2	20.3	14.2	13.7
Insufficient guarantee	28.2	7.1	8.6	11.8
Problems associated with previous debts	3.2			0.5
Inappropriate purpose of loan	4.8	9.0	3.2	3.7
Other reasons	54.5	63.6	74.0	70.3
	100.0	100.0	100.0	100.0

In Kigali, apart from other, unspecified reasons, the main reason for refusal of a loan is that the guarantee is inadequate, while in other place of residences the reason in insufficient income. Those are the main reasons in all the provinces except Kibungo, where one in ten households states that when a loan was requested the response was that the purpose of the loan was inappropriate.

Regardless of the level of poverty, the main obstacle to obtaining a loan is insufficient income, in particular for the poorest households. Of those requesting a loan, 6.2% and 5.2% of the less poor and those who are not poor respectively are told that the purpose of the loan is inappropriate.

Table 9.14. Source of loan according to place of residence

Source of loan	Place of residence			
	Kigali City	Other towns	Rural areas	Total
State bank	3.6	10.6	1.6	1.8
Private bank	10.5	18.3	1.7	2.3
Rural credit		1.1	1.5	1.5
Farming Mutuels			4.3	4.1
Cooperatives	6.5		1.2	1.4
NGO	3.7	2.3	0.3	0.5
Companies	6.5	5.7	2.4	2.6
Other formal institutions	5.0	2.2	1.3	1.5
Creditor			0.4	0.4
Trader	15.3	12.1	15.2	15.2
Farmer		3.0	26.3	24.9
Family	45.6	41.8	39.7	39.9
Tontine/community funds	1.2	0.8	1.7	1.7
Other informal source	2.0	2.0	2.2	2.2
	100.0	100.0	100.0	100.0

Almost two in five loans are obtained from family, in all places of residence. Total, a further quarter of loans are provided by farmers and 15.2% by traders. One in ten loans in Kigali are provided by private banks, compared to 18.3% in the other towns. Only 3.6%, 10.6% and 1.6% in Kigali, the

other towns and rural areas respectively obtain loans from State banks. Rural credit and agricultural cooperatves rarely provide loans.

Outside Kigali, Byumba is the most ready to take out bank loans (7.7%), ahead of Kibuye (7%) and Gikongoro (6%). The sources do not differ according to level of poverty. However, those who are not poor resort to the banks more often and those who are poor (generally farmers) apply more often to agricultural cooperatives and tontine arrangements.

Table 9.15: Use of loans according to place of residence

Purpose of loan	Place of residence			
	Kigali	Other towns	Rural areas	Total
Land and agricultural equipment	7.7	4.1	12.8	12.5
Agricultural inputs			0.7	0.7
Business expansion	18.3	16.8	3.7	4.5
Housing	11.4	16.1	3.6	4.1
Education	2.3	7.6	2.7	2.8
Health	2.1	8.6	15.0	14.4
Ceremonies	2.1	2.3	3.6	3.6
Consumer goods	34.3	28.2	43.8	43.2
Other purpose	21.8	16.2	14.0	14.3
Total	100.0	100.0	100.0	100.0

Over two in five loans are for the purchase of capital equipment, while a further 14.4% are for health purposes and 13.2% are for factors of agricultural production (land, equipment and agricultural inputs). The situation varies according to place of residence, with the main purpose of a loan being business expansion or home extension (18.3% and 11.4% respectively in Kigali, and 16.8% and 16.1% respectively in the other towns). In rural areas agricultural use acnumber for over 13% and health accounts for 15.0%, while few loans are for business expansion or health.

Table 9.16. Average amount of loan according to use

Purpose of loan	Amount of loan
Land and agricultural equipment	14,689
Agricultural inputs	4,956
Business expansion	92,038
Housing	281,727
Education	21,049
Health	3,990
Ceremonies	25,040
Consumer goods	3,991
Other purpose	21,576
Total	24,530

Although rare, loans for housing needs are higher in relative terms: on average, these loans are worth FRw 281,727 compared to FRw 92,038 for business expansion. The amount for ceremonies is FRw 25,040 while FRw 14,689 are allocated to agricultural activities.

CONCLUSION

In this brief report, we have presented data that give an overview of household living conditions in Rwanda as observed through the HLCS. While it has not been possible to provide a detailed explanation of the various phenomena observed, we believe that the in-depth sectoral studies that are planned will fill that gap.

It is apparent from the studies that demographic features and poverty indicators are interrelated. Population volume and growth are generally considered to be the principal factors determining increases in the demand for goods and services. In our case, there is pressure on food demand in particular, and therefore on agricultural areas, above all due to the proportion of farmers within the working population as a whole.

Poverty is a multifaceted phenomenon. Links have been found between poverty and level of education, size of household, quality of health, etc. A detailed study of the various aspects of poverty can only lead to the identification of targeted policies to be introduced as part of the programme to reduce poverty.

The long-awaited data from the HLCS are already widely used. In addition to measuring poverty, they have been used to up-date the weights for the Consumer Price Index. Moreover, it has been possible to use these data to identify aspects of household consumption, spending and saving for the purposes of the national accounts. In addition, they have been used to elaborate the Poverty Reduction Strategy Document. One can therefore affirm that the objectives assigned to this survey by MINECOFIN have effectively been achieved.

In short, the subject has not been exhausted. This report has only touched on the various subject areas and awakened the interest of researchers, who should put to good use the vast pool of data arising from this survey, the like of which has never before been carried out in the country.

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A N N E X E S

ANNEX I:

Two-stage sampling theory

The sampling plan used for the HLCS is the classical "self-weighting sample with probabilities proportional to size at the 1st stage." This annex is divided into two parts. The first sets set out the theory of sample design and the second focuses on the modifications required in practice.

Assuming a two-stage sampling procedure where the first stage involves selecting a certain number of stratified area units (the primary units or PU) and the second stage involves sampling households from within each PU that is selected.

If $\mathbf{M_i}$ is the number of households within PU_i (thus $\mathbf{M_i}$ is the size of PU_i), and the PUs are selected with probabilities proportional to the size $\mathbf{M_i}$; the probability of selecting PU_i is then

$$\mathbf{P_{1i} = k\ M_i} \qquad \text{---------- (1)}$$

where $\mathbf{p_{1i}}$ is the probability that unit **i** will be selected in the sample and **k** is a constant. The value $_1$ denotes the first stage sampling. The constant **k** can be determined in the following way: with the probabilities proportional to the size systematic sampling procedure, $\mathbf{k=a/M}$ where **a/M** is the reciprocal of the sampling interval ***I***, where M is the total number of households in the population and a is the number of selected units.
Substituting this value in (1) obtains:

$$\mathbf{p_{1i} = aM_i/M} \qquad \text{---------- (2)}$$

With regard to the 2nd stage of sampling, a number of households $\mathbf{b_i}$ will be selected from the PU_i that contains $\mathbf{M_i}$ number of households. The probability of selection for a particular household in that PU will thus be

$$\mathbf{P_{2i} = b_i/M_i} \qquad \text{---------- (3)}$$

This is the conditional probability, which assumes that the PU_i has already been selected.

The overall probability of a household being selected is the product of $\mathbf{p_{1i}}$ and $\mathbf{p_{2i}}$, from which we obtain

$$\mathbf{F_i = p_{1i}.p_{2i} = (aM_i/M).(b_i/M_i) = ab_i/M} \qquad \text{--------- (4)}$$

It follows that if a constant number, **b,** of households is selected from each PU the overall probability for any household will be

$$\mathbf{F = ab/M} \qquad \text{---------- (5)}$$

In other words, all households will have the same probability of being selected. This is called a self-weighting sample. The sample is directly representative of the population with no need to weight it. Thus means, ratios, percentages or rates can be taken from the sample as estimates of population.

In addition to the advantage of being self-weighting, the fact that there is a fixed number **b** of households to be selected in each PU is a significant advantage in logistical terms.

Unfortunately, in practice this self-weighting model cannot strictly be applied. This is because the unit sizes $\mathbf{M_i}$, which features in equation (2), must be known in advance for each unit before the first stage of sampling. In many surveys, these figures are imprecise. Thus, there is a preference for using data from listing in the selected PU as $\mathbf{M_i}$ in equation (3). These, at least, will be up to date. If the values differ (we will call $\mathbf{M_{i'}}$ the value from listing), equation (4) will become

$$\mathbf{F_i = (ab_i/M).(M_i/M_{i'})} \quad \text{---------- (6)}$$

Even if **b** is allowed to be constant, it can be seen that self-weighting no longer exists. $\mathbf{F_i}$ will vary for each PU. It will thus be necessary to introduce a weighting coefficient

$$\mathbf{W_i = M_{i'}/M_i} \quad \text{---------- (7)}$$

that is specific to each PU of the sample.

In this survey, we do not know whether these weightings will be necessary. It all depends on the size of the difference between the $\mathbf{M_i}$ value provided by the *cellule* head and the $\mathbf{M_{i'}}$ value of the listing agent. If those figures are approximately in agreement (for example, if no PU is found with a difference of more than 5%), we can be fairly sure that the weighting necessary in theory would have only a negligible effect on the results in practice. This issue can be broached only after the survey results are available.

The preceding discussion assumes that that there is only one stratum. In fact, the sample is composed of 13 strata. If a stratum is designated by the value **h**, this value must be inserted equations (1) to (7). For example, equation (5) becomes

$$\mathbf{F_h = a_h\, b_h / M_h} \quad \text{---------- (5')}$$

The self-weighting referred to above depend on the constancy of **F**. Even if $\mathbf{F_{hi}}$ is constant in respect of **i**, it will not be constant in respect of **h** in this survey, since the parameter $\mathbf{M_h}$ varies according to **h**. Consequently, even if our sample is self-weighting within each stratum, it cannot be self-weighting across the strata. It is therefore necessary to weight each stratum in order to combine data from several strata.

Application: 1st stage sampling

The following are required for applying the methodology described above:

- Lists of *cellule* by stratum, with the size $\mathbf{M_{hi}}$ of each one as indicated by the *cellule* head. Once a list becomes available for a stratum, it will be possible to calculate the sum of sizes $\mathbf{M_h = \Sigma\, M_{hi}}$. At the same time, it will be possible to make cumulative calculations of sizes and these could be added in a column to the right of the list.

- Values $\mathbf{a_h}$ *cellules* to be sampled.

Once these data are available, it will be possible to sample *cellules* with probabilities proportional to size, using the systematic sampling method (i.e. fixed-interval sampling). The work will be carried out independently in each prefecture (the prefectures being the strata).The systematic method of sampling will contribute an additional element of stratification in so far as the *cellules* on the list are

arranged according to their size. Thus, fixed-interval sampling involves selection from all sections, which ensures that there is a good distribution of the sample in respect of the variable determining the order of units on the list. This is called implicit stratification. In our case, although we know little in advance about the characteristics of the units (i.e. the *cellules*), we can at least list them in hierarchical order (prefecture-*commune*-sector-*cellule*). Many variables are statistically related to geographical location: this implicit stratification will thus tend to reduce sampling errors by ensuring a good spatial distribution of the sample.

Sampling at the first stage involves the following steps:

Initial verification that the list of units/zones in respect of which the sampling will be carried out is properly organised in order of administrative hierarchy before making cumulative calculations.

Once $\mathbf{M_h}$ and $\mathbf{a_h}$ have been identified for a stratum **h**, it is possible to calculate the sampling interval $\mathbf{I_h = M_h/a_h}$ rounded up to the next whole figure.

Find an area number $\mathbf{C_h}$ between **1** and $\mathbf{I_h}$.

Write out the sampling series:

$\mathbf{C_h : \quad C_h + I_h : \quad C_h + 2I_h : \quad C_h + 3I_h : \quad etc.}$

Units/zones will be sampled by approaching this series in together with the cumulative values column. The following method is used. For each term in the series, seek the first cumulative value that is equal to or greater than that term. The line containing that cumulative value corresponds to the unit selected.

After the sampling has been carried out, it is necessary to verify that the number $\mathbf{a_h}$ of desired units/zones has been selected.

Verify the selection of each unit. Experience shows that on the first trial, people select the wrong line from time to time when carrying out sampling of this kind.

Implementation: 2nd stage of the survey (households)

Agents will initially be sent to all the units/zones selected in order to do a count (that is, in order to draw up a list of all households living in the *cellule*). Such visits will be planned so that they take place approximately 2 months before the survey in the *cellule* in question. Lists will be returned to the head office as soon as they have been completed.

The second stage of the sampling process will involve selecting households from these lists. To that end, the following elements will be required for each unit **i** selected.

A list of households obtained during the count.
The number of households $\mathbf{M_i}$.
The number of households to be sampled from each unit.

It is at this point that we should raise the issue of households that fail to complete the survey, whether because they refused, were absent, or could not be found. Different surveys have adopted different methods to deal with this problem. In a survey that assumes that there are a set number of households to survey in each area, a it is appropriate to replace a defaulting household with another household that can be surveyed. This is the case here. In order to enable such replacements to be

made, a surplus of households should be selected at the start. There will thus be a small reserve sample for each *cellule*.

In urban areas, provision will be made to select a number **b** = 9 of households to be surveyed per *cellule*. A reserve of 3 will be added to this. The total to be selected is: **b'** = 12.

In rural areas, provision will be made to survey **b** = 12 per unit. A reserve of 4 will be added. The total to be selected is: **b'** = 16.

Selection will be carried out at the head office. $\mathbf{M_i}$ is divided by **b'** and the figure is rounded up to the next whole number in order to obtain the sampling interval $\mathbf{I_i}$. A random number $\mathbf{c_i}$ between **1** and $\mathbf{I_i}$ is selected to begin with. Households are numbered from **1** to $\mathbf{M_i}$. The households selected are those bearing the numbers

$$\mathbf{c_i : \ c_i + I_i : \ c_i + 2I_i : \ c_i + 3I_i : \ etc.}$$

After the selection has been carried out, it is necessary to verify that the desired **b'** have effectively been selected. Where this is not the case, whether due to an error or to the fact that the process of rounding up has given 1 to many or too few, the error should be corrected and/or 1 household should be deleted from or added to the list at random.

The households selected should be numbered from 1 to 12 (urban areas) or from 1 to 16 (rural areas).

Households numbered 4, 8 and 12 in urban areas and 4, 8, 12 and 16 in rural areas should be allocated to the reserve list. The supervisor will hold these reserve lists. Survey workers will have on their lists only those households initially selected for the survey (numbers not divisible by 4). Where survey workers are unable to interview a household, they must ask the regulator for a replacement. The regulator must be satisfied that it was not possible to conduct the first interview before agreeing to a replacement. Where a replacement is to be made, the regulator will give the survey worker the name of the nearest replacement on the list.

Where the survey worker uses a replacement household, it is not given the number of the household that has been replaced. Rather, the number (divisible by 4) referred by the regulator is retained. It is thus known that a replacement has been made.

ANNEX II:

CONTENT OF HOUSEHOLD QUESTIONNAIRE

The household questionnaire was used to collect information from households. It is composed of 2 parts, A and B. An attempt will be made to summarise the information contained in the questionnaire. Additional information, may be obtained from the Department of Statistics.

Section 1: Household roster

Section 1 identifies the usual members of the household and collects information on their demographic characteristics (gender, age, relationship to the head of household, absence from the household and marital status).

Section 2: Education

This section concerns all household members over 7 years old. It measures household members' attendance at school and level of education, and expenditure on education at all levels. It also provides data on the number of years spent at primary school and the type of school attended. Teaching work, short-term training courses and literacy also form part of the data collected in this section.

Section 3: Health

The section on health provides information on the health status of household members, expenses on medical services and medicine and access to and use of health services. It also provides information on preventive health services, use of contraceptive methods, the fertility of women aged 12 to 49 years and anthropometric measures of children aged 3 to 59 months.

Section 4: Employment and time use

This section collects information on the type of main and secondary occupation carried out by household members 7 years old and over and on the characteristics of such occupations. It also deals with job seeking, employment history and domestic activities.

Section 5: Migration

The spatial mobility of household members over 15 years old is dealt with in this section. It also provides information on the place of former residence, reasons for migration and the type of occupation carried out in the place of former residence.

Section 6: Housing

Housing quality is an indicator of the well-being of household members. This section collects information on:

- Occupancy status
- Type of house
- Number of rooms
- Expenditure related to housing
- Water supply and lighting
- Cooking fuel
- Toilets, etc.

Section 7: Individuals to be interviewed in Part B

This section is essentially used to identify household members who are eligible for sections 8, 9 and 10.

Section 8: Agricultural and Livestock activities

This section is designed to collect data on agricultural and Livestock activities carried out by the household. It covers agricultural capital such as land, livestock populations, and agricultural equipment. In addition, this section enables data to be collected on agricultural production, technology, the processing of agricultural produce, sales and income and of own-produce consumption.

Section 9: Household expenditures

This section deals with frequent household expenditure on food and non-food items over a 33-day period in urban areas and a 16-day period in rural areas. Occasional expenditure such as ornaments, household equipment, building materials, clothing and footwear are also noted in this section.

Section 10: Non-farm enterprise

This section provides data on household revenues from non-farm enterprise. It identifies the member of the household in charge of the activity in terms of decision-making and use of income generated by the activity. Information regarding the type of activity, the length of time that it has been going on, the customers, sources of capital, access to credit and intermediate consumption is collected in this section.

Section 11: Transfers

Information on transfers in cash or in kind, and the volume, source and destination of such transfers is collected in this section. Transfers received are regarded as part of household income, while transfers madeout by the household come under household expenditure.

Section 12: Credit, assets and savings

This section collects information on sources of credit (formal or informal), and the savings of household members.

CHAPTER		INFORMATION
Identification		Identification, location, religious characteristics.
Demographic characteristics		Gender, age, marital status, civil status, fertility, migration.
Social characteristics	Education	School attendance and level of education, literacy, teaching work.
	Health	Health of household members, services, contraceptive methods, infant/child health care and preventive measures, medical consultations, vaccination, breastfeeding.
	Employment	Type and characteristics of main and secondary occupations, job seeking, employment history.
	Housing, amenities and community development	Type of housing, occupancy status, means of water supply and lighting, cooking fuel, rubbish disposal system, type of toilet.
Agroforestry and livestock activities	Agriculture	Purchase, leasing, “co-exploitation” of land, equipment, size, farming system, type of crop, volume, type of outlet, place of sale, payment details, production costs.
	Livestock	Type and size of livestock population.
	Forestry	Reforestation, surface area, type.
	Other activities	Hunting, fishing, gathering.
	Processing	Processing of products.
Own-produce consumption		Value and quantities for cereals, value of other food products from own-produce consumption.
Household consumption and expenditure	Occasional expenditure	Ornaments, household equipment, building materials, clothing and footwear.
	Frequent expenditure	Personal items, upkeep of household, transport and fuel, personal care and healthcare, food products.
Non-agricultural economic activities		Type, length of time carried out, share of income belonging to the household, customers, number of employees, legal status of undertaking (formal or informal), types of problem, sources of capital, access to credit, intermediate consumption, income.
Transfers		Volume sent and received by the household, source and destination.
Credit, assets and savings		Sources of credit (formal or informal), assets (depreciation), level of savings.

ANNEX III.

RESULTS:

S T A T I S T I C A L S T A B L E S

I. DEMOGRAPHICS CHARACTERISTICS

Table 1.1: Distribution of population (in %) according to the gender and age groups

Age groups	Male	Female	Total
Less than 5 years	16.5	14.8	15.6
5 to 10 years	14.9	13.7	14.3
10 to 15 years	16.1	14.8	15.4
15 to 20 years	14.3	14.1	14.2
20 to 25 years	8.5	8.9	8.7
25 to 30 years	5.4	6.3	5.9
30 to 35 years	4.5	5.0	4.7
35 to 40 years	4.3	4.8	4.6
40 to 45 years	3.9	5.0	4.5
45 to 50 years	3.6	3.4	3.5
50 to 55 years	2.3	2.8	2.6
55 to 60 years	1.6	1.9	1.8
60 to 65 years	1.3	1.6	1.5
65 to 70 years	1.0	1.1	1.1
70 to 75 years	0.8	0.9	0.9
75 to 80 years	0.5	0.4	0.4
80 years and more	0.4	0.5	0.5
TotalTotal	100.0	100.0	100.0

Table 1.2: Distribution of population (in %) by gender and province

Provinces	Male	Female	Total
Butare	7.9	8.5	8.2
Byumba	10.0	9.1	9.5
Cyangugu	7.6	7.5	7.6
Gikongoro	6.5	6.2	6.3
Gisenyi	9.2	9.8	9.5
Gitarama	10.5	10.5	10.5
Kibungo	8.3	8.2	8.2
Kibuye	5.8	5.6	5.7
Kigali Ngali	11.0	11.7	11.4
Kigali City	7.5	7.3	7.4
Ruhengeri	11.6	11.7	11.7
Umutara	4.1	3.8	3.9
Total	100.0	100.0	100.0

Table 1.3: Distribution of population (in %) according to gender and place of residence

	Sex		
Place of residence	Male	Female	Total
Kigali City	47.0	53.0	100.0
Other towns	46.9	53.1	100.0
Rural areas	46.3	53.7	100.0
Total	46.4	53.6	100.0

Table 1.4: Distribution of population (in %) according to the gender and place of residence

Place of residence	Male	Female	Total
Kigali City	7.5	7.3	7.4
Other towns	3.1	3.0	3.0
Rural areas	89.4	89.6	89.5
Total	100.0	100.0	100.0

Table 1.5: Distribution of population (in %) according to the expenditure quintile and province

Province	Expenditure quintiles					
	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Total
Butare	26.4	23.0	23.6	14.8	12.1	100.0
Byumba	23.1	20.0	22.2	15.5	19.3	100.0
Cyangugu	26.1	18.6	19.4	20.2	15.8	100.0
Gikongoro	32.0	23.2	21.9	15.7	7.2	100.0
Gisenyi	11.6	21.1	20.8	25.2	21.3	100.0
Gitarama	14.2	19.2	20.0	27.3	19.3	100.0
Kibungo	11.2	17.6	21.8	27.4	22.0	100.0
Kibuye	20.7	24.9	26.4	18.1	9.9	100.0
Kigali Ngali	29.0	22.7	18.9	17.9	11.5	100.0
Kigali City	0.7	3.4	7.9	13.3	74.8	100.0
Ruhengeri	25.1	25.7	19.4	18.4	11.4	100.0
Umutara	16.8	15.4	18.0	26.4	23.4	100.0
Total	20.0	20.0	20.0	20.0	20.0	100.0

Tableau 1.6: Distribution of population (in %) according to the province and the expenditure quintiles

Province	Expenditure quintiles					
	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Total
Butare	2.2	1.9	1.9	1.2	1.0	8.2
Byumba	2.2	1.9	2.1	1.5	1.8	9.5
Cyangugu	2.0	1.4	1.5	1.5	1.2	7.6
Gikongoro	2.0	1.5	1.4	1.0	0.5	6.3
Gisenyi	1.1	2.0	2.0	2.4	2.0	9.5
Gitarama	1.5	2.0	2.1	2.9	2.0	10.5
Kibungo	0.9	1.4	1.8	2.2	1.8	8.2
Kibuye	1.2	1.4	1.5	1.0	0.6	5.7
Kigali Ngali	3.3	2.6	2.2	2.0	1.3	11.4
Kigali City	0.1	0.3	0.6	1.0	5.5	7.4
Ruhengeri	2.9	3.0	2.3	2.1	1.3	11.7
Umutara	0.7	0.6	0.7	1.0	0.9	3.9
Total	20.0	20.0	20.0	20.0	20.0	100.0

Table 1.7: Distribution of population (in %) according to the expenditure quintiles and place of residence

Place of residence	Expenditure quintiles					
	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Total
Kigali City	0.7	3.4	7.9	13.3	74.8	100.0
Other towns	1.7	6.3	10.7	14.6	66.8	100.0
Rural areas	22.2	21.8	21.3	20.7	13.9	100.0
Total	20.0	20.0	20.0	20.0	20.0	100.0

Table 1.8a. Distribution of urban population (excluding Kigali City) according to the gender and the province (row %)

	Sex		
Province	Male	Female	Total
Butare	44.5	55.5	100.0
Byumba	49.0	51.0	100.0
Cyangugu	47.7	52.3	100.0
Gikongoro	53.5	46.5	100.0
Gisenyi	51.6	48.4	100.0
Gitarama	46.6	53.4	100.0
Kibungo	37.9	62.1	100.0
Kibuye	48.5	51.5	100.0
Kigali Ngali	47.5	52.5	100.0
Ruhengeri	44.6	55.4	100.0
Umutara	53.2	46.8	100.0
Total	46.9	53.1	100.0

Table 1.8b: Distribution of urban population excluding Kigali City according to the gender and the province (column %)

	Sex		
Province	Male	Female	Total
Butare	13.8	15.2	14.5
Byumba	5.4	4.9	5.2
Cyangugu	7.7	7.4	7.5
Gikongoro	4.8	3.7	4.2
Gisenyi	18.4	15.2	16.7
Gitarama	10.2	10.3	10.3
Kibungo	7.5	10.8	9.2
Kibuye	4.3	4.0	4.1
Kigali Ngali	12.4	12.1	12.2
Ruhengeri	13.4	14.7	14.1
Umutara	2.2	1.7	2.0
Total	100.0	100.0	100.0

Table 1.9a: Distribution of rural population by province and gender (column %)

	Sex		
Province	Male	Female	Total
Butare	8.4	9.0	8.7
Byumba	11.0	9.9	10.4
Cyangugu	8.2	8.2	8.2
Gikongoro	7.2	6.7	6.9
Gisenyi	9.7	10.5	10.1
Gitarama	11.4	11.4	11.4
Kibungo	9.0	8.7	8.9
Kibuye	6.4	6.2	6.3
Kigali Ngali	11.9	12.6	12.3
Ruhengeri	12.5	12.6	12.5
Umutara	4.5	4.2	4.3
Total	100.0	100.0	100.0

Table 1.9b: Distribution of rural population by province and gender (row %)

	Sex		
Province	Male	Female	Total
Butare	44.6	55.4	100.0
Byumba	48.8	51.2	100.0
Cyangugu	46.6	53.4	100.0
Gikongoro	47.8	52.2	100.0
Gisenyi	44.3	55.7	100.0
Gitarama	46.2	53.8	100.0
Kibungo	47.0	53.0	100.0
Kibuye	47.1	52.9	100.0
Kigali Ngali	44.9	55.1	100.0
Ruhengeri	46.2	53.8	100.0
Umutara	48.2	51.8	100.0
Total	46.3	53.7	100.0

Table 1.10: Distribution of population of Kigali City by gender (row %)

	Sex		
	Male	Female	Total
Kigali City	47.0	53.0	100.0

Table 1.11: Distribution of population (in %) according to groupsthe gender and age groups

	Sex		
Age groups	Male	Female	Total
Less than 5 years	7.67	7.94	15.6
5 to 10 years	6.92	7.36	14.3
10 to 15 years	7.48	7.93	15.4
15 to 20 years	6.66	7.57	14.2
20 to 25 years	3.95	4.75	8.7
25 to 30 years	2.50	3.37	5.9
30 to 35 years	2.07	2.67	4.7
35 to 40 years	2.00	2.57	4.6
40 to 45 years	1.81	2.67	4.5
45 to 50 years	1.66	1.82	3.5
50 to 55 years	1.08	1.49	2.6
55 to 60 years	0.75	1.01	1.8
60 to 65 years	0.61	0.86	1.5
65 to 70 years	0.45	0.61	1.1
70 to 75 years	0.37	0.50	0.9
75 to 80 years	0.21	0.20	0.4
80 years and more	0.21	0.27	0.5
Total	46.41	53.59	100

Table 1.12: Distribution of Kigali City population according to the gender and the age groups (in %)

	Sex		
Age group	Male	Female	Total
Less than 5 years	7.4	8.4	15.8
5 to 10 years	6.1	5.4	11.5
10 to 15 years	5.8	7.0	12.8
15 to 20 years	6.0	9.5	15.5
20 to 25 years	6.6	6.4	13.0
25 to 30 years	4.1	4.7	8.8
30 to 35 years	3.5	3.8	7.2
35 to 40 years	2.4	2.4	4.8
40 to 45 years	1.8	1.9	3.7
45 to 50 years	1.3	1.0	2.3
50 to 55 years	0.9	0.6	1.5
55 to 60 years	0.4	0.3	0.7
60 to 65 years	0.2	0.5	0.7
65 to 70 years	0.2	0.6	0.8
70 to 75 years	0.1	0.2	0.3
75 to 80 years	0.1	0.1	0.2
80 years and more	0.1	0.2	0.3
Total	47.0	53.0	100

	Sex		
Age groups	Male	Female	Total
Less than 5 years	7.6	8.2	15.8
5 to 10 years	6.4	7.0	13.4
10 to 15 years	7.1	6.7	13.8
15 to 20 years	7.2	9.1	16.4
20 to 25 years	4.7	5.5	10.2
25 to 30 years	3.4	3.7	7.1
30 to 35 years	2.8	3.4	6.2
35 to 40 years	2.0	2.6	4.6
40 to 45 years	1.8	1.9	3.6
45 to 50 years	1.2	1.5	2.7
50 to 55 years	0.8	0.9	1.7
55 to 60 years	0.7	0.7	1.4
60 to 65 years	0.5	0.5	0.9
65 to 70 years	0.2	0.7	0.9
70 to 75 years	0.2	0.4	0.6
75 to 80 years	0.1	0.1	0.2
80 years and more	0.2	0.2	0.4
groups	46.9	53.1	100

Table 1.14: Distribution of rural population by gender and age group (in %)

	Sex		
Age groups	Male	Female	Total
Less than 5 years	7.7	7.9	15.6
5 to 10 years	7.0	7.5	14.5
10 to 15 years	7.6	8.1	15.7
15 to 20 years	6.7	7.4	14.0
20 to 25 years	3.7	4.6	8.3
25 to 30 years	2.3	3.2	5.6
30 to 35 years	1.9	2.6	4.5
35 to 40 years	2.0	2.6	4.6
40 to 45 years	1.8	2.8	4.6
45 to 50 years	1.7	1.9	3.6
50 to 55 years	1.1	1.6	2.7
55 to 60 years	0.8	1.1	1.9
60 to 65 years	0.6	0.9	1.5
65 to 70 years	0.5	0.6	1.1
70 to 75 years	0.4	0.5	0.9
75 to 80 years	0.2	0.2	0.4
80 years and more	0.2	0.3	0.5
Total	46.3	53.7	100

Table 1.15: Distribution of household heads by gender and by age groups

Age groups	Sex				Total	
	Male		Female			
	Number	%	Number	%	Number	%
10 to 15 years			593	0.1	593	0.0
15 to 20 years	12082	1.1	8295	1.6	20378	1.3
20 to 25 years	82263	7.5	16172	3.1	98436	6.1
25 to 30 years	144467	13.2	22750	4.4	167218	10.4
30 to 35 years	144296	13.2	41464	8.0	185761	11.5
35 to 40 years	152265	13.9	58951	11.4	211216	13.1
40 to 45 years	139841	12.8	82330	15.9	222170	13.8
45 to 50 years	130542	11.9	61733	11.9	192275	11.9
50 to 55 years	84527	7.7	56474	10.9	141001	8.8
55 to 60 years	58443	5.3	42935	8.3	101378	6.3
60 to 65 years	47644	4.4	37842	7.3	85486	5.3
65 to 70 years	35678	3.3	32651	6.3	68329	4.2
70 to 75 years	29088	2.7	29149	5.6	58237	3.6
75 to 80 years	16847	1.5	12524	2.4	29371	1.8
80 years and more	15463	1.4	12838	2.5	28301	1.8
Total	1093446	100.0	516701	100.0	1610147	100.0

Table1.16: Distribution of the household heads by gender and by Province

Province	Sex				Total	
	Male		Female			
	Number	%	Number	%	Number	%
Butare	90621	8.3	50450	9.8	141071	8.8
Byumba	117215	10.7	35260	6.8	152475	9.5
Cyangugu	80137	7.3	32375	6.3	112511	7.0
Gikongoro	74029	6.8	27861	5.4	101889	6.3
Gisenyi	103473	9.5	48916	9.5	152389	9.5
Gitarama	105085	9.6	65898	12.8	170983	10.6
Kibungo	93498	8.6	39826	7.7	133324	8.3
Kibuye	63173	5.8	33137	6.4	96310	6.0
Kigali Ngali	115922	10.6	71173	13.8	187095	11.6
Kigali City	82349	7.5	30362	5.9	112711	7.0
Ruhengeri	127258	11.6	59930	11.6	187188	11.6
Umutara	40688	3.7	21513	4.2	62201	3.9
Total	1093446	100.0	516701	100.0	1610147	100.0

Table 1.17: Distribution of the household heads by gender and by place of residence (col%)

Place of residence	Sex				Total	
	Male		Female			
	Number	%	Number	%	Number	%
Kigali City	82349	7.5	30362	5.9	112711	7.0
Other towns	32214	2.9	14176	2.7	46389	2.9
Rural areas	978884	89.5	472163	91.4	1451046	90.1
Total	1093446	100.0	516701	100.0	1610147	100.0

Table 1.18: Distribution of the household heads of by gender and by place of residence (row%)

Place of residence	Sex				Total	
	Male		Female			
	Number	%	Number	%	Number	%
Kigali City	82349	73.1	30362	26.9	112711	100.0
Other towns	32214	69.4	14176	30.6	46389	100.0
Rural areas	978884	67.5	472163	32.5	1451046	100.0
Total	1093446	67.9	516701	32.1	1610147	100.0

Table 1.19: Distribution of total population by gender and expenditure quintile (%)

Expenditure quintile	Sex		Total
	Male	Female	
1st quintile	8.9	11.1	20.0
2nd quintile	9.4	10.6	20.0
3rd quintile	9.1	10.9	20.0
4th quintile	9.4	10.6	20.0
5th quintile	9.6	10.4	20.0
Total	46.4	53.6	100.0

II. POVERTY

Table 2.1: Poverty indices (household level) by place of residence with the poverty line of RwF 64.000

	Overall poverty line = RwF64.000		
Place of residence	Incidence (P0)	Depth (P1)	Severity (P2)
Kigali City	10.44%	2.66%	1.02%
Other towns	17.80%	5.41%	2.31%
Rural areas	61.68%	25.33%	13.52%
Total	56.83%	23.17%	12.32%

Table 2.2:Poverty indices (household level) by place of residence with the food poverty line of RwF 45.000.

	Food poverty line = RwF45.000		
Place of residence	Incidence (P0)	Depth (P1)	Severity (P2)
Kigali City	3.70%	0.82%	0.30%
Other towns	8.77%	2.12%	0.82%
Rural areas	41.35%	14.18%	6.75%
Total	37.78%	12.90%	6.13%

Table 2.3: Poverty indices (household level level) by province with the food poverty line of RwF 45.000

	Food povery line = 45.000 Frw		
Province	Incidence (P0)	Depth (P1)	Severity (P2)
Butare	48.56%	16.97%	8.28%
Byumba	41.51%	13.99%	6.38%
Cyangugu	40.99%	15.45%	8.04%
Gikongoro	53.07%	20.54%	10.28%
Gisenyi	29.18%	7.66%	3.06%
Gitarama	31.70%	9.70%	4.26%
Kibungo	26.79%	7.87%	3.50%
Kibuye	42.65%	13.20%	5.70%
Kigali Ngali	47.78%	18.28%	9.42%
Kigali City	3.70%	0.82%	0.30%
Ruhengeri	47.14%	16.31%	7.50%
Umutara	30.64%	11.28%	5.93%
Total	37.78%	12.90%	6.13%

Table 2.4: Poverty indices (household level) by province with the overall poverty line of RwF 64.000

	Total poverty line = 64.000 Frw		
Province	Incidence (P0)	Depth (P1)	Severity (P2)
Butare	71.02%	30.00%	16.21%
Byumba	63.65%	25.40%	13.29%
Cyangugu	60.06%	25.75%	14.57%
Gikongoro	75.13%	33.90%	19.10%
Gisenyi	48.93%	16.87%	7.82%
Gitarama	50.11%	18.93%	9.47%
Kibungo	46.57%	16.24%	7.89%
Kibuye	66.71%	25.53%	12.78%
Kigali Ngali	65.23%	29.82%	17.05%
Kigali City	10.44%	2.66%	1.02%
Ruhengeri	66.23%	28.42%	15.27%
Umutara	47.15%	19.56%	10.88%
Total	56.83%	23.17%	12.32%

Table 2.5: Distribution of households by level of poverty and province

	Level of poverty			
	Extreme poor	Poor	Not poor	Total
Butare	48.56	22.46	28.98	100.00
Byumba	41.51	22.14	36.35	100.00
Cyangugu	40.99	19.08	39.94	100.00
Gikongoro	53.07	22.05	24.87	100.00
Gisenyi	29.18	19.75	51.07	100.00
Gitarama	31.70	18.41	49.89	100.00
Kibungo	26.79	19.78	53.43	100.00
Kibuye	42.65	24.06	33.29	100.00
Kigali Ngali	47.78	17.45	34.77	100.00
Kigali City	3.70	6.74	89.56	100.00
Ruhengeri	47.14	19.09	33.77	100.00
Umutara	30.64	16.50	52.85	100.00
Total	37.78	19.05	43.17	100.00

Table 2.6: Poverty indices (household level) by area with the overall poverty line of RwF 64.000

	Total poverty line = 64.000 Frw		
area	Incidence (P0)	Depth (P1)	Severity (P2)
Urban	12.59%	3.46%	1.39%
Rural	61.68%	25.33%	13.52%
Total	56.83%	23.17%	12.32%

Table 2.7: Poverty indices (household level) by area with the food poverty line of RwF 45.000

	Food poverty line = 45.000 Frw		
area	Incidence (P0)	Depth (P1)	Severity (P2)
Urban	5.18%	1.20%	0.45%
Rural	41.35%	14.18%	6.75%
Total	37.78%	12.90%	6.13%

Table 2.8: Distribution of households by the level of poverty and area

	Level of poverty			
area	Extreme poor	Poor	Not poor	Total
Urban	5.2	7.4	87.4	100.0
Rural	41.4	20.3	38.3	100.0
Total	37.8	19.1	43.2	100.0

Table 2.9: Poverty indices (by the household size

	Total poverty line = RwF 64.000				Food poverty line = RwF 45.000		
Household size	P0	P1	P2		P0	P1	P2
1	30.30%	8.87%	3.78%		15.09%	3.47%	1.34%
2	41.51%	14.25%	7.21%		21.78%	7.27%	3.55%
3	48.41%	17.32%	8.54%		27.96%	8.54%	3.87%
4	56.54%	22.40%	11.59%		35.79%	12.02%	5.56%
5	60.26%	25.65%	14.21%		40.94%	15.09%	7.52%
6	64.77%	27.96%	15.38%		46.85%	16.31%	7.98%
7 and more	66.15%	29.01%	15.71%		48.39%	16.72%	7.83%
Total	56.83%	23.17%	12.32%		37.78%	12.90%	6.13%

Table 2.10: Poverty indices (level of population) by place of residence with food poverty line of RwF 45.000

Strata	***P0***	***P1***	***P2***
Kigali City	4.52%	0.97%	0.32%
Other towns	9.78%	2.11%	0.75%
Rural area	45.81%	15.93%	7.61%
Total	***41.64%***	***14.40%***	***6.86%***

Table 2.11: Poverty indices (level of population) by province with food poverty line of RwF 45.000

Province	*P0*	*P1*	*P2*
Butare	52.04%	18.35%	8.98%
Byumba	44.60%	15.82%	7.48%
Cyangugu	45.96%	18.00%	9.49%
Gikongoro	56.83%	22.27%	11.22%
Gisenyi	34.68%	9.10%	3.64%
Gitarama	34.46%	10.49%	4.57%
Kibungo	31.88%	9.30%	4.12%
Kibuye	48.32%	15.32%	6.66%
Kigali Rural	52.82%	20.60%	10.58%
Kigali City	4.52%	0.97%	0.32%
Ruhengeri	52.31%	18.14%	8.27%
Umutara	32.84%	12.06%	6.27%
Total	***41.64%***	***14.40%***	***6.86%***

III. EDUCATION

Table 3.1: Net school enrolment rate at primary according to the gender and the place of residence

Place of residence	Sex		Total
	Boys	Girls	
National	72.37 %	72.89 %	72.64%
Rural	71.75 %	71.94 %	71.85%
Urban	78.84 %	82.78 %	80.87%
. Kigali City	77.18 %	82.26 %	79.77%
. Other towns	82.53 %	83.89 %	83.24%

Table 3.2: Net school enrolment rate at primary according to the gender and the province

Province	Sex		Total
	Boys	Girls	
Butare	70.96%	69.85 %	70.37%
Byumba	70.12%	72.11 %	71.10%
Cyangugu	70.07%	72.42 %	71.29%
Gikongoro	70.77%	72.35 %	71.56%
Gisenyi	68.81%	64.04 %	66.21%
Gitarama	80.07%	76.77 %	78.38%
Kibungo	64.96%	68.25 %	66.70%
Kibuye	75.52%	73.72 %	74.61%
Kigali Ngali	72.11%	78.59 %	75.49%
Kigali City	77.18%	82.26 %	79.77%
Ruhengeri	75.31%	72.76 %	74.03%
Umutara	70.79%	75.52 %	73.00%

Table 3.3: Net school enrolment rate at primary according to gender and expenditure quintile

	Sex		
Quintile	Boys	Girls	Total
1st quintile	64.53%	66.50%	65.56%
2nd quintile	70.93%	69.70%	70.31%
3rd quintile	75.34%	73.59%	74.41%
4th quintile	71.78%	80.23%	76.04%
5th quintile	84.48%	79.44%	81.97%

Table 3.4: Net school enrolment rate at primary according to gender and level of poverty

Level of	Sex		
poverty	Boys	Girls	Total
Extreme poor	67.92%	67.87%	67.89%
Poor	75.42%	74.39%	74.87%
Not poor	77.45%	79.89%	78.68%

Table 3.5: Gross school enrolment rate at primary according to gender and place of residence

Place of residence	Sex		
	Boys	Girls	Total
National	92.89%	92.04%	92.45%
Rural	92.62%	91.20%	91.89%
Urban	95.75%	100.75 %	98.32%
. Kigali City	89.67%	99.02%	94.44%
. Other towns	109.22 %	104.38 %	106.69%

Table 3.6: Gross school enrolment rate at primary according to gender and province

		Sex	
Province	Total	Boys	Girls
Butare	92.32%	94.84%	90.09%
Byumba	90.17%	88.43%	91.96%
Cyangugu	87.77%	87.58%	87.94%
Gikongoro	91.18%	88.35%	94.01%
Gisenyi	84.52%	90.37%	79.61%
Gitarama	103.33%	105.95%	100.84%
Kibungo	90.31%	92.48%	88.37%
Kibuye	91.76%	95.48%	88.16%
Kigali Ngali	95.06%	91.86%	98.00%
Kigali City	94.44%	89.67%	99.02%
Ruhengeri	92.93%	93.71%	92.17%
Umutara	97.52%	94.89%	100.53%

Table 3.7: Gross school enrolment rate at primary according to gender and expenditure quintile

		Sex	
Quintile	Total	Boys	Girls
1st quintile	80.96%	79.69%	82.12%
2nd quintile	89.72%	92.00%	87.49%
3rd quintile	95.84%	96.62%	95.15%
4th quintile	98.55%	93.32%	103.70%
5th quintile	104.56%	110.78%	98.30%

Table 3.8: Gross school enrolment rate at primary according to gender and level of poverty

		Sex	
Level of poverty	Total	Boys	Girls
Extreme poor	85.67%	86.46%	84.93%
Poor	95.17%	95.33%	95.03%
Not poor	101.35 %	101.26 %	101.45 %

Table 3.9: Net school enrolment rate at secondary according to gender and place of residence

Place of residence	Sex		
	Boys	Girls	Total
National	7.09%	7.99%	7.57%
Urban	22.70 %	22.40 %	22.52 %
Kigali City	26.82 %	23.52 %	24.85 %
Other towns	14.29 %	19.51 %	17.11 %
Rural	5.43%	6.06%	5.76%

Table 3.10: Net school enrolment rate at secondary according to gender and province

Province	Sex		
	Boys	Girls	Total
Butare	7.29%	7.03%	7.15%
Byumba	6.61%	4.50%	5.53%
Cyangugu	7.43%	8.74%	8.11%
Gikongoro	5.34%	6.30%	5.83%
Gisenyi	5.29%	4.36%	4.76%
Gitarama	8.35%	11.24%	9.75%
Kibungo	5.19%	7.74%	6.54%
Kibuye	4.84%	4.12%	4.47%
Kigali Ngali	4.23%	7.87%	6.19%
Kigali City	26.82%	23.52%	24.85%
Ruhengeri	2.39%	2.57%	2.48%
Umutara	7.25%	8.23%	7.75%

Table 3.11: Net school enrolment rate at secondary according to gender and by expenditure quintile

Quintile	Sex		
	Boys	Girls	Total
1st quintile	1.65%	0.71%	1.14%
2nd quintile	4.16%	2.55%	3.34%
3rd quintile	4.38%	4.70%	4.56%
4th quintile	9.94%	12.76%	11.36%
5th quintile	16.75%	21.14%	19.15%

Table 3.12: Net school enrolment rate at secondary according to gender and level of poverty

Level of poverty	Sex		
	Boys	Girls	Total
Extreme poor	2.83%	1.53%	2.15%
Poor	4.84%	5.18%	5.03%
Not poor	13.22%	17.16%	15.29%

Table 3.13: Literacy level by gender and area

area		Literacy level			
		Do not know how to read or write	Do know read only	Know read and write	Total
National	Male	37.5	4.4	58.1	100.0
	Female	48.6	3.6	47.8	100.0
	Total	43.7	4.0	52.4	100.0
Urban	Male	43.7	2.4	54.0	100.0
	Female	49.6	3.1	47.3	100.0
	Total	46.9	2.7	50.4	100.0
Rural	Male	36.7	4.7	58.6	100.0
	Female	48.5	3.7	47.9	100.0
	Total	43.2	4.1	52.6	100.0

Table 3.14: Literacy level by gender and place of residence

Place of residence	Place of residence	Literacy level			
		Do not know how to read or write	Do know read only	Know read and write	Total
Kigali City	Male	43.2	2.0	54.8	100.0
	Female	49.8	2.5	47.7	100.0
	Total	46.7	2.3	51.0	100.0
Other towns	Male	45.0	3.2	51.8	100.0
	Female	49.2	4.5	46.3	100.0
	Total	47.3	3.9	48.8	100.0
Rural area	Male	36.7	4.7	58.6	100.0
	Female	48.5	3.7	47.9	100.0
	Total	43.2	4.1	52.6	100.0

Table 3.15: Level of education of household heads by gender and by level of poverty

Level of poverty	Sex	Level of instruction						Total
		Primary	Post primary	Secondary	Superior	Not known	No instruction	
Extreme poor	Male	55.0	1.4	1.0		0.1	42.5	100.0
	Female	33.4	1.6	0.2			64.9	100.0
	Total	47.0	1.5	0.7		0.1	50.8	100.0
Poor	Male	58.6	1.7	1.7			38.0	100.0
	Female	40.6	2.1	0.7			56.5	100.0
	Total	52.9	1.8	1.4			43.8	100.0
Not poor	Male	60.8	7.0	10.5	2.4		19.2	100.0
	Female	36.6	4.5	6.5	0.7		51.7	100.0
	Total	54.0	6.3	9.4	1.9		28.4	100.0
Total	Male	58.3	4.0	5.5	1.1	0.0	31.0	100.0
	Female	36.0	2.8	2.6	0.2		58.3	100.0
	Total	51.2	3.6	4.6	0.8	0.0	39.8	100.0

Table 3.16: Level of education of the household heads by gender and expenditure quintile (%)

Expenditure quintiles	Sex	Level of instruction						Total
		Primary	Post primary	Secondary	Superior	Not known	No instruction	
1st quintile	Male	49.8	0.2	0.2		0.2	49.5	100.0
	Female	34.9	1.9	0.2			63.1	100.0
	Total	43.6	0.9	0.2		0.1	55.1	100.0
2nd quintile	Male	58.4	2.2	1.5		0.1	37.8	100.0
	Female	31.2	1.3				67.5	100.0
	Total	49.3	1.9	1.0		0.1	47.7	100.0
3rd quintile	Male	59.4	1.8	1.7			37.0	100.0
	Female	41.0	2.0	0.8			56.1	100.0
	Total	53.7	1.9	1.4			43.0	100.0
4th quintile	Male	65.7	3.4	5.2	0.1		25.6	100.0
	Female	39.5	2.4	2.3			55.7	100.0
	Total	57.9	3.1	4.3	0.1		34.5	100.0
5th quintile	Male	56.1	10.1	15.3	4.4		14.1	100.0
	Female	33.3	6.7	10.6	1.3		48.2	100.0
	Total	50.0	9.2	14.0	3.6		23.2	100.0
Total	Male	58.3	4.0	5.5	1.1	0.0	31.0	100.0
	Female	36.0	2.8	2.6	0.2		58.3	100.0
	Total	51.2	3.6	4.6	0.8	0.0	39.8	100.0

Table 3.17: Literacy level by province and gender

Province		Literacy level			
		Do not know how to read or write	Know read only	Know read and write	Total
Butare	Male	38.2	7.6	54.2	100.0
	Female	42.2	9.2	48.6	100.0
	Total	40.5	8.5	50.9	100.0
Byumba	Male	38.8	3.8	57.4	100.0
	Female	52.6	3.3	44.1	100.0
	Total	46.1	3.5	50.3	100.0
Cyangugu	Male	34.7	6.6	58.6	100.0
	Female	47.9	4.2	47.9	100.0
	Total	41.9	5.3	52.8	100.0
Gikongoro	Male	44.2	6.2	49.6	100.0
	Female	54.4	3.2	42.4	100.0
	Total	49.7	4.6	45.7	100.0
Gisenyi	Male	43.5	3.4	53.1	100.0
	Female	56.7	3.1	40.2	100.0
	Total	51.0	3.2	45.8	100.0
Gitarama	Male	32.8	2.7	64.5	100.0
	Female	40.6	2.0	57.4	100.0
	Total	37.1	2.3	60.5	100.0
Kibungo	Male	31.3	3.2	65.6	100.0
	Female	43.7	1.9	54.4	100.0
	Total	38.2	2.5	59.3	100.0
Kibuye	Male	41.4	6.3	52.3	100.0
	Female	53.2	4.8	42.0	100.0
	Total	47.9	5.5	46.6	100.0
Kigali Ngali	Male	37.4	2.1	60.5	100.0
	Female	45.7	1.6	52.7	100.0
	Total	42.1	1.8	56.0	100.0
Kigali City	Male	43.2	2.0	54.8	100.0
	Female	49.8	2.5	47.7	100.0
	Total	46.7	2.3	51.0	100.0
Ruhengeri	Male	34.7	7.1	58.1	100.0
	Female	53.7	4.8	41.5	100.0
	Total	45.3	5.8	48.9	100.0
Umutara	Male	30.3	4.1	65.6	100.0
	Female	47.4	3.5	49.1	100.0
	Total	39.6	3.7	56.6	100.0

Table 3.18: Primary school leaving rate according to gender and by place of residence by gender and strata

	Sex		
Strata	Male	Female	Total
Kigali City	2.5%	2.2%	2.3%
Other towns	1.0%	2.8%	1.9%
Rural area	3.3%	4.0%	3.6%
Total	3.2%	3.8%	3.5%

Table 3.19: Primary school leaving rate according to gender and by province

	Sex		
Province	Male	Female	Total
Butare	4.0%	6.1%	5.1%
Byumba	7.5%	10.9%	9.2%
Cyangugu	3.4%	3.3%	3.4%
Gikongoro	3.7%	2.4%	3.0%
Gisenyi	2.1%	1.2%	1.7%
Gitarama	2.2%	4.4%	3.3%
Kibungo	0.4%	5.2%	3.0%
Kibuye	1.3%	1.9%	1.6%
Kigali Ngali	4.2%	2.3%	3.2%
Kigali City	2.5%	2.2%	2.3%
Ruhengeri	1.8%	1.3%	1.6%
Umutara	6.0%	6.5%	6.2%
Ensemble	3.2%	3.8%	3.5%

Table 3.20: The school leaving rate at primary by gender and by expenditure quintile

	Sex		
Expenditure quintiles	Male	Female	Total
1st quintile	4.5%	4.3%	4.4%
2nd quintile	2.9%	3.7%	3.3%
3rd quintile	2.1%	4.3%	3.3%
4th quintile	4.8%	3.6%	4.2%
5th quintile	1.5%	2.9%	2.2%
Total	3.2%	3.8%	3.5%

Table 3.21: Primary school leaving rate according to gender and by level of poverty

	Sex		
Level of poverty	Male	Female	Total
Extreme poor	3.7%	3.9%	3.8%
Poor	1.8%	4.6%	3.3%
Not poor	3.2%	3.3%	3.3%
Total	3.2%	3.8%	3.5%

IV. HOUSING AND ENVIRONNEMENT

Table 4.01: Distribution of households according to source of water supply and area

Present source of water supply	Residential area		
	Urban	Rural	Total
Electrogaz subscription	22.5	0.1	2.4
Ordinary well	0.2	2.0	1.8
Sunk well	1.3	6.1	5.7
River/Stream/Lake	6.2	20.7	19.3
Exploited spring	7.6	16.9	16.0
Unexploited spring	1.8	9.3	8.5
Purchased at tap	51.4	3.2	7.9
Free public stand pipe	7.1	41.5	38.1
Other	1.9	0.2	0.3
	100.0	100.0	100.0

Table 4.02: Distribution of households according to source of water supply and place of residenceplace of residence

Present source of water supply	Place of residence			
	Kigali City	Other towns	Rural	Total
Electrogaz	23.3	20.5	0.1	2.4
Ordinary well	0.2	0.4	2.0	1.8
Sunk well	1.1	1.7	6.1	5.7
River/Stream/Lake	5.5	8.0	20.7	19.3
Exploited spring	6.8	9.5	16.9	16.0
Unexploited spring	1.3	2.9	9.3	8.5

Table 4.03: Distribution of households according to source of water supply and level of poverty

	Level of poverty			
	Extreme poor	Poor	Not poor	Total
Electrogaz	0.2	0.1	5.3	2.4
Ordinary well	1.3	1.7	2.3	1.8
Sunk well	6.1	6.1	5.1	5.7
River/Stream/Lake	20.9	19.5	17.8	19.3
Exploited spring	16.8	17.7	14.5	16.0
Unexploited spring	9.2	9.4	7.6	8.5
Purchased at tap	2.4	4.7	14.2	7.9
Free public fountain	42.9	40.7	32.8	38.1
Other	0.1	0.3	0.6	0.3
	100.0	100.0	100.0	100.0

Table 4.04: Distribution of households according to the method of disposal of household rubbish and the province

	Method of disposal of household rubbish				
Province	Public collection	Dumped	Burned	Buried	Total
Butare	0.4	39.5	5.7	54.3	100.0
Byumba	0.7	95.8		3.4	100.0
Cyangugu	0.3	59.9	1.6	38.2	100.0
Gikongoro	0.3	78.6	0.4	20.7	100.0
Gisenyi	2.8	61.1	0.3	35.9	100.0
Gitarama	0.4	80.0	2.2	17.4	100.0
Kibungo	0.1	62.8	0.3	36.8	100.0
Kibuye	0.2	60.6	0.4	38.8	100.0
Kigali Ngali	0.2	78.7	0.2	20.9	100.0
Kigali City	37.3	50.7	0.6	11.5	100.0
Ruhengeri	0.7	86.2	0.8	12.4	100.0
Umutara		41.1	3.0	55.9	100.0
Total	3.2	69.1	1.2	26.5	100.0

Table 4.05: Distribution of households according to type of toilet used and by area

Type of toilet	area		
	Urban	Rural	Total
Flush toilet with septic tank	8.0	0.3	1.1
Protected latrines	79.2	47.3	50.4
Unprotected latrines	10.6	44.6	41.3
Other	0.7	1.3	1.3
No toilet	1.6	6.4	5.9
	100.0	**100.0**	**100.0**

Table 4.06: Distribution of households according to type of toilet used and place of residence

	Place of residence			
Type of toilet	Kigali City	Other towns	Rural area	Total
Flush toilet with septic tank	8.4	7.1	0.3	1.1
Protected latrines	81.7	73.1	47.3	50.4
Unprotected latrines	8.0	16.9	44.6	41.3
Other	0.8	0.3	1.3	1.3
No toilet	1.2	2.6	6.4	5.9
Total	**100.0**	**100.0**	**100.0**	**100.0**

Table 4.07: Distribution of households according to type of toilet used and province

Province	Type of toilet					
	Flush toilet with septic tank	Protected latrines	Unprotected latrines	Other	No toilet	Total
Butare	0.8	56.1	32.2	2.5	8.5	100.0
Byumba	0.7	30.3	64.6	2.0	2.4	100.0
Cyangugu	0.6	64.1	26.6	0.8	7.8	100.0
Gikongoro	0.1	51.6	38.1	0.2	10.1	100.0
Gisenyi	1.0	53.5	36.6	2.9	6.1	100.0
Gitarama	0.8	54.1	35.6	2.4	7.1	100.0
Kibungo	0.2	35.7	61.0		3.0	100.0
Kibuye	0.3	46.3	49.1	0.8	3.6	100.0
Kigali Ngali	0.3	35.4	57.7	0.2	6.5	100.0
Kigali City	8.4	81.7	8.0	0.8	1.2	100.0
Ruhengeri	0.6	62.0	30.7	0.0	6.8	100.0
Umutara	0.3	35.0	52.0	3.7	9.0	100.0
Total	1.1	50.4	41.3	1.3	5.9	100.0

Table 4.08: Distribution of households according to type of toilet used and expenditure quintile

Type of toilet	Expenditure quintile					
	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Total
Flush toilet with septic tank	0.5	0.2	0.2	0.4	3.8	1.1
Protected latrines	33.3	40.9	49.2	54.9	68.7	50.4
Unprotected latrines	54.0	50.2	42.5	40.1	23.9	41.3
Other	2.0	1.7	1.0	0.9	0.9	1.3
No toilet	10.2	7.0	7.1	3.7	2.7	5.9
	100.0	100.0	100.0	100.0	100.0	100.0

Table 4.09: Distribution of housing according to material used to construct the walls and place

Material used to construct the walls	Place of residence		
	Kigali City	Other towns	Rural a
Adobe bricks	18.2	12.8	27.6
Cemented adobe bricks	39.8	36.1	5.3
Cemented pisé	27.7	13.1	4.6
Uncemented pisé	9.0	24.0	59.4
Boards	0.0	0.4	0.2
Baked earth bricks	4.0	11.4	0.9
Cement bricks	1.3	0.1	0.0
Stone	0.0	0.7	0.3
Other	0.0	1.4	1.7
	100.0	**100.0**	**100.0**

Table 4.10: Distribution of housing according to material used to construct the roof and place

	Strata

Material used for the construction of roofing	Kigali City	Other towns	R a
Thatch/Straw	1.7	3.1	1
Corrugated iron	96.9	77.6	3
Concrete	0.7	0.3	0
Tiles	0.6	17.3	4
Other	0.1	1.6	5
Total	100.0	100.0	10

Table 4.11: Distribution of housing according to material used to construct the roof and by province

	Material used for the construction of roofing					
Province	Thatch/Straw	Corrugated iron	Concrete	Tiles	Other	
Butare	14.3	22.5		62.2	1.0	100.0
Byumba	15.3	56.6		22.5	5.7	100.0
Cyangugu	17.0	72.4		5.3	5.3	100.0
Gikongoro	11.1	10.9		77.1	0.9	100.0
Gisenyi	6.6	20.8	0.6	64.3	7.6	100.0
Gitarama	2.1	18.3	0.2	79.0	0.4	100.0
Kibungo	11.1	72.9		1.0	15.0	100.0
Kibuye	7.8	18.7		70.2	3.3	100.0
Kigali Ngali	14.1	69.7	0.1	14.7	1.5	100.0
Kigali City	1.7	96.9	0.7	0.6	0.1	100.0
Ruhengeri	13.5	28.7	0.2	47.8	9.8	100.0
Umutara	22.8	61.0	0.1	1.2	14.9	100.0
Total	11.0	44.7	0.2	38.9	5.1	100.0

Table 4.12: Distribution of housing according to type of housing and place of residence

Present type of housing	Place of residence			Total
	Kigali City	Other towns	Rural area	
Detached house holding a single household	52.3	69.5	91.6	88.2
Detached house holding several households	14.9	5.4	1.4	2.4
Two-storey house	0.5	0.1	0.0	0.1
Group of houses holding several households	23.4	16.8	1.5	3.5
Group of houses holding a single household	8.8	8.0	5.3	5.6
Other	0.1	0.2	0.2	0.2
Total	100.0	100.0	100.0	100.0

Table 4.13: Distribution of households according to main source of lighting and area

Principal current source of	area

lighting	Urban	Rural	Total
Electricity supplied by Electrogaz	40.3	0.6	4.5
Electricity generator	0.1	0.1	0.1
Oil lamp	36.8	8.3	11.1
Gas lamp	0.3	0.1	0.1
Wood fire	0.8	25.0	22.6
Candle	3.6	0.6	0.9
String lantern	18.0	63.6	59.1
Other	0.2	1.7	1.6
Total	100.0	100.0	100.0

Table 4.14: Distribution of households according to status of housing occupation and residential area

	Place of residence			
Status of current occupation	Kigali City	Other towns	Rural area	Total
Owner	48.3	59.4	94.2	89.9
Tenant	38.0	28.9	0.7	4.2
Housing provided by the service	0.8	1.8	0.2	0.3
Housing provided free	7.0	6.4	4.1	4.4
Appropriation	5.7	3.1	0.5	1.0
Renting out / sale			0.0	0.0
Other	0.3	0.4	0.2	0.2
	100.0	100.0	100.0	100.0

Table 4.15: Distribution of households according to occupancy status and province

Province	Occupancy status							
	Owner	Tenant	Housing provided by the service	Housing provided free	squatting	Renting out / sale	Other	
Butare	89.4	2.2	0.7	6.1	1.3		0.2	100.0
Byumba	96.8	0.2	1.3	1.4	0.3			100.0
Cyangugu	95.4	2.7		1.7			0.3	100.0
Gikongoro	88.1	1.2	0.1	10.2			0.5	100.0
Gisenyi	91.6	1.7	0.1	5.3	0.9		0.4	100.0
Gitarama	94.0	1.2	0.4	4.0	0.2		0.2	100.0
Kibungo	96.1	1.0	0.0	2.5	0.3			100.0
Kibuye	93.9	2.1		2.2	1.4		0.3	100.0
Kigali Ngali	90.3	2.6	0.1	5.8	0.9		0.3	100.0
Kigali City	48.3	38.0	0.8	7.0	5.7		0.3	100.0
Ruhengeri	94.8	1.4	0.0	3.2	0.6			100.0
Umutara	92.8	1.7		4.5	0.6	0.2	0.2	100.0
Total	89.9	4.2	0.3	4.4	1.0	0.0	0.2	100.0

Table 4.16: Type of infrastructures built since 1994 in rural area by level of household poverty

Type of infrastructure	Level of poverty											
	Extreme poor			Poor			Non-poor			Total		
	Yes	No		Yes	No		Yes	No		Yes	No	
School	16.9	83.1	100.0	16.8	83.2	100.0	18.5	81.5	100.0	17.4	82.6	100.0
Health centres	0.3	99.7	100.0	1.2	98.8	100.0	0.7	99.3	100.0	0.7	99.3	100.0
Bridge	9.8	90.2	100.0	7.7	92.3	100.0	7.8	92.2	100.0	8.7	91.3	100.0
Road	10.7	89.3	100.0	12.2	87.8	100.0	14.7	85.3	100.0	12.4	87.6	100.0
Mosques	2.0	98.0	100.0	3.3	96.7	100.0	2.6	97.4	100.0	2.5	97.5	100.0
Churches	36.0	64.0	100.0	37.4	62.6	100.0	40.0	60.0	100.0	37.6	62.4	100.0
Markets	0.8	99.2	100.0	1.1	98.9	100.0	0.9	99.1	100.0	0.9	99.1	100.0
Cultural Centres		100.0	100.0		100.0	100.0		100.0	100.0		100.0	100.0
Water supply systems	12.6	87.4	100.0	11.3	88.7	100.0	15.6	84.4	100.0	13.4	86.6	100.0
Imidugudu	32.5	67.5	100.0	32.4	67.6	100.0	35.2	64.8	100.0	33.4	66.6	100.0

Table 4.17: Type of infrastructures built in rural area since 1994 by level of poverty and type of infrastructure (number)

Type of infrastructure		Level of poverty			
		Extreme poor	Poor	Not poor	Total rural
School	Units	3.2	2.7	3.0	3.0
Health centre	Units	1.0	1.0	1.0	1.0
Bridge	Units	2.9	2.3	3.2	2.9
Road	Kms	3.7	3.4	3.7	3.6
Mosque	Units	1.0	1.1	1.1	1.1
Churches	Units	1.2	1.4	1.4	1.3
Markets	Units	1.0	1.0	1.0	1.0
Water supply systems	Kms	2.7	4.1	3.5	3.3
Imidugudu	houses	58.4	57.2	60.3	58.8

Table 4.19: Presence of road in rural *cellule* by province

	Existance of road		
Province	Yes	No	
Butare	97.9	2.1	100.0
Byumba	92.4	7.6	100.0
Cyangugu	88.5	11.5	100.0
Gikongoro	89.9	10.1	100.0
Gisenyi	96.7	3.3	100.0
Gitarama	96.8	3.2	100.0
Kibungo	98.9	1.1	100.0
Kibuye	67.1	32.9	100.0
Kigali Ngali	97.8	2.2	100.0
Ruhengeri	87.1	12.9	100.0
Umutara	100.0		100.0
Total	92.7	7.3	100.0

Table 4.20: Year-round accessibility of rural *cellule* by province

	Year-round accessibility		
Province	Yes	No	
Butare	6.5	93.5	100.0
Byumba	50.7	49.3	100.0
Cyangugu	36.6	63.4	100.0
Gikongoro	37.3	62.7	100.0
Gisenyi	42.3	57.7	100.0
Gitarama	29.4	70.6	100.0
Kibungo	42.0	58.0	100.0
Kibuye	45.3	54.7	100.0
Kigali Ngali	42.4	57.6	100.0
Ruhengeri	33.7	66.3	100.0
Umutara	37.6	62.4	100.0
Total	36.4	63.6	100.0

Tableau 4.21: Presence of water supply system in rural area by province

	Presence of water supply system		
Province	Yes	No	
Butare	56.9	43.1	100.0
Byumba	63.8	36.2	100.0
Cyangugu	61.0	39.0	100.0
Gikongoro	75.3	24.7	100.0
Gisenyi	83.6	16.4	100.0
Gitarama	81.6	18.4	100.0
Kibungo	75.5	24.5	100.0
Kibuye	60.7	39.3	100.0
Kigali Ngali	61.1	38.9	100.0
Ruhengeri	77.6	22.4	100.0
Umutara	52.1	47.9	100.0
Total	69.5	30.5	100.0

Table 4.22: Average distance (in kms) of the water source in the dry season in rural area by province

Province	Avg. distance (in kms) of the water source in the dry season
Butare	1.9
Byumba	2.3
Cyangugu	2.1
Gikongoro	1.5
Gisenyi	2.1
Gitarama	1.5
Kibungo	2.8
Kibuye	1.0
Kigali Ngali	3.2
Ruhengeri	2.8
Umutara	3.8
Total	2.3

Table 4.23: Presence of an electricity supply in rural area by province

	Presence of an electricity supply		
Province	Yes	No	
Butare	4.0	96.0	100.0
Byumba	8.0	92.0	100.0
Cyangugu	18.1	81.9	100.0
Gikongoro	6.9	93.1	100.0
Gisenyi	9.9	90.1	100.0
Gitarama	4.9	95.1	100.0
Kibungo	7.3	92.7	100.0
Kibuye	5.1	94.9	100.0
Kigali Ngali	10.5	89.5	100.0
Ruhengeri	24.1	75.9	100.0
Umutara	6.0	94.0	100.0
Total	10.2	89.8	100.0

Table 4.24: Existence of a rubbish collection service in rural area by province

	Existence of a rubbish collection		
Province	Yes	No	
Butare		100.0	100.0
Byumba		100.0	100.0
Cyangugu	2.3	97.7	100.0
Gikongoro		100.0	100.0
Gisenyi		100.0	100.0
Gitarama		100.0	100.0
Kibungo		100.0	100.0
Kibuye	3.0	97.0	100.0
Kigali Ngali	2.3	97.7	100.0
Ruhengeri		100.0	100.0
Umutara		100.0	100.0
Total	0.7	99.3	100.0

Table 4.25: Means of rubbish disposal in rural area by province

	Means of rubbish disposal by province				
Province	Dumped	Burned	Compost	Other	
Butare	7.9			92.1	100.0
Byumba	26.0	2.4	2.4	69.2	100.0
Cyangugu	6.0	8.5	7.5	78.1	100.0
Gikongoro		8.3	2.7	89.0	100.0
Gisenyi		21.5	2.1	76.4	100.0
Gitarama	2.6	16.2	21.7	59.6	100.0
Kibungo	23.7			76.3	100.0
Kibuye	21.1	27.1	3.3	48.4	100.0
Kigali Ngali		7.8	7.8	84.4	100.0
Ruhengeri	11.1			88.9	100.0
Umutara	10.5	49.2		40.3	100.0
Total	9.5	10.3	4.9	75.4	100.0

Table 4.26: Type of market in rural area by province

Province	Type of market			
	Daily market	Weekly market	No market	Total
Butare	7.6	9.7	82.6	100.0
Byumba	5.4	26.7	67.9	100.0
Cyangugu	2.6	21.5	75.8	100.0
Gikongoro		16.5	83.5	100.0
Gisenyi	5.4	10.5	84.1	100.0
Gitarama	2.3	7.0	90.7	100.0
Kibungo	5.4	10.3	84.3	100.0
Kibuye	2.8	6.1	91.1	100.0
Kigali Ngali		7.9	92.1	100.0
Ruhengeri	2.5	3.1	94.4	100.0
Umutara	0.1	10.4	89.6	100.0
Total	3.2	11.5	85.3	100.0

V. AGRICULTURE AND LIVESTOCK

Table 5.1: Distribution of livestock population by type of livestock and province

(number)

Province	Type of livestock							
	Cattle	Sheep	Goats	Pigs	Rabbits	Chickens	Other poultry	Other animals
Butare	45948	10044	133775	50065	56635	122630	3625	4525
Byumba	56941	70538	186816	9764	29601	137529	18100	34665
Cyangugu	30541	16447	73986	27682	11265	75163	1059	47403
Gikongoro	54542	46595	87590	60535	47443	64179	815	3136
Gisenyi	26970	39783	41291	21028	58061	89602	11303	9729
Gitarama	146503	20019	148643	54732	85694	166975	10373	5754
Kibungo	45262	3614	169689	27024	14653	145435	27076	2040
Kibuye	43414	55901	86681	10728	34154	67163	0	2533
Kigali Ngali	72033	30593	191825	16103	41677	161495	6902	16733
Kigali City	24213	2747	17071	1548	5738	27968	1813	319966
Ruhengeri	36095	70865	83210	14050	103042	132458	11100	35057
Umutara	264193	4301	87839	3055	7016	103252	6407	44
Total	846656	371446	1308416	296314	494978	1293846	98572	481585

Table 5.02: Percentage distribution of livestock population by type of livestock and province

Provinces	Type of livestock							
	Cattle	Sheep	Goats	Pigs	Rabbits	Chickens	Other poultry	Other animals
Butare	5.43	2.70	10.22	16.90	11.44	9.48	3.68	0.94
Byumba	6.73	18.99	14.28	3.30	5.98	10.63	18.36	7.20
Cyangugu	3.61	4.43	5.65	9.34	2.28	5.81	1.07	9.84
Gikongoro	6.44	12.54	6.69	20.43	9.58	4.96	0.83	0.65
Gisenyi	3.19	10.71	3.16	7.10	11.73	6.93	11.47	2.02
Gitarama	17.30	5.39	11.36	18.47	17.31	12.91	10.52	1.19
Kibungo	5.35	0.97	12.97	9.12	2.96	11.24	27.47	0.42
Kibuye	5.13	15.05	6.62	3.62	6.90	5.19	0.00	0.53
Kigali Ngali	8.51	8.24	14.66	5.43	8.42	12.48	7.00	3.47
Kigali City	2.86	0.74	1.30	0.52	1.16	2.16	1.84	66.44
Ruhengeri	4.26	19.08	6.36	4.74	20.82	10.24	11.26	7.28
Umutara	31.20	1.16	6.71	1.03	1.42	7.98	6.50	0.01
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 5.03: Distribution of livestock population by type of livestock and expenditure quintile

Expenditure quintile	Type of livestock					
	Cattle	Goats	Sheep	Pigs	Rabbits	Chickens
1st quintile	38100	146168	40510	43852	65117	154440
2nd quintile	78093	209442	76817	54959	107418	182633
3rd quintile	127766	280789	84061	63885	108644	283154
4th quintile	219104	330851	92565	69812	136010	315346
5th quintile	383593	341166	77493	63806	77790	358274
Total	846656	1308416	371446	296314	494978	1293846

Table 5.04: Average price of livestock by type of livestock and province (Frw. / unit)

Province	Type of livestock					
	Cattle	Sheep	Goats	Pigs	Rabbits	Chickens
Butare	50936.4	4491.4	5328.8	4939.7	398.7	650.6
Byumba	45463.9	4051.9	4432.2	5701.0	366.0	622.2
Cyangugu	68171.9	4706.1	6134.5	7655.2	864.3	803.8
Gikongoro	54574.6	4756.0	5623.2	9374.6	378.1	721.3
Gisenyi	54777.1	6851.7	8506.5	7229.6	503.0	998.3
Gitarama	49153.2	4615.6	5377.6	6777.0	467.6	776.0
Kibungo	40140.1	5565.6	5033.0	4549.9	362.5	632.6
Kibuye	50407.8	5546.0	6081.5	5750.5	399.6	885.4
Kigali Ngali	44000.1	4461.9	5186.3	6386.2	441.2	678.2
Kigali City	60232.5	5698.9	7311.4	14860.8	597.3	1259.8
Ruhengeri	56395.0	5631.4	6387.9	5922.7	418.1	848.5
Umutara	42490.8	3714.0	5383.9	7966.2	485.7	656.6
Total	50402.4	5106.8	5508.0	6801.5	439.2	752.6

Table 5.05: Distribution of households by size of family farms and place of residence (%)

	Place of residence			
Size of family farms	Kigali City	Other towns	Rural area	Total
Less than 0.5 Ha	96.4	81.7	54.9	58.6
0.5 to 1 Ha	0.7	7.9	20.7	19.0
1 to 1.5 Ha	1.0	2.6	11.6	10.6
1.5 to 2 Ha	0.4	2.6	6.4	5.8
2 to 3 Ha	0.4	0.9	3.8	3.5
3 to 4 Ha	0.4	1.4	1.3	1.2
4 to 5 Ha	0.2	0.7	0.6	0.5
5 Ha and more	0.6	2.1	0.8	0.8
	100.0	100.0	100.0	100.0

VI. FARM ENTERPRISES CARRIED OUT BY HOUSEHOLDS

Table 6.01: Distribution of the heads of enterprise by occupation and gender (% in row)

Non agricultural occupations	Sex of head		
	Male	Female	
	%	%	%
Technical and similar professions	89.2	10.8	100.0
Managerial staff	100.0		100.0
Administrative staff and similar workers	78.4	21.6	100.0
Traders and salesmen	48.9	51.1	100.0
Specialised workers in the services	59.7	40.3	100.0
Agricultural and livestock farmers, forestry workers, fishermen and hunters	95.4	4.6	100.0
Labourers and unskilled worker in the non-agricultural sector, and plant operators	71.4	28.6	100.0
Other workers	81.2	18.8	100.0
	58.5	41.5	100.0

Table 6.02: Distribution of the heads of enterprise by occupation and gender (% in column)

Non agricultural occupations	Sex of head		
	Male	Female	Total
	%	%	%
Technical and similar professions	2.7	0.5	1.8
Managerial staff	0.1		0.0
Administrative staff and similar workers	0.9	0.4	0.7
traders and hawkers	51.2	75.2	61.2
Specialised workers in the services	2.8	2.7	2.8
Agricultural and livestock farmers, forestry workers, fishermen and hunters	3.0	0.2	1.8
Labourers and unskilled worker in the non-agricultural sector, and plant operators	34.7	19.5	28.4
Other workers	4.6	1.5	3.3
	100.0	100.0	100.0

Table 6.03: Distribution of main occupations of household by type of occupation and gender of head

Non agricultural occupations	Sex of head of household		Total
	Male %	Female %	%
Technical and similar professions	2.2	0.3	1.7
Administrative staff and similar workers	0.8		0.6
traders and hawkers	57.5	73.4	61.1
Specialised workers in the services	3.2	1.2	2.8
Agricultural and livestock farmers, forestry workers, fishermen and hunters	2.2	0.8	1.8
Labourers and unskilled worker in the non-agricultural sector, and plant operators	30.7	21.8	28.7
Other workers	3.4	2.6	3.2
	100.0	100.0	100.0

Table 6.04: Main source of credit during the last 12 months by the gender of responsible (% in row)

Source of credit	Sex of responsible		
	Male %	Female %	
Private Banks	32.6	67.4	100.0
Popular Bank	100.0		100.0
Other financial institutions	40.0	60.0	100.0
Money lenders	54.9	45.1	100.0
Family/parent	23.2	76.8	100.0
Others	48.5	51.5	100.0
Total	54.9	45.1	100.0

Table 6.05: Main source of credit during the last 12 months by the gender of responsible (% in column)

Source of credit	Sex of responsible		
	Male %	Female %	Total %
Private Banks	3.3	8.3	5.5
Popular Bank	43.7		24.0
Other financial institutions	27.0	49.4	37.1
Money lenders	12.4	12.4	12.4
Family/parent	4.5	18.2	10.7
Others	9.1	11.8	10.3
	100.0	100.0	100.0

Table 6.06: Access to credit during the last 12 months by the gender of responsible (% in row)

Service of credit	Sex of responsible		
	Male %	Female %	
Yes, successful	54.9	45.1	100.0
Yes, unsuccessful	64.5	35.5	100.0
No	58.2	41.8	100.0
Total	58.5	41.5	100.0

Table 6.07: Access to credit during the last 12 months by the gender of responsible (% in row))

Service of credit	Sex of responsible		Total %
	Male %	Female %	
Yes, successful	4.0	4.6	4.2
Yes, unsuccessful	7.3	5.6	6.6
No	88.7	89.8	89.2
Total	100.0	100.0	100.0

Table 7.01: Immunisation cover by strata

Type of immunisation		Kigali City	Other towns	Rural area	Total
DPT Vaccine	Complete dose	76,7	71,3	59,1	**60,8**
	Incomplete dose	17	23,1	37,1	**35,1**
Polio Vaccine	Complete dose	68,6	73,4	59,3	**60,5**
	Incomplete dose	24,9	24	38,8	**37,3**
Measles Vaccine		76,5	79	74,8	**75,1**
BCG Vaccine		96,6	96	98,5	**98,3**

Table 7.02: Distribution of patients according to the type of establishment and the place of residence

	Place of residence			
Type of establishment	Kigali City	Other towns	Rural area	Total
Public	38.5	46.4	49.2	48.0
Private	60.6	41.7	36.6	39.3
Semi private	0.9	12.0	14.2	12.7
Total	100.0	100.0	100.0	100.0

Table 7.03: Distribution of patients according to the type of establishment and the level of poverty

	Level of poverty			
Type of establishment	Extreme poor	Poor	Not poor	Total
Public	46.1	48.1	49.1	48.0
Private	37.9	38.6	40.3	39.3
Semi private	16.0	13.3	10.6	12.7
Total	100.0	100.0	100.0	100.0

Table 7.04: Proportion of pregnant women receiving pre-natal care according to province

Province	Have you received prenatal care?		
	Yes	No	Total
Butare	68.4	31.6	100.0
Byumba	90.8	9.2	100.0
Cyangugu	80.7	19.3	100.0
Gikongoro	74.6	25.4	100.0
Gisenyi	81.0	19.0	100.0
Gitarama	78.2	21.8	100.0
Kibungo	82.9	17.1	100.0
Kibuye	80.8	19.2	100.0
Kigali Ngali	83.4	16.6	100.0
Kigali City	88.7	11.3	100.0
Ruhengeri	84.1	15.9	100.0
Umutara	84.8	15.2	100.0
Total	82.4	17.6	100.0

Table 7.05: Mean weaning age and mean final weaning by place of residence

Strata	Mean weaning age	Mean final weaning age
Kigali City	6	18
Other towns	6	19
Rural area	6	23
Total	6	23

Table 7.06: Mean weaning age and mean final weaning by province

Province	Mean weaning age	Mean final weaning age
Butare	6	25
Byumba	7	21
Cyangugu	6	23
Gikongoro	6	25
Gisenyi	7	23
Gitarama	6	24
Kibungo	6	22
Kibuye	6	23
Kigali Ngali	7	23
Kigali City	6	18
Ruhengeri	6	22
Umutara	6	21
Total	6	23

Table 7.07: Mean weaning age and mean final weaning by level of poverty

Level of poverty	Mean weaning age	Mean final weaning age
Extreme poor	6	24
Poor	6	23
Not poor	6	21
Total	6	23