



The Republic of Rwanda



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Labour Force Survey

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Foreword

Labour statistics play an essential role in the efforts of the country to achieve decent work for all. These statistics are needed for the development of policies towards this goal and for assessing progress towards decent work.

In the context of Rwanda's commitment to achieve its overarching objective set in vision 2020 of transforming Rwanda into a middle income country, the Second Economic Development and Poverty Reduction Strategy (EDPRS 2) sets out target of creating 200,000 off-farm jobs annually to speed up employment growth. At the same time, labour market indicators of the sustainable development goals are also to be monitored. To monitor progress towards these goals and targets, relevant, reliable, coherent, timely and accessible labour statistics have to be produced.

During the last fifteen years, NISR collected labour market data from household surveys, population censuses and establishment censuses or surveys, but the demand of data on labor statistics remains high.

In order to bridge that gap, the National Institute of Statistics of Rwanda introduced the labour force survey (LFS) program to provide key stakeholders, Ministry of Public Service and Labour and Ministry of Finance and Economic Planning, the Ministry of Education, International Labour Organization and other users, with needed labour statistics .

The ultimate goal of the labour force survey is to collect data on employment and labour underutilization characteristics of the population on a continuous basis, providing bi-annual estimates of the main labour force aggregates. The survey programme begun with a pilot survey conducted in February 2016. The principal objective of which was a full rehearsal of the operations of a national labour force survey including sample selection, listing of sample enumeration areas, household interviewing and data processing. After the pilot survey, the first round of the Rwanda labour force survey was conducted in August 2016 to derive estimates of the main labour force aggregates.

NISR congratulates all those who contributed in one way or the other in this exercise. In particular, NISR expresses its gratitude to the Rwanda – German Development Cooperation for proving technical assistance by Farhad Mehran in the design and analysis of the survey as part of its technical cooperation project GIZ Eco-Emploi.



Yusuf MURANGWA
Director General of NISR

Executive summary

Rwanda conducted its first national labour force survey (LFS) in August 2016. The main objective of the survey was to collect current data on the size and characteristics of the labour force, employment, unemployment and other labour market characteristics of the population. The survey was also designed to measure different forms of work, in particular, own-use production work and other components of labour underutilization including time-related underemployment and potential labour force in line with the new international standards, adopted by the 19th International Conference of Labour Statisticians (ICLS) in 2013.

According to the new international standards, employment includes only persons working for pay or profit, excluding persons engaged wholly or mostly in subsistence foodstuff production. The effect of this is to lower the count of employment (according to the old definition) and to higher the count of unemployment because some of the subsistence foodstuff producers would be looking and available for work for pay or profit and thus be classified as unemployed. The comparison of some key indicators using old and new definition is presented in this section as well as in the tables at the end of the section.

The survey also collected data on certain particular labour-market related issues such as working children 5 to 15 years old below the legal age for employment, income from employment, migrant workers and workers with disabilities.

The scope of the survey covered all persons living in private households, excluding the institutional population permanently residing in places such as hostels, health resorts, correctional establishments etc., as well as persons living at their work-sites and in seasonal dwellings. The survey was designed as part of a regular survey programme to be conducted twice a year, in February and August of each year, using a rotation sample scheme with a sample size of 9,344 households per round, selected by means of a stratified two-stage probability design based on information from the Population and Housing Census 2012 updated at the second stage of sampling with fresh listing of the selected enumeration areas. The resulting estimates of the main labour force rates at the national level have standard errors of about 0.6 percent.

The survey results are analyzed in this report under sixteen headings and sub-headings. The main highlights are described below. Key summary indicators are presented at the end of this section.

Labour force, employment and unemployment

According to the survey results, among the 6,573,000 persons 16 years old and over living in regular households, about 3,329,000 persons representing 51 percent were in the labour force, either employed (2,703,000) or unemployed (626,000). The remainder 3,244,000 persons were outside the labour force including some 1,665,000 persons engaged wholly or mostly in subsistence foodstuff production, not classified as employment according to the new international standards on statistics of work, employment and labour underutilization.

The unemployment rate stood at 18.8 percent, indicating that roughly for five persons in the labour force there was one person unemployed. The unemployment rate was higher among women (22.7 percent) than among men (15.7 percent) and higher among young people (21.5) than among adults (16.3%). It was also higher in the rural areas (19.8 percent) than in the urban areas (16.4 percent). The median duration of seeking employment was only 2.3 months but about 31 percent of the unemployed were seeking employment for 12 months or more (long-term unemployment).

Other components of labour underutilization

The unemployment rate is not the only indicator of the unmet needs for employment. Other indicators combine unemployment and time-related underemployment and potential labour force. In total there were 848,500 persons classified as time-related underemployed and 1,588,300 persons as potential labour force. The composite measure of labour underutilization including unemployment was 62.3 percent, more than two-third of the extended labour force was either unemployed, time-related underemployed or in the potential labour force (persons outside the labour force who were available for employment but were not seeking employment during the reference period as well as others outside the labour force who were seeking employment during the reference period but were not currently available for work).

Subsistence foodstuff producers

The unemployment rate obtained in the 2016 survey under the new international standards (18.8 percent) differed considerably from the rate (5.3 percent) that would have been obtained under the old definitions used in past household surveys and population censuses of Rwanda. The main reason explaining the difference is the statistical treatment of subsistence foodstuff producers in the definition of employment. The effect of this is to lower the count of employment according to the old definition (by 2,026,100 persons) and to higher the count of unemployment (by 361,300 persons).

Branches of economic activity

Under the new international standards, agriculture employment includes only those who produce agriculture good intended mainly for sale or barter. Agriculture employment was still predominant even under the new international standard with a proportion of 37%. The branch of economic activity with the next highest number of employed persons was trade (14.7 percent) followed by construction (11.2 percent) and activities of households as employers of domestic personnel (6.8 percent). Using the broad branch of economic activity, the share of industry was 19% and 44% in services.

Occupations

The occupation category with the highest proportion (49.2 percent) was elementary occupations involving the performance of simple and routine tasks. This is followed by

services and sales workers (18.6 percent), followed by craft and related trades workers (10.7 percent) and skilled agricultural, forestry and fishery workers (8.7 percent).

Status in employment

The employed population consisted of employees, paid apprentices and interns (68.7 percent), employers (1.6 percent), own-account workers (26.2 percent), contributing family workers (2.7 percent) and members of producers' cooperatives (0.8 percent).

Informal sector and informal employment

The results of the survey show that there were about 2,060,100 employed persons in the informal sector, corresponding to about 81.2 percent of total employment. There were in total 2,462,800 persons with informal employment at main job, constituting almost 91 percent of total employment. A significant result was the presence of some 258,600 persons with informal jobs in the formal sector.

Working time

The average and median number of hours usually worked at all jobs were 40.0 and 36 hours per week respectively, and the corresponding hours actually worked during the reference week were 35.5 hours for the average and 30 hours for the median. For most people (65.2 percent), the weekly usual and actual hours of work at all jobs were the same. For others, the usual hours of work was higher than the actual hours of work due to various reasons, including vacation or holidays or sickness during part or the whole of the reference week (28.4 percent). For the remaining, the hours usually worked was lower than the hours actually worked. The total volume of employment in terms of actual hours worked at all jobs in the reference week was 93 million hours.

The combination of usually working hours in employment and in foodstuff production give the number of usually working hours according to the old definition of employment. The corresponding mean and median usually working hours were 36.4 and 34.0 hours per week.

Income from employment

The average income from paid employment of employees at main job was about 55,230 RWF per month while the median was 20,800 RWF. The national average hourly cash income from employment of employees at main job was 407 RWF per hour. The corresponding values were 215 RWF per hour in agriculture, 502 RWF per hour in industry and 574 RWF per hour in services.

Population outside the labour force

The number of persons of working age who were outside the labour force was about 3,244,000, the majority of them being subsistence foodstuff producers (51 percent). A large part of the population outside the labour force considered themselves to be unemployed (32 percent), or fulfilling domestic tasks in their household (25 percent). The remainder (43

percent) considered themselves as pupil, student, post-graduate, in retirement, or permanently unable to work due to disabilities or other health problem.

Women and equal opportunities

Women accounted for close to 44 percent of the labour force, mostly engaged as crop farm labourers, field crop and vegetable growers, stall and market salespersons, and domestic cleaners and helpers. Among employed persons with managerial positions, 27 percent were women. The analysis of the survey data also showed that, after controlling for differences in characteristics of males and females as well the differences in their jobs, females earn 8.9% lower than males. This gap is all contributed by the private sector (-9.8 percent) as there is no statistically significant gender pay gap in public sector.

Youth and education

The unemployment rate among young persons 16 to 30 years old was 21.5 percent. The survey showed an increasing pattern of youth unemployment rate from about 20 percent for young people with no educational attainment to 32 percent for youth with secondary education with a slight decline to 29 percent among youth who completed university education.

Participation in training programmes

In total an estimated 827,000 persons attended a trade or technical vocational course in the past. The most popular training courses were tailoring, masonry and carpentry with participation rates of 33 percent, 21 percent and 9 percent, respectively. Among the training courses with more than 1 percent of the participants, motor vehicle engine mechanics was the most successful with current employment rate of 68.2 percent, followed by engine mechanic, carpentry and automotive body repair with current employment rates of 67.2, 64.4 and 63.3 percent, respectively.

Graduates in Technical and Vocational Education Training are more privileged than graduates in general education at the labour market. The proportion of employed population among those who completed TVET was 59% while the corresponding proportion among those who followed general education was 40%. In the same way, the unemployment rate among TVET graduates was 18% while it was 20% among those who completed general education.

Working children

In many countries, children below the legal working age are engaged in economic activity, earning money in a variety of casual or informal jobs or helping without pay in family enterprises. Not all work performed by children is however *child labour*. According to the international standards concerning statistics of child labour adopted by the 18th ICLS in 2008, the term *child labour* refers to the engagement of children in prohibited work and, more generally, in types of work to be eliminated as socially and morally undesirable as guided by national legislation and relevant ILO conventions and recommendations.

The RLFS was not designed to measure child labour, however, the survey collected some data on children aged 5 to 17 that allows estimating some aspects of work activities of children. The survey results show that there were 312,200 children 5 to 17 years old engaged in employment work during the reference period, representing 8.4 percent of the total number of children in that age category. Only 0.2 percent of children 5 to 12 years old were working and they were working 20 hours or less per week and they were all enrolled in schools. The corresponding rates for those aged 13 to 15 years old and 16 to 17 years old were 14 percent and 38 percent respectively. The major part of the working children were engaged in agriculture activities (72%), combining work with school (82.5 percent) and working 20 hours or less per week (58 percent).

Own-use producers

More than 80 percent of the working age population engaged in one or more types of own-use production work, spending on average 24.7 hours of work in such activities, for example household chores including shopping, preparing meals (10.7 hours per week), looking after children and elderly (10.3 hours per week), searching for fodder or grazing for domestic animals (9.9 hours per week), constructing own dwelling or making major repairs (8.2 hours per week), manufacturing household goods for own or family use (7.8 hours per week), collecting firewood (5.6 hours per week), and fetching water for the household including travel time (5.0 hours per week).

Migrant workers

The stock of the migrant population at the time of the survey was 1,303,700 persons, representing 11.5 percent of the total population. Among them, an estimated 654,900 were migrant workers, the bulk were internal migrant workers engaged as domestic workers (21 percent), or in agriculture (18 percent), in wholesale and retail trade (14 percent) and in construction (11 percent).

Workers with disabilities

In total there were 484,000 persons five years old and over with disabilities, representing a prevalence rate of slightly less than 5 percent. More than one-fourth of the working age persons with disabilities were labour force participants, but the unemployment rate of persons with disabilities (20.8 percent) was significantly higher than the unemployment rate of the working age population at large (18.8 percent).

Rwanda Labour force survey August 2016: Summary labour force indicators

Children 5 to 17 years old = 3,746,000 Working children = 312,200 (8.3%) 5-12 yrs: 0.2% ; 13-15yrs: 14% ; 16-17yrs: 38.4%	Working age population 16 years old and over 6,573,200 persons							
	Outside the labour force 3,243,900 persons		Labour force 3,329,300 persons Labour force participation rate 50.6%					
			Employed (All who worked for pay or profit) 2,703,200 persons			Unemployed (All not employed but seeking and available to work for pay or profit) 626,100 persons		
	Others outside the labour force 48.7%	Subsistence foodstuff producers 51.3%	Agriculture excluding subsistence foodstuff production 37.3%	Industry 19%	Services 43.7%	Primary education or below 77.6%	Secondary education 17.6%	Tertiary education 4.8%
Supplied weekly labour: 93 million hours								
Labour underutilization (3,062,900 persons): Unemployed (626,100) + Time-related underemployed (848,500) + Potential labour force (1,588,300) Composite measure of labour underutilization (62.3%)								

Comparison of General and Technical and Vocational education

Level of attained	Employment to population ratio			Unemployment rate		
	General education	TVET	Total	General education	TVET	Total
None	—	56.1	40.2	—	22.1	18.3
Primary	38.6	58.7	41.0	18.2	15.1	17.7
Lower secondary	25.0	59.9	30.7	20.4	19.0	19.9
Upper secondary	42.2	63.1	44.1	25.3	22.6	25.0
University	72.1	70.8	72.0	17.1	18.0	17.2
Young and adults						
Young (16-30)	32.1	57.8	39.3	23.7	22.8	21.5
Adults(31+)	51.6	59.9	42.8	15.6	15.1	16.3
Total	39.8	59.0	41.1	19.8	18.4	18.8

Comparison of old and new definitions

Indicators	Old definition			New definition		
	Total	Urban	Rural	Total	Urban	Rural
Labour force participation rate	76.0	70.7	77.6	50.6	62.8	47.0
Employment to population ratio	71.9	62.3	74.9	41.1	52.5	37.7
Unemployment rate	5.3	11.9	3.5	18.8	16.4	19.8
Youth Unemployment rate	7.9	15.7	5.3	21.5	19.4	22.5
Average usually working hours	36.4	47.7	33.6	40.0	50.7	35.5
Median usually working hours	34.0	46.0	30.0	36.0	48.0	35.0

OCCUPATION	Old definition			New definition		
	Total	Urban	Rural	Total	Urban	Rural
Managers	0.7	2.7	0.2	1.2	3.2	0.4
Professionals	3.6	8.6	2.3	6.2	10.2	4.6
Technician and Associate Professional	0.9	2.7	0.5	1.6	3.2	0.9
Clerical and support workers	0.5	2.3	0.1	0.9	2.7	0.2
Service and sales workers	10.6	22.3	7.7	18.6	26.4	15.3
Skilled agricultural	47.8	17.5	55.4	8.7	2.2	11.4
Craft and related trade workers	6.1	10.5	5.0	10.7	12.5	10.0
Plant and machines operators	1.6	4.2	1.0	2.9	5.0	2.0
Elementary occupations	28.1	29.1	27.9	49.2	34.5	55.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Economic activity	Old definition			New definition		
	Total	Urban	Rural	Total	Urban	Rural
Agriculture, forestry and fishing	64.1	23.2	74.4	37.3	9.0	49.1
Mining and quarrying	0.8	0.4	0.9	1.4	0.4	1.8
Manufacturing	3.3	4.7	2.9	5.8	5.6	5.8
Electricity, gas, steam and air conditioning supply	0.1	0.1	0.0	0.1	0.2	0.1
Water supply, sewerage and waste management	0.3	0.5	0.2	0.5	0.6	0.4
Construction	6.4	9.7	5.6	11.2	11.5	11.1
Wholesale, retail trade, repair of motor vehicles	8.4	18.8	5.8	14.7	22.3	11.4
Transportation and storage	2.3	5.8	1.4	4.0	6.8	2.9
Accommodation and food service activities	2.5	4.1	2.1	4.4	4.9	4.2
Information and communication	0.3	1.3	0.0	0.5	1.6	0.1
Financial and insurance activities	0.4	1.6	0.1	0.7	1.9	0.2
Real estate activities	0.0	0.0	0.0	0.0	0.0	0.0
Professional, scientific and technical activities	0.3	1.3	0.0	0.5	1.6	0.1
Administrative and support service activities	0.7	2.2	0.4	1.3	2.7	0.7
Public administration and defense	1.5	4.0	0.8	2.5	4.7	1.6
Education	2.2	3.5	1.9	3.8	4.1	3.7
Human health and social work activities	0.8	1.9	0.5	1.4	2.3	1.0
Arts, entertainment and recreation	0.1	0.5	0.0	0.2	0.6	0.1
Other service activities	1.5	2.8	1.1	2.6	3.4	2.2
Activities of households as employers	3.9	12.6	1.7	6.8	14.9	3.3
Activities of extraterritorial organizations and bodies	0.3	0.8	0.1	0.4	1.0	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

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Introduction

The National Institute of Statistics of Rwanda, as the coordinator of the National Statistics System (NSS), has launched a regular labour force survey programme (LFS) starting in 2016.¹ The survey programme is part of the second National Strategy for the Development Statistics (NSDS2) covering the period 2014/15 to 2018/19.² It is conducted in partnership with the Ministry of Public Service and Labour (MIFOTRA), and with technical support from the Rwanda-German Development Cooperation as part of its Technical Cooperation program GIZ Eco-Emploi.

The main objective of the survey programme is to monitor the trend of employment and labour underutilization including unemployment at the national and province levels, and to the extent possible also at district level. The survey programme is also meant to provide relevant data for the design, implementation and evaluation of economic and social policies related to employment creation, income generation, skills development including vocational education and training, and related decent work policies. It is further designed to provide data on particular categories of persons such as women and youth and on required data for other bodies of statistics such as volume of work and labour input for national production accounts and calculation of labour productivity.

The survey programme begun with a pilot survey conducted in February 2016. The principal objective of the pilot LFS was a full rehearsal of the operations of a national labour force survey including sample selection, listing of sample enumeration areas, household interviewing, data processing and report writing. The first round of the full-fledge Rwanda labour force survey was conducted in August 2016.

The analysis of the LFS 2016 results is presented in the main body of the report organized into 13 Chapters. Chapter 1 presents the main results at the national level and comparisons with the past surveys. Chapter 2 examines the age structure of the population, the labour force and its relation to the subsistence foodstuff producers. Chapter 3 examines the labour force participation of the working age population. Chapter 4 presents the data on employment and its composition in terms of status in employment, branch of economic activity, occupation, informal sector and informal employment, and working time and income from employment.

Chapter 5 deals with unemployment and other components of labour underutilization (time-related underemployment and potential labour force) and compares the unemployment rate with broader indicators of labour underutilization. Chapter 6 presents the data on the characteristics of the population outside the labour force, including main source of livelihood and past work experience. The other seven chapters examine the labour market situation of particular categories of workers, namely, women (Chapter 7), young persons (Chapter 8), participants in training programmes (Chapter 9), own-use producers (Chapter 10), working children (Chapter 11), migrant workers (Chapter 12) and workers with disabilities (Chapter 13).

¹ NISR, *Labour Statistics Framework of Rwanda*, National Institute of Statistics of Rwanda Kigali, 2014.

² NISR, *National Strategy for the Development of Statistics, 2014/15-2018/19*, National Institute of Statistics of Rwanda, Kigali, September 2014.

The survey methodology and data quality is documented in Annexes A and B. The main concepts and definitions used in the survey are described in Annex A, including the working age population, employment, unemployment and other components of labour underutilization, and own-use producers. The definitions of other concepts are presented in the body of the report including hours actually or usually worked, status in employment, informal sector and informal employment. Annex B describes the survey design and quality of the data, in particular, sampling errors, coverage errors, non-responses and response errors. The annex also describes the questionnaire design and issues experienced during the field operations. The statistical tables are presented in Annex C.

A specimen of the survey questionnaire is reproduced in Annex D and the list of officials involved in the survey design and operations is given in Annex E.

Chapter 1. Main labour force indicators

The main results of the LFS August 2016 are shown in Table 1.1 below. According to these results, among the 6,573,000 persons 16 years old and over living in regular households, about 3,329,000 persons were in the labour force, either employed (2,703,000) or unemployed (626,000). The remainder 3,244,000 persons were outside the labour force including some 1,665,000 persons engaged wholly or mostly in subsistence foodstuff production, not classified as employment according to the 2013 new international standards on statistics of work, employment and labour underutilization.

The national labour force participation rate, that is the percentage of the working age population engaged in the labour force, was 50.6 percent, indicating that slightly more than half of the working age population was either working for pay or profit or seeking employment. The male labour force participation rate was 60.7 percent, higher than the female rate of 41.9 percent. At the same time, the labour force participation rate in urban areas (62.8 percent) was higher than the rate in rural areas (47.0 percent).

Table 1.1: Main labour force indicators

Indicators ('000)	Total	Male	Female	Urban	Rural	Participated in subsistence agriculture	Not participated in subsistence agriculture
Population 16 years old and over	6,573	3,071	3,502	1,521	5,053	3,256	3,317
Labour force	3,329	1,863	1,466	955	2,374	1,592	1,737
- Employed	2,703	1,570	1,133	799	1,904	1,230	1,473
- Unemployed	626	293	333	156	470	361	265
Outside labour force	3,243	1,208	2,036	566	2,678	1,665	1,579
Labour underutilization	3,064	1,315	1,748	547	2,516	1,976	1,087
- Unemployed	626	293	333	156	470	361	265
- Time-related underemployed	849	453	396	141	708	550	299
- Potential labour force	1,588	569	1,019	250	1,338	1,065	523
Labour force participation rate	50.6	60.7	41.9	62.8	47.0	48.9	52.4
Employment-to-population ratio	41.1	51.1	32.4	52.5	37.7	37.8	44.4
Time-related underemployment rate	31.4	28.8	34.9	17.6	37.2	44.7	20.3
LU1 - Unemployment rate	18.8	15.7	22.7	16.4	19.8	22.7	15.2
LU2 - Combined rate of unemployment and time-related	44.3	40.0	49.7	31.1	49.6	57.2	32.4

Indicators ('000)	Total	Male	Female	Urban	Rural	Participated in subsistence agriculture	Not participated in subsistence agriculture
underemployment							
LU3 - Combined rate of unemployment and potential labour force	45.0	35.4	54.4	33.7	48.7	53.7	34.8
LU4 - Composite measure of labour- underutilization	62.3	54.1	70.3	45.4	67.8	74.4	48.1

The employment-to-population ratio, i.e., the percentage of the working age population who is employed, is an indicator of the performance of the national economy in providing employment to its growing population. The ratio was 41.1 percent according to the survey results. Similar to the labour force participation rate, the employment-to-population ratio was higher among men than women, and higher in urban areas than in rural areas.

The unemployment rate represents the percentage of the labour force that is unemployed. The rate shown in Table 1.1 as LU1 stood at 18.8 percent, indicating that roughly for five person in labour force there was one person unemployed. The female unemployment rate (22.7 percent) was higher than the male rate (15.7 percent) and that the rural rate (19.8 percent) was higher than the urban rate (16.4 percent).

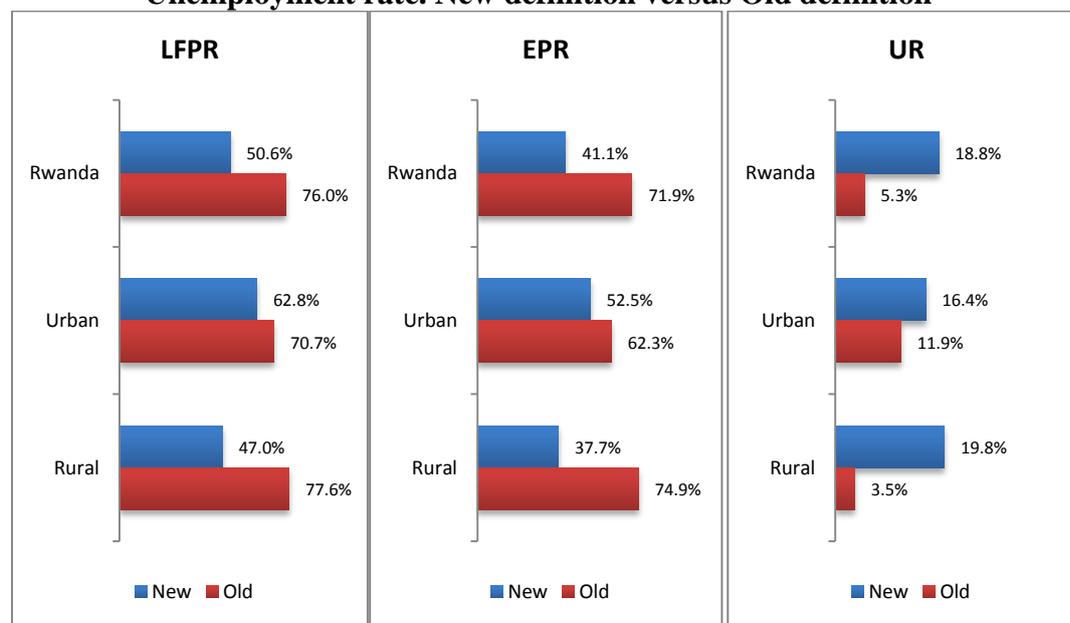
The unemployment rate is not the only indicator of the unmet needs for employment. Other indicators combine unemployment and time-related underemployment and potential labour force. The potential labour force includes persons who were available for employment but were not seeking employment during the reference period as well as persons who were indeed seeking employment during the reference period but were not currently available for work.

According to the LFS results, the combined rate of unemployment and time-related underemployment (LU2) was 44.3 percent more than twice the unemployment rate. The combined rate of unemployment and potential labour force (LU3) was even higher at 45.0 percent. The composite measure of labour underutilization (LU4) that combines unemployment, time-related underemployment and potential labour force was 62.3 percent indicating that more than half of the labour force was affected by some form of labour underutilization. In general, labour underutilization affected female workers more than male workers, and rural areas more than urban areas.

The results presented here under the new definitions in line with the 2013 international standards differ considerably from those that would have been obtained under the old definitions used in household surveys and population censuses of Rwanda, in line with the 1982 international standards. Figure 1.1 compares the main labour market indicators under the new and old definitions. The labour force participation rate under the new definition, 50.6 percent, is

significantly lower than the rate under the old definition, 76.0 percent. Even more pronounced is the difference between the employment-to-population ratio, 41.1 percent under the new definition, and 71.9 percent under the old definition. By contrast, the unemployment rate is considerably higher under the new definition, 18.8 percent, than the rate under the old definition, 5.3 percent.

Figure 1.1: Labour force participation rate, Employment-to-population ratio and Unemployment rate. New definition versus Old definition



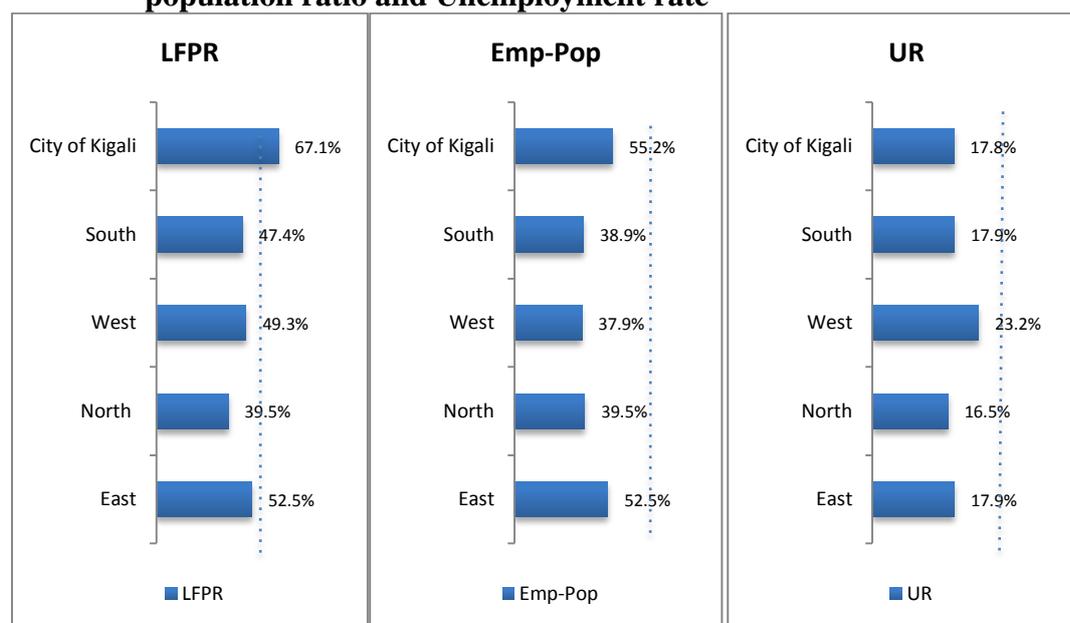
Source: RLFS August 2016

The main reason explaining the differences is the statistical treatment of subsistence foodstuff producers in the definition of employment. According to the new international standards, employment includes only persons working for pay or profit, excluding persons engaged wholly or mostly in subsistence foodstuff production. The effect of this is a lower count of the number of employed and a higher count of the number of unemployed because some of the subsistence foodstuff producers would be looking and available for work for pay or profit and thus be classified as unemployed.

It can be observed on Figure 1.1 that the differences between the labour market indicators under the new and old definitions are much less pronounced in urban areas than in rural areas where subsistence foodstuff production is vastly more widespread. The difference between the labour force participation rate under the old and new definitions in urban areas is 7.9 percentage points while it is 30.6 percentage points in rural areas. The difference between the employment-to-population ratio under the old and new definitions in urban areas is 9.8 percentage points while it is 37.2 percentage points in rural areas. The difference between the unemployment rate under the old and new definitions in urban areas is only 4.5 percentage points while the gap is much wider at 16.3 percentage points in rural areas.

Labour market situation varies from one part of the country to another. Figure 1.2 shows the main labour force indicators for the five regions of Rwanda. More detail regional data are presented in the Statistical Annex C. It can be observed that the labour force participation rate in August 2016 was considerably higher than the national average in the City of Kigali (67.1 percent). The rate was about average in the East (52.5 percent), West (49.3 percent), and South (47.4 percent), and much lower in the North (39.5 percent).

Figure 1.2: Regional variations of Labour force participation rate, Employment-to-population ratio and Unemployment rate



Source: LFS August 2016.

Note: Dotted line represents the national average of corresponding indicator.

A similar pattern may be observed with respect to the employment-to-population ratio. It shows that the rate was higher than the national average in the City of Kigali (55.2 per cent) and about average in the East (43.1 percent), South (38.9 percent) and West (37.9 percent), but significantly lower in the North (33.0 percent).

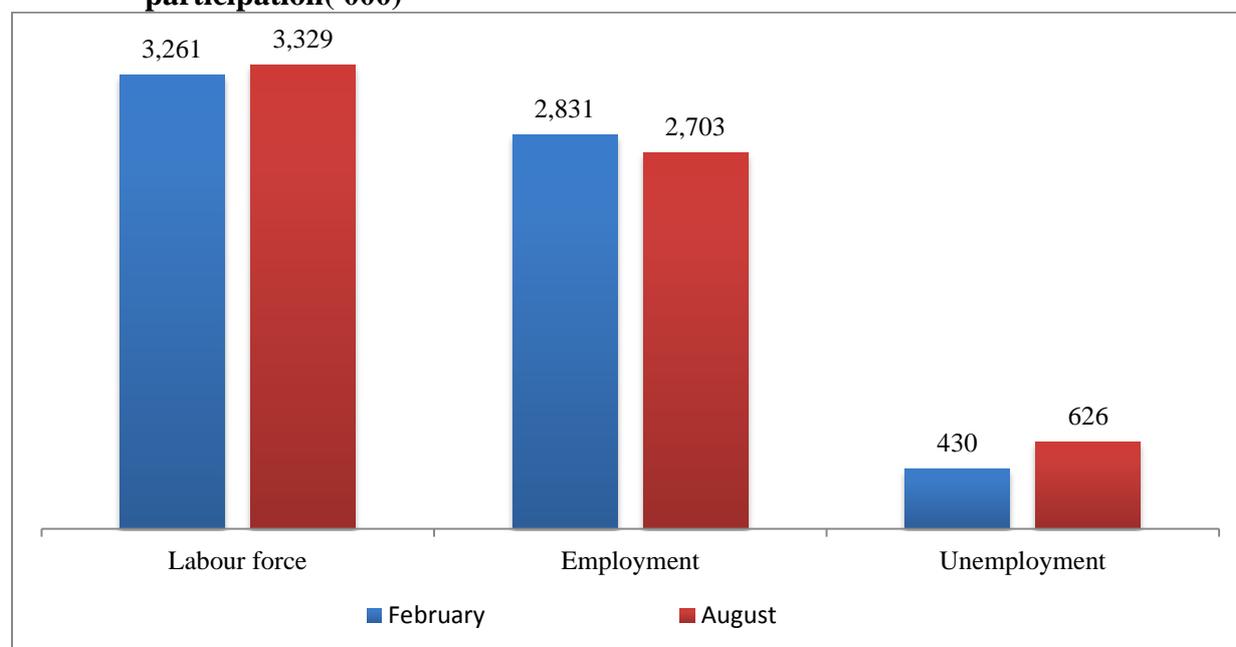
The unemployment rate shows an almost mirror image though not exactly, lowest in the North (16.5 percent), about average in the East (17.9 percent), South (17.9 percent) and the City of Kigali (17.8 percent) and highest in the West (23.2 percent).

Overall, the regional pattern that emerges indicates significantly higher labour market activity in the City of Kigali in the form employment work and in the West in the form of unemployment. The North shows the lowest labour market activity both in the form of employment work and unemployment, while East and South are about average. These results are essentially in line with the regional pattern of subsistence foodstuff production. Where there are relatively more subsistence foodstuff producers, employment is comparatively lower and vice versa where there are relatively less subsistence foodstuff producers, employment tends to be higher. The relationship with unemployment is however more complex.

The labour market of Rwanda is not only subject to regional variations in different parts of the country but also subject to seasonal variations over different periods of the year, particular, the high and low season of agricultural activities. An idea of the effect of seasonality of the labour market may be obtained by comparing the results of the LFS August 2016 with those of the Pilot LFS conducted in February 2016. According to the sample design of the pilot survey, every household in the country had a non-zero probability of being selected in the sample. Therefore its estimates may be interpreted to represent the entire country and comparable to the results of LFS August 2016.

Figure 1.3 presents the main labour force aggregates obtained from the two surveys. According to these results, total employment was almost unchanged from February to August at about 2,800,000. Unemployment, however, was significantly higher in August (626,000) compared to February (430,000), resulting to a slightly higher labour force participation in August (3,400,000) as opposed to February (3,300,000).

Figure 1.3: Seasonal variations of employment, unemployment and labour force participation ('000)



Source: Pilot RLFS February 2016 and RLFS August 2016

The main factor explaining the seasonal variations in the main labour force aggregates is the change in the number of subsistence foodstuff producers during the high and low season. In February 2016, corresponding to the high season of agriculture activity, the total number of subsistence foodstuff producers was about 4,104,000, while the number in August 2016, corresponding to the low season of agriculture activity, was reduced to below 3,256,000, i.e., a drop of almost 900,000. Some of the subsistence foodstuff producers who stopped their agriculture activity during the off-season became jobseekers looking for employment work, and as a result raising the level of unemployment. This process may have involved some 200,000 workers, explaining the increase of the total number of unemployed persons from 430,000 in February 2016 to 640,000 in August 2016.

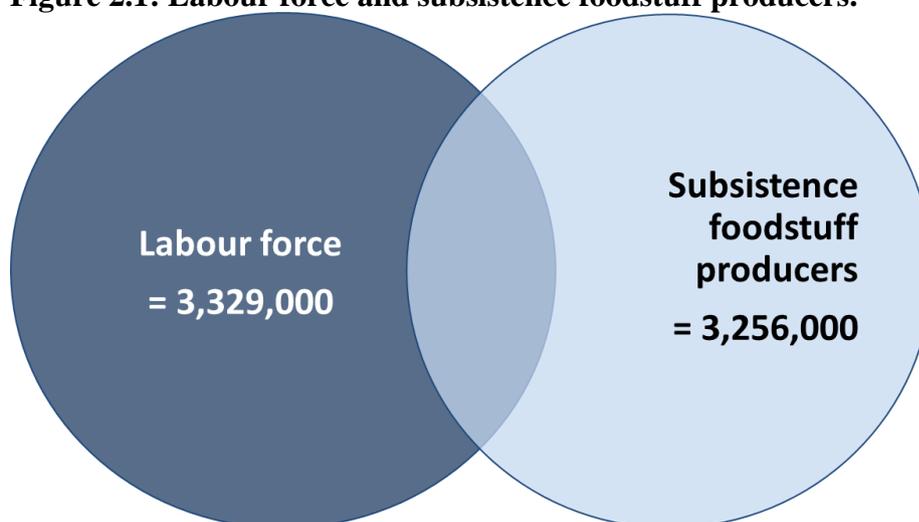
Chapter 2. Population, labour force and subsistence foodstuff producers

The population constitutes the human capital of a nation and defines its potential labour supply. From an economic point of view, the working population is a factor of production and its aptitude and skills level contribute to the productivity of the national economy. From a social point of view, different categories of the population form social groups of particular concern and meeting their needs are major challenges faced by public institutions and society at large.

The results of the LFS August 2016 show that the working age population 16 years old and over includes 6,573,000 persons of whom about 3,329,000 are in the labour force. This means that slightly more than a half of the working age population is participating in the labour force, many others are engaged in subsistence foodstuff production not counted as employment according to the new international standards on statistics of work, employment, and labour underutilization.

Figure 2.1 shows the size of the labour force relative to the size of the subsistence foodstuff producers and the overlap between them. As it can be observed there were almost as many subsistence foodstuff producers (3,256,000) than persons in labour force (3,329,000). The overlap (1,592,000) represents the subsistence foodstuff producers who were engaged in an employment activity for pay or profit as a subsidiary activity (1,231,000) or were seeking and available for employment during the reference period of the survey (361,000).

Figure 2.1: Labour force and subsistence foodstuff producers.

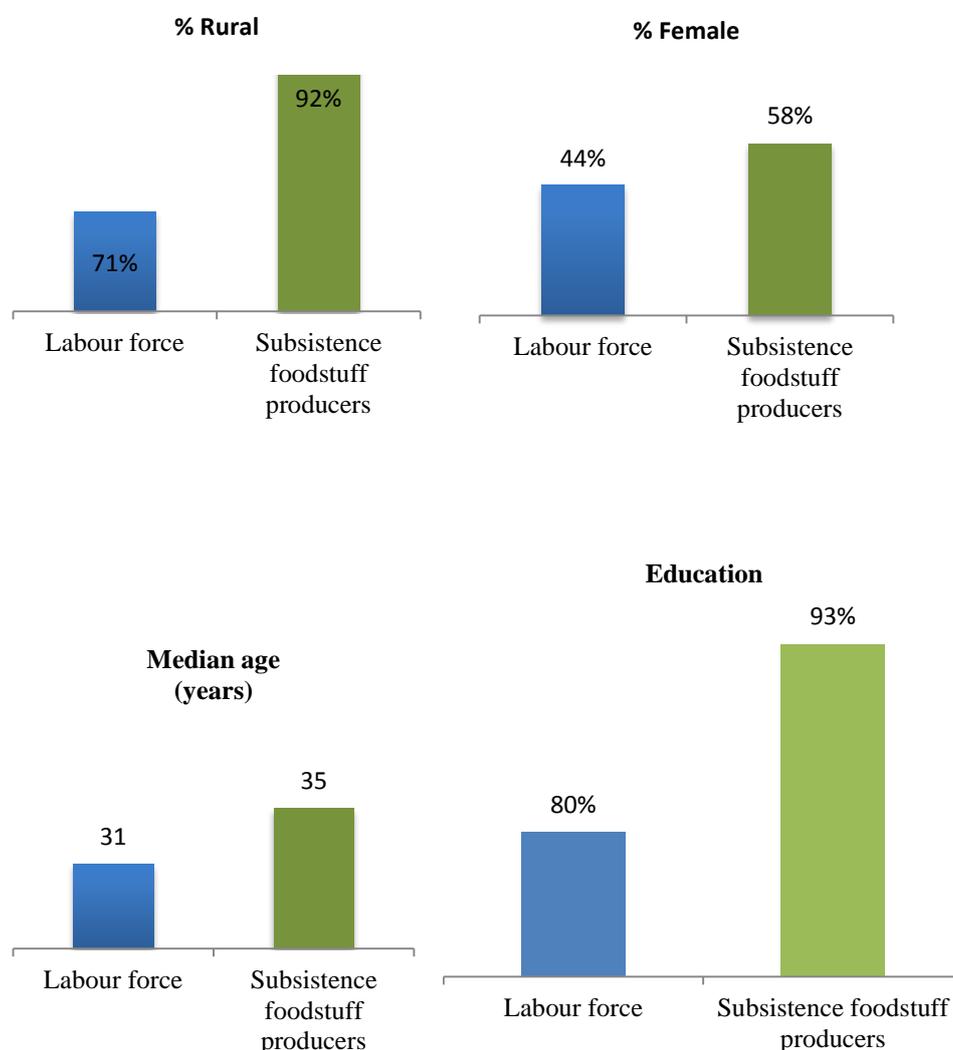


Source: RLFS August 2016

Figure 2.2 compares some of the demographic and educational characteristics of the subsistence foodstuff producers with those of the labour force. In general, subsistence foodstuff producers were virtually all living in rural areas (92 percent) while the labour force was 71 percent rural and 29 percent urban. The majority of subsistence foodstuff producers were women (58 percent) while the share of women in the labour force was 44 percent. Subsistence foodstuff producers were generally older (median age 35 years old) and less educated (93 percent with primary

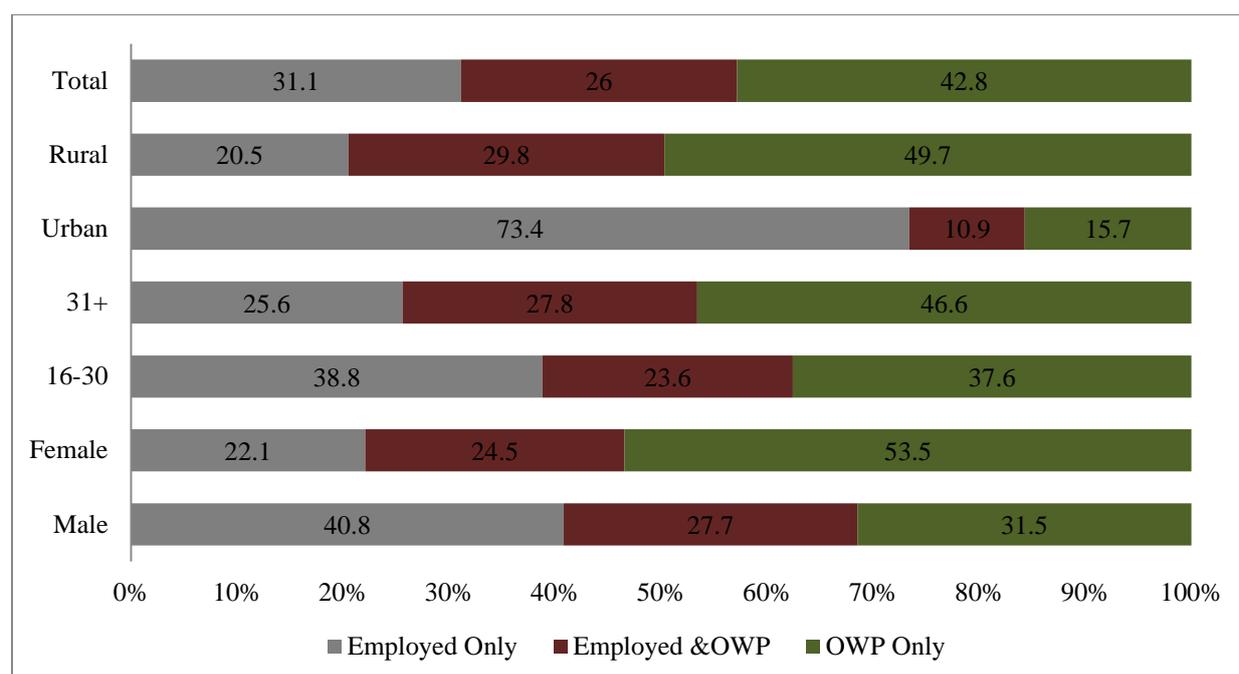
education or below) than persons in the labour force (median age 31 years old and 80 percent with primary education or below).

Figure 2.2: Demographic and educational characteristics of labour force versus subsistence foodstuff producers.



Source: LFS August 2016

The following figure shows the combination of employment work and own-use production of goods among different categories of persons who were engaged in one or both of these forms of work. Overall, 31 percent were engaged only in employment work and 43 percent only in own-use production of goods. The remainder 26 percent was combining employment work and own-use production of goods during the specified reference period. It should be mentioned that employment work were measured with reference to the last seven days while the reference period for the measurement of own-use production of goods was four weeks prior to the survey date.

Figure 2.3: Employment and own-use production of good

Source: LFS August 2016

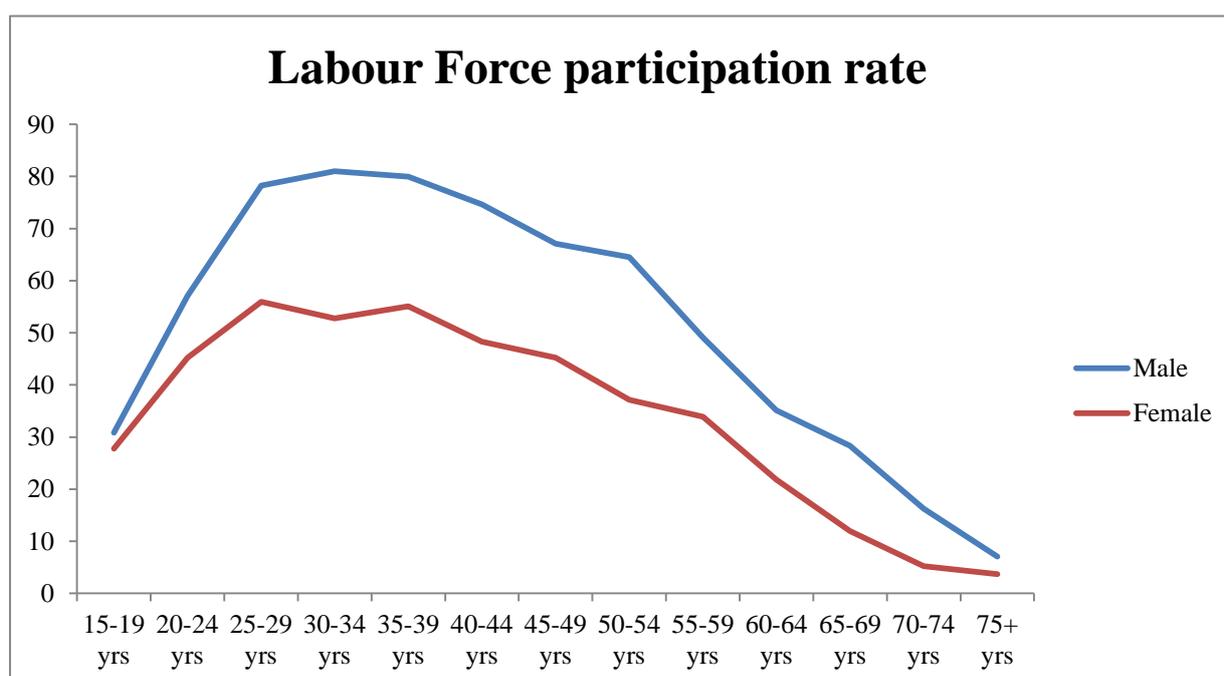
In terms of categories of persons, the data show that sole engagement in own-use production of goods was mostly among women, older persons 31 years old and over, and in rural areas. In contrast, engagement in employment work only was mostly among men, young persons 16 to 30 years old, and in the urban areas. The relative size of persons engaged in both employment work and own-use production of goods was about the same for all categories of persons at about 25 to 30 percent, except for persons living in urban areas where the percentage of persons combining the two forms of work was relatively low at about 10 percent.

Chapter 3. Labour force participation

The labour force participation rate, i.e., the ratio of the labour forces to the working age population expressed in percentage terms, is an indicator of the level of labour market activity. It measures the extent of the working age population who is in the labour force. The breakdown of the labour force participation rate by sex and age group gives a profile of the labour force participation as shown in Figure 3.1.

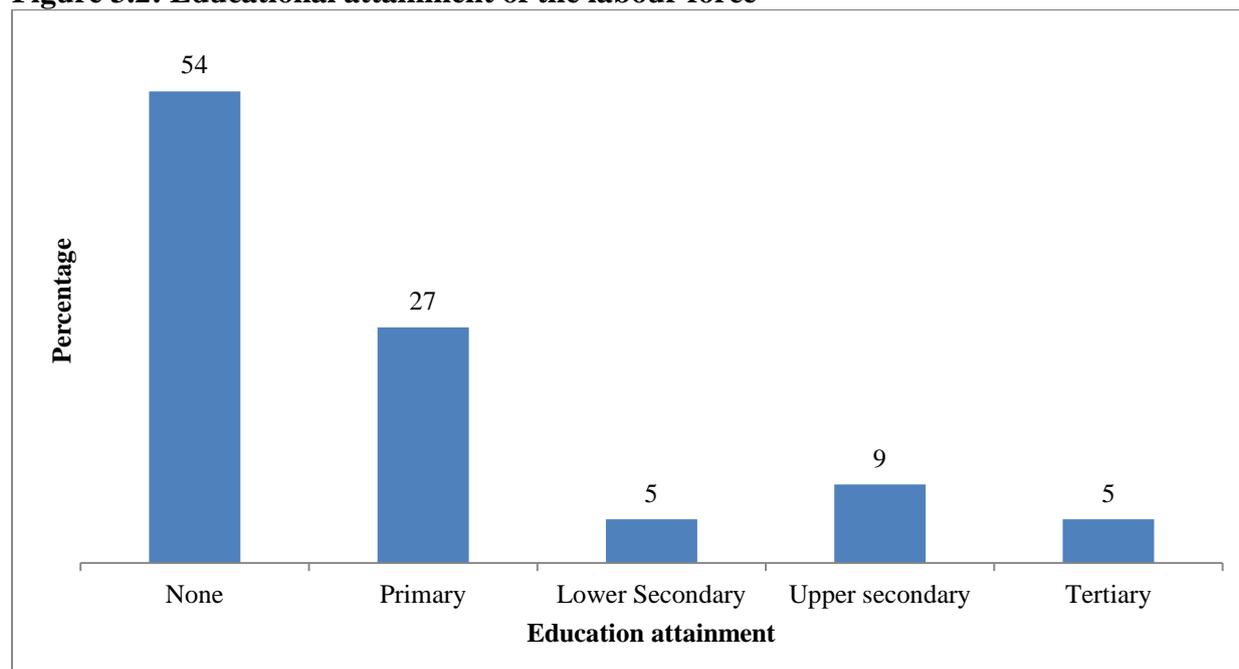
Like most national rates, the Rwanda labour force participation rate has an inverted-U shape. The male curve is above the female curve, reflecting a higher labour force participation of male at virtually all age groups. For each sex, the curve increases for young people when they leave school and enter the labour market. It reaches a peak in the age group 30-34 years for men and in the age group 25-29 for women. The fluctuation of the labour force participation rate among females aged between 25 and 34 years old may be attributable to exit and reentering the labour market due to marital and child bearing reasons. After 39 years old, the labour force participation rate decreases sharply for both men and women, as people leave and retire from the labour market at older ages.

Figure 3.1: Labour force participation rate by sex and age group



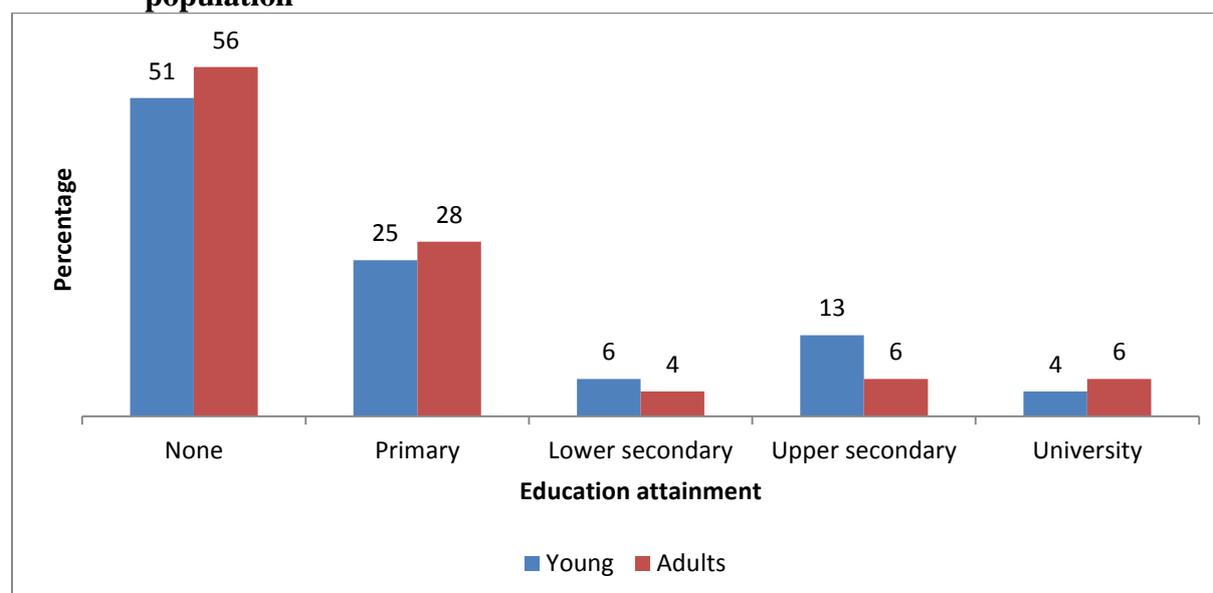
Source: LFS August 2016

The skill level of the labour force may be assessed by the educational attainment of the labour force participants. Figure 3.2 presents the distribution of the labour force by educational attainment. The level of educational attainment of the bulk of the labour force was primary education or below (81 percent). The share of the labour force with secondary education (lower and upper) was about 14 percent and the share with tertiary education was about 5%.

Figure 3.2: Educational attainment of the labour force

Source: LFS August 2016

The educational attainment of the youth population 16 to 30 years old in the labour force was higher than the overall labour force. About 23 percent of the youth labour force has lower secondary or higher education against 20 percent for the labour force as a whole and 16 percent for adults. The percentage of youth with educational attainment above primary school was almost the same among male and female youth population (19 percent) Figure 3.3

Figure 3.3 Distribution of labour force by education attainment among young and adult population

Chapter 4. Employment

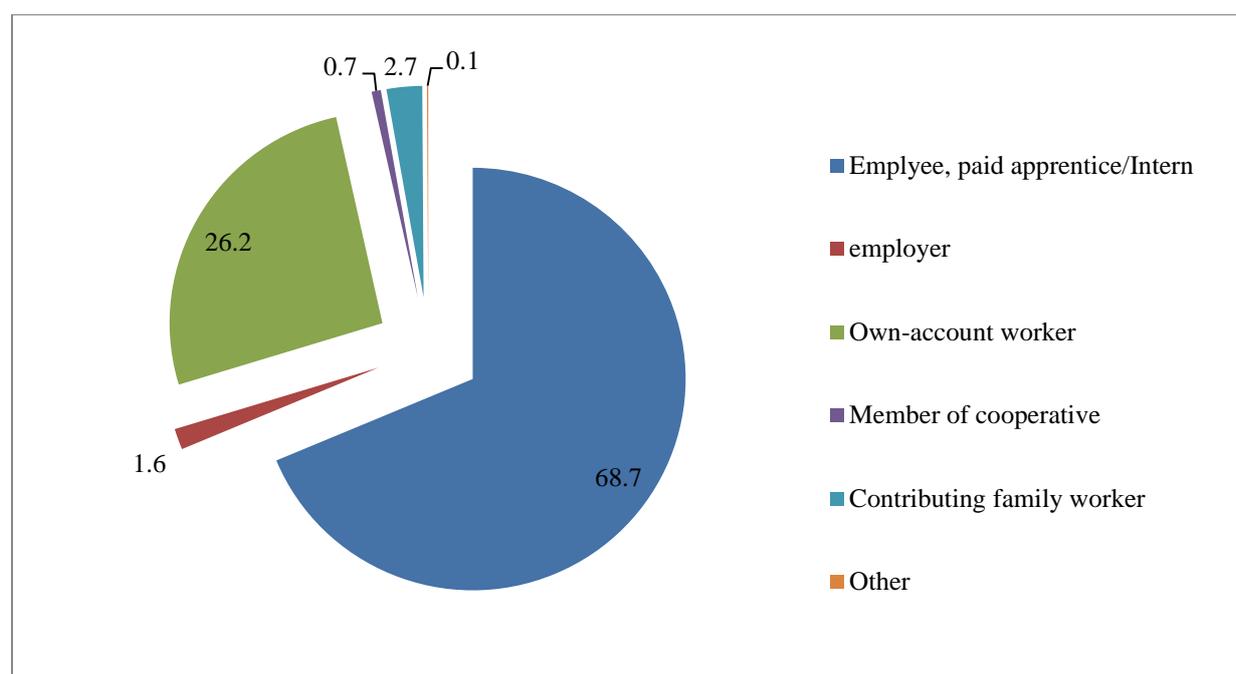
Aggregate employment generally increases with growing population. Therefore, the ratio of employment to the working age population is an important indicator of the capacity of the economy to provide employment to a growing population. A decline in the employment-to-population ratio is often regarded as an indicator of economic slowdown and a decline in total employment as an indicator of a more severe economic downturn. In August 2016, the employment-to-population ratio was 41.1 percent.

Status in employment classifies jobs held by persons at a given point of time with respect to the type of explicit or implicit contract of employment of the person with other persons or organizations. It may refer to the current job or jobs of an employed person or the last job of an unemployed person who had with past work experience. The International Standard Classification of Status in Employment (ICSE-1993) identifies five main categories of persons with respect to their status in employment:³

- **Employees:** Persons working in “paid employment jobs”, i.e., holding explicit (written or oral) or implicit employment contract with remuneration not directly dependent upon the revenue of the unit for which they work. Remuneration could be in the form of wages or salaries, commission from sales, piece-rates, bonuses, or in-kind payments such as food, housing or training.
- **Employers:** Persons working on own-account or with one or a few partners in “self employment jobs”, i.e., (a) remuneration is directly dependent on the profits (or potential for profits) derived from the goods and services produced or for own consumption, and (b) engaging one or more “employees,” on a continuous basis.
- **Own-account workers:** Persons working on own-account or with one or a few partners in a “self employment job”, not engaging any “employees,” on a continuous basis.
- **Contributing family workers:** Persons working in a market-oriented establishment operated by a household member, who cannot be regarded as partner, in a “self employment job”, not engaging any “employee” on a continuous basis.
- **Members of producers’ cooperatives:** Persons working in a cooperative producing goods and services, in a “self employment job”, not engaging any “employee” on a continuous basis

Figure 4.1 shows the composition of the employed population by status in employment in main job according to the August, 2016 LFS. More than two-third of the employed population (68.2 percent) were employees or paid apprentices or trainees. The share of own-account workers was (26.1 percent), followed by contributing family workers (2.6 percent), employers (1.6 percent) and members of producers’ cooperatives (0.7%).

³ILO, *International Classification of Status in Employment, ICSE-93*, Fifteenth International Conference of Labour Statisticians, Geneva, <http://laborsta.ilo.org>.

Figure 4.1: Status in employment at main job

Source: LFS August 2016

The data disaggregated by gender show that relatively more men were employed in dependent jobs as employees than women. The percentage of women employed as employees is 66 percent against 71 percent among men. Similarly, the percentage of women employed in dependent jobs as contributing family workers was 5 percent against 1 percent among men.

The distribution of the employed population by sector of employment reveals that the majority of employment was in private sector (80.5 percent) or in household activities (10 percent). The share of employment in the public sector was about 6 percent and less than 1 percent in the mixed sector. The remaining part of the employed population was engaged in the cooperative sector (2 percent) or in international or local non-governmental organizations (1 percent) or other institutions (less than 1 percent).

4.1 Branches of economic activity and occupations

Branch of economic activity refers to the activity of the establishment in which an employed person worked during the reference period. An establishment may be a farm, a mine, a factory, a workshop, a store, an office or a similar type of economic unit. It is important to distinguish enterprises from establishments. “Enterprise” is a broader concept than “establishment”. An enterprise is a legal entity (or group of legal entities) and may have a number of establishments with different economic activities and different locations.

Table 4.1 presents the distribution of the employed population by branch of economic activity in main job. The data show that agriculture employment was by far the most frequent branch of economic activity, comprising 37.3 percent of employment. The branch of economic activity with the next highest number of employed persons was trade (14.7 percent) followed by construction (11.2 percent) and activities of households as employers of domestic personnel (6.8

percent). The other branches of economic activity comprised each less than five percent of total employment.

Table 4.1: Employed persons by branch of economic activity in main job

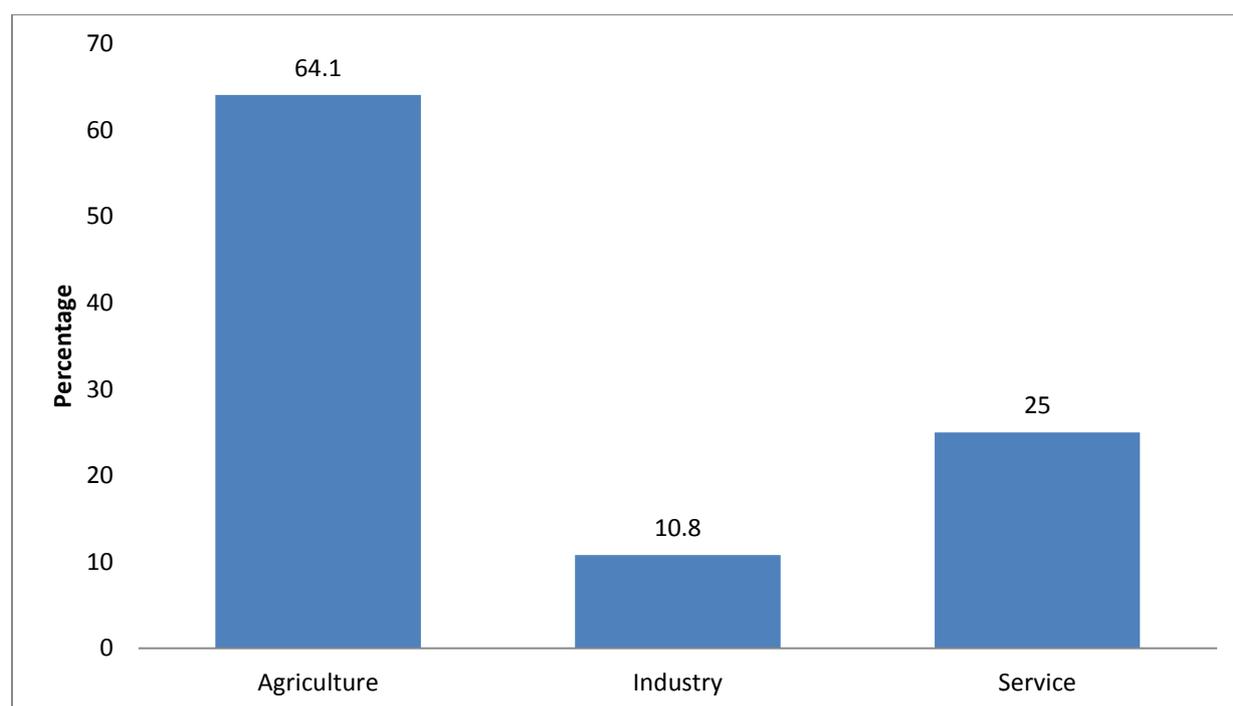
Branch of economic activity	Number	%
Total	2,703,212	100.0
Agriculture, forestry and fishing	1,007,171	37.3
Mining and quarrying	37,608	1.4
Manufacturing	155,445	5.8
Electricity, gas, steam and air conditioning supply	2,697	0.1
Water supply, sewerage and waste management	13,048	0.5
Construction	302,902	11.2
Wholesale, retail trade, repair of motor vehicles, motorcycles	396,139	14.7
Transportation and storage	109,111	4.0
Accommodation and food service activities	118,053	4.4
Information and communication	14,026	0.5
Financial and insurance activities	18,861	0.7
Real estate activities	69	0.0
Professional, scientific and technical activities	13,398	0.5
Administrative and support service activities	35,104	1.3
Public administration and defense	68,808	2.5
Education	103,434	3.8
Human health and social work activities	38,237	1.4
Arts, entertainment and recreation	5,743	0.2
Other service activities	69,017	2.6
Activities of households as employers	182,495	6.8
Activities of extraterritorial organizations and bodies	11,845	0.4

Source: LFS August 2016

A full account of agriculture activity requires the inclusion of subsistence foodstuff producers in the calculation.⁴ This means adding to agriculture employment (1,007,000), the number of workers engaged wholly in subsistence foodstuff production not already included in agriculture employment (estimated at 2,026,000 persons).

The result gives a total of 3,033,000 persons engaged in agriculture, representing 64.1 percent of total employment adjusted for subsistence foodstuff production and made comparable with past data. Figure 4.2 presents the composition of the work force by broad branch of economic activity.

⁴ In principle, a full account of the role of agriculture activities should also include agricultural employment in secondary jobs.

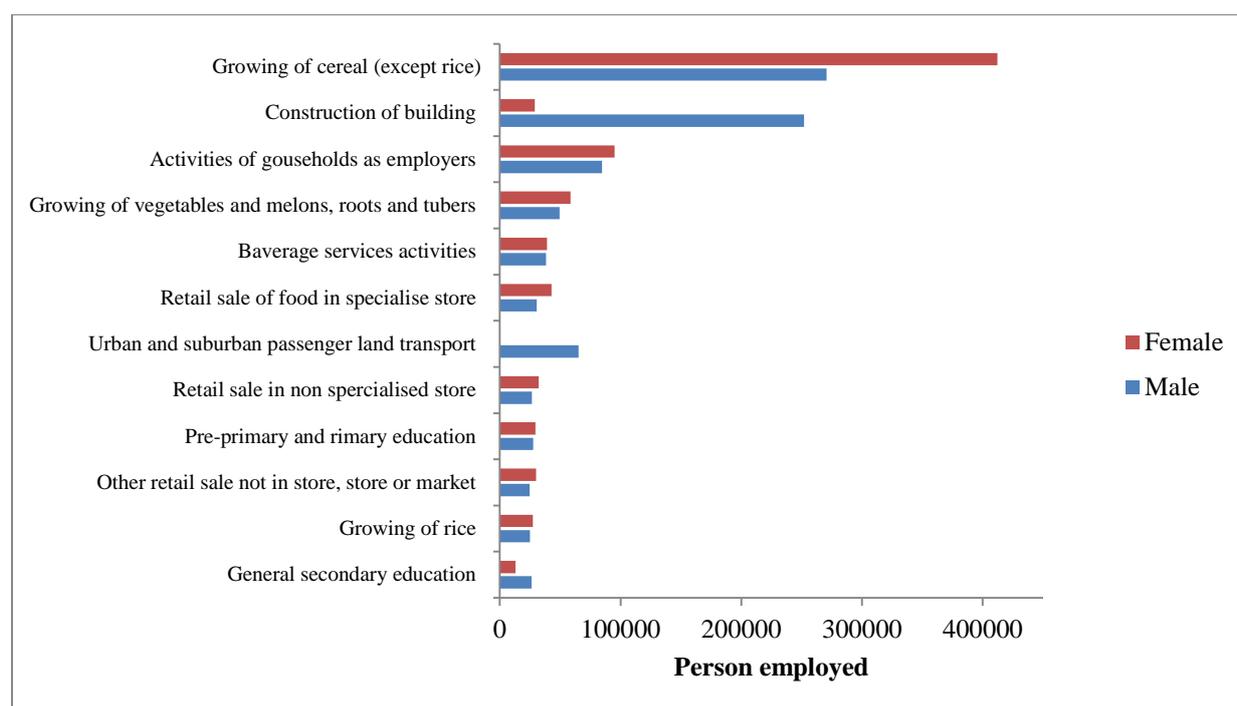
Figure 4.2: Share of work force by broad branch of economic activity

Source: LFS August 2016

Note: Agriculture includes forestry, fishing and animal husbandry. Industry includes Mining and quarrying, Manufacturing, Electricity, gas, steam and air conditioning supply, Water supply, sewerage and waste management, and Construction. Services cover the remaining branches of economic activity.

The results show that the share of agriculture workers was 64.1 percent in August 2016, the share of industry was 10.8 percent and that of services was 25.0 percent in August 2016.

Figure 4.3 shows the top twelve 4-digit branches of economic activity according to the LFS 2016. It is instructive to note that growing of cereals, households as employers of domestic personnel, growing of vegetables as well as beverage serving activities were branches of economic activity dominated by female workers, while construction of buildings, urban and suburban land transport as well as general secondary education were branches of economic activity dominated by male workers.

Figure 4.3: Top twelve branches of economic activity of employed persons at main job

Source: LFS August 2016

Similar data were obtained by occupation. Occupation refers to the kind of work done by a person employed (or the kind of work done previously or wanted if the person is unemployed), irrespective of the branch of economic activity or the status in employment of the person. Table 4.2 presents the distribution of the employed population by occupation category in the main job. The occupation category with the highest frequency (49.2 percent) was elementary occupations involving the performance of simple and routine tasks. It includes cleaners and helpers, agricultural, forestry and fishery labourers, labourers in mining, construction, manufacturing and transport, food preparation assistants, street and related sales and service workers and other elementary workers.

Table 4.2: Employed persons by occupation in main job

Major occupation group	Number	%
Total	2,703,212	100.0
Legislators, Managers and Senior Officials	33,779	1.2
Professionals	168,697	6.2
Technicians and Associate Professionals	42,846	1.6
Clerical Support Workers	25,391	0.9
Service and Sales Workers	501,993	18.6
Skilled Agricultural, Forestry and Fishery Workers	234,127	8.7
Craft and Related Trades Workers	289,427	10.7
Plant and Machine Operators and Assemblers	77,524	2.9
Elementary Occupations	1,329,428	49.2

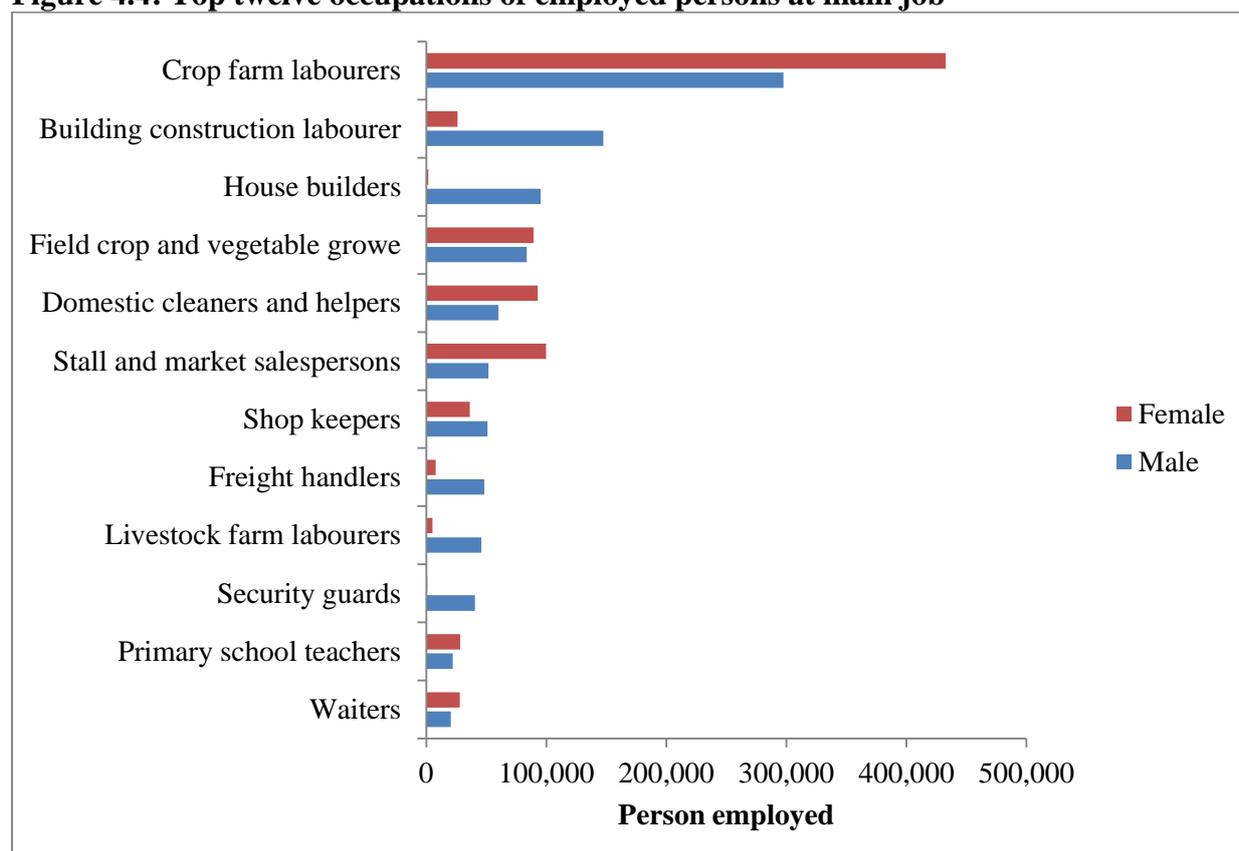
Source: LFS August 2016

The occupation category with the second highest frequency was services and sales workers (18.6 percent), followed by craft and related trades workers (10.7 percent) and skilled

agricultural, forestry and fishery workers (8.7 percent) . The other occupation categories each covered less than seven percent of the employed population.

Figure 4.4 lists the top twelve 4-digit occupations and compares their frequency among male and female employed persons. It can be observed that there were more women than men employed as crop farm labourers, field crop and vegetable growers, stall and market salespersons and domestic housekeepers.

Figure 4.4: Top twelve occupations of employed persons at main job



Source: LFS August 2016

There were more men than women employed as house builders and labourers in building construction. Livestock farm labourers, bartenders and security guards were virtually all men.

The degree of segregation of occupations by sex may be measured with the occupational segregation index. It measures extent to which labour markets are separated into “male” and “female” occupations. The occupational segregation index (D) is commonly used as a proxy indicator for equality of opportunity in employment and occupation.⁵ It is defined by

$$D = \frac{1}{2} \sum_i \left| \frac{n_{Ai}}{n_A} - \frac{n_{Bi}}{n_B} \right|$$

where n_{Ai} and n_{Bi} are, respectively, the number of men and women in a given occupational i and n_A and n_B are, respectively, the total number of men and women in all occupations. The value of

⁵ILO, *Decent Work Indicators Concepts and definitions, ILO Manual (First version)*, May 2012, pp. 127-130.

the index ranges from zero to one, zero indicating no segregation and one indicating complete segregation. The index may be interpreted as the fraction of persons that need to change occupations to achieve zero segregation. According to the results of the August 2016 LFS, the segregation index was 0.45 indicating that 45 percent of the male and female employed population need to exchange occupations to eliminate occupational segregation in Rwanda.

Among the 326 distinct 4-digit occupations coded in the survey, seven contributed more than half of total index of occupational segregation in the country. There were:

Table 4.3: Four digits occupation with high segregation

Occupation code	Occupation	Number of employed persons	
		Male	Female
9211	Crop farm labourers	296,398	427,925
9313	Building construction labourers	144,873	25,475
7111	House builders	95,214	1,766
5211	Stall and market salespersons	50,993	98,382
9111	Domestic cleaners and helpers	58,018	86,752
6111	Field crop and vegetable growers	83,179	88,631
5414	Security guards	40,596	939

Source: LFS August 2016

It can be observed from these data that building construction labourers, house builders and security guards were male-dominated occupations while crop farm labourers, stall and market salespersons and domestic cleaners and helpers were female dominated occupations. Field crop and vegetable growers comprise also a female dominated occupation although there were about the same number of male and female persons employed in that occupation. This is because the overall size of female employment was lower the size of male employment. Therefore, the proportion of female employed persons in that occupation was significantly higher than the corresponding proportion among the male employed persons.

4.2 Informal sector and informal employment

The concept of informal sector is broadly characterized as unincorporated enterprises owned by households.⁶ In such economic units the fixed capital and other assets of the enterprise do not belong to the production units as such but to their owners, and may be used both for production and personal purposes. Production expenditure can hardly be separated from household expenditure. In practice, in the LFS, employment in the informal sector was defined as all persons 16 years of age and over who were engaged in unregistered private business enterprises that did not keep written record of accounts. Unregistration meant not registered with the Rwanda Revenue Authority or not paying PAYE/TPR. Domestic workers engaged by households were excluded from the classification of employment in the informal sector.

The results of the survey show that there were about 2,060,000 employed persons in the informal sector, corresponding to about 81.2 percent of total employment. The employed

⁶ILO, *Resolution on the measurement of employment in the informal sector*, Fifteenth International Conference of Labour Statisticians (ICLS), Geneva, 1993.

persons in the informal sector were mostly male (57.1 percent), employees (62.4 percent) or own-account workers (32.3 percent). Employment in the informal sector was mostly in agriculture (46.3 percent), followed by whole sale and retail trade; repair of motor vehicles and motorcycles (16.3 percent) and Construction (13.3 percent)

Parallel to the concept of employment in the informal sector, there is the separate concept of informal employment. While the concept of informal sector refers to production units as observation units, the concept of informal employment refers to jobs as observation units.⁷ In the case of employees, informal employment is defined in terms of the employment relationship. A job held by an employee is considered informal, if the job does not entail social security contribution by the employer, and is not entitled of paid sick leave and paid annual leave.

In the case of own-account workers and employers, the informal employment status of the job is determined by the informal sector nature of the enterprise. Thus, own-account workers (without hired workers) operating an informal enterprise are classified as in informal employment. Similarly, employers (with hired workers) operating an informal enterprise are classified as in informal employment. All contributing family workers are classified as having informal employment, irrespective of whether they work in formal or informal sector enterprises.

According to the August, 2016 LFS, there were in total 2,462,000 persons with informal employment at main job, constituting almost 91 percent of total employment. Informal employment jobs were held mostly by male workers (57.4 percent).

The joint analysis of the informal or formal sector status of production units and the informal or formal status of jobs reveals the existence of a significant number of persons with informal employment engaged in the formal sector. Table 4.4 gives the cross-classification of the employed population according to informal or formal sector status of the production unit and informal or formal status of the job.

Table 4.4: Cross-classification of employment by informal or formal job and informal or formal production unit

Classification of production units	Classification of jobs		Total
	Formal employment	Informal employment	
Informal sector	19,888	2,040,218	2,060,106
Formal sector	218,362	258,632	476,994
Household	2,206	163,905	166,111
Total	240,456	2,462,755	2,703,211

Source: LFS August 2016

The results show that there were few people with formal employment working in the informal sector (19,888 persons). But, there were a significant number of persons with informal employment in the formal sector (258,632 persons). An example of this category of persons is

⁷ILO, *Guidelines concerning a statistical definition of informal employment*, Seventeenth International Conference of Labour Statisticians, Geneva, 2003.

an employee with short-term contract without social security contribution by the employer working in, a large private corporation or a government agency.

4.3 Working time and income from employment

The international definition of employment is expansive covering even one hour of work during the reference week. It is thus important that employment is analyzed in conjunction with data on hours of work in order to distinguish the various intensities of employment. Data on hours of work are also necessary to calculate time-related underemployment and hourly income from employment so that the resulting income data are comparable across different categories of workers. The August, 2016 LFS measured two concepts of hours of work:

- **Hours actually worked:** The time spent in a job for the performance of activities that contribute to the production of goods and services during the specified reference period. It includes the direct hours that the person is engaged in the activities, as well as the related hours such as waiting time, on-call, resting time, coffee break, prayer, etc. It excludes annual leave, public holidays, sick leave and other leave, as well as commuting time between work and home, longer breaks such as meal breaks and educational activities, even if authorized by the employer.
- **Hours usually worked:** The hours actually worked in a job during a typical week (or in general any specific reference period). In principle, it is calculated as the most frequent number of hours that a person actually worked per week during the past month.

According to the results shown in Table 4.5, the average number of hours usually worked per week by employed persons in their main job was 39 hours. The corresponding average number of hours actually worked during the reference week was 35 hours. Around 87,500 persons representing 3.2 percent of the employed population reported to have been engaged in secondary jobs during the reference week. The average number of hours usually worked on secondary jobs was 14.4 hours per week while the average number of hours actually worked on secondary jobs was 13.8 hours during the reference week.

Table 4.5: Usual and actual hours of work at main and secondary jobs

Job category	Number of employed persons	Average hours usually worked per week	Average hours actually worked in reference week
Main job	2,703,000	39.5	35.1
Secondary job	87,500	14.4	13.8
All jobs	2,703,000	40.0	35.5

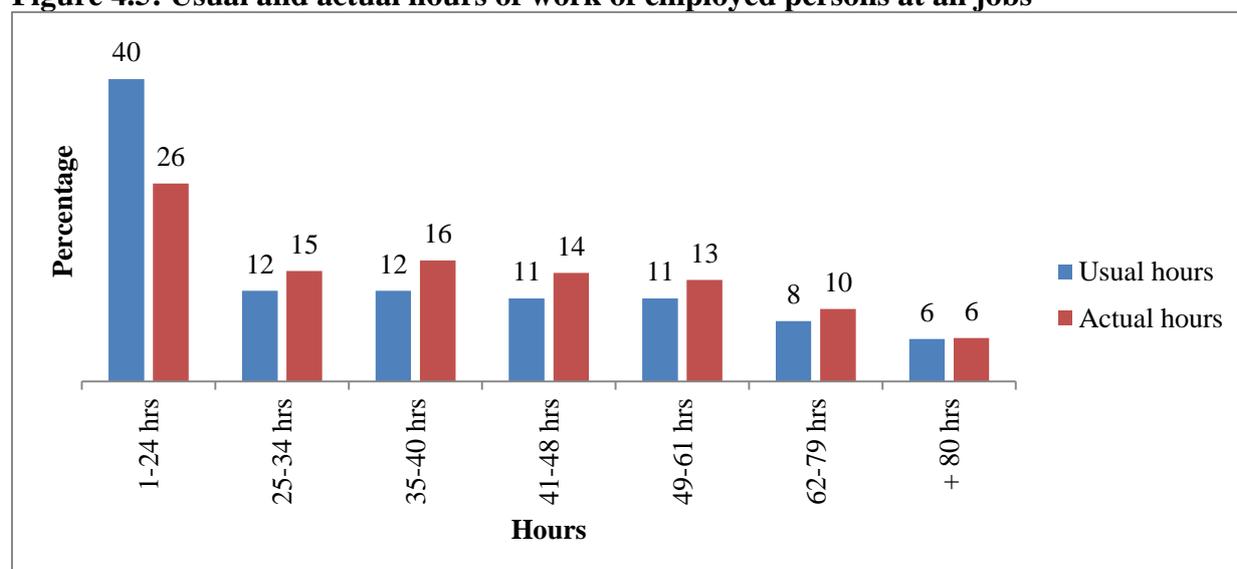
Source: LFS August 2016

The average number of hours usually worked at all jobs was 40.0 hours per week and the corresponding number of hours actually worked during the reference week was 35.5 hours. For most people (65.2percent), the weekly usual and actual hours of work at all jobs were the same. For certain others (28.4 percent), the usual number of hours worked was higher than the actual number of hours due to various reasons, including vacation or holidays or sickness during part or the whole of the reference week. Some 2.4 percent of the employed persons had a job but

were temporarily absent from work during the reference week and therefore had zero hours actually worked during the reference week. Finally, for 6 percent of the employed persons, the usual number of hours worked was lower than the actual number of hours of work. In total, the volume of employment in terms of actual hours worked at all jobs in the reference week was 93 million hours.

Figure 4.5 shows the size distribution of total weekly usual and actual hours of work of the employed population. The percentage of persons working part-time or short hours (lower than 35 hours per week) was 52 percent measured in terms of usual hours worked and 41 percent measured in terms of actual hours of work.

Figure 4.5: Usual and actual hours of work of employed persons at all jobs



Source: LFS August 2016

The percentage of persons working long hours was about 25 percent, when measured in terms of actual hours of work and 29 percent when measured in terms of usual hours of work. Excessive hours of work are defined as usual hours of work more than 48 hours per week at all jobs. Very long or excessive hours of work is a threat to physical and mental health, interfering with the balance between work and family life, reducing productivity and often signaling an inadequate hourly pay.⁸ The data show that male workers are affected relatively more by excessive hours of work than female workers (34 percent for male against 21 percent for female).

An attempt has been made in the LFS to measure income from employment in cash and in-kind at the main job for both paid employees and self-employed workers. Because of the differences in the nature of income generation in self-employment and paid employment jobs, the international definition of *employment-related income* distinguishes between paid employment

⁸[ILO, *Decent Work Indicators Concepts and definitions, ILO Manual (First version)*, May 2012, pp. 86-87.

and self-employment.⁹ In the case of paid employment, the concept is defined in terms of its components, namely, remuneration in cash and in kind, profit-related pay and current receipts of employment-related social benefits. In the case of self-employment, the concept is defined as the difference between gross value of output and operating expenses.

Given that respondents are generally reluctant about providing information on their income in surveys, the LFS questionnaire was designed in a way so as to make response as easy as possible. The series of questions (D12 to D19) thus begun by asking paid employees the amount earned at their main job in cash the last time they were paid and then by asking the period it covered. If the respondent refused to provide the information or did not know the amount, another question was asked phrased in terms of income ranges rather than exact figures. Similar questions were designed for in-kind income and income from self-employment.

The results showed that despite the special questionnaire design, responses to the questions on income from self-employment and on in-kind income from employment were erratic, exhibiting wide variations and large outliers. It was therefore decided to limit the analysis of the data on cash income from employment of employees at main job for which more reliable data could be obtained. The data were processed on this basis as presented in Annex B.5 of this report

Table 4.6 shows the period of coverage of last payment of paid employees at main job. About 44 percent of employees reported that their last cash payment covered one month. For another 1 percent paid employees, the last payment covered two weeks, 5 percent covered one week, and 44 percent covered one day. The remaining 6 percent paid employees received their last cash payment for other time periods. The corresponding median monthly cash payment was 35,000 RWF, the median two-week cash payment was 15,000 RWF, the median one-week cash payment was 5,000 RWF and the median daily cash payment was 800 RWF.

Table 4.6: Period of coverage of last income payment of paid employees at main job

Period of payment	Cash income from employment		In-kind income from employment	
	Number of responses	Median response	Number of responses	Median response
Total	6,421	-	436	-
Month	2,808	35,000	160	20,000
Two weeks	96	15,000	12	3,000
One week	301	5,000	24	1,050
One day	2,818	800	183	800
Other(specify)	397	3,000	57	700
Not stated	1	1,600	-	-

Source: LFS August 2016

Note: Un-weighted numbers and medians

Based on these results, it was decided to use the conversion factor 1 for monthly payments, 2 for two-weekly payments, 52/12 for weekly payments, and 26 for daily payments to calculate

⁹ILO, *Resolution concerning the measurement of employment-related income*, Sixteenth ICLS, October 1998. For the sake of simplicity, the term “income from employment” is used in this chapter in preference to the more exact term “employment-related income”.

the monthly income. For payments on other time periods, the fix conversion factor of 10 was used. The factor 10 was derived by calculating the ratio of median income from employment for those reporting “monthly” period of payment to the corresponding median for those reporting “other” period of payment.

Table 4.7 presents the resulting size distribution of cash monthly income from employment of employees at main job. According to these results, the median income from paid employment of employees at main job was about 20,800 RWF per month while the mean monthly income was 55,737 RWF.

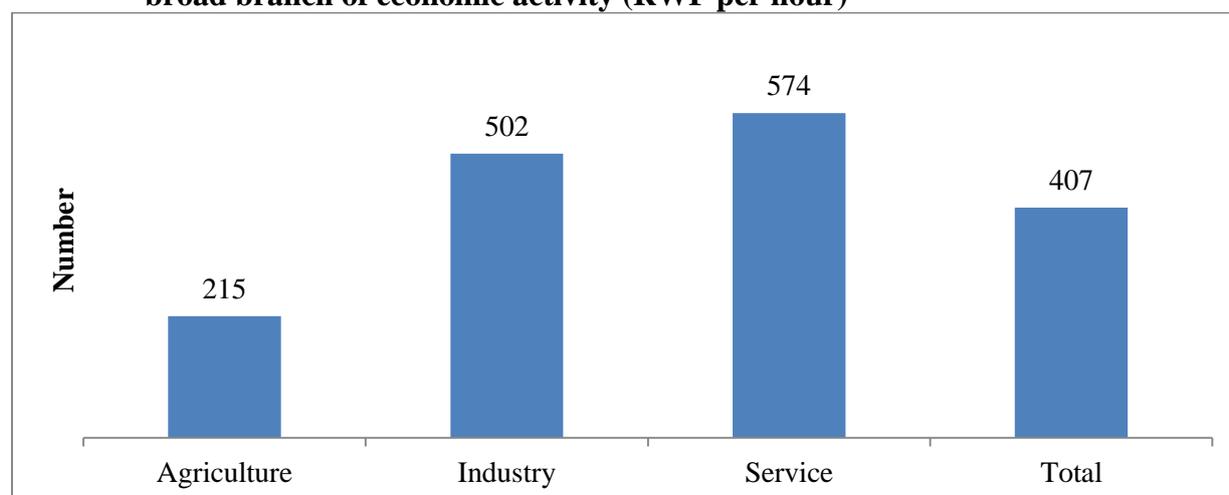
Table 4.7: Size distribution of harmonized monthly income from employment at main job

Monthly income from employment (RWF)	Number of paid employees
Total	1,822,376
Less than 20,000 RWF	771,917
20,000 – 29,999 RWF	365,298
30,000 – 49,999 RWF	227,688
50,000 – 99,999 RWF	232,857
100,000 RWF and above	224,616
Median	20,800 RWF
Average	55,737 RWF

Source: LFS August 2016

Finally, the average hourly cash income from employment of employees at main job was calculated by broad branch of economic activity. The results are shown in Figure 4.6. The overall average hourly cash income from employment of employees at main job was 407 RWF per hour, and the corresponding values were 215 RWF per hour in agriculture, 502 RWF per hour in industry and 574 RWF per hour in services.

Figure 4.6: Average hourly cash income from employment of employees at main job by broad branch of economic activity (RWF per hour)



Source: LFS August 2016

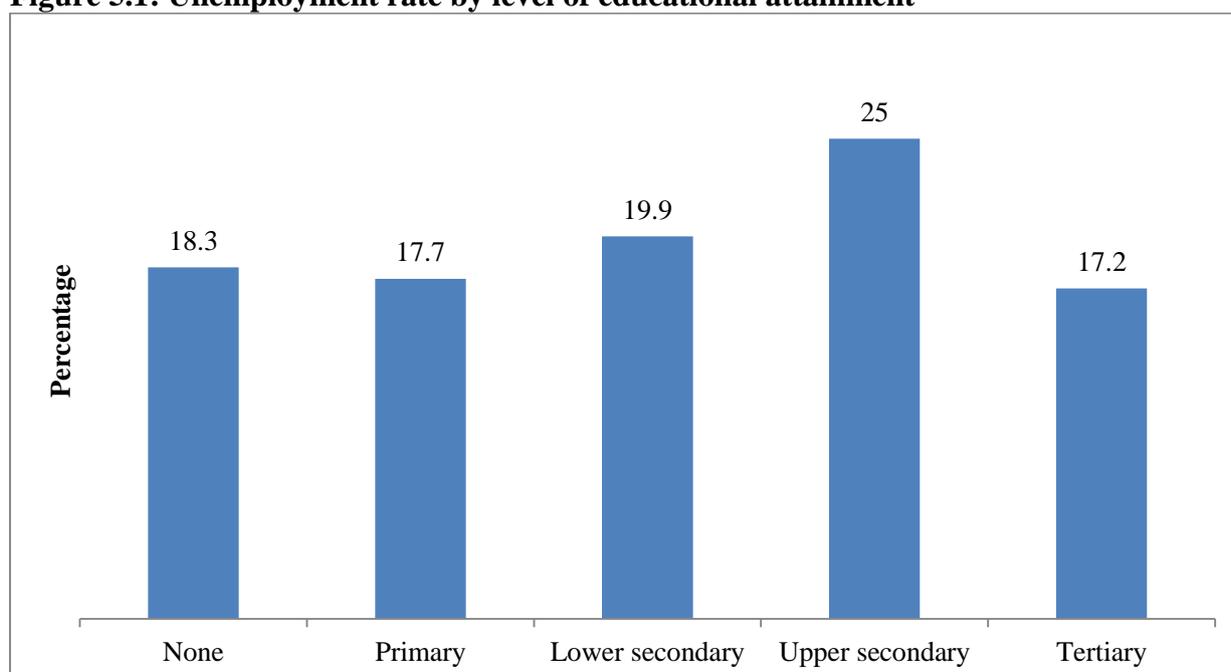
Chapter 5. Unemployment and labour underutilization

Unemployment is a particular form of labour underutilization. It reflects the pressure on the labour market as it is measured in terms of the number of persons without employment, actively seeking and available for employment. Labour underutilization is a more general concept. It refers to mismatches between labour supply and demand, which translate into an unmet need for employment among the population. Labour underutilization includes unemployment, time-related underemployment, and the potential labour force referring to persons not in employment who express an interest in this form of work but for whom existing conditions limited their active job search and/or their availability.

The unemployment rate, defined as the ratio of the number of unemployed persons to the total labour force, is the most commonly used indicator of the labour market. It is sometimes used in a general sense as an indicator of the health of the economy, not just the labour market. According to the results of the August 2016 LFS, the unemployment rate in Rwanda stood at 18.8 percent. The rate was higher in rural areas (19.8 percent) than in urban areas (16.4 percent). Similarly, it was higher among the female labour force (22.7 percent) than the male labour force (15.7 percent), and among the youth 16 to 30 years old (21.5 percent) than among adults (16.3 percent).

In terms of educational attainment, the results shown in Figure 5.1 indicate that the unemployment rate was highest among persons with upper secondary education (25.0 percent) followed by lower secondary education (19.9 percent). It was lowest among persons with university level of education (17.2 percent) and with Primary education (17.7 percent), followed by persons with no attained level of education (18.3 percent).

Figure 5.1: Unemployment rate by level of educational attainment



Source: LFS August 2016

On average each unemployed person used 1.5 methods for seeking employment during the specified reference period. The most frequent method of job search was applying to employers directly, checking at worksites, farms, factory gates, placement (55.3 percent), followed by seeking the assistance of friends, relatives or other types of intermediaries (20.3 percent) and arranging for financial resources, applying for permits, licenses (9.6 percent). Other methods of job search were placing or answering newspaper or online job advertisements or response to job advertisements (5.6 percent), looking for land, premises, machinery, supplies, farming inputs (3.4 percent) and registering with or contacting public or private employment services (3.2 percent).

The survey provides also data on duration of job search that can be used to estimate long-term unemployment. Long-term unemployment refers to unemployed persons with duration of search for employment lasting 12 months or more, including the reference period. Duration of search for employment is measured from when the unemployed person began carrying out activities to seek employment, or from the end of the last job, whichever is shorter. Duration of unemployment is the length of time that an unemployed person has been without employment, available for employment, and actively seeking employment.

Table 5.1 shows that about 31 percent of the unemployed who reported duration of job search were long-term unemployed, i.e., seeking employment for 12 months or more. Most unemployed persons were however seeking employment for the period between one and three month (24.7 percent) or less than one month (21.1 percent). The general shape of the curve of unemployment by duration of job search is U-shaped with concentration at the two tails of the distribution.

Table 5.1: Duration of unemployment: Elapsed duration of job search

Elapsed duration of job search	Number of unemployed reporting duration of job search	%
Total	571530	100.0%
Less than 1 month	120809	21.1%
1 – less than 3 months	141215	24.7%
3 – less 6 months	86343	15.1%
6 – less 12 months	45715	8.0%
1 – less 2 years	65366	11.4%
2 years or more	112082	19.6%

Source: LFS August 2016

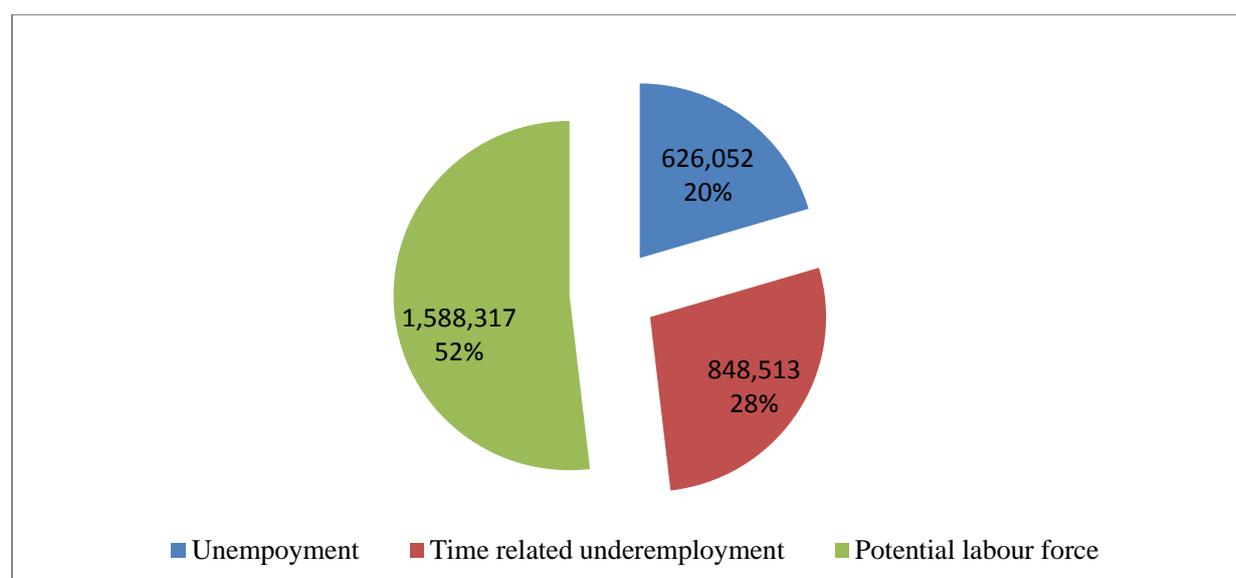
The median reported duration of search for employment by the unemployed was about 2.3 months. This is the median duration of job search until the date of the survey.¹⁰ The duration of unemployment however continues after the survey. The median duration of completed spells of unemployment may be estimated as twice the duration of the interrupted spells of unemployment ($2 \times 2.3 = 4.6$ months).

¹⁰Kiefer, Nicholas, M & Lundberg, Shelly J & Neumann, George R, "How Long Is a Spell of Unemployment? Illusions and Biases in the Use of CPS Data," *Journal of Business & Economic Statistics*, American Statistical Association, vol. 3(2), April 1985, pp. 118-128.

This figure is almost equal to the corresponding estimate of completed spells of unemployment under steady state conditions obtained by the ratio of total (571,000) to the number of unemployed with short-duration of job search less than 1 month (120,000), generally considered more accurately measured in surveys. The steady-state estimate gives $571,000/120,000 = 4.7$ months.

Unemployment is a particular form of labour underutilization. As mentioned earlier, other forms of labour underutilization include time-related underemployment and potential labour force. Time-related underemployment refers to the situation when the working time of persons in employment is insufficient in relation to alternative employment situations in which they are willing and available to engage. Time-related underemployment is measured here as all persons in employment who, during the specified reference period of the survey (a) wanted to work additional hours, (b) were working in all jobs less than 35 hours during the reference week, and (c) were available to work additional hours given an opportunity for more work. Potential labour force is defined as all persons of working age outside the labour force who, during the reference period, were neither in employment nor in unemployment but who were considered as either (a) *unavailable jobseekers* (seeking employment but not currently available) or (b) *available potential jobseekers* (currently available for employment but did not carry out activities to seek employment).

Potential labour force together with time-related underemployment and unemployment are different dimensions of labour underutilization. Figure 5.2 shows the composition of labour underutilization. It is instructive to note that unemployment was only a small part of labour underutilization in Rwanda comprising 626,000 persons and representing about 20 percent of labour underutilization. By far, the largest part of labour underutilization was the potential labour force close to 1.6 million persons, representing 52 percent of labour underutilization. The potential labour force consists of persons outside the labour force who were currently available for employment but did not carry out activities to seek employment during the specified reference period as well as those seeking employment but not currently available for work.

Figure 5.2: Composition of labour underutilization

Source: LFS August 2016

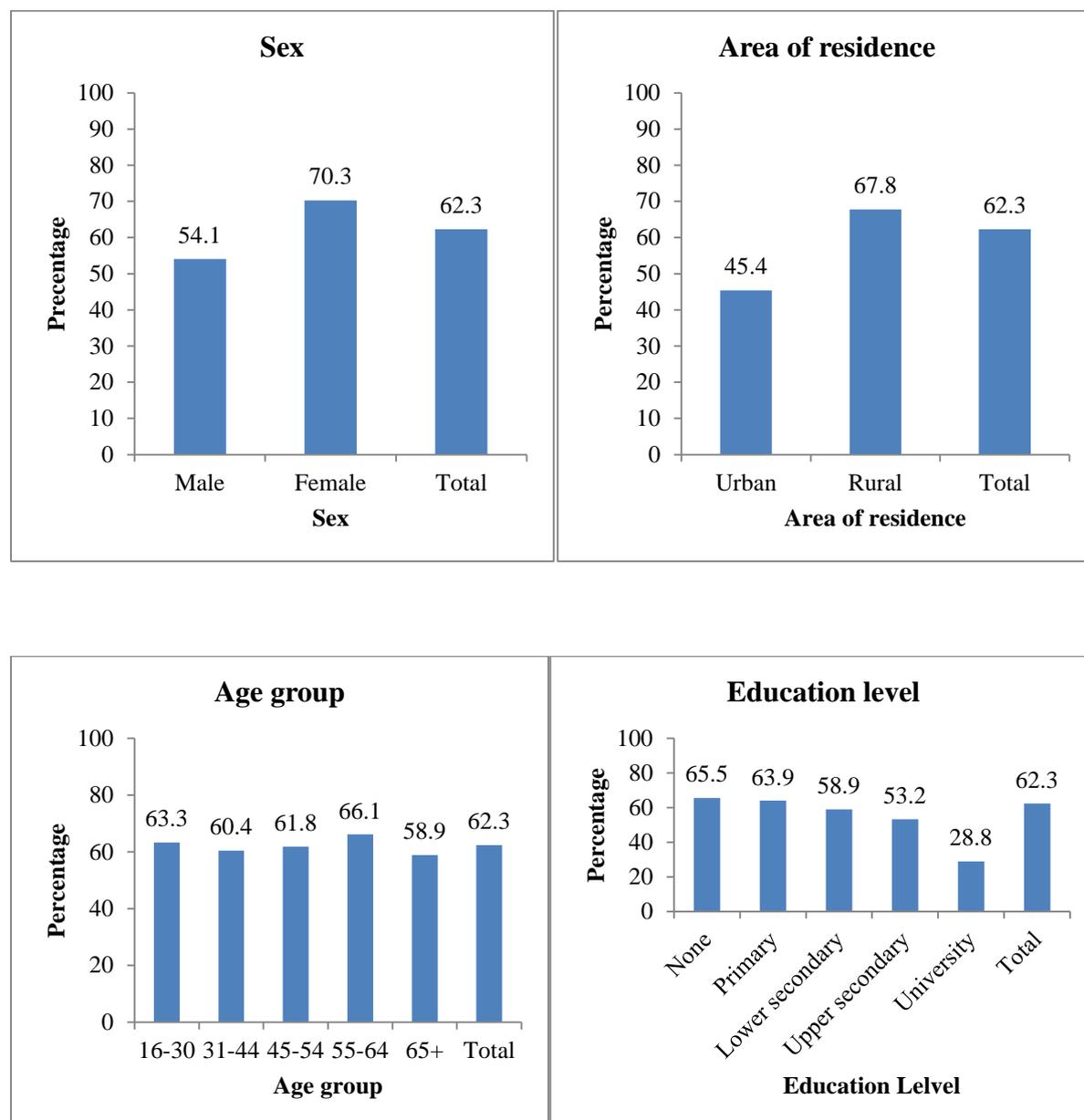
The other part of labour underutilization includes the time-related underemployed, consisting of 848,000 persons or about 28 percent of labour underutilization.

An important sub-category of the potential labour force is the discouraged jobseekers, i.e., those outside the labour force who did not “seek employment” for labour market-related reasons, such as past failure to find a suitable job, lack of experience, qualifications or jobs matching the person’s skills, lack of jobs in the area, considered too young or too old by prospective employers). According to the current LFS there were about 1,131,000 discouraged jobseekers in Rwanda in August 2016 representing around 34 percent of those out of the labour force.

The international standards further suggest the identification of a separate group of persons outside the labour force who expressed interest in employment. They are called *willing non-jobseekers* and defined as persons neither employed or unemployed who wanted employment but did not seek employment and were not currently available for work. The estimate of the number of willing non-jobseekers obtained from the August 2016LFS was 135,000 representing 4 percent of the population outside the labour force.

Figure 5.3 shows the composite measure of labour underutilization for different socio-demographic characteristics of the population. While the unemployment rate (LU1) is the narrowest measure of labour underutilization, the composite measure (LU4) is the broadest measure of labour underutilization. It is the ratio of total labour underutilization to the extended labour force, calculated as the sum of the labour force and the potential labour force.

Figure 5.3: Composite measure of labour underutilization by sex, urban/rural area , age group and educational attainment



Source: LFS August 2016

In terms of gender and age group, the composite measure of labour underutilization closely follows the pattern of the unemployment rate though at a much higher level. The female rate of labour underutilization (70.3 percent) is relatively higher than the male rate (54.1 percent). Similarly, the youth (16 to 30 years of age) are affected by labour underutilization at a relatively higher rate (63.3 percent) than most of other age population groups (60.4 percent for persons 31 to 44 years old, 61.8 percent for persons 45 to 54 years old and 58.9 percent for persons 65+ years old). It is important to note that the population in age group 55-64 years is the most affected by the labour underutilization (66.1%).

According to area of residence, it can be observed that the pattern of the composite measure of labour underutilization is in most of cases identical to that of the unemployment rate. The rate of labour of underutilization is higher in rural areas (67.8 percent) than in urban areas (45.4 percent). This is because there is a large pool of subsistence foodstuff producers in the rural areas outside the labour force, who is available for employment but not seeking work.

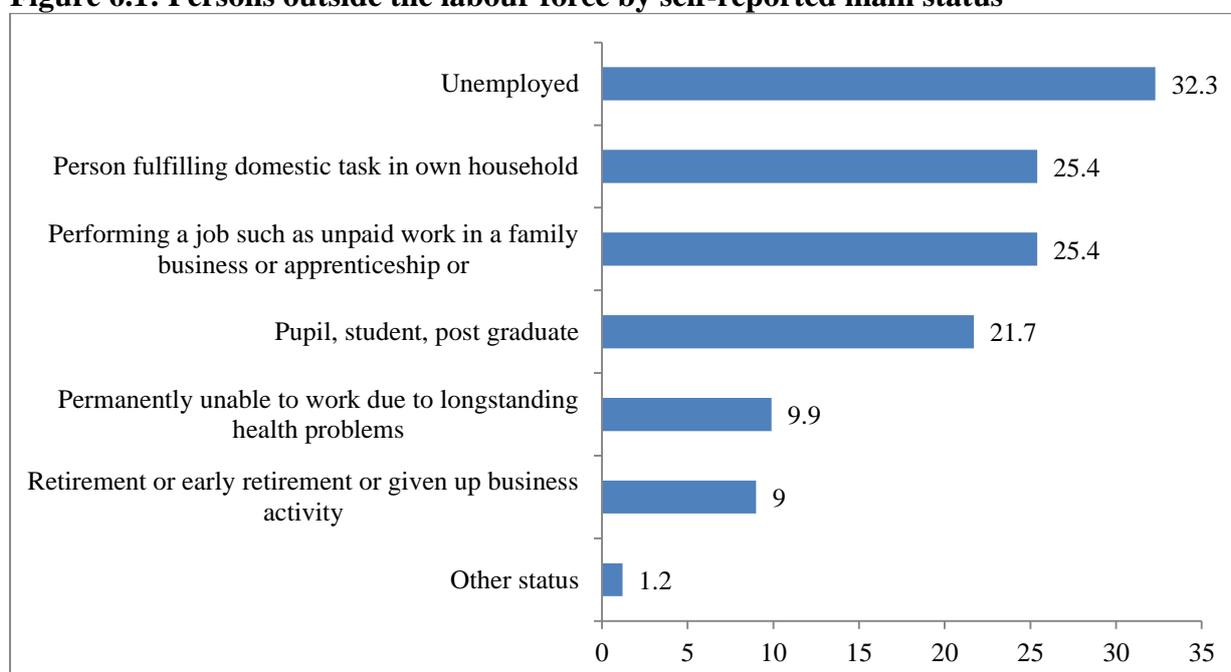
In terms of level of educational attainment, the composite measure of labour underutilization differs from the pattern of the unemployment rate. While the unemployment rate is highest among persons with upper and lower secondary, the rate of labour underutilization is highest among persons with no educational attainment or primary education.

Chapter 6. Persons outside the labour force

A particular characteristic of countries with large subsistence foodstuff production is the fact that the size of the working age population outside the labour force may be as big or larger than the size of the labour force itself. In Rwanda, the LFS_August 2016 shows that the number of persons 16 years old and over who are outside the labour force is about 3,244,000 against 3,329,000 in the labour force. The majority of the persons outside the labour force are subsistence foodstuff producers (51 percent).

The survey identifies the main status of people outside labour force as self-reported. The largest group consisted of persons who considered themselves unemployed (32 percent). The next largest group was persons who reported to have been fulfilling domestic tasks in their household (25 percent)

Figure 6.1: Persons outside the labour force by self-reported main status



Source: LFS August 2016

The survey also included a question on main source of livelihood of persons outside the labour force. Table 6.1 shows the results by sex and broad age group. For most people outside the labour force, the main source of livelihood was own-production irrespective of sex and age group, except for the young population between 16 and 24 years old outside the labour force, for whom the main source of livelihood was from their parents. Table 6.1 also shows that for elderly persons 65 years old and above who were outside the labour force, the main source of livelihood after own production was from their children or other family members. The percentage of those who were supported by FARG, church or other non-government organizations was less than one percent of the person outside labour force.

Table 6.1: Main source of livelihood of persons outside the labour force by sex and age group

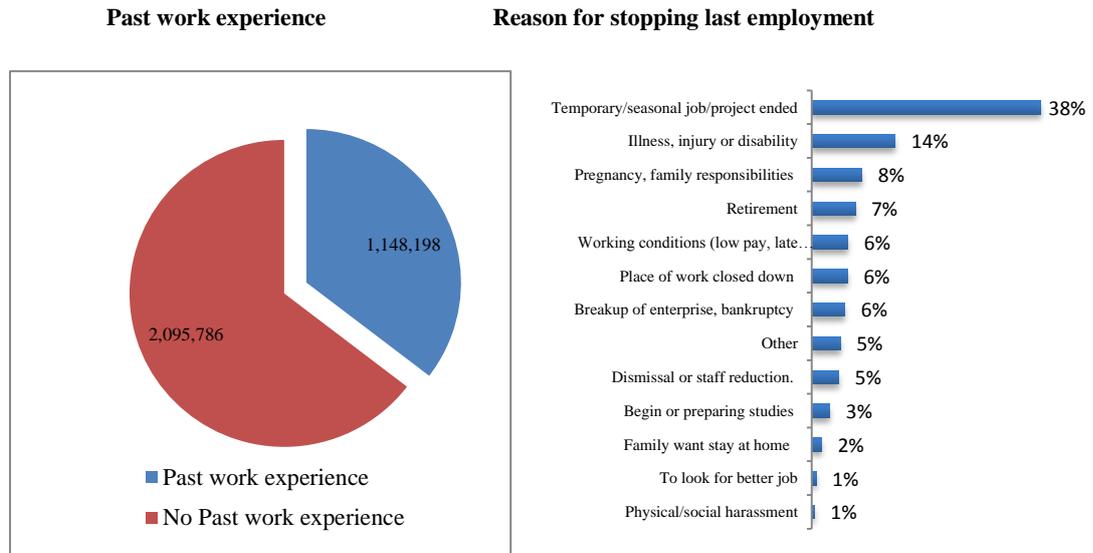
	Total	Male	Female	16-24 years	25-34 years	35-54 years	55-64 years	65+ years
Total	3,243,984	1,207,944	2,036,040	1,198,731	603,513	729,180	349,269	363,292
	100%	100%	100%	100%	100%	100%	100%	100%
Parents	29.3	37.8	24.3	71.2	14.0	1.8	0.2	0.1
Husband/Wife	11.5	4.3	15.8	4.7	26.3	15.9	5.5	6.4
Child	3.5	1.9	4.5	0.1	0.1	1.5	9.7	18.6
Other family members	7.3	7.3	7.4	11.9	4.7	3.1	4.0	8.4
Pension	0.3	0.4	0.3	0.0	0.1	0.2	1.1	1.2
Own production	40.1	38.9	40.8	8.4	46.0	67.0	70.2	51.8
Assistance received [VUP]	1.2	0.8	1.4	0.1	0.5	1.0	1.9	5.2
Assistance received [FARG]	0.3	0.1	0.4	0.1	0.4	0.1	0.5	1.0
Assistance received [Church, Other NGO]	0.3	0.5	0.3	0.3	0.5	.3	0.4	0.4
Assistance from friends	1.6	1.1	1.8	0.7	1.4	2.3	2.3	2.6
Revenue from own property/Savings	1.3	1.9	1.0	0.3	0.5	2.5	2.0	3.1
Past work	2.2	3.7	1.3	1.1	4.3	3.3	1.5	0.8
Scholarship	0.3	0.5	0.2	0.7	0.4	0.0	0.0	0.0
Others (Please specify)	0.7	0.7	0.7	0.5	0.9	1.1	0.7	0.4

Source: LFS August 2016

Persons outside the labour force have different degrees of attachment to the labour force. Some are in the potential labour force as discussed in the preceding section. Others may not be in the potential labour force but have had past work experience or were willing to work although they were not currently seeking or available for work.

Among the population outside the labour force, about 1,198,198 persons representing 35 percent of the total reported to have had past work experience. For some (38 percent of the total) the reason for stopping employment was the nature of their job (temporary or seasonal), temporally or seasonal job. For others the main reason was, illness/injury or disability (14percent), or pregnancy, family responsibilities (8percent), and other reasons such as low pay, late payment of wages, difficult work, or faraway place of work.

Figure 6.2: Past work experience and reason for stopping last employment of persons outside the labour force



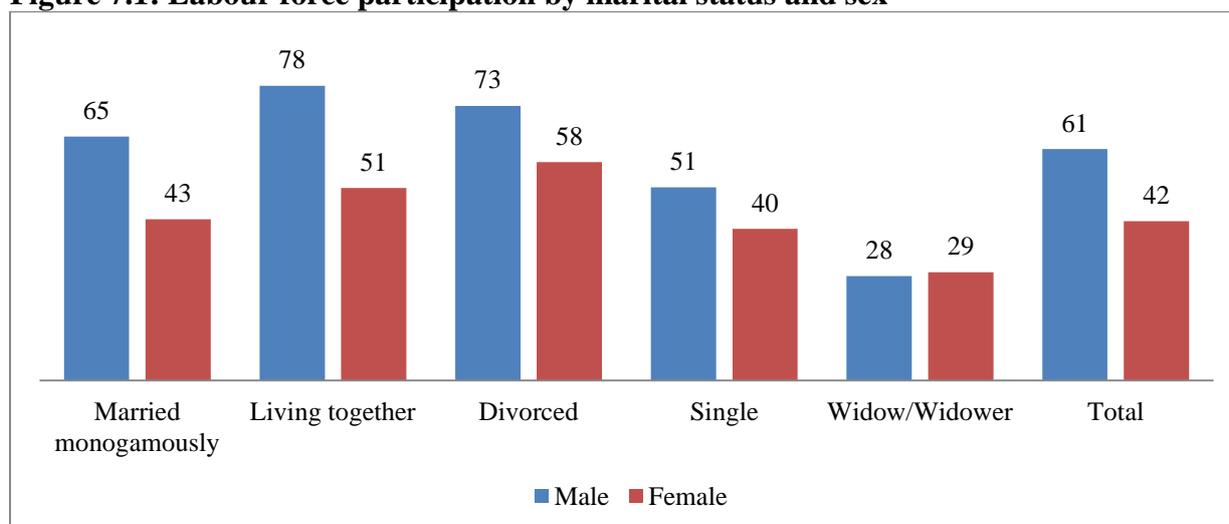
Source: LFS August 2016

Chapter 7. Women and equal opportunities

Women account for close to 44 percent of the labour force in Rwanda. The August, 2016 LFS provides a rich set of current information on their labour force participation. Here a few aspects are examined: female labour force participation rate by marital status, pay gap between women and men, and the proportion of women in managerial positions.

The overall female labour force participation rate was 42 percent. As shown in Figure 7.1 below, the labour force participation rate was lower for female widower (28.6percent) and much higher for female divorcees or separated (58 percent).

Figure 7.1: Labour force participation by marital status and sex



Source: LFS August 2016

Gender pay gap measures the relative difference between the male average hourly pay and the female average hourly pay for doing the same type of work. In line with the ILO decent work indicator, gender pay gap may be measured as the difference between the gross average hourly earnings of male and female employees expressed as percentage of gross average hourly earnings of male employees.¹¹ The limitation in this methodology is that it overlooks different factors that may be the source of wage gap such as the level of education, length of work experience, occupation etc. Not taking into account these factors may result to the over estimation of gender wage gap. In this report the extended Mincer equation¹² have been used to control those differences in individuals characteristics as well as differences in their jobs such as occupation, industry, formality status and the type of contract in order to compare, to the extent possible, the means wages of males and females working in similar jobs. The results for hourly earnings are shown in table 7.1 below. After controlling for the above mentioned variables, the gender pay gap is -8.9%. The disaggregation into public and private sector reveals that there is no gender wage gap in public sector while in Private sector the female hourly earnings is around 10% lower than the males’.

¹¹ILO, *Decent Work Indicators Concepts and definitions, ILO Manual (First version)*, May 2012, pp. 130-131.

¹²Heckman, James J., Lochner, Lance J., and Todd, Petra E., “Fifty Years of Mincer Earnings Regressions,” First draft June 1998, Revised March 19, 2003.

Table 7.1: Gender wage gap using extended Mincer earning equation

VARIABLES	(1) Employee hourly	(2) Employee hourly Public	(3) Employee hourly private
Female	-0.0898*** (-3.82)	-0.0346 (-0.58)	-0.0981*** (-3.83)
Age	0.0208*** (3.73)	0.0176 (0.59)	0.0220*** (3.85)
Age squared	-0.0002** (-2.20)	-0.0000 (-0.11)	-0.0002** (-2.44)
Primary	0.0913*** (3.19)	0.1442 (1.02)	0.0881*** (3.03)
Lower secondary	0.4002*** (6.81)	0.5514*** (3.17)	0.3836*** (6.14)
Upper secondary	0.5403*** (10.46)	0.7869*** (6.08)	0.5114*** (8.84)
University	1.5229*** (24.39)	1.8040*** (13.81)	1.3905*** (16.61)
managers	0.6285*** (6.61)	0.5056*** (2.79)	0.7820*** (6.39)
professional	0.1765*** (2.81)	0.0997 (0.68)	0.4627*** (5.40)
Technician and associate professional	0.5847*** (6.21)	0.5634*** (3.30)	0.6865*** (5.34)
Clerical support workers	0.2259*** (2.65)	0.4295** (2.02)	0.2125** (2.25)
Service and sales workers	-0.2287*** (-4.35)	-0.0096 (-0.07)	-0.2554*** (-4.53)
Agricultural	-0.1845** (-1.98)	-0.2947 (-0.47)	-0.1782* (-1.90)
Craft and related trade workers	0.4831*** (10.29)	0.5042** (2.56)	0.4869*** (10.16)
Plant and machine operators	0.3661*** (4.44)	0.8911** (2.28)	0.3200*** (3.82)
Industry	0.3047*** (9.02)	0.0909 (0.41)	0.3021*** (8.74)
Services	0.2079*** (4.83)	-0.2025 (-1.16)	0.2436*** (5.36)
Formal sector	0.0834** (2.38)	0.1862** (2.01)	0.0781** (2.03)
Permanent contract	-0.2296*** (-6.91)	-0.1174 (-1.46)	-0.2224*** (-6.07)
Constant	4.6425*** (44.04)	4.4939*** (7.96)	4.6323*** (42.66)
Observations	5,956	777	5,169
R-squared	0.4063	0.4835	0.3518

Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Women are gradually increasing their numbers as managers. A recent global report prepared by the ILO states that women own and manage over 30percent of all businesses, ranging from self-

employed (or own-account workers), micro and small enterprises to medium and large companies.¹³ Occupations in senior and middle management correspond to the ISCO sub-major occupation groups occupational categories 11 (Chief executives, senior officials and legislators) and 12 (Administrative and commercial managers).

The data in Table 7.3 show that there were 2,136 women working as chief executives, senior officials and legislators and about 1,765 women as administrative and commercial managers, giving a total of 3,901 women in managerial positions. The corresponding total for men was 10,573 persons. Thus, the overall share of women in managerial positions was 26.9 percent, a low figure but relatively more than the world average.

Table 7.2: Women and men in managerial positions

Sub-major occupation groups	Persons			%		
	Total	Male	Female	Total	Male	Female
Total Persons in managerial positions	14,475	10,573	3,901	100.0	73.0	26.9
Chief Executives, Senior Official and Legislators	8,524	6,388	2,136	100.0	74.9	25.1
Administrative and Commercial Managers	5,950	4,185	1,765	100.0	70.3	29.7

LFS August 2016

¹³ILO, *Women in Business and Management Gaining Momentum*, Abridged version of the Global Report, Geneva, 2015.

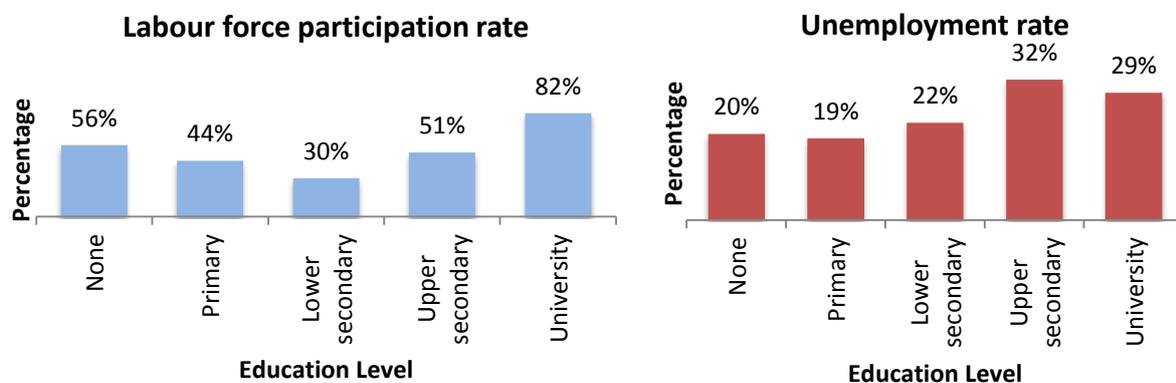
Chapter 8. Youth and education

In general there is a two-way relationship between the education system and the labour market. The education system supplies the labour market with an educated labour force, while the labour market – through the wage structure of occupations and other labour market variables – transmits signals on the types of qualifications expected from the education system. The data collected by the August 2016 LFS contain the elements for carrying such types of analysis. This section focuses on two aspects: the relationship between educational attainment and labour force participation and unemployment, and the extent of skill mismatch among the youth population.

In Rwanda, youth is defined as young person's 16 to 30 years of age. The international definition of the youth population is "persons aged 15-24 years old."¹⁴ To cover countries where entry into the labour market occurs at a later stage, the ILO extends the definition to include young adults aged 25-29 years old for certain purpose.

Figure 8.1 presents in the left panel the youth labour force participation rate by educational attainment and in the right the youth unemployment rate by educational attainment. The data show that the labour force participation rate was higher among the university graduates (82 percent) and essentially constant at around 50 percent for youth at lower levels of educational attainment, except for young people with lower secondary education for whom the labour force participation rate was still lower at 30 percent.

Figure 8.1: Youth (16-30 years old) labour force participation rate and unemployment rate by educational attainment



Source: LFS August 2016

The relationship between educational attainment and the unemployment rate is also significantly different, showing a relatively positive slope. Unemployment shows an increasing rate from about 20 percent for young people with no educational attainment to 32 percent for youth with secondary education and then a slight declining rate to 29 percent among youth who completed university education. This pattern suggests that the higher the educational attainment

¹⁴ILO, *Global Employment Trends for Youth 2015*, Employment Policy Department, International Labour Office, Geneva, 2015.

of a young person, the higher his or her risk of unemployment. One could think of a number of reasons for this phenomenon. First, persons with higher educational attainment have a higher reservation wage, preferring to wait for a suitable employment rather than accepting a job considered as inadequate or low paying. Another possible reason may be the existence of mismatch between the qualification of the young and the skill requirements of jobs in the labour market.

Chapter 9. Participation in training programmes

The role of training for insertion or reinsertion into the labour market is widely recognized. In order to assess the outreach of training among the youth and adults as well as to understand the nature of the demand for training in terms of subject of courses and type of training providers, the LFS August 2016 questionnaire included a series of four questions (B07-B10) on current participation or past acquisition of in any trade or technical vocational course among all eligible respondents.

In total an estimated 826,876 persons attended a trade or technical vocational course in the past. Table 9.1 gives the distribution of training courses attended and the current status of employment of the participants. The most popular training course was tailoring with participation rate of 33percent, followed by masonry and carpentry with participation rates of 21 percent and 9percent, respectively. There were in total 15 training course subjects that covered each more than 1 percent of the total number of participants.

Table 9.1: Participation in trade or technical vocational course and current employment status

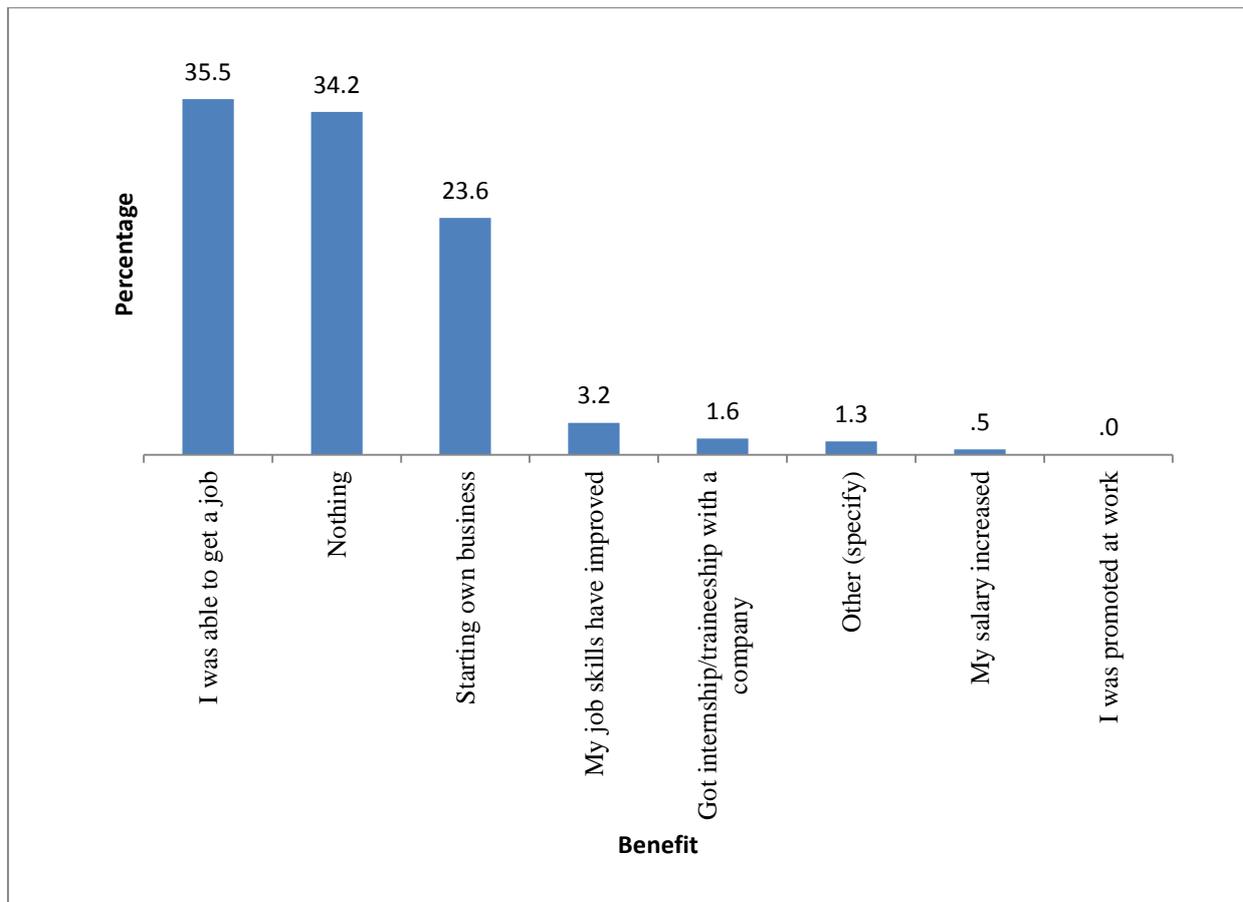
Technical vocational course	Participated in vocational training		Currently working	
	Number of persons	%	Number of persons	%
Total	826,876	100.0	446,782	54.0
Masonry	172,967	20.9	107,099	61.9
Carpentry	71,296	8.6	45,947	64.4
Automotive technology.	13,006	1.6	6,571	50.5
Culinary arts	34,878	4.2	15,448	44.3
Domestic Electricity	13,928	1.7	8,032	57.7
Welding	29,348	3.5	18,176	61.9
Plumbing	4,636	0.6	2,074	44.7
Food processing	19,565	2.4	9,304	47.6
Animal health	259	0.0	146	56.4
Auto- Electricity	2,323	0.3	63	2.7
Automotive body repair	43,257	5.2	27,391	63.3
Computer maintenance	4,187	0.5	2,823	67.4
Crop production	1,328	0.2	687	51.7
Engine mechanics	11,444	1.4	7,693	67.2
Forestry	307	0.0		0
Music	924	0.1	423	45.8
Painting and decoration	7,511	0.9	5,508	73.3
Multimedia	1,068	0.1	835	78.2
Networking	2,412	0.3	1,302	54
Tailoring	272,448	32.9	123,048	45.2
Industrial electricity	3,631	0.4	1,905	52.5
Civil construction	3,619	0.4	1,987	54.9
Nursery growing	67	0.0	67	100

Technical vocational course	Participated in vocational training		Currently working	
	Number of persons	%	Number of persons	%
Total	826,876	100.0	446,782	54.0
Milk processing	402	0.0	402	100
Livestock	206	0.0	206	100
Horticulture production	112	0.0	112	100
Food & Beverage services	8,498	1.0	3,534	41.6
Front office	10,348	1.3	5,137	49.6
House keeping	1,808	0.2	1,357	75
Concrete masonry	604	0.1	55	9.1
Leather craft	3,224	0.4	2,193	68
Hairdressing	39,910	4.8	19,875	49.8
Biding and Jewelleries	7,199	0.9	4,125	57.3
Software Development	4,969	0.6	1,519	30.6
NCDs and Palliative Care Community health	2,056	0.2	1,257	61.1
Agri-Business	2,076	0.3	932	44.9
Manicure and Pedicure	135	0.0	70	51.4
Beauty therapy	1,045	0.1	1,045	100
Screen printing	570	0.1	518	90.9
Sport and Medical Massage	240	0.0	169	70.3
Crochet embroidery	9,059	1.1	4,079	45
Pottery	2,936	0.4	2,301	78.4
Motor vehicle engine mechanics	15,424	1.9	10,511	68.2
Film making	1,646	0.2	858	52.1

Source: LFS August 2016

Evaluating the success or non-success of the training courses in terms of the current employment status of the participants, it may be said that training courses with the highest percentage of participants currently employed were the most successful, and training courses with the lowest percentage of participants currently employed were the least successful. In this sense, it appears that among the training courses with more than 1 percent of the participants, motor vehicle engine mechanics was the most successful training course with current employment rate of 68.2 percent, followed by engine mechanic, carpentry and automotive body repair with current employment rates of 67.2, 64.4 and 63.3 percent, respectively.

The LFS August 2016 also included a question (B14) on the success of the training course in terms of “what happened three months after the completion of the course”. The results presented in Figure 9.1 show that 64.8 percent of the participants reported improvement in their situation after finishing the training course. These included 36 percent who managed to get a job or were able to find a job following the training course. By contrast a considerable portion (34.2 percent) reported no particular improvement in their situation after completion of the training course (34.2 percent).

Figure 9.1: Reported benefits after completing vocational training

Source: LFS August 2016

The data on participation in training courses may be further analyzed in terms of the length of training course and the year of its completion as well as in terms of the type of institution providing the training course and the main sponsor.

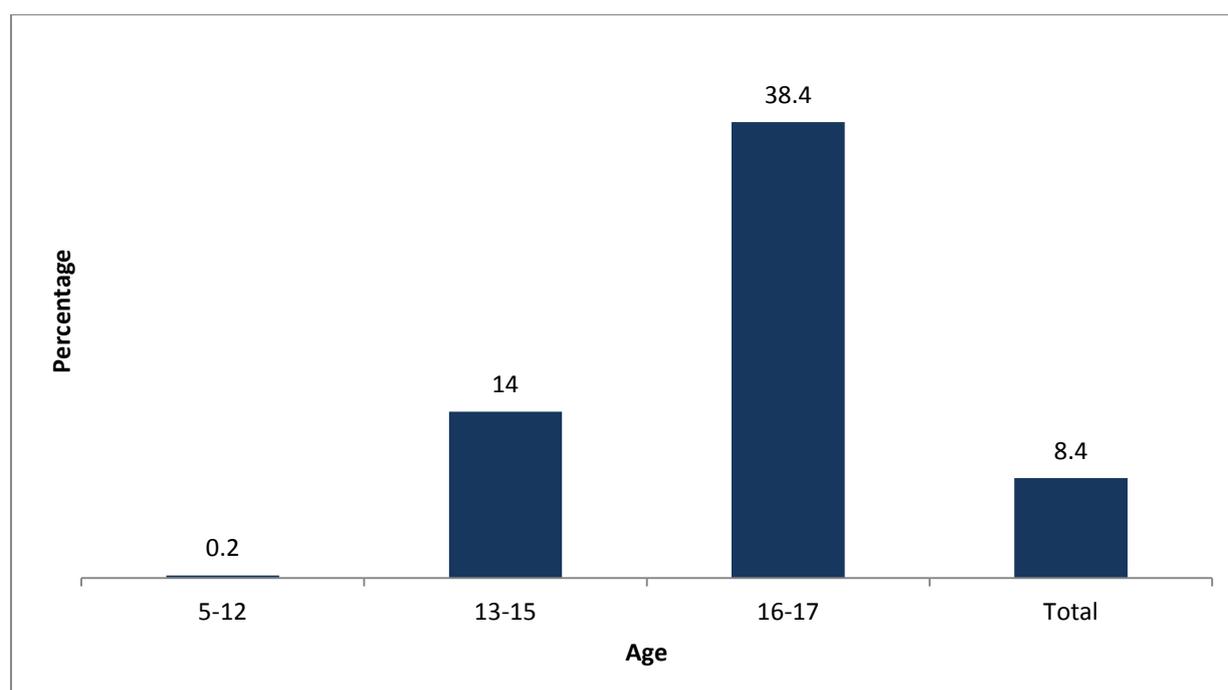
Chapter 10. Working children

In many countries, children below the legal working age are engaged in economic activity, earning money in a variety of casual or informal jobs or helping without pay in family enterprises. Not all work performed by children is however *child labour*. According to the international standards concerning statistics of child labour adopted by the 18th ICLS in 2008, the term *child labour* refers to the engagement of children in prohibited work and, more generally, in types of work to be eliminated as socially and morally undesirable as guided by national legislation and relevant ILO conventions and recommendations.

According to the Ministerial guidelines N° 02 of 10th May 2016 related to the elimination of child labour in Rwanda, children in age group 5-12 are allowed to participate in non-paid activities performed for the household such as carrying household harvest from fields, preparing kitchen garden etc, provided that the allocated time in those activities does not exceed 20 hours per week. The same guidelines stipulates that those aged 13-15 years old are allowed to work not more than 20 hours per week in light non-paid agricultural related activities performed for the household as well as in paid light activities performed outside the household such as selling newspapers, selling air times, hair cutting etc. Children aged 16-17 years old are allowed to work in all activities which don't harm their life during the same working hours as the adult persons aged 18 years and above. The mentioned guidelines provides more example of light works allowed for children aged 5-15 and the list of worst form and hazardous works as well as industries prohibited for all children including those aged 16-17 years old. While the RLFS was not designed to measure child labour, the survey collected data on work activities of children 5-13 years old, in addition to the labour force data on the population 14 years old and over. Thus, some aspects of the activities of all children 5-17 years old can be estimated using the current RLFS data while the full analysis of child labour will be subject to future investigations.

According to the survey results, there were in total 3,726,000 children 5 to 17 years old. Among them, 312,158 representing 8.4 percent were working either inside or outside of their households during the reference period. This rate is lower than the world average (11.8 percent) and also below the average rate in Sub-Saharan Africa (26.2 percent) estimated for 2012 by the ILO.¹⁵ It is important to mention that this number includes all working children irrespective of the form or characteristics of the work they were engaged in. However, the following information will shed more light on some work characteristics covered by the survey. Figure 10.1 presents the distribution of working children by age group for children 5 to 17 years old. According to these results, the percentage of working children in the age category 5 to 12 years old was only 0.2 percent and they were working 20 hours or less per week and they were all enrolled in schools. In the age category 13 to 15 years old, the percentage working children was 14.0 percent of which 79% were engaged in agriculture activities and 21% in non-agriculture activities. The rate of working children among 16-17 years old was 38.4 and the majority of them were also working in agriculture (69%). (Table 10.1)

¹⁵ ILO, *Global child labour trends 2008 to 2012*, Yacouba Diallo, Alex Etienne and Farhad Mehran, International Programme on the Elimination of Child Labour (IPEC), International Labour Office, Geneva, 2013.

Figure 10.1: Child work rate by age group

Source: LFS August 2016

From the table 10.1, it can be also observed that the number of working hours is highly associated with the working sector (agriculture/non-agriculture) and the age of children. While children who worked less hours are predominant in agriculture activities (eg:70% of children worked 20 or less hours and only 20% worked 30 or more hours), the majority of children who worked many hours is found among those who performed non-agriculture activities (68% worked more than 30 hours per week and only 25% worked 20 hour or less). In the same way, the proportion of children who worked relatively lower hours (1-14 hours) decreases with age of children, while it shows an increasing pattern for children who worked more than 14 hours.

Table 10. 1: Distribution of working children by age group, working hours and type of work

	Weekly working hours	Age group			Total
		5-12yrs	13-15yrs	16-17yrs	
All	1-14 Hours	84.1	60.2	37.2	46.2
	15-20 Hours	13.2	10	12.6	11.7
	21-29 Hours	0	8.3	10.3	9.4
	30-45 Hours	0	11	20.7	16.9
	46+ Hours	0	10.5	19.2	15.7
	NS	2.8	0	0	0
	Total	100	100	100	100
		5,085	112,024	195,008	312,117
	% of all children	0.20%	14%	38.40%	8.40%

	Hours	5-12yrs	13-15yrs	16-17yrs	Total
	Agriculture	1-14 Hours	83.3	67.7	47.4
	15-20 Hours	16.7	11.4	17.1	14.8
	21-29 Hours	0	7.6	12.5	10.5
	30-45 Hours	0	10	17.9	14.6
	46+ Hours	0	3.4	5.1	4.4
	Total	100	100	100	100
		2,061	89,015	134,678	225,754
Non agriculture					
	children	5-12yrs	13-15yrs	16-17yrs	Total
	1-14 Hours	84.6	31.4	14.9	21.7
	15-20 Hours	10.8	4.2	2.6	3.3
	21-29 Hours	0	11.2	5.3	6.7
	30-45 Hours	0	15.1	26.9	22.8
	46+ Hours	0	38.1	50.4	45.4
	NS	4.7	0	0	0.2
	Total	100	100	100	100
		3,024	23,009	60,330	86,364

Some industries such as construction, mining, etc are not allowed to engage children below 18 years old. Table 10.2 shed light on the economic activities of working children aged 14-17 years old. Similarly to the information in the previous table the majority of working children in this age category were engaged in agriculture mostly within their households (72%). The remaining children were distributed in different non-agricultural sectors whose the most predominant are households as employers (16%), trade (4%) and construction (3 %).

Table 10. 2: Distribution of working children aged 14-17 years old by economic activity according to age group

Economic activities	13-15yrs	16-17yrs	Total
agriculture forestry and fishing	77.4	69.2	72.1
mining and quarrying	0	0.5	0.3
manufacturing	0.8	1	0.9
water supply, gas and remediation services	0	0.5	0.3
construction	3.5	3	3.1
whole sale and retail trade; repair of motor vehicles and motorcycles	3.9	4.5	4.3
transportation and storage	1.6	1.1	1.3
accommodation and food service activities	0.8	0.5	0.6
information and communication	0	0.2	0.2
other services	0.9	0	0.3
activities of households as employers	11.1	19.4	16.4
Total	100	100	100
	108,228	195,589	303,817

The following table shows the distribution of working children aged 14-17 years old by economic activity, according to working hours. The results shows that children who were working less hours (20 or less) were predominantly present in agriculture while those working excessive hours (46+ hours) were predominantly working for households as domestic workers.

Table 10. 3: Distribution of working children by economic activity, according to weekly working hours

Economic activities	1-14 Hours	15-20 Hours	21-29 Hours	30-45 Hours	46+ Hours	Total
agriculture forestry and fishing	88	91.7	79.6	61.6	19.5	72.1
mining and quarrying	0	0	0	1.1	0.9	0.3
manufacturing	0.6	1.2	0	2.4	0.7	0.9
water supply, gas and remediation services	0.3	0.3	0	0.7	0	0.3
construction	2.7	1.4	1.8	5.5	4	3.1
whole sale and retail trade; repair of motor vehicles and motorcycles	4.6	1.2	10.5	4.5	1.9	4.3
transportation and storage	0.7	0.7	1.5	0.8	3.9	1.3
accommodation and food service activities	0.8	0	0	0.8	0.8	0.6
information and communication	0	0.8	0	0	0.4	0.2
other services	0.1	1.4	1.5	0	0	0.3
activities of households as employers	2.2	1.3	5.1	22.6	68	16.4
Total	100	100	100	100	100	100
	137,508	35,867	29,411	52,368	48,664	303,817

The desegregation of working children (5-17 years) by type of work (Figure 10.2), reveals that 60 percent of them were working without pay and 40 percent were working for pay or profit. Figure 10.3, shows that female constitutes the majority of working children (52 percent). In terms of type of work as presented in figure 10.4, male were engaged at higher rate in paying activities (40 percent) than female (31 percent). Also, the proportion of male children worked in unpaid agricultural activities (53 percent) was lower than the females' (62 percent).

Figure 10.2: Working children by type of work

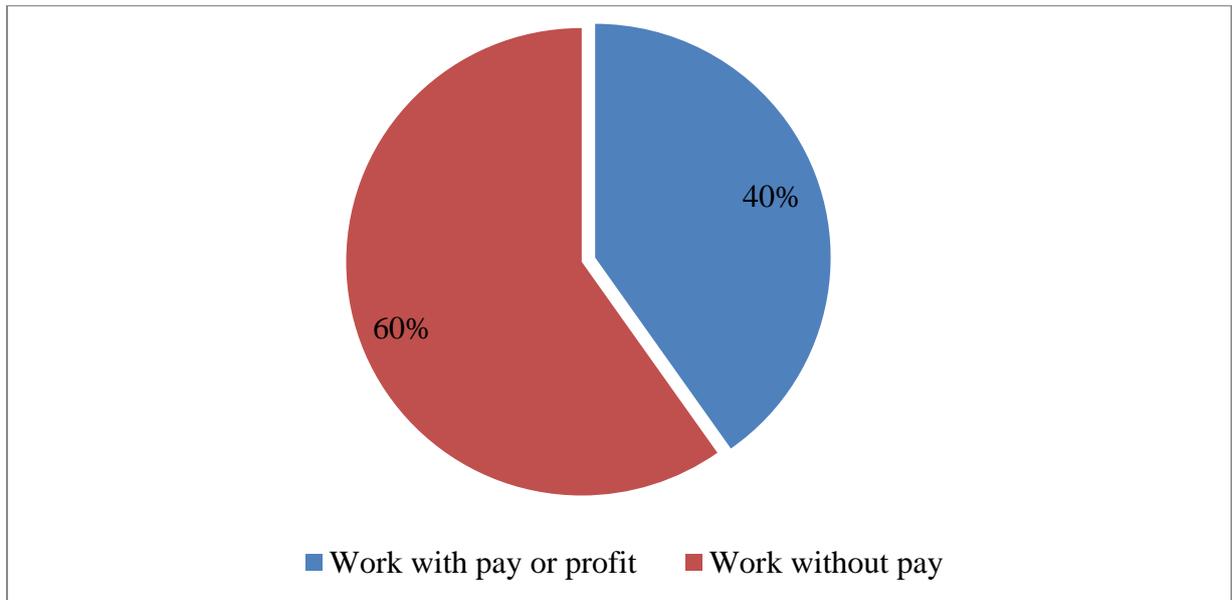
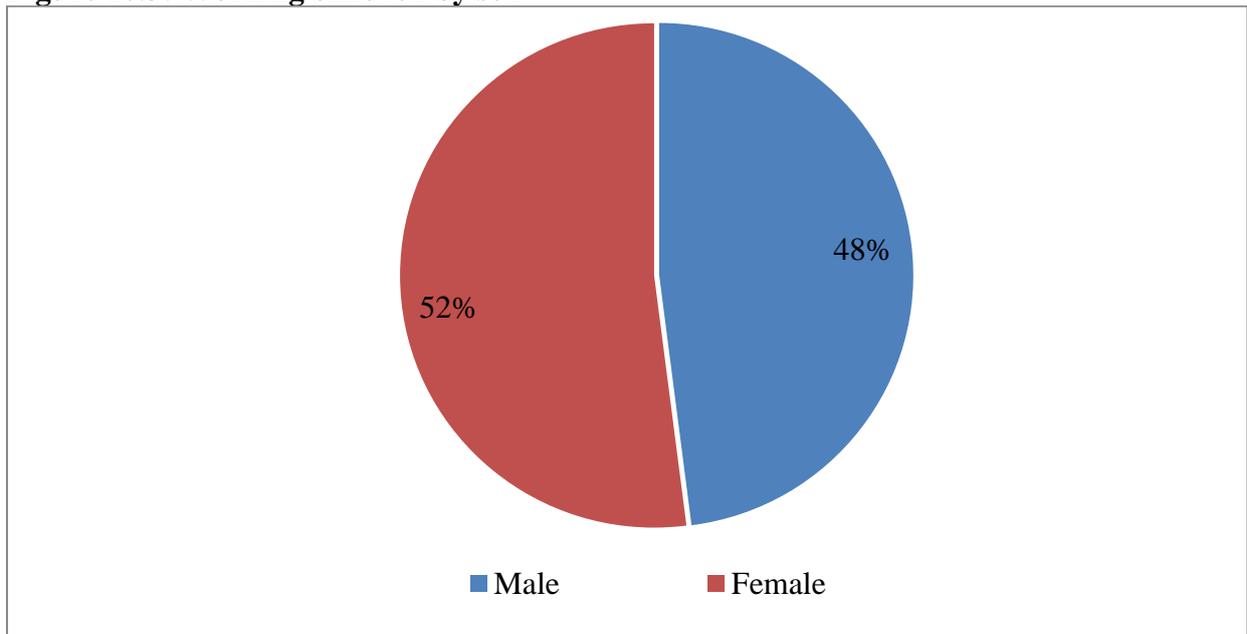
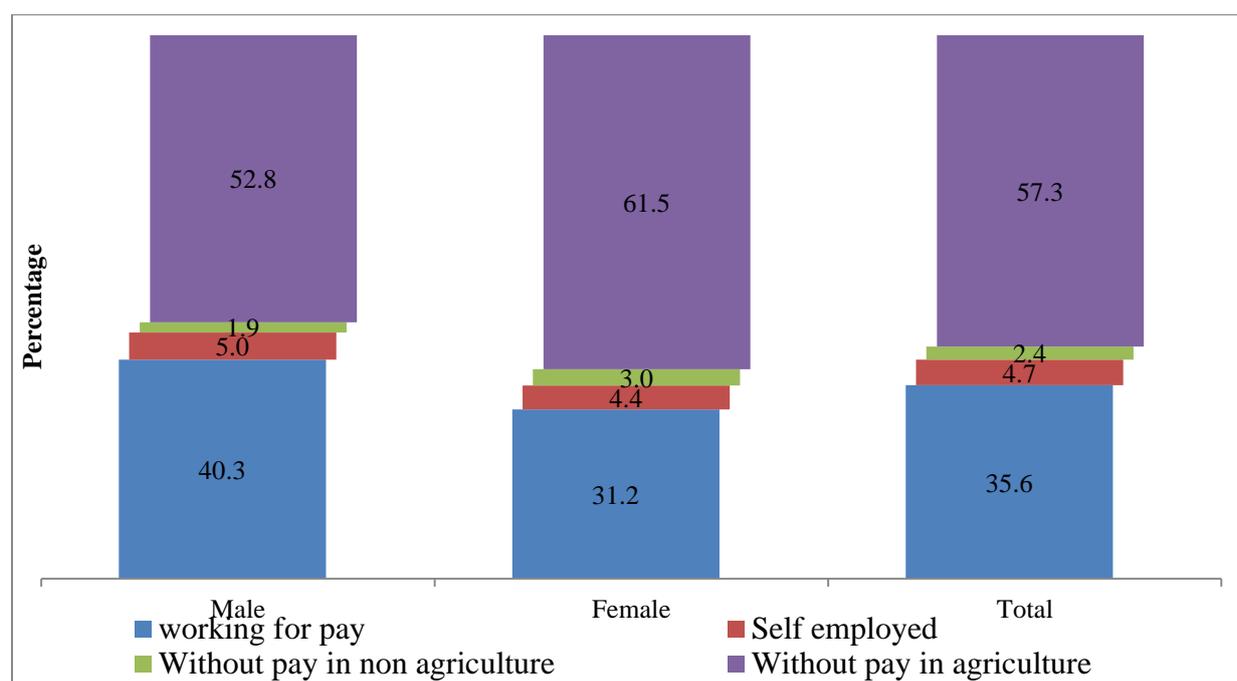


Figure 10.3: Working children by sex



Source: LFS August 2016

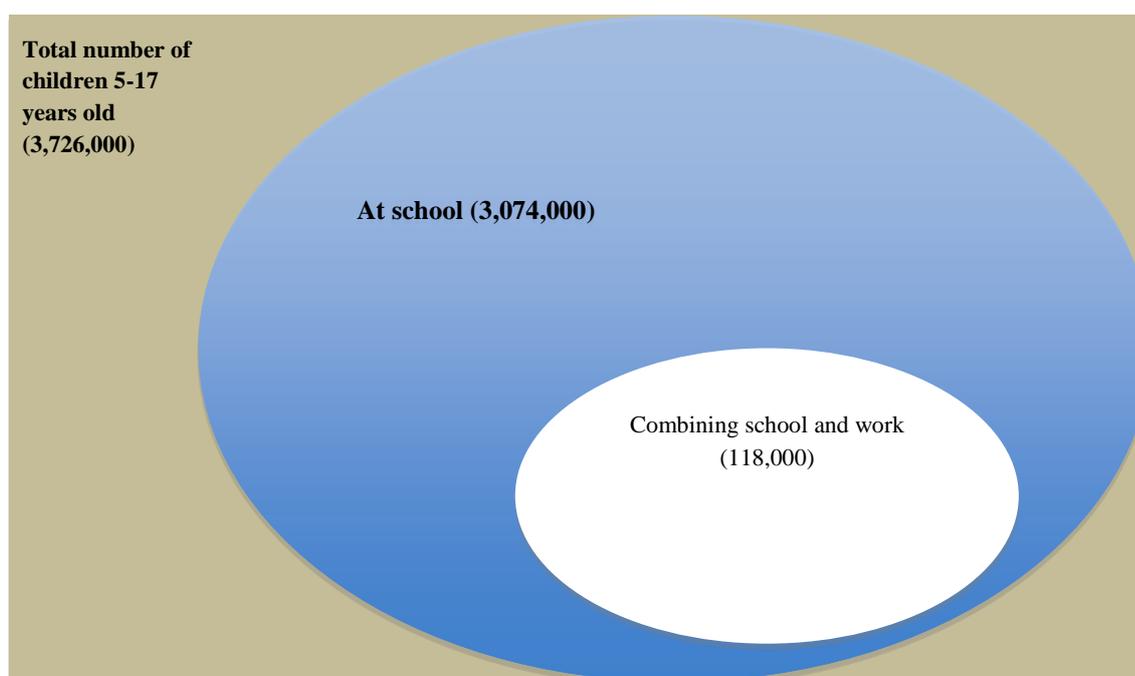
Figure 10.4: Percentage distribution of working children by sex and type of work



Source: LFS August 2016

As shown in figure 10.5, out of the total number of children 5 to 17 years old (3,726,000), the majority (3,074,000) representing 82.5 percent were attending school while 17.5 percent were not attending. Some 118,332 were combining school and work, and among those who were not studying (193,826), were working.

Figure 10.5: School and work among children (5-17 years old)



Chapter 11. Own-use producers

The international standards on statistics of work, employment and labour underutilization define *own-use producers* as all persons of working age who were engaged in own-use production work for at least one hour during the reference period. Own-use production comprises any activity to produce goods or provide services for own final use, interpreted to mean production where the intended destination of the output as self-declared is *mainly* for final use by the producer in the form of capital formation, or final consumption by household members, or by family members living in other households. In the case of agricultural, fishing, hunting or gathering goods intended mainly for own consumption, a part or surplus may nevertheless be sold or bartered.

Production of goods is within the SNA production boundary and covers: (i) producing or processing for storage agricultural, fishing, hunting and gathering products; (ii) collecting or processing for storage mining and forestry products, including firewood and other fuels; (iii) fetching water from natural and other sources; (iv) manufacturing household goods (such as furniture, textiles, clothing, footwear, pottery or other durables, including boats and canoes); (v) building, or effecting major repairs to, one's own dwelling, farm buildings, etc.

Provision of services is within the SNA general production boundary and covers (i) household activities of accounting and management, purchasing or transporting goods; (ii) preparing or serving meals, household waste disposal and recycling; (iii) cleaning, decorating and maintaining one's own dwelling or premises, durables and other goods, and gardening; (iv) childcare and instruction, transporting and caring for elderly, dependent or other household members and domestic animals or pets, etc.

Information about participation and time-spent in own-use production work is essential to inform a wide range of policies including those targeting employment creation in rural areas, poverty reduction, food security, and provision of a wide range of services, including water supply, child and elderly care, domestic services, etc. It is also essential for addressing gender issues in the world of work and for better understanding participation and access to labour markets, and related issues such as work-life balance.

The August 2016 LFS questionnaire contained 7 questions on time spent on different types of own-use production work. The results are shown in Table 11.1. The data indicate that some 5,300,538 persons 16 years old and over were engaged in at least one type of own-use production work during the reference week, representing 81percent of the total working age population. They devoted on average 24.7 hours per week on these activities. The type of activity in which the highest numbers of persons were engaged was “doing household chores including shopping, preparing meals”, covering 61 percent of the working age population and involving on average 10.7 hours per week, followed by “fetching water for the household, including travel time” (50percent of the working age population) and on average 5.0 hours per week.

Table 11.1: Average time spend per week on own-use production

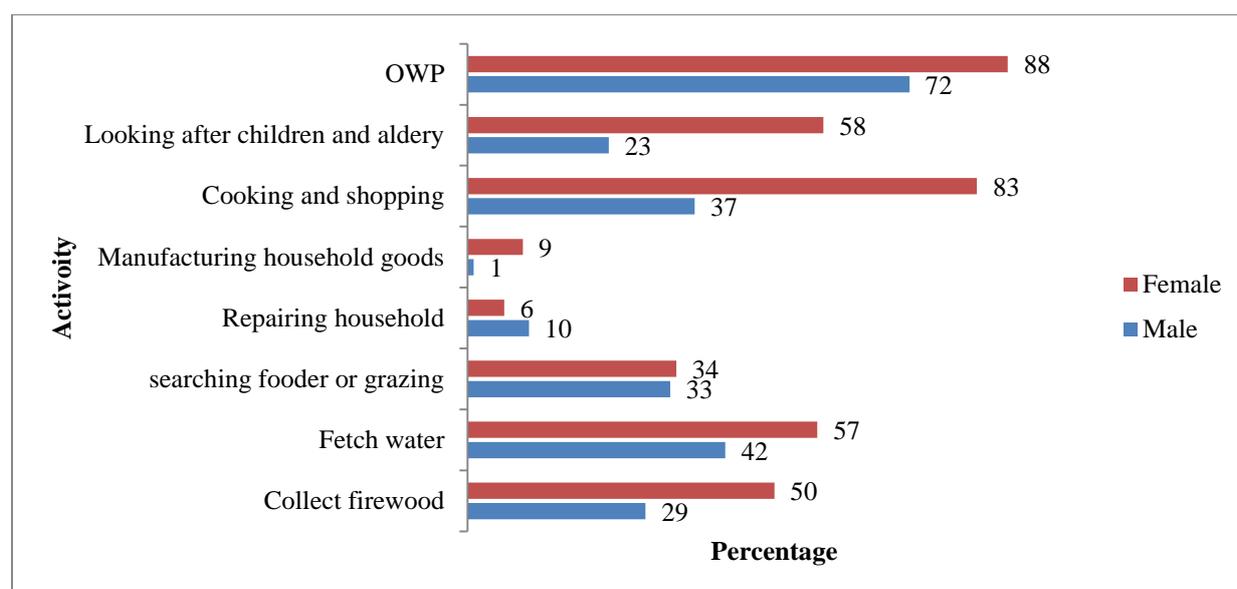
	Number of persons	Percent (%)	Average number of hours
Population 16 years old and over engaged in some type of own-use production work	5,300,538	80.6	24.7
Collecting firewood for the household including travel time	2,662,241	40.5	5.6
Fetching water for the household, including travel time	3,283,533	50.0	5
Searching for fodder or grazing for the household's animals	2,188,880	33.3	9.9
Constructing your dwelling, making major repairs on it, farm buildings, private roads, or wells	496,899	7.6	8.2
Manufacturing household goods for own or family use	371,902	5.7	7.8
Doing household chores including shopping, preparing meals	4,021,682	61.2	10.7
Looking after children and elderly	2,728,958	41.5	10.3
Own-use production work among the labour force			
Among labour force	2,669,734	80.1	23.7
Among employed	2,102,103	77.8	22.3
Among unemployed	567,631	90.7	28.7

Source: Pilot LFS February 2016

The table also shows that some 2,669,734 persons combined labour force activity with own-use production work. The average time spent per week on own-use production work by labour force participants was 23.7 hours. As expected, the average number of hours of own-use production work was lower among the employed and considerably higher among the unemployed.

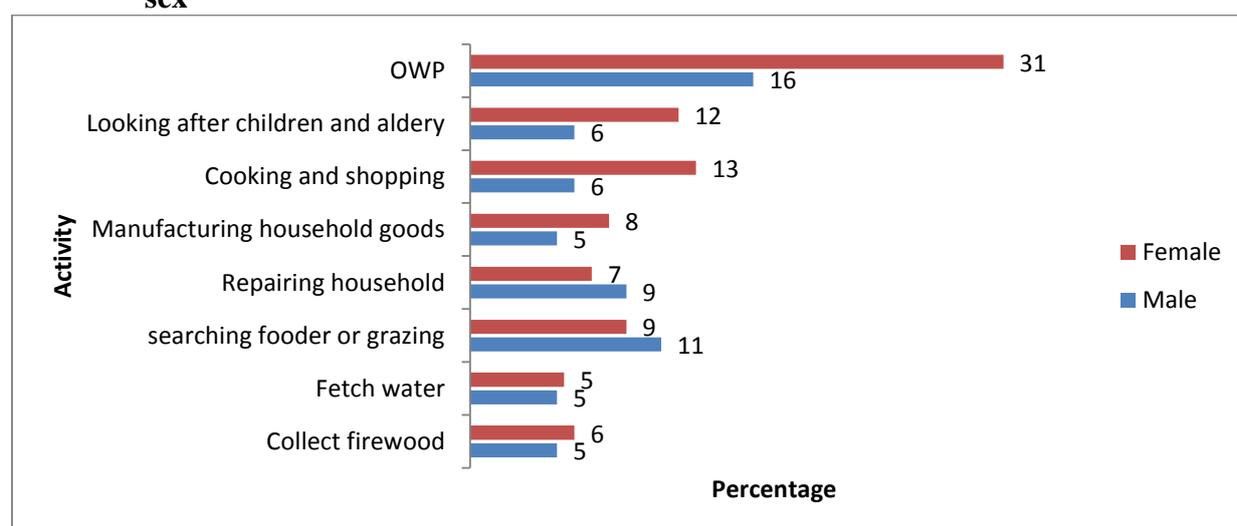
Using data on total hours usually worked at main and secondary jobs of the employed population, the combined hours of work in employment activity and own-use production work of the employed population was about 57.2 hours per week.

Figure 11.1 below illustrates the proportion of working age population who were engaged in own use production activities by sex. Females were more engaged in own-use production (88 percent) than males (72 percent). Except for construction of own dwelling, the proportion of working age females engaged in other type of own use production activities was higher than the proportion of working age males.

Figure 11.1: Proportion of working age population who are own use producers by sex

Source: LFS August 2016

Figure 11.2 presents the average number of time spent per week in own use production of different services by sex. The time spent by females (31 hours) was almost twice as high as the time spent by males (16 hours) in those activities. The activities in which females were spending more time were cooking and shopping (13 hours) followed by looking after children or elderly (12 hours) while males were spending more time in searching folder or grazing (11 hours) and repairing own houses (9 hours).

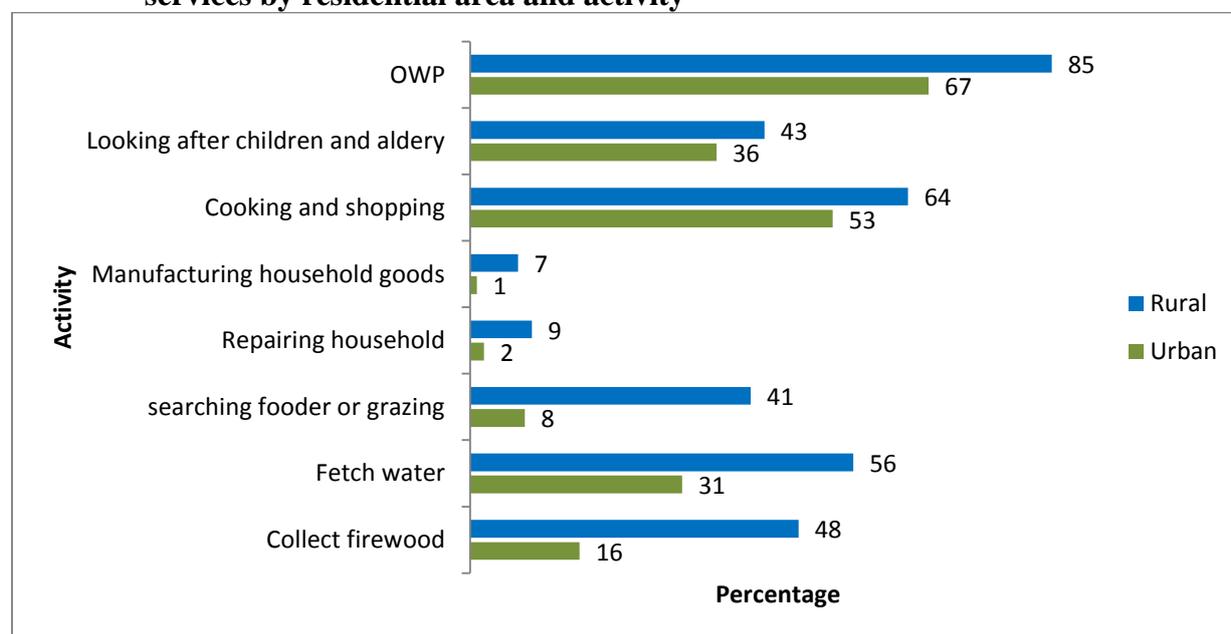
Figure 11.2: Average number of hours spent in own use production activities by type and sex

Source: LFS August 2016

Considering the area of residence, own use services activity was more predominant in rural area (85 percent) as compared to urban areas (67 percent). More than half of the working age population was engaged in cooking and shopping, and in fetching water in rural areas. In urban

areas, the activities that involve an important proportion of working age population were also cooking and shopping, and fetching water.

Figure 11.3: Proportion of working age population engaged in Own use production of services by residential area and activity



Source: LFS August 2016

Subsistence foodstuff producers constitute an important subgroup of persons in own-use production work. They are defined as all those who performed any of the activities specified above as *production of goods* in order to produce foodstuff from agriculture, fishing, or gathering that contribute to the livelihood of the household or family. The definition excludes persons who engaged in such production as recreational or leisure activities.

The August, 2016 LFS questionnaire included a section on subsistence agriculture (section H) with 11 questions on subsistence foodstuff production. The basic results are shown in Table 11.2 below. Among the population 16 years old and over, some 3,256,513 persons were engaged in subsistence foodstuff production during the past month, representing 49.5 percent of the total working age population. They have spent on average about 21.2 hours per week on this activity. The average number of hours of work on subsistence foodstuff production among the employed was 18.5 hours per week. It was significantly higher among persons not in employment (23.5 hours per week).

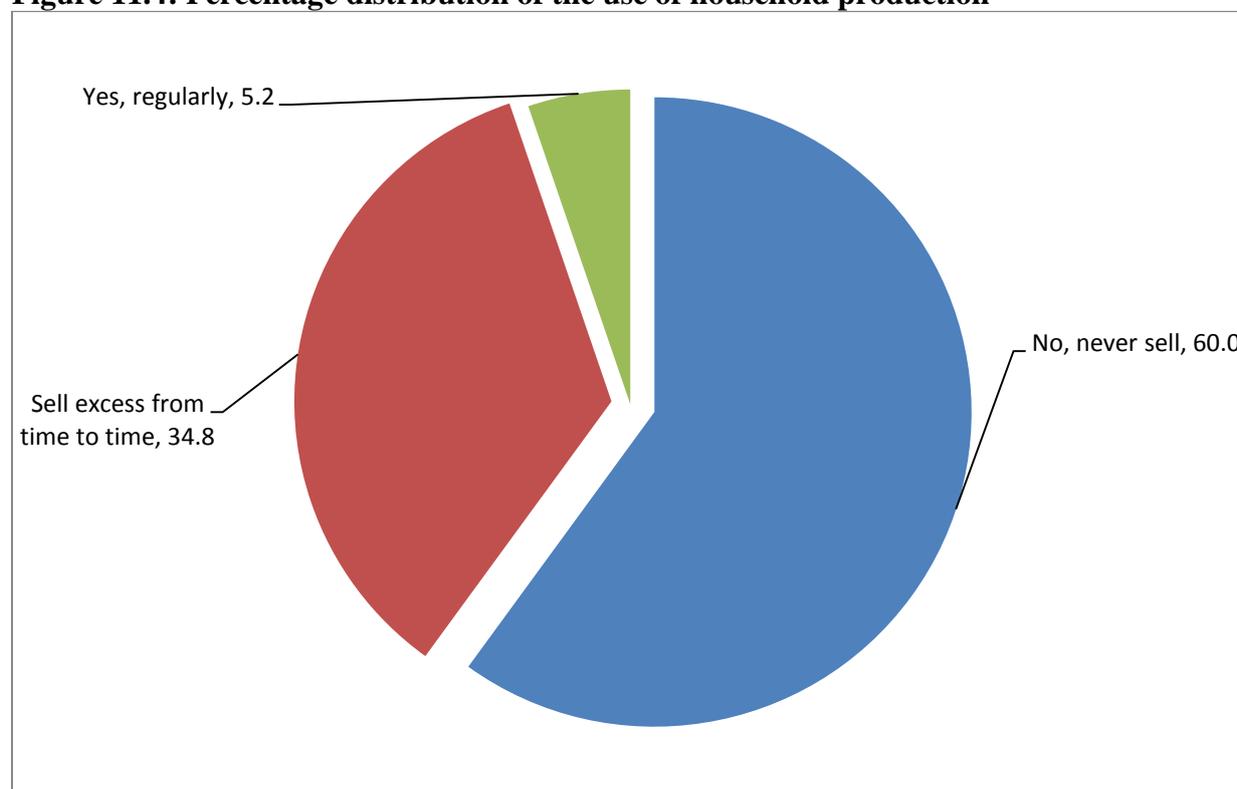
Table 11.2: Average time spend per week on subsistence foodstuff production

	Number of persons	Percent %	Average number of hours
Among total population 16 years old and over	3,256,513	49.5%	22.1
Among persons in employment	1,230,444	45.5%	18.5
Among persons not in employment	2,026,068	52.4%	23.5

Source: RLFS, August 2016

The survey collected additional information on subsistence foodstuff production including on whether any part of the products were sold in the market and the net amount the household obtained from agricultural activities last season as well as the number of paid employees engaged in the activities in addition to family members.

Figure 11.4: Percentage distribution of the use of household production

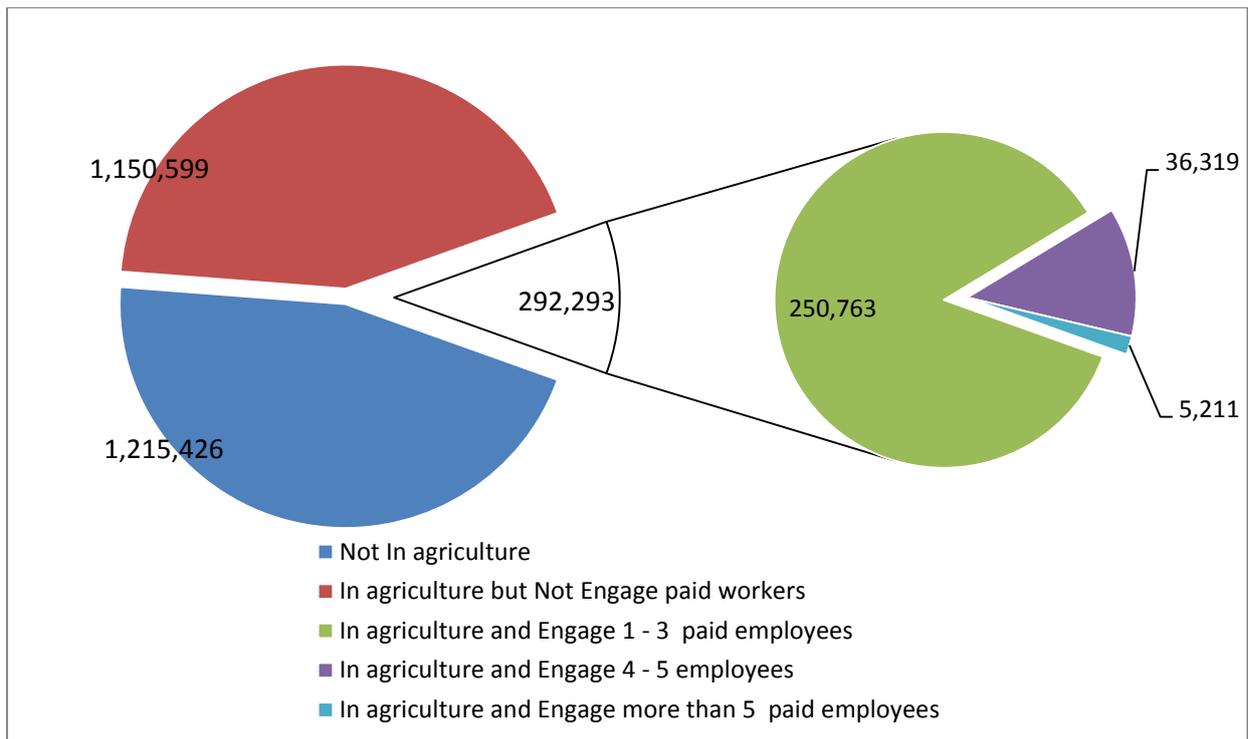


Source: RLFS, August 2016

Figure 11.4 above shows that 60 percent of household in Rwanda did not sell any production in general. As expected in a country with predominant agriculture, production was directly used for the household. Only 5.2 percent of households were selling their production on a regular basis.

The August 2016 LFS estimated 2,658,318 households of which 54.3 percent participated in subsistence agriculture. The remaining proportion of households (45.7 percent) did not participate in the subsistence agriculture. Among the households which participated in subsistence agriculture, 292,293 of them, corresponding to 11 percent of all households, employed agriculture labourers. The results show that most of households employed between 1 to 3 persons excluding other members of the household (86 percent).

Figure 11.5: Participation of paid workers in subsistence agriculture

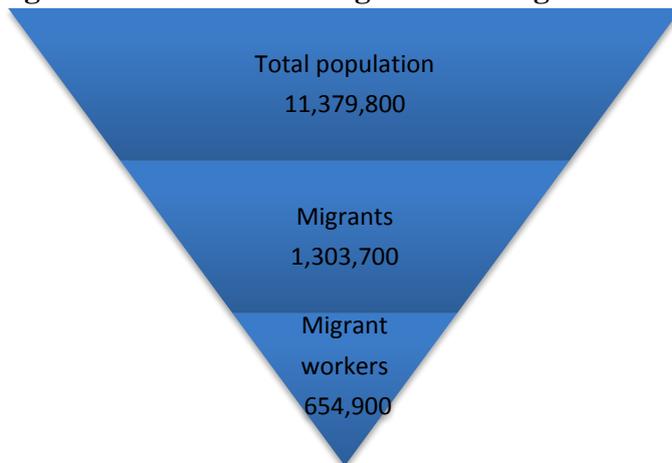


Source: RLFS, August 2016

Chapter 12. Migrant workers

According to the results of the LFS August 2016 shown in Figure 12.1 below, the stock of the migrant population at the time of the survey was 1,303,700 persons, representing 11.5 percent of the total population. Among them, an estimated 654,900 were migrant workers. A migrant was defined to be any current resident, member of a private household in Rwanda who has changed his or her district or country of usual residence in the last five years. A migrant worker was defined to be a migrant in the sense described above who was in the labour force of the country, i.e., currently engaged in an employment work or looking and available for employment.

Figure 12.1: Size of the migrant and migrant workers populations



Source: LFS August 2016

The migrant population includes the internal migrants and the international migrants. Similarly, the migrant workers population includes the internal migrant workers and the international migrant workers. The internal migrant and internal migrant workers were those who have moved from one district of Rwanda to another during the last five years, and the international migrant and international migrant workers were those who have moved from outside the country to Rwanda in the last five years. The bulk of the migrants were internal migrants (1,214,700). The international migrants were less than 89,000. The share of international migrants in total population of Rwanda (0.8 per cent) was significantly lower than the world average (3.2 percent).¹⁶

There were relatively more women (51.6 percent) than men (48.4 percent) among internal migrants of working age 16 years old and over, while the reverse is true among international migrants. The percentage of women among international migrants of working age was 45.7 and the percentage of men was 54.3 percent.

The percentage of migrants of working age living in the urban areas was significantly higher than the national average, both for internal migrants and international migrants. The share of

¹⁶ International Labour Office, *ILO global estimates on migrant workers. Results and methodology. Special focus on migrant domestic workers*. Labour Migration Branch, Conditions of Work and Equality Department and Department of Statistics, 2015.

both internal and international migrants in urban areas were around 52.5 percent, substantially more than double the corresponding urban rate at the national level (23.1 percent).

Table 12.1 shows the distribution of internal migrants from the province prior residence to the province of current residence. It also shows the distribution of international migrants from the country of prior residence to the province of current residence.

Table 12.1: Province of current residence and province of last move of internal migrants.

		Province of current residence					
		Kigali	East	North	South	West	Total
Province of last move	City of Kigali	168,733	72,596	17,531	45,189	16,471	320,521
	East	62,930	117,141	22,837	18,542	7,146	228,596
	North	36,313	92,680	22,741	7,392	5,163	164,289
	South	111,563	61,151	9,193	74,224	14,875	271,007
	West	69,539	50,188	20,533	36,456	53,598	230,315
	Total	449,079	393,757	92,835	181,804	97,254	1,214,728

Source: LFS August 2016

The diagonal elements of Table 12.1 show that about one-third of the internal migrants moved from one district to another district in the same province. The total numbers in the diagonals of the table is 436,437 corresponding to 35.9 percent of the total internal migrant population. The majority or about two-third of the internal migrants moved from one province to another. From the off-diagonal elements of Table 12.1, one can observe that the migration corridor with the largest movement was from the Southern Province to the City of Kigali (111,563 migrants), followed by the movement from the Northern Province to the Eastern Province (92,680) and the movement from the City of Kigali to the Eastern Province (72,593).

Table 12.2: Province of current residence and country of last move of international migrants.

		Province of current residence					
		Kigali	East	North	South	West	Total
Country of last move	Burundi	10,617	2,181	-	1,145	296	14,239
	Congo-Kinshasa	3,295	5,964	754	2,594	11,288	23,895
	Kenya	1,706	-	-	-	-	1,706
	Tanzania	2,378	8,406	2,296	2,738	-	15,818
	Uganda	5,437	12,925	4,596	-	2,150	25,109
	Rest of Africa	879	490	-	-	-	1,370
	Other countries	6,498	-	-	-	339	6,837
	Total	30,810	29,967	7,647	6,477	14,073	88,973

Source: LFS August 2016

It is interesting to note that the City of Kigali was a major destination as well as a major province of origin of migrant workers. More than one-third of the internal migrants currently reside in the City of Kigali (37.0 per cent). Similarly, more than one-fourth of the internal

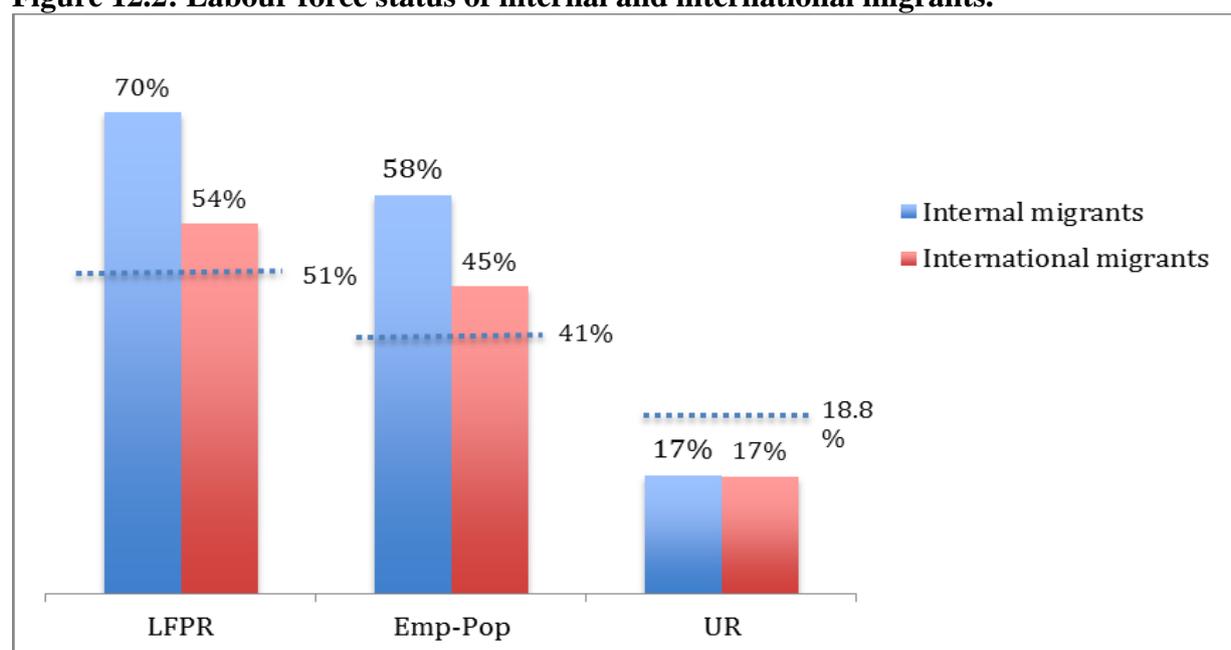
migrants moved from a district of the City of Kigali to another district inside or outside the City of Kigali in the last five years (26.4 percent). The Eastern province was the second pole of attraction as a destination province while the Southern province was the second highest migrant-sending province after the City of Kigali.

In terms of international migration, most migrants were coming from Uganda and Congo-Kinshasa DRC (28.2 and 26.9 percent, respectively), followed by Tanzania (17.8 percent) and Burundi (16.0 percent). The City of Kigali was also the province of destination of the highest number of international migrants (34.6 percent) followed by the Eastern province (33.7 percent).

A large part of the migrant population is migrant workers. Statistics on this category of migrants are particularly important. The management of labour migration and the protection of migrant workers, especially, their labour rights and the promotion of safe and secure working environments are of priority concerns of many countries.

Figure 13.2 shows the summary indicators of the labour force status of internal and international migrants according to the results of the RLFS August 2016.

Figure 12.2: Labour force status of internal and international migrants.



Source: LFS August 2016

Notes: LFPR = Labour force participation rate; Emp-Pop = Employment-to-population ratio; and UR = Unemployment rate. Dotted lines correspond to corresponding national rates or ratio.

It can be observed that the share of the working age migrants engaged in the labour force is significantly higher than the general population as a whole. The labour force participation rate of internal migrants was 70 percent and that of the international migrants was 54 percent, both significantly higher than the overall labour force participation rate (51 percent). Similarly, the employment-to-population ratio of internal migrants (58 percent) and that of the international

migrants (45 percent) were higher than the overall employment-to-population ratio of the country (41 percent). It can also be observed that the unemployment rate of internal migrant workers (17 percent) and international migrant workers (17 percent) were in both cases slightly below the national unemployment rate (18.8 percent).

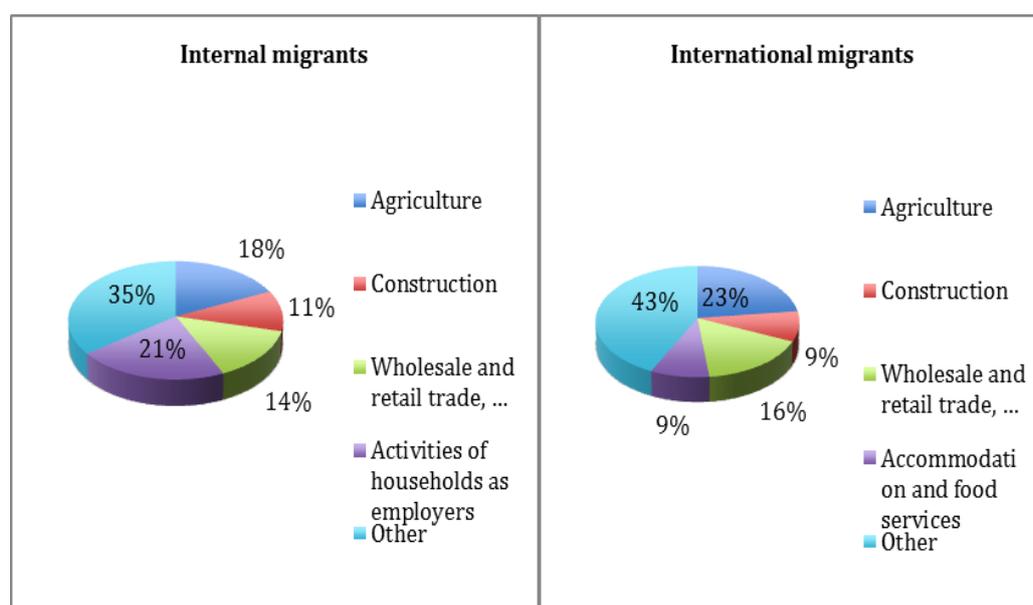
These results are in line with expectation as migration is often motivated by economic and labour market factors. According to the results of the RLFS August 2016, the main reason to move from the previous place of residence of the working age migrants was to look for work (27.5 percent of respondents) followed by looking for land to farm (12.0 percent). Marriage and other personal reasons such as living with relatives or accompanying parents were next in relative size (10.3, 9.8 and 9.1 percent respectively).

It is also instructive to note that the unemployment rate was lowest (about 1 to 2 percent) among migrant workers who moved from their previous place of residence because of a job transfer or a new job and highest (about 40 to 50 percent) among those who moved for personal reasons such as divorce or study. Correspondingly, the employment-to-population ratio was highest among migrant workers who moved for labour market reasons than those who moved for personal or family or other reasons.

More detailed analysis of the relationship between labour force status and reason of migration of migrant workers may be carried out based on the data presented in Table 54 of the Statistical Annex. One particular result that should be mentioned here is the very high employment-to-population ratio (79.6 percent) and the relatively low unemployment rate (13.0 percent) of migrants whose main reason of migration was to look for work. This result means that many of these migrants did find employment following their move, although not all did.

The pattern of employment of migrant workers in terms of branch of economic activity is shown below for internal and international migrants, separately. The branch of economic activity with the highest number of internal migrants was activities of households as employers (21 percent). Compared with the national share of persons engaged in households as employers (6.8 percent), this result shows that a high proportion of domestic workers were migrants many of whom were employed in agriculture prior to migration. This result explains the relatively low percentage of agriculture employment among the internal migrant workers (18 percent) as compared to the national average (37 percent).

The shares of internal migrants engaged in wholesale and retail trade and motor vehicle repair (14 percent) and in construction (11 percent) are about the same as the corresponding national average (14.6 and 11.2 percent respectively), suggesting that migrant workers in these two branches of economic activity were engaged in the same activity prior and after migration.

Figure 12.3: Employed migrant workers by branch of economic activity.

Source: LFS August 2016

Turning to international migration, the data show that the international migrant workers were mostly engaged, following migration, in agriculture (23 percent), wholesale and retail trade and motor vehicle repair (16 percent), construction (9 percent) and accommodation and food services (9 percent). Except for accommodation and food services, the share of international migrant workers was below the corresponding national share of employment in the stated branches of economic activity. This indicates that international migrant workers were proportionally more represented in accommodation and food services than in other major branches of economic activity. The share of international workers in accommodation and food services was 9 percent against 4.4 percent for the employed population as a whole.

Finally, it should be mentioned that migrant workers were defined here in terms of their participation in the labour force, i.e., engaged in or looking for work for pay or profit. Many other migrants were also engaged in subsistence foodstuff production or other own-use production of goods, not considered as employment work under the new international standards.

According to the RLFS August 2016, the proportion of internal migrants of working age, engaged in subsistence foodstuff production, not counted in labour force was 12.3 percent. The proportion among the international migrants was 10.3 percent. Both figures are considerably lower than the corresponding national percentage of 25.3 percent, indicating that migrants are relatively less engaged in subsistence foodstuff activity than the working age population at large. One implication of these results is that the higher labour force participation rate of migrants noted earlier in this chapter would be dissipated if the participation rate would be calculated on the basis employment work as well as subsistence foodstuff production work.

Chapter 13. Workers with disabilities

The National Institute of Statistics of Rwanda has pursued the recommendation of the UN formed Washington Group on Disability Statistics and included in the Rwanda labour force survey the recommended questions for identifying people with disabilities and their disaggregation by labour force status and other demographic and economic characteristics. Data collection on disabilities and on workers with disabilities aims to contribute to the UN Sustainable Development Goals (SDG), a universal and ambitious plan of actions for ending poverty and hunger by 2030, leaving no one behind including people with disabilities. Such disaggregated statistics are critical for monitoring progress toward the achievement of the SDGs.

The sample size of the LFS August 2016 is considerably larger and it is considered sufficient for providing preliminary estimates of workers with disabilities and their broad characteristics. According to the results of the RLFS August 2016, there were 483,819 persons with disabilities, five years old and over, in Rwanda representing a prevalence rate of slightly less than 5 percent. The relative standard error of the estimate is approximately 3.3 percent, corresponding to a margin of error of about +/- 33,000.

The recommended set of questions on disability was administered to persons five years old and over, and therefore the RLFS results refer to this age category. In line with recommendations of the Washington Group on Disability Statistics, a person with disability was defined as any individual five years old and over who responded to have “a lot of difficulty” or “cannot do it at all” with respect to one or more of the following six conditions: “seeing, even if wearing glasses”, “hearing, even if using a hearing aid”, “remembering or concentrating”, “walking or climbing steps”, “self-care such as washing all over or dressing”, “communicating, for example, understanding or being understood”.

Table 14.1 shows the estimated number of persons with disabilities by type and degree of disability. The table also gives data on the prevalence rate in relation to the total population five years old and over.

Table 13.1: Prevalence of disabilities by type of disability.

Type of disability	Total persons with disability		With a lot of difficulty		Cannot do at all	
	Number	Rate	Number	Rate	Number	Rate
Total	483,819	4.9	431,895	4.4	51,924	0.5
Seeing	153,235	1.6	145,847	1.5	7,388	0.1
Hearing	82,569	0.8	67,834	0.7	14,735	0.2
Walking, climbing	179,207	1.8	169,273	1.7	9,934	0.1
Remembering	147,303	1.5	131,848	1.3	15,455	0.2
Washing, dressing	68,929	0.7	45,968	0.5	22,961	0.2
Communicating	48,281	0.5	31,422	0.3	16,859	0.2

Source: LFS August 2016

Note: Details do not add up to totals due to the existence of persons with more than one disability.

The disability with the highest prevalence rate was difficulty in walking or climbing steps, affecting 179,207 persons or 1.8 percent of the population 5 years old and over. Almost as frequent are the disability in seeing even with glasses, affecting 153,235 persons or 1.6 percent of the population 5 years old and over, and the disability in remembering or concentrating, affecting 147,303 persons or 1.5 percent of the population 5 years old and over. The data show that there were about 7,388 persons who cannot see at all, roughly one per thousand persons, and 15,455 who cannot remember or concentrate at all, representing about two per thousand persons.

Some 126,112 persons had more than one disability, 25,952 persons had difficulty seeing as well as difficulty in walking or climbing steps, 15,537 persons had difficulty walking or climbing steps as well as remembering or concentrating, and 313,387 persons had difficulties both remembering or concentrating and washing all over or dressing.

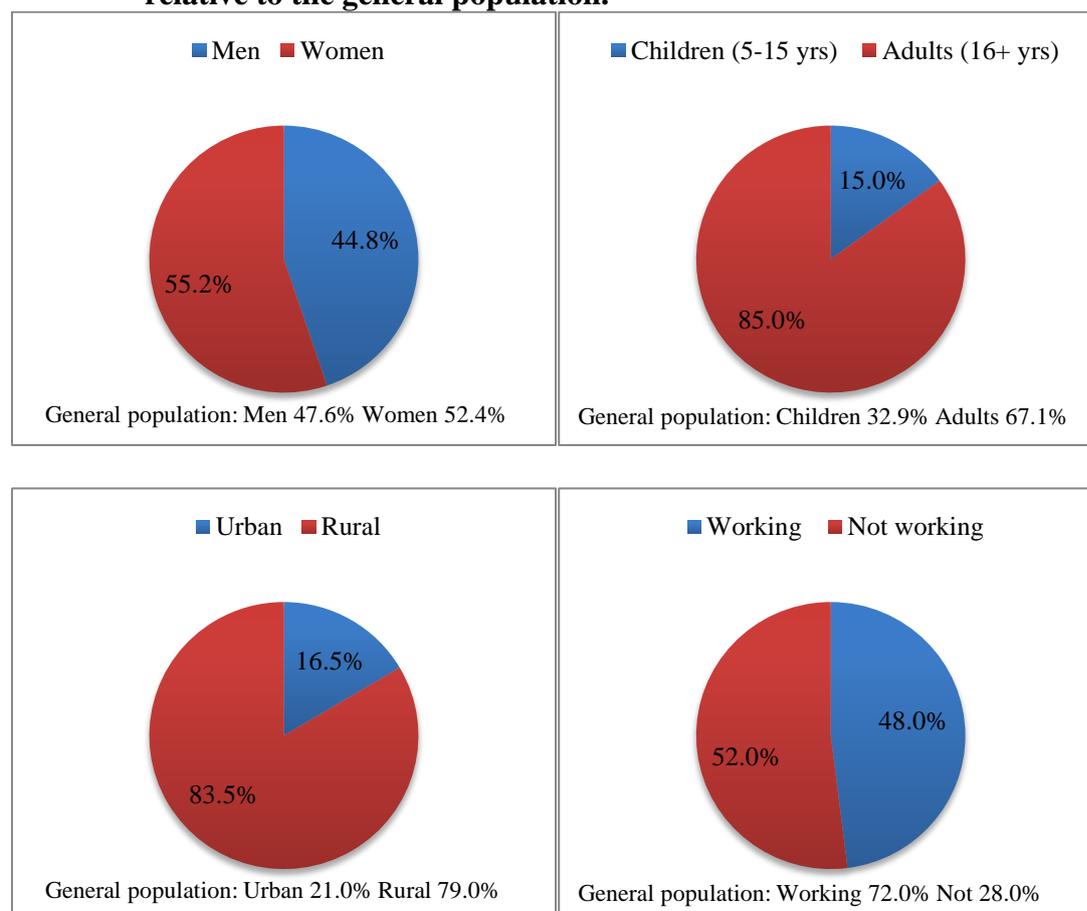
There were also persons who suffer from a combination of three or more difficulties. In particular, there were about 7,391 persons who suffer from difficulties in walking or climbing steps, remembering or concentrating and washing all over or dressing. This result is in line with the observation that certain disabilities are correlated with age and therefore it is not surprising to find these persons form the largest category of persons with multiple disabilities. Overall, every person with disability had on average 1.4 disabilities.

The data collected in the survey indicate that women were relatively more affected by disabilities across all types of disabilities except for difficulty with communicating for which the number of men was relatively higher than women. The percentage of women was particularly high among persons with seeing disabilities (61 per cent) and remembering and concentration (59 percent). In general, as shown in Figure 13.1, women are disproportionately affected by disabilities. The percentage of women among persons with disabilities was 55.2 percent, while women formed 52.4 percent of the population 5 years old and over.

The data shown in Figure 13.1 also indicate that adults of working age are disproportionately affected by disabilities. The percentage of persons 16 years and over among persons with disabilities was 85.0 percent while the percentage of persons 16 years and over among the general population 5 years old and over was 67.1 percent.

Similarly, the data show that rural areas were disproportionately affected by disabilities. The percentage of persons 16 years and over with disabilities living in rural areas was 83.5 percent while the rural population 5 years old and over was only 79.0 percent of the general population 5 years old and over.

Figure 13.1: Demographic characteristics and work status of persons with disabilities relative to the general population.



Source: LFS August 2016

Note: General population refers here to the size of the population five years old and over according to the RLFS August 2016.

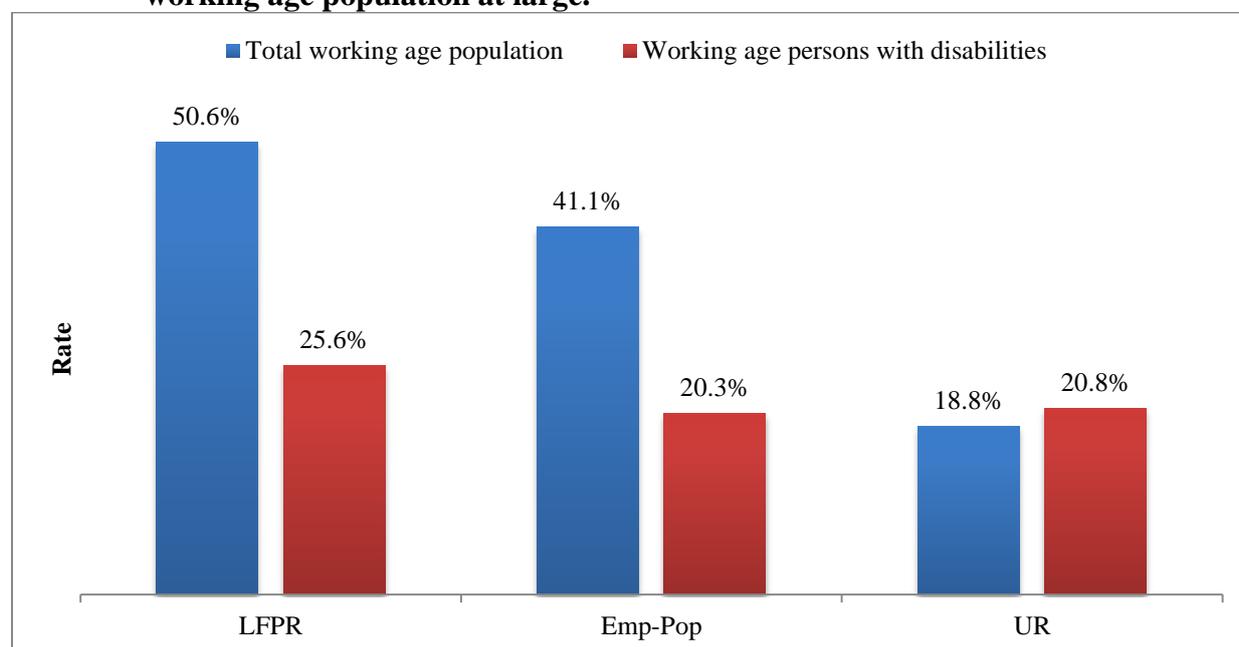
Also, as expected, the data shown in Figure 13.1 indicate that the proportion of working age persons with disabilities who are not working (52.0 percent) is relatively higher than the share of persons who are not working in the general working age population (28.0 percent). Work is defined here in a broad sense covering not only employment work but also work on subsistence foodstuff production.

In terms of labour market activity, the data show that despite their handicap there is a relatively high number of persons of working age with disabilities who are engaged in the labour market, either working for pay or profit, or looking for paid jobs or self-employment.

Figure 13.2 compares the main labour market indicators for persons 16 years old and over with disabilities and the corresponding indicator for the working age population at large. The results show that 25.6 percent or more than one-fourth of the working age persons with disabilities are labour force participants. The corresponding rate for the working age population at large is 50.6 per cent. About 20.3 percent or slightly more than one-fifth of the working age persons with

disabilities are engaged in employment work for pay or profit. The corresponding ratio for the working age population at large is 40.1 percent.

Figure 13.2: Main labour force indicators: Working age persons with disabilities versus working age population at large.



Source: LFS August 2016

Note: LFPR = labour force participation rate; Emp-Pop = Employment-to-population ratio; and UR = Unemployment rate.

It is instructive to note that the data from the RLFS August 2016 show that the unemployment rate of persons with disabilities is significantly higher than the unemployment rate of the working age population at large (20.8 percent versus 18.8 percent). This result is in line with the expectation that persons with disabilities have more difficulties in obtaining jobs than the working age population at large.

The analysis of employment status of the working age persons with disabilities by type of disability (presented in Table 6 of the Statistical Annex) shows that the employment-to-population ratio is highest among persons with communication disability (25.0 percent) and lowest among persons with difficulty in washing all over and dressing (4.6 percent). Persons with difficulty in washing all over and dressing are also those with the lowest unemployment rate (3.3 percent) and labour force participation rate (4.7 percent), reflecting their age pattern. Many of them being elderly, they are engaged in labour market activity, neither working for pay or profit or looking for employment. By contrast, persons with hearing disability have the highest unemployment rate (30.5 percent) followed by persons with seeing disability (22.0 percent) and persons with communicating disability (20.4 percent).

More detailed analysis of workers with disabilities by hours of work, status in employment, occupation and branch of economic activity is possible using the RLFS August 2016. However, the limited number of observations at this level of detail is leading to estimates with low precision, not undertaken in the present report.

Annex A. Main concepts and definitions

The main concepts and definitions used in the survey are in line with the international standards on statistics of work, employment, and labour underutilization adopted by the 19th International Conference of Labour Statisticians (Geneva, 2013).¹⁷ They are briefly described below.

- **Work**

The starting point of the international standards on statistics of work, employment and labour underutilization is the concept of work defined as:

- “Any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use” in line with the General production boundary defined in the System of National Accounts 2008.
- Work is defined “irrespective of its formal or informal character or the legality of the activity.”
- It excludes “activities not involving production of goods or services (begging, stealing), self-care (personal grooming, hygiene) and activities that cannot be performed by another person on one’s own behalf (sleeping, learning, own recreation).”

The international standards recognize different forms of work: Own-use production work (production of goods and services for own final use); employment (work performed for others in exchange for pay or profit); unpaid trainee work (work performed for others without pay to acquire workplace experience or skills); volunteer work (non-compulsory work performed for others without pay); and other forms of work (not defined at this time by the international standards). The RLFS focuses on the measurement of employment and labour underutilization and separately on own-use production work.

- **Working age population**

The working age population in Rwanda is defined as all persons 16 years old and over. For international reporting, the international standards recommend the lowest age bracket starting with 15 years. To enable comparison with the past and to conform to the international standards, the LFS questionnaire collected data on labour force and labour underutilization characteristics of the population 14 years and over. Accordingly, the main indicators presented in this report are based on the 16 years old limit.

¹⁷ILO, *Resolution concerning statistics of work, employment and labour underutilization*, 19th International Conference of Labour Statisticians, Geneva, October 2013.

- **Employment**

Employment is a particular form of work. Persons in employment are defined as all those above a specified age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit. It excludes persons engaged wholly in activities to produce goods or services for own final use such as producing agricultural, fishing and gathering products for own-consumption or cleaning, decorating, gardening and maintaining one's own dwelling or premises, durables and other goods. Persons in employment comprise: (a) employed persons "at work," i.e., who worked in a job for at least one hour; and (b) employed persons "not at work" due to temporary absence from a job, or to working-time arrangements (such as shift work, flexi-time and compensatory leave for overtime).

This definition of employment differs from the definition used in past surveys and censuses that was based on the previous international standards.¹⁸ The main difference concerns the statistical treatment of subsistence foodstuff producers. According to these earlier standards, "persons engaged in the production of goods and services for own and household consumption should be considered as in self-employment if such production comprises an important contribution to the total consumption of the households." According to the new standards, however, only those are included in employment if the production was "intended mainly for sale or barter, even if part of the output is consumed by the household or family."

- **Labour underutilization**

Labour underutilization refers to mismatches between labour supply and demand. It reflects the unmet need for employment among the population. Measures of labour underutilization include, but may not be restricted to unemployment; time-related underemployment; and potential labour force.

- **Unemployment**

Persons in unemployment are defined as all those above a specified age who (a) were not in employment; (b) carried out activities to seek employment during a specified recent period; and (c) were currently available to take up employment given a job opportunity. The definition of unemployment provides an exception in the case of *future starters*. They are considered as unemployed even if they did not carry out activities to seek employment during the specified recent period, if satisfy the availability condition.

Although this definition of unemployment is essentially the same as the definition used in past surveys and censuses, the resulting statistics differ considerably from each other. This is due to the impact of the change in the definition of employment. Persons who are not classified as employed under the new definition are now subject to classification as unemployed if they satisfy the other two criteria of unemployment.

¹⁸ ILO, *Resolution concerning statistics of the economically active population, employment, unemployment and underemployment*, adopted by the 13th International Conference of Labour Statisticians, Geneva, 1982.

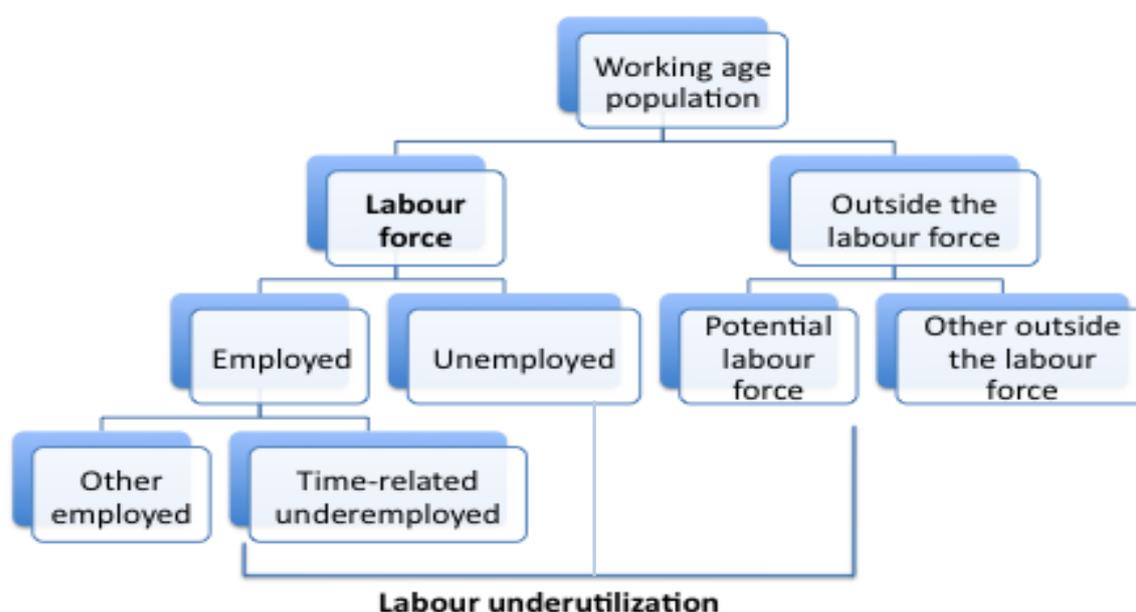
- **Time-related underemployment**

Persons in time-related underemployment are defined as all persons in employment who, during a specified reference period, (a) wanted to work additional hours, (b) whose working time in all jobs was less than a specified hours threshold, and (c) who were available to work additional hours given an opportunity for more work. The hour-threshold was set at 35 hours of work during the reference week at all jobs. It corresponds to the median value of the distribution of hours actually worked at all jobs during the reference week.

- **Potential labour force**

Potential labour force is defined as all persons above a specified age who, during the short reference period, were neither in employment nor in unemployment but who were considered as either (a) *unavailable jobseekers* (seeking employment but not currently available) or (b) *available potential jobseekers* (currently available for employment but did not carry out activities to seek employment). The relationship among the various concepts is shown in the figure below.

A1. Labour force and labour underutilization framework



Note: The employed excludes workers engaged in the production of goods or services for own consumption or in other forms of work not regarded as employment.

- **Discouraged jobseekers**

Among the potential labour force, one particular group requires separate attention. These are the so-called discouraged jobseekers. Discouraged jobseekers are persons outside the labour force

who wanted employment and were currently available but did not seek employment during the short reference period of measurement for labour market-related reasons as listed below:

- past failure to find a suitable job
- lack of experience
- lack of qualifications or jobs matching the person's skills
- lack of jobs in the area
- considered too young or too old by prospective employers

The discouraged jobseekers are a subset of the potential labour force, or more particularly, a subset of the “available potential jobseekers”. During the survey reference period, they wanted and were available for employment, but were not seeking employment for labour market-related reasons as opposed to personal, family or other non-labour related reasons. They are considered as potential jobseekers because in principle they have been seeking employment in the past but stopped looking for employment after failure or repeated failures to obtain suitable employment due to various reasons related to the unsuitability of their age, qualification, work experience, and similar labour-market reasons. If these obstacles could be overcome, they would presumably be again jobseekers.

- **Others outside the labour force**

The potential labour force is one group of persons outside the labour force. In general, persons outside the labour force include persons of working age population who were neither in employment nor in unemployment during the reference period of measurement. Persons outside the labour force may be classified in terms of their current main activity status as well as the main reason for not being engaged in the labour force and their potential future labour force engagement. The international standards recommend the classification of persons outside the labour force by main activity status, as self-declared, with the following categories:

- own-use production of goods or own-use provision of services;
- unpaid-trainee work;
- volunteer work;
- studies;
- self-care (due to illness or disability);
- leisure activities (social, cultural, recreational).

The main status of the individual is to be determined by the person himself or herself, or in practice by the survey respondent if the survey allows for proxy-response.

Additional classifications of the population outside of the labour force (or more generally, the population not in employment) that may be considered in survey design are past work employment and characteristics of last employment for those who had past employment experience, and main current source of livelihood.

- **Willing non-jobseekers**

One particular group of persons outside the labour force who are not in the potential labour but have some attachment to the labour force are the so-called “willing non-jobseekers”. Willing non-jobseekers are defined as persons who wanted employment but were not seeking employment and were not currently available for employment during the corresponding specified reference periods of measurement.

The willing non-jobseekers are a subset of the persons outside the labour force, and more particularly, a subset of those persons outside the labour force who are not in the potential labour force. The willing non-jobseekers were not seeking employment, nor were available for employment during the appropriate reference periods and as a result are not classified as unemployed or as potential labour force. However, they wanted employment during the appropriate reference period, and in this sense they are considered as a separate category among the population outside the labour force.

- **Own-use production work**

Persons in own-use production work are defined as all those of working age who, during a short reference period, performed any activity to produce goods or provide services for own final use for a cumulative total of at least one hour. “For own final use” is interpreted as production where the intended destination of the output is *mainly* for final use (in the form of capital formation, or final consumption by household members, or by family members living in other households). In the case of agricultural, fishing, hunting or gathering goods intended mainly for own consumption, a part or surplus may nevertheless be sold or bartered.

Subsistence foodstuff producers constitute an important subgroup of persons in own-use production work. They are defined as all those who performed any of the specified activities to produce foodstuff from agriculture, fishing, hunting or gathering that contribute to the livelihood of the household or family. Excluded are persons who engaged in such production as recreational or leisure activities.

Own-use producers and in particular persons engaged in own-use production of goods such as subsistence foodstuff producers (and for that also matter unpaid trainee workers or volunteer workers) may be engaged, in the same reference period, in other activities, including employment or search for employment. On the basis of their other activity, therefore, certain own-use producers may also be in the labour force and classified as employed, unemployed or other labour underutilization category.

The following table lists the terminology and definitions of the main labour force and labour underutilization indicators used in the survey. The definitions of other concepts used in the survey are described as part of the analysis of the data in the body of the report.

A2. Main labour force and labour underutilization indicators

Concept	Definition
Working age population (Pop16+)	$E+U+N$
Labour force (LF)	$LF = E+U$
Potential labour force	P
Extended labour force (XLF)	$XLF = E+U+P$
Employment	E
Unemployment	U
Time-related underemployment	T
Labour force participation rate	$LF/Pop16+$
Employment-population ratio	$E/Pop16+$
Unemployment rate (LU1)	U/LF
Combined rate of unemployment and time-related underemployment (LU2)	$(U+T)/LF$
Combined rate of unemployment and potential labour force (LU3)	$(U+P)/XLF$
Composite measure of labour underutilization (LU4)	$(U+T+P)/XLF$

Annex B. Survey methodology and data quality

The ultimate goal of the labour force survey (LFS) programme is to collect data on the employment and labour underutilization characteristics of the population on a continuous basis, providing quarterly estimates of the main labour force aggregates with sufficient precision at the district level. Given this ambitious measurement objective, it has been decided to adopt a gradual approach starting with an annual survey with the sample spread over two points in time. The sample is designed such that the survey provides for:

- Semi-annual national estimates of employment and labour underutilization with specified precision, and
- Annual district-level estimates by pooling together the bi-annual data of each calendar year.

The timing of the bi-annual rounds is based on the seasonal variations of labour force activities in Rwanda, in particular, the high and low seasons of agriculture activities, in February and August, respectively. This approach is in line with the international standards that recommend a national data collection strategy that allows reporting “on a sub-annual basis, main aggregates of employment, the labour force, labour underutilization, including unemployment, and subsistence foodstuff producers, in order to monitor short-term trends and seasonal variations.”

An annual survey with the sample spread over two points in time has a number of advantages in comparison with an approach that starts with an annual survey conducted at one point in time during the year. The semi-annual approach allows NISR to put in place a survey management system that oversees survey operations and data processing tasks that cover the entire year. This would make it easier to transit at a later stage into a more frequent reporting system. It will also lessen the number of transitions and inevitable disruptions at each transition toward the final objective of reaching a continuous survey with quarterly reporting,

A semi-annual approach also provides the possibility of incorporating a rotation scheme into the sample design. A rotation scheme allows to produce more accurate measurement of employment and labour underutilization trends as well as new statistics on labour force dynamics, in particular, flow data on job gains (number of persons obtaining employment during a given period) and corresponding data on job losses (number of persons losing employment during the period).

1. Sample design

The sample design of the LFS is a two-stage stratified design according to which at the first stage of sampling, a stratified sample of enumeration areas from the latest population census is drawn with probabilities proportional to size measured in terms of the census number of households or census number of household members, and at the second stage of sampling, a fixed number of sample of households is selected with equal probability within each sample enumeration areas. Finally, all household members in the sample households are selected for survey interviewing.

The scope of the survey is all persons living in private households. It excludes the institutional population permanently residing in houses such as hostels; health resorts; correctional establishments etc., as well as persons living in seasonal dwellings not covered in the survey. It also excludes workers living at their work-sites. A household is a group of persons who live together and make common provision for food and other essentials for living. The people in the group may be related or unrelated or a combination of both. A household may consist of only one person or several persons.

- **Sample size**

Sample size determination in most household-based surveys with multi-stage stratified design is based on the principle of first calculating the required sample size for a single «domain» assuming a simple random sample design and no non-response. A domain is a well-defined population group for which estimates with pre-determined accuracy are sought. The results are then extended to allow for non-response and deviation from simple random sampling.

The application of this principle with the choice of parameters described below leads to a sample size requirement of 18,691 households for measuring annual unemployment with margin of errors of +/- 0.3% at 95% confidence level. In these calculations, the main indicator is the ratio of unemployment to the working age population, set at $r=0.024$ according to the 2012 population census of Rwanda. The design effect (deff) is set at 3, within the range of values (3 to 4) generally used for labour force surveys. The margin of errors (ME = 0.0026) is twice the standard error of the estimate.¹⁹ Similar calculations for employment gave a sample size requirement of 18,792 households.

Because the sample size should be a multiple of $2 \times 4 \times 16$ for two survey rounds per year, four rotation groups per round and 16 sample households per Primary Sampling Unit (PSU), the required annual sample size has been rounded to 18688 households. For the August 2016 round, the sample size was therefore set at

Sample size of LFS August 2016 = $18688/2 = 9344$ households.

- **Sample rotation**

The main purpose of sample rotation is to improve the precision of the trend estimates. It also allows obtaining data on labour force flows by matching sample individuals common in different survey rounds. The sample rotation scheme adopted for the Rwanda LFS programme builds on the possibility of transiting to quarterly sub-rounds after a few years of half-annual sub-rounds.

¹⁹For more detail description of the calculations reference is made to: “Labour Force Survey of Rwanda: Proposed survey programme and instruments, Farhad Mehran, GIZ Consultant, National Institute of Statistics of Rwanda (NISR), 31 July 2015.

Rwanda LFS: Sample rotation design

2016		2017		2018	
February	August	February	August	February	August
Pilot survey	4 (R1)				
	3 (R2)	4 (R2)			
	2 (R3)	3 (R3)	4 (R3)		
	1 (R4)	2 (R4)	3 (R4)	4 (R4)	
		1 (R5)	2 (R5)	3 (R5)	4 (R5)
			1 (R6)	2 (R6)	3 (R6)
				1 (R7)	2 (R7)
					1 (R8)
Sample size:			Sample overlap:		
Annual: 18688 households			Round-to-round overlap = 75%		
Semi-annual: 9344 households			Year-to-year same half-year overlap = 50%		
One rotation group: 2336 households			Year-to-year overlap = 60%		

According to the sample rotation design, the annual sample size is distributed into two bi-annual rounds in February and August of each year, except for the first year when the Pilot Survey was conducted. The LFS August 2016 begins with a half-sample of 9344 households. In 2017, the survey would use the full sample of 18688 households evenly spread over February and August, and the process continues in 2018 and beyond unless a decision is taken to transit to quarterly sub-rounds.

The rotation scheme retains each sample household in four consecutive half-year rounds (2 years) before leaving the sample altogether. The sample size in each round consists therefore of 4 rotation groups, containing households who would remain in the sample three more times, the other who would remain two more times, another who would remain one more time, and finally one who join the sample for the first time.

According to this rotation scheme, there is 75% sample overlap between the semi-annual rounds. The overlap for the same period one-year apart is 50% and the sample overlap between two consecutive years is 60%. It should be mentioned that sample rotation implies a lower number of distinct households in each annual survey. There would be 11,680 distinct households in the sample each year in 2017 and 2018.

- **Sampling frame and sample allocation among districts**

The sample in each survey round consists of four rotation groups comprising in total 9344 households in 584 primary sampling units (PSUs). A primary sampling unit is an enumeration

area of the Population and Housing Census 2012. There are altogether 14,784 enumeration areas in the sampling frame constructed by NISR based on the population and housing census.

To ensure adequate geographical distribution of the sample over the different parts of the population, the sample is allocated among the 30 districts of the country. Prior to sample selection, the sampling frame is sorted according to urban and rural areas within districts. This provides an implicit stratification of the population by urban and rural areas. The resulting distribution of the sample of the LFS August 2016 round obtained on the basis of the square-root allocation is shown in the following table. The sample design thus provides a total of 9344 households in 584 enumeration areas, with 3248 urban households in 203 urban enumeration areas and 6096 rural households in 381 rural enumeration areas.

Sample allocation of enumeration areas and households by district, LFS August 2016

District	Number of sample enumeration areas			Number of sample households		
	Total	Urban	Rural	Total	Urban	Rural
Total	584	203	381	9344	3248	6096
Nyarugenge	68	49	19	1088	784	304
Gasabo	92	51	41	1472	816	656
Kicukiro	72	59	13	1152	944	208
Nyanza	12	1	11	192	16	176
Gisagara	12	0	12	192	0	192
Nyaruguru	12	1	11	192	16	176
Huye	12	5	7	192	80	112
Nyamagabe	12	1	11	192	16	176
Ruhango	12	1	11	192	16	176
Muhanga	12	2	10	192	32	160
Kamonyi	12	2	10	192	32	160
Karongi	12	1	11	192	16	176
Rutsiro	12	1	11	192	16	176
Rubavu	16	6	10	256	96	160
Nyabihu	12	2	10	192	32	160
Ngororero	12	1	11	192	16	176
Rusizi	16	3	13	256	48	208
Nyamasheke	16	1	15	256	16	240
Rulindo	12	1	11	192	16	176
Gakenke	12	1	11	192	16	176
Musanze	16	5	11	256	80	176
Burera	12	0	12	192	0	192
Gicumbi	16	1	15	256	16	240
Rwamagana	12	1	11	192	16	176
Nyagatare	16	2	14	256	32	224
Gatsibo	16	1	15	256	16	240

District	Number of sample enumeration areas			Number of sample households		
	Total	Urban	Rural	Total	Urban	Rural
Kayonza	12	1	11	192	16	176
Kirehe	12	1	11	192	16	176
Ngoma	12	1	11	192	16	176
Bugesera	12	1	11	192	16	176

It should be mentioned that the square-root allocation rule allocates the sample in proportion to the square-root value of the size of the district. It is a compromise between equal and proportional allocation. Equal allocation gives the same allocation to each district regardless of size. It may be appropriate if each district is to be treated as separate reporting unit (domain) with the same precision requirement as the others. Proportional allocation distributes the sample in proportion to the size of the districts. With proportional allocation, the geographical composition of the population is preserved, but it may lead to very small sample sizes for certain districts.

- **Selection of sample enumeration areas**

The next step in sample design was the selection of the 584 sample enumeration areas. The sample was drawn in each district by probability proportional to size (pps) from the sampling frame. In practice, the sample of enumeration areas was selected from the start for an entire sequence of 18 survey rounds from August 2016 to August 2023 when in principle a new sampling frame constructed on the basis of the next population and housing census will become available. The selected sample was then assigned randomly to 18 rotation groups. Sample enumeration areas in rotation groups R1 to R4 formed the sample for LFS August 2016. For subsequent survey rounds, the sample of enumeration areas assigned to rotation groups R2 to R5 will be used for LFS February 2017, sample enumeration areas assigned to R3 to R6 for LFS August 2017, and so on.

- **Selection sample households**

The sample enumeration areas were freshly listed prior to selection of the final sample of households. According to the sample design, 16 sample households were selected from the list of households in each sample enumeration area by systematic sampling with equal probability. If the list contained 16 households or less all households in the sample enumeration area were drawn in the sample. If the list contained more than 16 households, a sample of fixed size (16 households) was drawn from the list by systematic random sampling.

The purpose of listing was to ensure that every household currently residing in the sample locality has a non-zero probability of selection. Listing permits to update the sampling frame and account population movements and new household formations that have occurred since the last preparation of the sampling frame. It aims at covering the newly constructed buildings with living quarters and taking into account demolished or vacant buildings, or transformed

dwellings no longer used as living quarters, such as dwelling addresses turned to stores or workshops, or living quarters used as secondary housing units or for holidays.

The listing form consisted a booklet of 24 pages organized in four columns: (1) A three-digit serial number for listing buildings; (2) Another three-digit serial number for listing dwellings within buildings; (3) The name of the head of household residing in the dwelling; and (4) The street address of the household.

- **Sample weights**

Three steps were involved in the calculation of the sample weights: Calculation of the design weight, Adjustment for non-response; and Calibration to known population projections.

The design weight of a given sample household is the inverse of the probability of selection of a sample household. This probability is calculated as the product of two probabilities. The first is the probability of selection of the enumeration area k where the sample household is residing,

$$p_k = \eta \times N_k$$

where N_k is the number of households in the enumeration area according to the sampling frame and η is the proportionality factor of the pps sampling scheme.

The second is the probability of selection of the sample household within the enumeration area k

$$p(hh_k) = \frac{16}{N_k^1}$$

where 16 is the fixed sample-take in enumeration area k and N_k^1 is the listed or estimated number of households in the enumeration area k.

The overall design weight is the inverse of the product of these two probabilities,

$$DesignWeight(hh_k) = d_k = \frac{1}{p_k} \times \frac{1}{p(hh_k)}$$

The non-response adjusted weight is then obtained by the dividing the design weight with the response rate,

$$AdjustedWeight(hh_k) = d_k^1 = \frac{d_k}{r_k}$$

where the response rate r_k in enumeration area k is the percentage number of responding households among the total eligible households in the sample enumeration area.

Finally, the adjusted weights were calibrated to known population projections for four demographic groups:

Male population less than 16 years old living in private households in August 2016 = 2,398,634

Male population 16 years old and over living in private households in August 2016 = 3,071,437

Female population less than 16 years old living in private households in August 2016 = 2,407,963

Female population 16 years old and over living in private households in August 2016 = 3,501,811

The population projections were derived from the NISR census publication.²⁰ The projections were adjusted by deducting estimated values for the institutional population not living in private households. The calibration procedure followed the methodology of Deville and Sarndäl.²¹ Accordingly, the final calibrated weights were obtained from the formula,

$$\text{CalibratedWeight}(hh_k) = w_k = d'_k \times (1 + \lambda x'_k)$$

where d'_k is the adjusted weight for non-response, λ is a regression vector obtained from the calibration formula, and x'_k is the vector of the count of male less than 16 years old, male 16 years old and over, female less than 16 years old and female 16 years old and over of interviewed households in the enumeration area k . All individuals in the same household are assigned the weight of the household in which they belong.

2. Questionnaire design

The questionnaire of the Rwanda Labour Force Survey August 2016 in its present form contains a total of 145 questions organized into 9 sections and a cover page, dealing with following topics:

- A Household roster including activities of children aged 5 to 13 years old
- B Education
- C Identification of employed, time-related underemployed, unemployed and potential labour force
- D Characteristics of main job/activity
- E Characteristics of secondary job/activity
- F Past employment
- G Own-use production of goods and services
- H Subsistence foodstuff production
- I Housing and household assets

Not all questions are addressed to every household member. For children below 14 years of age, a minimum number of questions are asked. For older youngsters and adults 14 years of age and

²⁰ National Institute of Statistics of Rwanda, *Fourth Population and Housing Census, Rwanda, 2012, Thematic Report Population Projections*, January 2014.

²¹ Deville, J.C., and Sarndäl, C.E., "Calibration Estimators in Survey Sampling," *Journal of the American Statistical Association*, Vol. 87, 1992, pp. 376-382.

above, the number of questions depends on the situation and activities of the person during the reference period. The basic reference period is the last 7 days prior to the date of the interview. For certain questions, however, other reference periods are used. In each case, the relevant reference period is indicated in the text of the question.

The questionnaire was prepared both in Kinyarwanda and in English. An earlier version of the Kinyarwanda questionnaire was tested during the Pilot LFS February 2016. The field test was conducted in selected urban and rural areas with the aim of assessing the integrity of the instrument, such as understanding of question wordings, duration of interviews, coding and data processing. The experience gained was used to finalize the questionnaire.

Experienced gained from the pilot survey led to certain modifications of the questionnaire. The revised questionnaire was again tested prior to the LFS August 2016 through the mock interviews conducted during the training of supervisors and interviewers.

A specimen of the final version of the questionnaire is presented in Annex C of the present report. It is accompanied with two documents: An extensive manual for interviewers, providing instructions on the role of interviewers, listing of household members, and procedures to be adopted for asking each question and recording the corresponding response;²² and a set of diagrams and corresponding STATA syntax providing rules for combining the survey responses for constructing the main labour force indicators of the survey. These derived variables included:

Labour force status (STATUS1):

- Employed, Unemployed and Outside the labour force

Time-related underemployed (TRU)

Potential labour force (PLF)

Discouraged jobseeker (discourage)

Willing non-jobseeker (willing)

Subsistence foodstuff producer (sub)

Employment in informal and formal sector (IS and FS)

Informal and formal employment (IE and FE)

Monthly cash income from of employment of employees at main job (cash)

Not in employment, nor in education or training youth 16-24 years old (NEETyouth)

Not in employment, nor in education or training young persons 16-30 years old (NEETyoung)

Migrant worker (migrant)

²² NISR, *Rwanda Labour Force Survey, Interviewers Manual (RLFS, 2016)*, National Institute of Statistics of Rwanda, Kigali, December 2015. Revised for the RLFS, August 2016.

Worker with disability (disable)

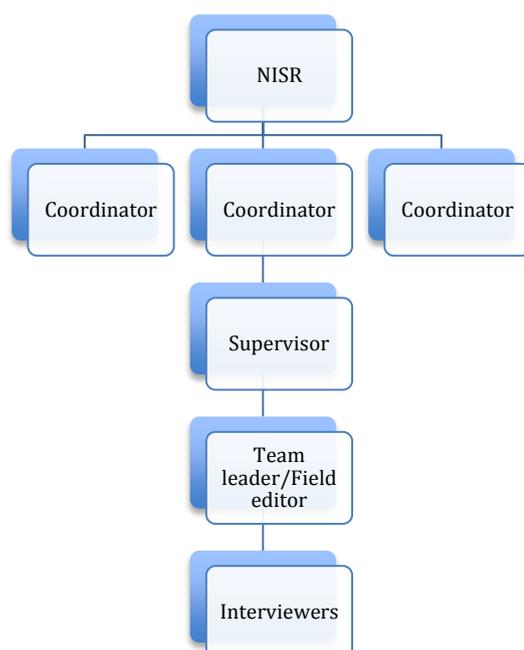
The experience gained from the LFS August 2016 suggested further improvement on the LFS questionnaire for implementation in future rounds of the survey. These include: revision of the questions on actual hours of work at main and secondary job; reassessment of the sequence of questions on income from employment; modification of the skip pattern in question D05 to direct the contributing family workers to question D20 rather than D23 as is presently the case.

3. Field operations

The main pre-survey activities conducted in preparation for the field operations included the establishment of the field organization, the recruitment and training of interviewers and the preparation and printing of the survey documents including maps of the sample enumeration areas, the listing forms, the survey questionnaire and interviewers' instructions.

The following diagram shows the field organization of the survey. It consisted of 3 coordinators, coordinating the work of 8 supervisors, 20 team leaders, 20 field editors and 80 interviewers. In many occasions the team leaders and field editors conducted also survey interviews. So altogether the survey interviewing was carried out by a total of 120 interviewers.

Field organization, LFS August 2016



In June 2016, some 135 interviewers were recruited at NISR. This number was in excess to the required 120 interviewers in order to allow for drop-outs, illness, absences and other possible failures.

The training of the survey staff was carried out in two stages. First, there was the training of the supervisors from 5 to 10 July 2016. It was then followed with the training of the interviewers from 17 to 30 July 2016. The coordinators conducted the training of the supervisors, and the combined pool of supervisors and coordinators conducted the training of the interviewers.

The field operations were conducted from 3rd August to 2nd October 2016. From 3rd to 10th all teams were involved in listing in Kigali city and from 11th the listing and data collection were expanded in others districts out of Kigali.

Prior to household selection and interviewing, all households in the sample enumeration areas were listed in a special listing form. A separate manual was prepared for household listing, providing special instructions for segmentation of large clusters and quality control of the results.²³ Finally, procedures were developed for selecting sample households from the list as part of the field operations.²⁴

During the listing operations two enumeration areas were found with no households and 58 with very large number of households. The two enumeration areas with no households were replaced with other enumeration areas in the same district and similar size according to the information of the sampling frame. The PSU codes of the affected enumeration areas are recorded below:

Serial number	Original PSU code	Replacement PSU code
112	12080102	12080202
161	13010102	13060205

The 58 sample enumeration areas with very large number of households at the listing stage were segmented according to the segment areas defined by the population and housing census. One segment at random was listed and the number of listed households was proportionally expanded to obtain an estimate of the current number of households residing in the enumeration area.

4. Data processing

Data processing involved data entry, coding and editing, tabulation of survey results. Data entry was carried out at the central Kigali Office, NISR. It was carried out as supervisors submitted the filled-in questionnaires every two weeks in Kigali, during the period from 1 September to 15 October 2016.

Several questions with textual responses were coded. These concerned education (major field of study in highest qualification attained, and subject of training), occupation and branch of economic activity (at main and secondary job and past employment experience). They were coded into the corresponding national standard classifications using on-screen coding with corresponding dictionaries in Kinyarwanda.²⁵ Coding of geographic areas and addresses was incorporated in the data entry programme as look-up.

²³ National Institute of Statistics of Rwanda, *Manual for Household Listing, Rwanda Pilot Labour Force Survey (RLFS-P 2016)*, NISR, Kigali, February 2016.

²⁴ Mehran, F., GIZ Consultant, "Rwanda Labour Force Survey February 2016. Selection of households without data entry as part of the field operations." 30 December 2015.

²⁵ National Institute of Statistics of Rwanda, *Customized International Standard Industrial Classification of all Economic Activities (ISIC Rev. 4)*, The Rwanda Classification Manual, 2012 edition.

National Institute of Statistics of Rwanda, *Customized International Standard Classification for Occupation (ISCO-08)*, The Rwanda Classification Manual, 2012 edition.

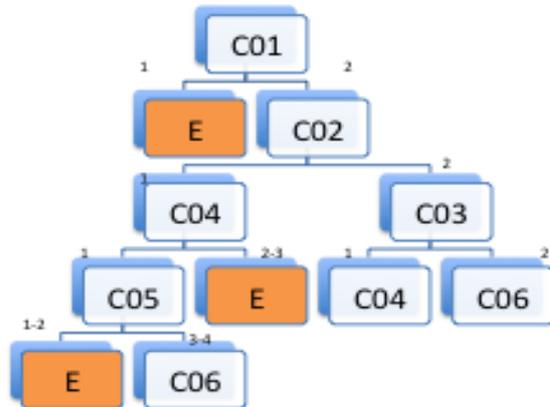
Following coding, responses of each questionnaire were edited for blanks, missing values, duplicates, out-of-range values, and inconsistencies such as no head of household or age of child greater than age of head of household. Editing specifications on coverage and demographic characteristics were based on the population and housing census (PHC4 2012). Other edit rules were developed for consistency checks on questions related to the measurement of the main labour force variables, including employment, unemployment, multiple jobholding, total hours usually worked at all jobs, total hours actually worked at all jobs, status in employment at main job, etc. Corrections were made mostly with reference to the original physical questionnaire. Many errors were due to data entry.

The resulting data file contained 38718 records, 22969 on persons of working age 16 years old and over, and 15749 on persons below 16 years of age. The data file included records corresponding to households who refused to participate in the survey or were not available for response after repeated visits.

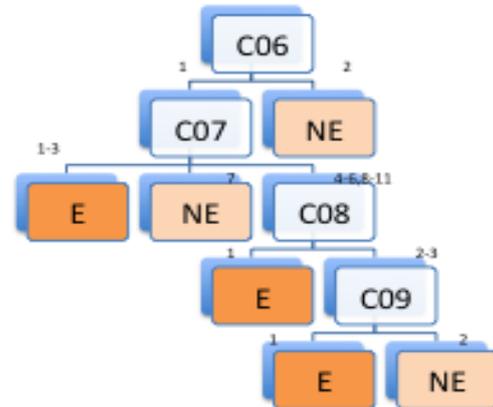
As part of data processing, the data file was augmented by adding a field on sampling weights (weight) and a series of additional fields on derived variables constructed on the basis of the information on each record. Some examples of the construction of the derived variables is schematically shown in diagrams B1 to B5 for employment (E), time-related underemployment (TRU), unemployment (U) and potential labour force (PLF), employment in informal sector (IS) and informal employment (IE) at main and secondary jobs, and monthly cash income from employment of employees at main job (cash). The numbered elements of the diagrams refer to the question numbers and response categories of the LFS questionnaire. The end nodes of the diagrams refer to the derived variable categories, employed, time-related underemployed, unemployed, etc.

B.1 Derived variable: Employment (E)

Employed, at work

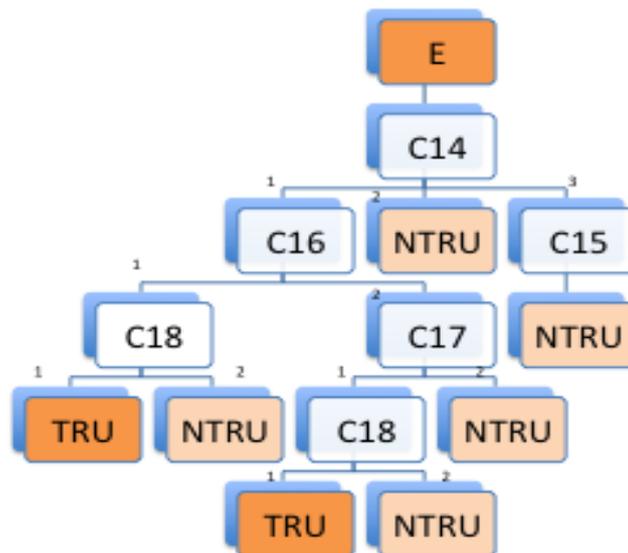


Employed, not at work



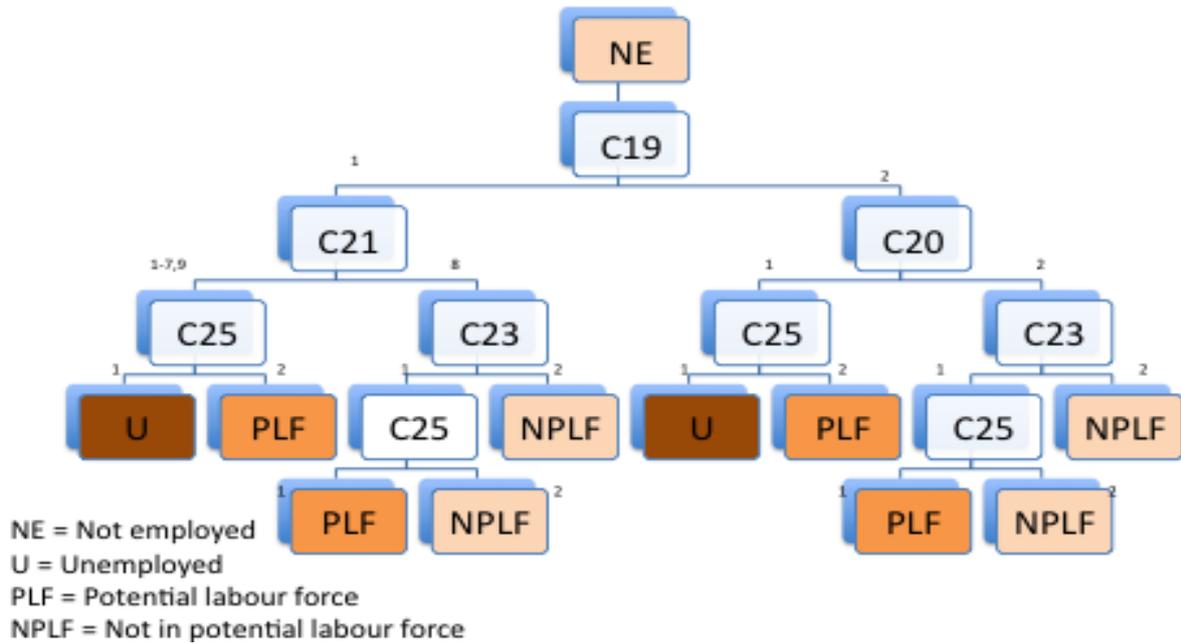
E = Employed
NE = Not employed

B.2 Derived variable: Time-related underemployment (TRU)



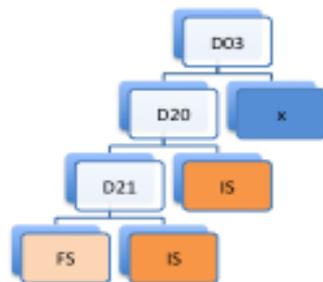
E = Employed
TRU = Time-related underemployed
NTRU = Not time-related underemployed

B.3 Derived variables: Unemployment (U) and potential labour force (PLF) and not in potential labour force (NPLF)



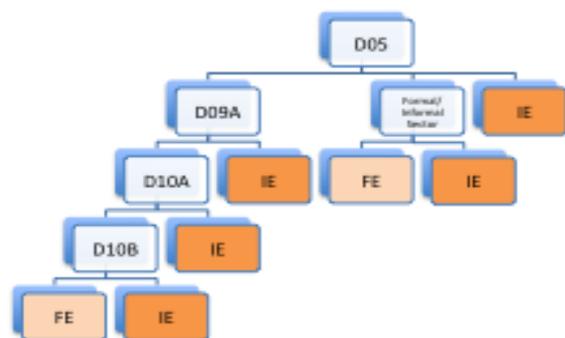
B.4 Derived variables: Informal sector (IS) and informal employment (IE) at main job

Informal sector



IS = Informal sector
 FS = Formal sector
 X = Out-of-scope (Domestic workers engaged by households are excluded from the count of informal and formal sector)

Informal employment



IE = Informal employment
 FE = Formal employment

B.5 Derived variable: Monthly cash income from employment of employees at main job (INC)

Status in employment		Response	Monthly cash income from employment at main job	
(1)	(2)	(3)	(4)	
Employee or Intern or Other	D05=1,2,7	D12=1 Amount	D12A x 1	if D13=1
			D12A x 26/12	if D13=2
			D12A x 52/12	if D13=3
			D12A x 52/2	if D13=4
			D12A x 10	if D13=5
		D12=8,9 Refusal, Don't know	$2 * 20,000 / 3 = 13,333$	if D17=1
			$2 / (1/20,000 + 1/30,000) = 24,000$	if D17=2
			$2 / (1/30,000 + 1/50,000) = 37,500$	if D17=3
			$2 / (1/50,000 + 1/100,000) = 66,667$	if D17=4
			$2 * 100,000 = 200,000$	if D17=5

Finally, the augmented data file with derived variables and sampling weights was used for producing the survey estimates specified in the tabulation programme of the survey as well as other analytical tables for the body of the report. The tabulation programme of the survey included 58 tables presented in the statistical annex of the present report (Annex D).

In order to speed up data processing and ensure better quality data, NISR is planning to introduce tablets for data collection in future LFS rounds. Discussions were held to also consider the possibility of adopting computer assisted coding of the questions with textual responses and automated editing procedures for both detection and correction of errors thus minimizing the need for the time-consuming task of making reference to the physical questionnaires.

5. Data quality

Like in all sample surveys, the results of the LFS August 2016 are subject to sampling and different forms of measurement errors. This section provides information on different sources of survey errors, namely, sampling errors, coverage errors, non-response errors, response errors and other errors such as coding and data entry errors.

- Sampling errors

Sampling errors arise due to the fact that the survey did not cover all elements of the population, but only a selected portion. The sampling error of an estimate is calculated on the basis of the difference between the estimate and the value that would have been obtained on the basis of a complete count of the population under otherwise identical conditions.

Information on sampling errors is used for interpreting the survey results. It provides an assessment of the precision of the estimates and on the degree of confidence that may be attached to them. In the same vein, it allows decision on the degree of detail with which the survey data may be meaningfully tabulated and analyzed. Information on sampling errors is also used for determining whether the survey estimates of change over time or the estimates of differences between two or more population subgroups are statistically significant. Finally, information on sampling errors may be used for future sample design. Rational decisions on the choice of sample size, sample allocation among strata, clustering and estimation procedures, can only be made on the basis of detail knowledge of their effect on the magnitude of sampling errors in the resulting statistics obtained from the survey.

The following table gives the sampling errors of the main labour force estimates obtained from the LFS August 2016. They have calculated based on the general principle that in multi-stage sample designs the variance contributed by the later stages of sampling is, under broad conditions, reflected in the observed variation among the sample results for first-stage units. Thus, the sampling variance of a variety of statistics, such as totals, means, ratios, proportions, and their differences can be obtained on the basis of totals calculated for the primary sampling units, here the localities.²⁶ The calculations took into account the fact that the sampling weights were calibrated and used the residual method proposed by Deville and Sarndäl p. 380. They have been carried out in a special Excel file “Rwanda LFS August 2016 Sampling errors.xlsx” (sheet Sampling errors 2).

B.6: Sampling errors of estimates of main labour force aggregates

Indicator	Estimate	Standard error	Relative standard error	Confidence interval	
				Lower	Upper
Population 16+ yrs	6,573,200	0	0.0%	6,573,200	6,573,200
Labour force	3,329,700	42,000	1.3%	3,245,700	3,413,700
Employment	2,703,600	42,000	1.6%	2,619,600	2,787,600
Unemployment	626,100	18,500	3.0%	589,100	663,100
Outside labour force	3,243,600	42,000	1.3%	3,159,600	3,327,600

Source: LFS August 2016

As an illustration of the use of the table, consider the second row of the table on the labour force. The total labour force, 3,329,700, is estimated with a relative standard error of 1.3 percent. The true value at 95 percent confidence level lies within the interval 3,245,700 and 3,413,700. Similarly, it can be stated that the total number of unemployed persons, 626,100 is estimated with a relative standard error of 3.0 percent. And, the true value at 95 percent confidence level lies within the interval 589,100 and 663,100.

²⁶Verma, Vijay, *Sampling Methods*, Manual for Statistical Trainers Number 2, Statistical Institute for Asia and the Pacific (SIAP), Tokyo, Revised 2002.

As expected the sampling errors of the LFS August 2016 estimates are significantly lower than the corresponding sampling errors of the Pilot LFS February 2016 estimates, based on much lower sample sizes. The relative standard error of the estimate of total number of employed persons is about 1.6 percent in the LFS August 2016, while it was almost 10 percent in the Pilot LFS February 2016. Similarly, the relative standard error of the estimate of total number of unemployed persons is about 3.0 percent in the LFS August 2016, while it was about 13 percent in the Pilot LFS February 2016.

The next table gives the estimated sampling errors for the main labour force indicators expressed in rates or percentages. For example the results indicate that the unemployment rate estimated at 18.8 percent has a standard error of 0.6 percentage points. This may be interpreted to mean that the true unemployment rate lies with 95 percent confidence within the interval, 17.7 to 19.9 percent.

B.7: Sampling errors of estimates of main labour force rates, ratios

Indicator	Estimate	Standard error	Confidence interval	
			Lower	Upper
Labour Force Participation Rate	50.7%	0.6	49.4%	51.9%
Employment-Population Ratio	41.1%	0.6	39.9%	42.4%
Unemployment rate	18.8%	0.2	17.7%	19.9%

LFS August 2016

It is not practical to compute and report sampling errors for every published statistics of a labour force survey. For this purpose, general variance estimates are typically calculated using the approximate relationship between the variance of an estimate and its size, expressed by $\text{var}(y)/y^2 = b + a/y$. Generalized variances have been calculated for the LFS August 2016 and the results presented in the following table.

B.8: Approximate sampling errors by size estimates

Size of estimate	Standard error	Relative standard error	Confidence interval	
			Lower	Upper
5,000,000	49,400	1.0%	4,901,200	5,098,800
2,500,000	36,200	1.4%	2,427,600	2,572,400
1,000,000	23,400	2.3%	953,200	1,046,800
500,000	16,700	3.3%	466,600	533,400
250,000	11,800	4.7%	226,400	273,600
100,000	7,500	7.5%	85,000	115,000
50,000	5,300	10.6%	39,400	60,600
25,000	3,800	15.2%	17,400	32,600
10,000	2,400	24.0%	5,200	14,800

Source: LFS August 2016

Thus, an estimate about 5,000,000 has an approximate standard error of 49,400 with a confidence interval at 95% level between 4,901,200 and 5,098,800. Similarly, an estimate of about 500,000 has an approximate standard error of 16,700 with a confidence interval between 466,600 and 533,400. It can be observed that the relative standard error sharply increases as the size of the estimate decreases. Estimates as low as 10,000 have very high relative standard errors, almost 25 percent. The table can be used to decide on the size of estimates that can be meaningfully considered as statistical significant for analysis. For size of estimates that are not listed in the table, the approximate standard errors can be obtained by interpolation or extrapolation of the values given in the table.

- **Coverage errors**

Probability sampling requires each element in the target population to have a known non-zero probability of being selected in the sample. This condition is violated if the target population is not fully represented in the sample frame or if the sampling of units from the frame is not according to the selection procedures specified in the sample design. The violation of these conditions generates coverage errors.

Coverage errors may occur due to imperfect frame (under-coverage, over-coverage, or duplication of units) or to practical problems such as confusion in boundary of units or in rules of association between units of different types. Coverage errors may also occur at the stage of selection of individual persons in the sample household because of failure to identify some eligible persons, for example, lodgers, domestic workers or other non-family members of the household. It can even happen due to incorrect data on personal characteristics, for example, if the age of the person is incorrectly recorded as below the age set for measuring labour force characteristics (under-coverage error), or vice versa the age is incorrectly recorded as above the threshold age (over-coverage error).

A measure of coverage errors in the LFS August 2016 may be obtained by counting the number of sample addresses that were found vacant, demolished, out-of-scope (e.g., dwelling addresses turned to stores or workshops) or void of target households for other reasons (e.g., living quarters used as secondary housing units or for summer holidays). In total there were 122 non-eligible sample units: 55 vacant units; 7 units converted to workplaces; and 60 others such as unable to locate address.

Another measure of coverage errors may be obtained by comparing the population estimates obtained from the survey with population projections based on demographic analysis of fertility and mortality rates. Table B.9 shows the estimates of total population by sex and age group (below 16 and 16 years old and above) based on weights with and without calibration.

The largest difference concerns the male working age population 16 years old and over and the smallest difference is for the female population below working age. The main reason for coverage errors in the LFS August 2016 may possibly be due to the difficulties in listing the large enumeration areas and as a consequence the need for segmentation and estimation of the total number of households in these enumeration areas. The problem of coverage error should

be examined more closely in future survey rounds in order to find ways to minimize the need for calibration.

B.9: Population estimates based on sampling weights with and without calibration LFS August 2016

Population group	Calibrated weights	Un-calibrated weight	Difference (%)
Total population	11,379,845	11,021,062	-3.2%
Male population	5,470,071	5,247,793	-4.1%
- Less than 16 years old	2,398,634	2,328,323	-2.9%
- 16 years old and above	3,071,437	2,919,470	-4.9%
Female population	5,909,774	5,773,269	-2.3%
- Less than 16 years old	2,407,963	2,417,995	0.4%
- 16 years old and above	3,501,811	3,355,274	-4.2%

Source: LFS August 2016

- **Non-response errors**

Non-response occurs due to failure to obtain the required information from the units selected in the sample (unit non-response) or to failure to obtain some items of information for the selected unit (item non-response). Unit non-response may occur due to incorrect address of the sample household, or inaccessibility of certain dwellings or refusal of the sample household to be interviewed, or because no one was at home when the interviewer contacted the household, or for other reasons.

Absence and refusal are considered as non-response while vacant demolished or out-of-scope housing units are considered as non-coverage. Based on the data in the table presented earlier, the non-response rate of the survey may be calculated:

$$Non_response_rate = \frac{46}{9222} = 0.5\%$$

It is the number of non-responding households (46) relative to the total number of eligible households (9,222). The resulting non-response rate is only 0.5%.

In the LFS August 2016, no item non-response could be on the main employment items at main job of the questionnaire, occupation (D01), branch of economic activity (D03), sector of employment (D04), status in employment (D05) and type of workplace (D23).

- **Response errors**

Response errors refer to errors originating at the data collection stage. In relation to an individual respondent, response errors may occur because the respondent was unwilling to divulge certain information or because the respondent did not know the answer to the question asked or did not fully understand the meaning of the question. Response errors can also occur due memory lapses, for example by forgetting to report an event, or incorrectly reporting the timing. Response errors may also occur because of errors made by the interviewer or by the

instrument used for measurement. Interviewers may introduce errors because of haste and misreporting the responses, or because of misunderstanding of the survey concepts and procedures, or preconceptions and subjective biases. The questionnaire itself may be faulty, with wrong question wordings and incorrect skipping patterns.

The measurement of response errors is one of the most difficult parts of quality assessment of survey data. It generally requires carefully designed re-interview programmes. In the absence of such data, the quality of survey responses may be assessed by comparing the survey results with corresponding information from more reliable external sources such as administrative sources, for example, reconciling the LFS estimate of employment with the corresponding estimate obtained from the Integrated Business Enterprise Survey.²⁷ More detailed assessment may be carried out by comparing the LFS estimates of employment in specific occupations such as primary and secondary school teachers, nurses, and civil servants with corresponding statistics from the line ministries. Other indicators of response errors may be obtained by measuring the degree of self-response against proxy-response, or by testing the internal consistency of certain sets of inter-related responses. The assessment of response errors along the lines described here should be considered in future rounds of the survey when the survey programme has been stabilized.

- **Other errors**

Other sources of errors in a survey include coding and editing errors, as well as errors in data entry and data processing. Here the occupation and industry coding of the LFS August 2016 is evaluated. Table B.10 shows that the employed persons were coded in 326 distinct 4-digit occupation codes and 253 distinct 4-digit industry codes. The percentage of employed persons who were coded with codes ending with the digit “9” was 2.2 percent for occupation and 8.1 percent for branch of economic activity. Codes ending with “9” indicate that the occupation or industry descriptions in the LFS questionnaire could not be precisely found in the classification system and had to be coded as “other”, suggesting insufficient information for precise occupation and industry coding.

²⁷National Institute of statistics of Rwanda, *Integrated Business Enterprise Survey*, NISR 2014.

B.10: Coding into occupation and branch of economic activity codes ending with “9”, LFS August 2016

	Occupation (ISCO-08)	Branch of economic activity (ISIC Rev 4)
Distinct 4-digit codes	326	253
Employed persons coded in with 4-digit codes ending with “9”	59,392	217,807
Total number of employed persons	2,703,212	2,703,212
Percent	2.2%	8.1%

Overall, the quality assessment of the results of the LFS August 2016 shows acceptable levels of sampling errors and non-response errors. A fuller assessment of response and coding errors should await future survey rounds when the survey programme is stabilized.

RWANDA LABOUR FORCE SURVEY

Annex C: Statistical Tables

Table 1: Summary labour force indicators, August 2016

	Total	Male	Female	Urban	Rural	Participated in subsistence agriculture	Not participated in subsistence agriculture	Old definition
Population 16 years old and over	6,573,248	3,071,437	3,501,811	1,520,508	5,052,740	3,256,513	3,316,735	6,573,248
Labour force	3,329,264	1,863,493	1,465,771	954,977	2,374,287	1,591,736	1,737,528	4,994,041
- Employed	2,703,212	1,570,350	1,132,861	798,782	1,904,430	1,230,445	1,472,767	4,729,280
- Unemployed	626,052	293,143	332,909	156,195	469,857	361,291	264,761	264,761
Outside labour force	3,243,984	1,207,944	2,036,040	565,531	2,678,453	1,664,777	1,579,207	1,579,207
Labour underutilization	3,062,882	1,315,206	1,747,676	546,609	2,516,273	1,975,828	1,087,054	-
- Unemployed	626,052	293,143	332,909	156,195	469,857	361,291	264,761	-
- Time-related underemployed	848,513	452,848	395,665	140,614	707,899	549,740	298,773	-
- Potential labour force	1,588,317	569,215	1,019,102	249,800	1,338,517	1,064,797	523,520	-
Labour force participation rate	50.6	60.7	41.9	62.8	47.0	48.9	52.4	76.0
Employment-to-population ratio	41.1	51.1	32.4	52.5	37.7	37.8	44.4	71.9
LU1 - Unemployment rate	18.8	15.7	22.7	16.4	19.8	22.7	15.2	5.3
LU2 - Combined rate of unemployment and time-related underemployment	44.3	40.0	49.7	31.1	49.6	57.2	32.4	-
LU3 - Combined rate of unemployment and potential labour force	45.0	35.4	54.4	33.7	48.7	53.7	34.9	-
LU4 - Composite measure of labour underutilization	62.3	54.1	70.3	45.4	67.8	74.4	48.1	-
Youth unemployment rate (16-30 yrs)	21.5	17.1	26.9	19.4	22.5	26.8	18.0	7.9
Median total monthly earnings at main job	20,800	26,000	18,200	30,000	18,200	18,200	25,000	-

Table 2: Comparison between old and new definitions

Indicators	Old definition			New definition		
	Urban	Rural	Total	Urban	Rural	Total
LFPR	70.7	77.6	76.0	62.8	47.0	50.6
Employed	62.3	74.9	71.9	52.5	37.7	41.1
Unemployed	11.9	3.5	5.3	16.4	19.8	18.8
Youth Unemployment	15.7	5.3	7.9	19.4	22.5	21.5
OCCUPATION						
Managers	2.7	0.2	0.7	3.2	0.4	1.2
Professionals	8.6	2.3	3.6	10.2	4.6	6.2
Technician & AP	2.7	0.5	0.9	3.2	0.9	1.6
Clerical & support workers	2.3	0.1	0.5	2.7	0.2	0.9
Service and sales workers	22.3	7.7	10.6	26.4	15.3	18.6
Skilled agricultural	17.5	55.4	47.8	2.2	11.4	8.7
Craft and related trade workers	10.5	5.0	6.1	12.5	10.0	10.7
Plant and machines operators	4.2	1.0	1.6	5.0	2.0	2.9
Elementary occupations	29.1	27.9	28.1	34.5	55.4	49.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Economic activity						
Agriculture, forestry and fishing	23.2	74.4	64.1	9	49.1	37.3
Mining and quarrying	0.4	0.9	0.8	0.4	1.8	1.4
Manufacturing	4.7	2.9	3.3	5.6	5.8	5.8
Electricity, gas, steam and air conditioning supply	0.1	0	0.1	0.2	0.1	0.1
Water supply, sewerage and waste management	0.5	0.2	0.3	0.6	0.4	0.5
Construction	9.7	5.6	6.4	12	11.1	11.2
Wholesale, retail trade, repair of motor vehicles, motorcycles	18.8	5.8	8.4	22	11.4	14.7
Transportation and storage	5.8	1.4	2.3	7	2.9	4
Accommodation and food service activities	4.1	2.1	2.5	4.9	4.2	4.4
Information and communication	1.3	0	0.3	2	0.1	0.5

Indicators	Old definition			New definition		
	Urban	Rural	Total	Urban	Rural	Total
Financial and insurance activities	1.6	0.1	0.4	1.9	0.2	0.7
Real estate activities	0	0	0	0	0	0
Professional, scientific and technical activities	1.3	0	0.3	1.6	0.1	0.5
Administrative and support service activities	2.2	0.4	0.7	2.7	0.7	1.3
Public administration and defence	4	0.8	1.5	4.7	1.6	2.5
Education	3.5	1.9	2.2	4.1	3.7	3.8
Human health and social work activities	1.9	0.5	0.8	2.3	1	1.4
Arts, entertainment and recreation	0.5	0	0.1	0.6	0.1	0.2
Other service activities	2.8	1.1	1.5	3.4	2.2	2.6
Activities of households as employers	12.6	1.7	3.9	14.9	3.3	6.8
Activities of extraterritorial organizations and bodies	0.8	0.1	0.3	1	0.2	0.4
Total	100	100	100	100	100	100

Table 3: Population by sex, age group and urban/rural area, August 2016

	Total	Male	Female	Urban	Rural
Population	11,379,845	5,470,071	5,909,774	2,357,466	9,022,379
0-4 yrs	1,588,853	806,401	782,452	304,279	1,284,575
5-9 yrs	1,487,487	752,943	734,545	242,289	1,245,198
10-14 yrs	1,512,343	742,440	769,904	243,570	1,268,773
15-19 yrs	1,182,992	562,235	620,757	277,956	905,036
20-24 yrs	1,050,502	501,934	548,568	293,319	757,183
25-29 yrs	958,098	458,208	499,890	275,019	683,079
30-34 yrs	857,320	429,608	427,713	218,932	638,389
35- 39 yrs	650,357	307,957	342,400	156,684	493,674
40-44 yrs	446,893	197,297	249,596	98,741	348,152
45-49 yrs	367,777	155,092	212,685	70,888	296,888
50-54 yrs	333,075	154,180	178,895	54,402	278,673
55-59 yrs	304,311	133,733	170,578	39,185	265,126
60-64 yrs	233,457	106,312	127,145	33,900	199,557
65-69 yrs	129,815	53,631	76,184	12,395	117,420
70-74 yrs	106,734	43,523	63,211	16,022	90,711
75+	169,831	64,579	105,252	19,885	149,946

Table 4: Households by household size, sex of head of household and urban/rural area, August 2016

Household size	Total number households	Head of household		Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
	2,658,318	1,963,722	694,596	586,137	2,072,180	1,442,892	1,215,426
1	256,606	166,845	89,761	90,976	165,630	87,878	168,727
2	342,152	175,814	166,337	94,216	247,935	153,152	188,999
3	445,354	299,707	145,647	82,628	362,726	247,949	197,405
4	471,454	351,101	120,352	92,214	379,240	275,870	195,584
5	432,634	347,403	85,231	83,840	348,794	249,454	183,180
6	300,955	255,481	45,474	55,166	245,790	189,664	111,291
7	209,206	183,278	25,929	36,519	172,687	132,012	77,194
8	105,628	97,009	8,619	24,513	81,116	55,670	49,959
9	54,579	48,811	5,767	13,704	40,875	30,549	24,030
10+	39,749	38,271	1,478	12,361	27,388	20,694	19,056

Table 5: Disabled persons by sex, age group, urban/rural area and type of disability, August 2016

Type of disability	Total	Male	Female	Urban	Rural	5-15 yrs	16+ yrs
Total disabled persons	483819	216933	266886	79,717	404,103	72,500	411,319
- Seeing	153,234	59,801	93,434	23,987	129,247	15,790	137,445
- Hearing	82,569	35,571	46,998	12,948	69,621	16,754	65,815
- Walking	179,207	78,744	100,463	25,573	153,634	18,067	161,140
- Remembering	147,303	60,812	86,491	30,010	117,293	18,298	129,004
- Washing, dressing	68,929	32,635	36,294	9,821	59,108	15,442	53,487
- Communicating	48,281	25,250	23,031	9,250	39,032	15,226	33,055

Table 6: Disabled working age persons by labour force status and type of disability, August 2016

Type of disability				Outside		LFPR	Emp-Pop	UR
	Total	Employed	Unemployed	labour force				
Disabled working age persons (16+ years)	411,319	83,480	21,927	305,912	25.6	20.3	20.8	
- Seeing	137,445	26,270	7,423	103,752	24.5	19.1	22.0	
- Hearing	65,815	9,350	4,095	52,370	20.4	14.2	30.5	
- Walking	161,140	23,591	5,737	131,812	18.2	14.6	19.6	
- Remembering	129,004	24,300	5,876	98,829	23.4	18.8	19.5	
- Washing, dressing	53,487	2,439	82	50,966	4.7	4.6	3.3	
- Communicating	33,055	8,260	2,111	22,685	31.4	25.0	20.4	

Note: Details may not add to totals because disabled persons may be reporting more than one type of disability.

Table 7: Population 16 years old and over by education status and urban/rural area, August 2016

Currently studying	Total	Sex		Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Total	6,573,248	3,071,437	3,501,811	1,520,508	5,052,740	3,256,513	3,316,735
Currently studying	803,517	426,728	376,789	257,239	546,278	131,816	671,701
Not Currently studying	5,769,731	2,644,709	3,125,022	1,263,269	4,506,462	3,124,697	2,645,034

Table 8: Population 16 years old and over by sex, level of educational attainment and urban/rural area, August 2016

	Sex			Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
	Total	Male	Female	Urban	Rural		
Total	6,573,289	3,071,478	3,501,811	1,520,508	5,052,740	3,256,513	3,316,735
None	3,645,303	1,613,665	2,031,638	497,855	3,147,449	2,096,860	1,548,443
Primary	1,768,646	857,972	910,674	412,638	1,356,008	928,774	839,872
Lower secondary	432,332	208,602	223,730	182,092	250,240	109,126	323,206
Upper secondary	525,069	270,404	254,664	276,130	248,939	103,453	421,616
University	201,939	120,834	81,105	151,794	50,104	18,300	183,598

Table 9: Population 16 years old and over with respective field of education by sex, urban/rural area, August 2016

Field of education	Sex			Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
	Total	Male	Female	Urban	Rural		
Total	6,573,248	3,071,437	3,501,811	1,520,508	5,052,740	3,256,513	3,316,735
General program	4,559,016	2,191,508	2,367,508	871,936	3,687,079	2,493,654	2,065,361
Education	96,338	48,767	47,570	35,558	60,780	22,254	74,084
Humanities and arts	78,880	40,916	37,965	31,466	47,414	19,202	59,678
Social sciences, business and law	280,754	121,388	159,366	192,001	88,753	32,980	247,774
Science	300,084	151,043	149,040	137,446	162,638	60,768	239,316
Engineering, manufact. and construction	122,667	107,458	15,208	73,425	49,242	15,084	107,583
Agriculture	31,604	20,173	11,430	17,853	13,751	5,411	26,192
Health and welfare	44,610	17,315	27,295	28,746	15,864	2,745	41,865
Services	30,583	11,573	19,010	26,246	4,337	1,800	28,784
Not Specified	1,136	523	613	952	184		1,136
No Education	1,027,577	360,772	666,805	104,880	922,697	602,615	424,962

Table 10: Population 16 years old and over in trade or training courses by sex, duration of training, and urban/rural area, August 2016

	Total	Sex		Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Total	826,876	456,267	370,609	300,099	526,777	368,621	458,256
Less than One month	22,262	13,007	9,255	4,884	17,378	11,505	10,758
1-3 months	86,427	45,769	40,658	27,604	58,823	42,815	43,612
3-6 Months	173,119	85,682	87,437	51,851	121,269	79,583	93,537
One Year	246,979	126,347	120,631	97,512	149,466	104,509	142,469
Two Years	125,825	75,885	49,939	47,684	78,141	58,251	67,574
Three years or more	172,264	109,575	62,688	70,564	101,700	71,958	100,305

Table 11: Population 16 years old and over who received trade and technical training outside formal education by sex, technical skills, and urban/rural area, August 2016

Technical skills learned	Total	Sex		Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Total	826,876	456,267	370,609	300,099	526,777	368,621	458,256
Masonry	172,967	165,280	7,687	46,838	126,129	81,149	91,818
Carpentry	71,296	70,389	908	14,058	57,239	40,752	30,545
Automotive technology.	13,006	11,981	1,025	7,115	5,891	2,622	10,383
Culinary arts	34,878	12,670	22,208	15,578	19,300	14,594	20,284
Domestic Electricity	13,928	12,977	951	8,603	5,325	4,277	9,651
Welding	29,348	27,240	2,108	8,659	20,689	11,007	18,342
Plumbing	4,636	4,456	180	2,532	2,104	2,385	2,251
Food processing	19,565	5,706	13,859	14,372	5,193	5,769	13,796
Animal health	259	146	113	113	146	-	259
Auto- Electricity	2,323	63	2,260	188	2,135	637	1,685
Automotive body repair	43,257	42,659	598	22,718	20,538	7,815	35,442
Computer maintenance	4,187	3,022	1,165	3,914	273	61	4,126
Crop production	1,328	511	817	943	385	1,101	227
Engine mechanics	11,444	11,411	33	5,774	5,670	4,219	7,225
Forestry	307	307	-	307		-	307
Music	924	924	-	482	442	-	924
Painting and decoration	7,511	5,898	1,613	5,074	2,436	2,195	5,316
Multimedia	1,068	888	180	1,068		-	1,068
Networking	2,412	1,813	598	2,236	176	-	2,412
Tailoring	272,448	25,061	247,387	73,932	198,516	159,154	113,294
Industrial electricity	3,631	3,166	464	2,834	797	811	2,820

Technical skills learned	Total	Sex		Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Civil construction	3,619	2,534	1,085	2,338	1,281	1,071	2,548
Nursery growing	67	67	-	-	67	-	67
Milk processing	402	402	-	-	402	402	-
Livestock	206	61	144	144	61	-	206
Horticulture production	112	112		112	-	-	112
Food & Beverage services	8,498	2,278	6,220	7,025	1,473	526	7,972
Front office	10,348	5,174	5,174	8,502	1,846	608	9,740
House keeping	1,808	1,316	493	757	1,051	1,010	798
Concrete masonry	604	438	167	238	366	-	604
Leather craft	3,224	2,080	1,144	1,083	2,141	934	2,290
Hairdressing	39,910	9,334	30,576	18,215	21,695	9,687	30,223
Biding and Jewelries	7,199	431	6,768	1,743	5,456	5,416	1,783
Software Development	4,969	3,255	1,714	4,919	51	-	4,969
Palliative Care Community Healt	2,056	404	1,652	611	1,446	994	1,062
Agri-Business	2,076	802	1,274	817	1,259	446	1,630
Manicure and Pedicure	135	-	135	135	-	-	135
Beauty therapy	1,045	964	82	462	584	264	782
Screen printing	570	297	273	492	78	-	570
Sport and Medical Massage	240	114	126	185	54	-	240
Crochet embroidery	9,059	1,861	7,198	4,661	4,398	3,899	5,160
Pottery	2,936	2,250	686		2,936	1,471	1,466
Motor vehicle engine mechanics	15,424	14,452	971	8,676	6,748	3,346	12,078
Film making	1,646	1,072	574	1,646	-	-	1,646

Table 12: Population 16 years old and over who received trade and technical training by sex, place of the training, main sponsor, Outcome of the Training and urban/rural area, August 2016

Place of Technical skills	Total	Sex		Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Total	826,876	456,267	370,609	300,099	526,777	368,621	458,256
Vocational School Course	490,605	261,106	229,499	197,864	292,741	205,439	285,166
Apprenticeship or on job Training	129,624	95,304	34,321	51,872	77,752	47,957	81,667
Learned from a friend or Family	128,248	75,291	52,957	26,628	101,620	72,695	55,553
NGO	50,108	15,575	34,533	15,126	34,982	27,681	22,427
Community organization	19,448	3,587	15,861	6,542	12,906	9,519	9,929
Apprenticeship or on job Training	8,842	5,404	3,439	2,066	6,777	5,329	3,514
Main sponsor							
Government	65,606	39,511	26,095	24,705	40,902	29,667	35,939
Employer	8,285	6,498	1,787	3,055	5,230	1,780	6,505
Self-financing	403,726	209,910	193,817	139,176	264,550	179,689	224,037
Private institutions/agencies/persons	52,573	26,413	26,159	33,759	18,814	15,303	37,270
Non-profit organization/charity	88,543	38,476	50,066	34,944	53,599	36,312	52,231
International organization	15,084	7,537	7,547	6,833	8,251	4,286	10,798
He/she didn't pay	179,003	118,754	60,249	50,041	128,962	97,352	81,652
Other(specify)	14,056	9,167	4,890	7,586	6,470	4,232	9,825

Place of Technical skills	Total	Sex		Area of residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Thing happened after completion of the training							
Nothing	160,841	62,789	98,052	58,910	101,931	75,308	85,533
Starting own business	111,590	51,798	59,792	42,173	69,417	52,673	58,917
I was able to get a job	167,575	128,045	39,531	81,781	85,795	55,048	112,528
My salary increased	2,562	2,091	472	1,261	1,301	910	1,653
I was promoted at work	93	93	-	93	-	-	93
My job skills have improved	15,036	10,842	4,194	7,516	7,520	5,903	9,133
Got internship/traineeship with a company	7,662	3,857	3,805	4,434	3,228	2,947	4,714
Other (specify)	6,344	2,783	3,561	1,079	5,265	4,066	2,278

Table 13: Population 16 years old and over by labour force status, sex, age group, and urban/rural area, August 2016

	Total	Labour force status				Labour force participation rate	Employment-population ratio	Unemployment rate
		Labour force	Employed	Unemployed	Outside labour force			
Population 16 yrs and over	6,573,248	3,329,264	2,703,212	626,052	3,243,984	50.6	41.1	18.8
16-24 yrs	2,015,581	16,850	636,144	180,706	1,198,731	40.5	31.6	22.1
25-34 yrs	1,815,418	1,211,905	968,626	243,279	603,513	66.8	53.4	20.1
35-54 yrs	1,798,102	1,068,922	902,316	166,606	729,180	59.4	50.2	15.6
55-64 yrs	537,767	188,498	157,708	30,790	349,269	35.1	29.3	16.3
65+ yrs	406,380	43,088	38,417	4,671	363,292	10.6	9.5	10.8
Population 16 yrs and over (Male)	3,071,437	863,493	1,570,350	293,143	1,207,944	60.7	51.1	15.7
16-24 yrs	967,318	430,166	350,584	79,582	537,152	44.5	36.2	18.5
25-34 yrs	887,815	706,493	599,625	106,868	181,322	79.6	67.5	15.1
35-54 yrs	814,526	597,030	511,706	85,324	217,496	73.3	62.8	14.3
55-64 yrs	240,045	102,989	84,962	18,027	137,056	42.9	35.4	17.5
65+ yrs	161,733	26,815	23,473	3,342	134,918	16.6	14.5	12.5
Population 16 yrs and over (Female)	3,501,811	1,465,771	1,132,861	332,909	2,036,040	41.9	32.4	22.7
16-24 yrs	1,048,263	386,684	285,560	101,124	661,579	36.9	27.2	26.2
25-34 yrs	927,603	505,412	369,001	136,411	422,190	54.5	39.8	27
35-54 yrs	983,576	471,892	390,610	81,282	511,684	48	39.7	17.2
55-64 yrs	297,723	85,509	72,746	12,763	212,213	28.7	24.4	14.9
65+ yrs	244,647	16,273	14,944	1,329	228,373	6.7	6.1	8.2

	Total	Labour force status				Labour force participation rate	Employment-population ratio	Unemployment rate
		Labour force	Employed	Unemployed	Outside labour force			
Population 16 yrs and over (Urban)	1,520,508	954,977	798,782	156,195	565,531	62.8	52.5	16.4
16-24 yrs	524,455	243,734	192,716	51,017	280,722	46.5	36.7	20.9
25-34 yrs	493,951	386,897	318,831	68,066	107,054	78.3	64.5	17.6
35-54 yrs	380,715	288,341	256,402	31,939	92,374	75.7	67.3	11.1
55-64 yrs	73,084	30,004	25,344	4,660	43,081	41.1	34.7	15.5
65+ yrs	48,303	6,002	5,489	513	42,301	12.4	11.4	8.5
Population 16 yrs and over	5,052,740	2,374,287	1,904,430	469,857	2,678,453	47	37.7	19.8
16-24 yrs	1,491,126	573,116	443,428	129,688	918,009	38.4	29.7	22.6
25-34 yrs	1,321,467	825,009	649,796	175,213	496,458	62.4	49.2	21.2
35-54 yrs	1,417,387	780,581	645,914	134,666	636,806	55.1	45.6	17.3
55-64 yrs	464,683	158,494	132,364	26,130	306,189	34.1	28.5	16.5
65+ yrs	358,077	37,086	32,928	4,159	320,991	10.4	9.2	11.2

Table 14: .Population 16 years old and over by labour force status, sex, educational attainment, and urban/rural area, August 2016

	Total	Labour force status				Labour force participation rate	Employment-to population ratio	Unemployment rate
		Labour force	Employed	Unemployed	Outside labour force			
Population 16 yrs and over	6,573,248	3,329,264	2,703,212	626,052	3,243,984	50.6	41.1	18.8
None	3,645,271	1,796,718	1,467,167	329,551	1,848,553	49.3	40.2	18.3
Primary	1,771,410	882,257	726,048	156,209	889,153	49.8	41.0	17.7
Lower secondary	427,449	165,760	132,759	33,001	261,689	38.8	31.1	19.9
Upper secondary	527,219	308,950	231,795	77,155	218,269	58.6	44.0	25.0
University	201,898.3	175,579.4	145,442.6	30,136.9	26,318.8	87.0	72.0	17.2

Table 15: Population 16 years old and over by labour force status, sex, marital status, and urban/rural area, August 2016

	Total	Labour force status				Labour force participation rate	Employment-to population ratio	Unemployment rate
		Labour force	Employed	Unemployed	Outside labour force			
Population 16 yrs and over	6,573,248	3,329,264	2,703,212	626,052	3,243,984	50.6	41.1	18.8
Married	2,603,634	1,392,403	1,148,836	243,567	1,211,232	53.5	44.1	17.5
Living together	911,872	588,469	470,792	117,677	323,403	64.5	51.6	20
Divorced/separated	187,195	115,407	92,801	22,606	71,788	61.7	49.6	19.6
Single	2,380,211	1,092,906	873,441	219,465	1,287,305	45.9	36.7	20.1
Widow/widower	490,335	140,078	117,341	22,737	350,257	28.6	23.9	16.2

Table 16: Employed population by sex, age group, and urban/rural area, August 2016

	Total	Male	Female	Urban	Rural	Participated in subsistence agriculture	Not participated in subsistence agriculture
Employed population 16+	2,703,212	1,570,350	1,132,861	798,782	1,904,430	1,230,445	1,472,286
16-19 yrs	231,061	121,178	109,883	65,421	165,639	145,441	85,620
20-24 yrs	405,084	229,407	175,677	127,295	277,789	254,872	150,211
25-29 yrs	500,709	300,487	200,223	172,795	327,914	309,881	190,828
30-34 yrs	467,917	299,139	168,778	146,036	321,881	271,536	196,381
35- 39 yrs	364,650	211,400	153,250	116,563	248,087	188,657	175,993
40-44 yrs	228,748	130,623	98,126	65,271	163,477	109,563	119,185
45-49 yrs	168,962	86,606	82,356	44,591	124,371	75,974	92,988
50-54 yrs	139,956	83,077	56,879	29,976	109,980	51,629	88,327
55-59 yrs	102,737	53,650	49,086	15,025	87,712	35,452	67,285
60-64 yrs	54,972	31,312	23,660	10,319	44,652	17,313	37,658
65-69 yrs	21,229	12,615	8,614	2,078	19,152	7,013	14,216
70-74 yrs	9,516	6,697	2,818	2,475	7,041	3,255	6,260
75+	7,672	4,160	3,512	937	6,735	2,180	5,492

Table 17: Employed population by sex, occupation group, and urban/rural area, August 2016

	Total	Male	Female	Urban	Rural	Participated in subsistence agriculture	Not participated in subsistence agriculture
ISCO High level	2,703,212	1,570,350	1,132,861	798,782	1,904,430	1,230,445	1,472,767
Managers	33,779	24,151	9,627	25,600	8,179	3,467	30,312
Professionals	168,697	100,699	67,998	81,806	86,890	26,569	142,127
Technicians and associate professionals	42,846	30,698	12,147	25,769	17,077	7,352	35,494
Clerical support workers	25,391	9,913	15,478	21,761	3,630	1,758	23,633
Service and sales workers	501,993	254,538	247,455	211,263	290,730	178,882	323,110
Skilled agricultural, forestry and fishers	234,127	119,763	114,365	17,775	216,352	190,665	43,462
Craft and related trades workers	289,427	239,143	50,284	99,608	189,820	104,394	185,033
Plant and machine operators and assemble	77,524	74,824	2,701	39,935	37,590	9,787	67,737
Elementary occupations	1,329,428	716,622	612,806	275,265	1,054,163	707,570	621,858

Table 18: Employed population by sex, current education attendance, and urban/rural area, August 2016

	Total	Sex		Residential Area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Employed population	2,703,212	1,570,350	1,132,861	798,782	1,904,430	1,230,445	1,472,767
Not currently studying	61,866	40,235	21,631	27,170	34,696	15,130	46,736
Currently studying	2,641,346	1,530,115	1,111,230	771,611	1,869,734	1,215,315	1,426,031

Table 19: Employed population by sex, educational attainment, and urban/rural area, August 2016

	Total	Sex		Residential area		Not participated in subsistence agriculture	
		Male	Female	Urban	Rural		
Employed population	2,703,212	1,570,350	1,132,861	798,782	1,904,430	1,230,445	1,472,767
None	1,467,199	832,682	634,516	281,305	1,185,893	792,670	674,528
Primary	726,016	433,982	292,034	213,387	512,629	344,932	381,084
Lower secondary	132,759	77,266	55,493	68,381	64,378	42,629	90,130
Upper secondary	231,795	135,475	96,320	128,130	103,666	36,358	195,437
University	145,443	90,944	54,498	107,578	37,865	13,856	131,587

Table 20: Employed population by sex, occupation group and level of educational attainment, August 2016

	Total	None	Primary	Lower secondary	Upper secondary	University
Employed population	2,703,212	1,467,199	726,016	132,759	231,795	145,443
Managers	33,779	1,126	1,598	676	8,593	21,785
Professionals	168,697	5,759	9,259	6,822	74,845	72,012
Technicians and Associate Professionals	42,846	5,793	8,372	2,077	8,206	18,399
Clerical Support Workers	25,391	1,655	1,850	1,003	10,740	10,144
Service and Sales Workers	501,993	216,564	158,182	42,302	69,701	15,243
Skilled Agricultural, Forestry and Fishery Workers	234,127	137,819	75,217	12,127	7,062	1,903
Craft and Related Trades Workers	289,427	132,475	109,679	18,683	25,519	3,072
Plant and Machine Operators and Assemblers	77,524	30,820	30,383	7,636	7,410	1,276
Elementary Occupations	1,329,428	935,188	331,476	41,434	19,720	1,609
Employed population (Male)	1,570,350	832,682	433,982	77,266	135,475	90,944
Managers	24,151	1,076	1,562	521	5,191	15,801
Professionals	100,699	4,305	8,495	5,288	37,742	44,868
Technicians and Associate Professionals	30,698	5,277	7,333	1,451	5,450	11,187

	Total	None	Primary	Lower secondary	Upper secondary	University
Clerical Support Workers	9,913	1,655	1,035	99	2,283	4,840
Service and Sales Workers	254,538	109,686	82,598	16,843	38,148	7,263
Skilled Agricultural, Forestry and Fishery Workers	119,763	69,397	38,110	5,609	4,864	1,782
Craft and Related Trades Workers	239,143	110,999	87,830	15,118	22,200	2,997
Plant and Machine Operators and Assemblers	74,824	29,480	29,862	7,636	6,758	1,089
Elementary Occupations	716,622	500,809	177,157	24,702	12,837	1,117
Employed population (Female)	1,132,861	634,516	292,034	55,493	96,320	54,498
Managers	9,627	50	36	155	3,402	5,984
Professionals	67,998	1,454	764	1,535	37,102	27,143
Technicians and Associate Professionals	12,147	516	1,039	626	2,756	7,211
Clerical Support Workers	15,478		814	903	8,457	5,304
Service and Sales Workers	247,455	106,879	75,584	25,459	31,553	7,980
Skilled Agricultural, Forestry and Fishery Workers	114,365	68,421	37,107	6,517	2,198	121
Craft and Related Trades Workers	50,284	21,476	21,849	3,565	3,318	75
Plant and Machine Operators and Assemblers	2,701	1,341	521		652	187
Elementary Occupations	612,806	434,379	154,319	16,733	6,882	493

Table 21: Employed population by sex, branch of economic activity, and urban/rural area, August 2016

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Employed population	2,703,212	1,570,350	1,132,861	798,782	1,904,430	1,230,445	1,472,767
Agriculture, forestry and fishing	1,007,171	457,953	549,218	71,557	935,614	736,038	271,133
Mining and quarrying	37,608	35,259	2,349	3,477	34,130	13,395	24,213
Manufacturing	155,445	96,871	58,574	44,976	110,469	56,657	98,788
Electricity, gas, steam and air conditioning supply	2,697	2,586	111	1,261	1,436	452	2,245
Water supply, sewerage and waste management	13,048	8,519	4,530	4,603	8,445	4,135	8,914
Construction	302,902	270,129	32,773	91,902	211,000	122,866	180,036
Wholesale, retail trade, repair of motor vehicles, motorcycles	396,139	204,911	191,229	178,241	217,899	129,391	266,748
Transportation and storage	109,111	104,631	4,481	54,679	54,433	17,159	91,953
Accommodation and food service activities	118,053	61,266	56,788	38,978	79,076	54,305	63,748
Information and communication	14,026	9,489	4,538	12,524	1,502	472	13,555
Financial and insurance activities	18,861	10,814	8,047	15,322	3,538	2,550	16,311
Real estate activities	69	69	-	69	-	-	69
Professional, scientific and technical activities	13,398	10,244	3,154	12,422	977	697	12,701
Administrative and support service activities	35,104	26,940	8,163	21,187	13,916	7,131	27,972
Public administration and defense	68,808	50,879	17,929	37,834	30,974	13,730	55,078
Education	103,434	58,875	44,559	32,948	70,485	24,512	78,921
Human health and social work activities	38,237	15,697	22,540	18,278	19,958	5,003	33,234
Arts, entertainment and recreation	5,743	4,513	1,230	4,746	997	587	5,156
Other service activities	69,017	47,336	21,681	26,767	42,250	22,984	46,032
Activities of households as employers	182,495	85,674	96,821	119,401	63,094	16,838	165,657
Activities of extraterritorial organizations and bodies	11,845	7,697	4,148	7,610	4,235	1,542	10,303

Table 22: Employed population by sex, branch of economic activity and level of educational attainment, August 2016

	Total	None	Primary	Lower secondary	Upper secondary	University
Employed population	2,703,212	1,467,199	726,016	132,759	231,795	145,443
Agriculture, forestry and fishing	1,007,171	721,621	240,190	26,343	13,249	5,768
Mining and quarrying	37,608	24,141	10,817	1,319	1,330	
Manufacturing	155,445	73,266	59,336	8,333	11,104	3,406
Electricity, gas, steam and air conditioning supply	2,697	976	614	93	520	495
Water supply, sewerage and waste management	13,048	7,352	3,827	281	972	617
Construction	302,902	165,594	97,799	16,355	16,639	6,514
Wholesale, retail trade, repair of motor vehicles, motorcycles	396,139	180,511	125,049	33,709	47,520	9,351
Transportation and storage	109,111	51,687	38,461	6,912	9,967	2,085
Accommodation and food service activities	118,053	59,781	31,786	9,026	13,484	3,977
Information and communication	14,026	1,975	1,830	1,026	3,877	5,317
Financial and insurance activities	18,861	342	1,929	218	4,641	11,730
Real estate activities	69	69				
Professional, scientific and technical activities	13,398	297	1,861	722	2,398	8,121
Administrative and support service activities	35,104	12,559	7,430	4,665	7,786	2,664
Public administration and defence	68,808	15,108	12,411	4,708	15,870	20,709
Education	103,434	8,496	5,066	2,274	52,584	35,014
Human health and social work activities	38,237	3,093	4,650	1,952	10,468	18,074
Arts, entertainment and recreation	5,743	475	1,853	367	1,926	1,123
Other service activities	69,017	32,402	20,162	4,172	8,028	4,253
Activities of households as employers	182,495	106,016	59,402	10,008	6,488	581
Activities of extraterritorial organizations and bodies	11,845	1,438	1,543	274	2,946	5,645
Employed population (Male)	1,570,350	832,682	433,982	77,266	135,475	90,944
Agriculture, forestry and fishing	457,953	322,307	110,417	12,786	9,025	3,419
Mining and quarrying	35,259	22,950	9,735	1,244	1,330	
Manufacturing	96,871	48,611	34,697	5,773	5,577	2,212

	Total	None	Primary	Lower secondary	Upper secondary	University
Electricity, gas, steam and air conditioning supply	2,586	976	614	93	520	384
Water supply, sewerage and waste management	8,519	4,288	2,727	105	972	427
Construction	270,129	146,479	88,956	13,989	15,825	4,880
Wholesale, retail trade, repair of motor vehicles, motorcycles	204,911	94,269	68,196	14,262	23,206	4,978
Transportation and storage	104,631	50,409	37,443	6,829	8,710	1,241
Accommodation and food service activities	61,266	33,096	14,981	3,253	7,086	2,850
Information and communication	9,489	1,229	1,208	553	2,854	3,645
Financial and insurance activities	10,814	342	1,359		2,117	6,995
Real estate activities	69	69				
Professional, scientific and technical activities	10,244	297	1,657	655	1,728	5,906
Administrative and support service activities	26,940	9,720	6,713	2,933	6,226	1,347
Public administration and defence	50,879	8,653	10,775	3,936	11,720	15,796
Education	58,875	7,354	4,757	1,148	23,930	21,686
Human health and social work activities	15,697	1,279	2,266	554	3,407	8,192
Arts, entertainment and recreation	4,513	475	1,135	367	1,670	866
Other service activities	47,336	23,672	13,593	2,327	4,867	2,876
Activities of households as employers	85,674	55,043	21,718	6,232	2,101	581
Activities of extraterritorial organizations and bodies	7,697	1,166	1,035	228	2,605	2,663
Employed population (Female)	1,132,861	634,516	292,034	55,493	96,320	54,498
Agriculture, forestry and fishing	549,218	399,314	129,773	13,558	4,224	2,349
Mining and quarrying	2,349	1,191	1,082	75		
Manufacturing	58,574	24,654	24,639	2,560	5,526	1,194
Electricity, gas, steam and air conditioning supply	111	-	-	-	-	111
Water supply, sewerage and waste management	4,530	3,064	1,100	176	-	189
Construction	32,773	19,116	8,842	2,367	814	1,634
Wholesale, retail trade, repair of motor vehicles, motorcycles	191,229	86,242	56,852	19,447	24,314	4,373
Transportation and storage	4,481	1,278	1,019	83	1,257	844

	Total	None	Primary	Lower secondary	Upper secondary	University
Accommodation and food service activities	56,788	26,685	16,805	5,773	6,398	1,127
Information and communication	4,538	746	622	474	1,023	1,672
Financial and insurance activities	8,047	0	570	218	2,524	4,735
Real estate activities	0	0	0	0	0	0
Professional, scientific and technical activities	3,154	-	203	67	670	2,214
Administrative and support service activities	8,163	2,839	716	1,732	1,559	1,317
Public administration and defence	17,929	6,455	1,637	773	4,151	4,913
Education	44,559	1,142	309	1,125	28,655	13,328
Human health and social work activities	22,540	1,814	2,384	1,398	7,061	9,882
Arts, entertainment and recreation	1,230		718		256	257
Other service activities	21,681	8,730	6,569	1,845	3,161	1,377
Activities of households as employers	96,821	50,973	37,684	3,777	4,387	
Activities of extraterritorial organizations and bodies	4,148	272	508	46	340	2,982

Table 23: Employed population by sex, status in employment, and urban/rural area, August 2016

	Total	Sex		Area of Residence		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Employed population	2,703,212	1,570,350	1,132,861	798,782	1,904,430	1,230,445	1,472,767
Employee, Paid apprentice/intern	1,857,667	1,111,097	746,570	545,441	1,312,225	811,110	1,046,556
Employer	42,168	27,088	15,080	17,589	24,579	20,167	22,001
Own-account worker	709,301	409,071	300,230	214,411	494,890	339,970	369,332
Member of cooperative	18,894	10,767	8,128	1,171	17,724	15,258	3,636
Contributing family worker	72,695	11,833	60,862	17,683	55,011	43,940	28,754
Other	2,487	494	1,992	2,487	-	-	2,487

Table 24: Employed population by sex, hours usually worked per week at all jobs, and urban/rural area, August 2016

	Rwanda			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Employed population	2,703,212	1,570,350.0	1,132,861	798,782	473,333	325,448	1,904,430	1,097,017	807,413
less than 24 hours	708,159	348,406	359,753	110,700	65,259	45,440	597,459	283,146	314,313
25-34 hours	395,500	201,022	194,478	57,837	33,186	24,651	337,663	167,836	169,827
35-40 hours	432,825	235,481	197,343	99,414	52,933	46,481	333,411	182,549	150,862
41-48 hours	388,508	247,841	140,666	138,482	76,702	61,780	250,026	171,139	78,887
49-61 hours	363,388	250,075	113,313	158,118	101,223	56,896	205,269	148,852	56,417
62-79 hours	259,289	179,534	79,755	146,002	90,787	55,215	113,287	88,748	24,539
80 hours+	155,544	107,990	47,553	88,229	53,243	34,985	67,315	54,747	12,568

Table 25 : Employees by sex, duration of employment contract at main job and urban/rural area, August 2016

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Total employees 16+	1,857,667	1,111,097	746,570	545,441	1,312,225	811,110	1,046,556
Permanent (without a known limited duration)	487,122	303,891	183,231	266,504	220,618	74,383	412,739
Temporary contract	1,370,544	807,206	563,339	278,937	1,091,607	736,727	633,817
- Day	1,023,632	576,836	446,796	141,313	882,318	644,775	378,857
- Week	103,662	68,797	34,865	20,752	82,910	49,852	53,810
- Month	145,829	98,715	47,114	67,237	78,592	24,341	121,488
- Less than one year	44,993	27,717	17,276	21,048	23,946	9,221	35,773
- One year or more	52,428	35,140	17,287	28,587	23,840	8,539	43,889

Table 26: Employed population by sex, formal/informal sector employment, status in employment at main job and urban/rural area, August 2016

	Total	Sex		Residential Area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Employed population 16+	2,537,100	1,491,179	1,045,921	663,362	2,099,110	1,215,726	1,321,374
Formal sector	476,994	314,337	162,657	225,371	476,994	97,398	379,596
Employee	414,019	272,237	141,782	194,689	414,019	74,752	339,267
Employer (with regular employees)	13,190	9,667	3,523	3,369	13,190	3,459	9,731
Own-account worker(without regular employees)	38,346	25,000	13,345	16,633	38,346	9,720	28,626
Member of cooperative	10,843	7,259	3,584	10,258	10,843	9,045	1,798
Contributing family worker	422	0	422	422	422	422	0
Other	174	174	0	0	174	0	174
Informal sector	2,060,106	1,176,842	883,264	437,991	1,622,116	1,118,328	941,778
- Employee	1,285,739	762,290	523,450	219,881	1,065,859	725,767	559,972
- Employer	28,525	17,421	11,104	7,768	20,757	16,255	12,270
- Own-account worker	665,918	381,766	284,152	192,079	473,840	326,970	338,949
- Member of cooperative	8,051	3,507	4,543	585	7,466	6,213	1,838
- Contributing family worker	71,580	11,711	59,869	17,386	54,194	43,123	28,457
- Other	292	146	146	292	0	0	292

Table 27 : Formal and informal employment by sex, branch of economic activity, August 2016

Economic activity	Total			Male		Female	
	Total	Formal employment	Informal employment	Formal employment	Informal employment	Formal employment	Informal employment
Total	2,703,212	240,456	2,462,755	154,819	1,415,531	85,637	1,047,224
Agriculture forestry and fishing	1,007,171	7,199	999,972	4,749	453,205	2,450	546,767
Mining and quarrying	37,608	1,644	35,964	1,644	33,615		2,349
Manufacturing	155,445	7,935	147,509	6,772	90,099	1,164	57,410
Electricity gas steam and air conditioning supply	2,697	96	2,601	40	2,546	56	55
Water supply, gas and remediation services	13,048	1,636	11,412	1,335	7,184	301	4,228
Construction	302,902	3,560	299,342	2,718	267,411	842	31,931
Whole sale and retail trade; repair of motor vehicles and motorcycles	396,139	8,264	387,876	6,008	198,903	2,255	188,973
Transportation and storage	109,111	2,492	106,619	1,856	102,775	637	3,844
Accommodation and food service activities	118,053	5,279	112,774	3,666	57,600	1,614	55,174
Information and communication	14,026	3,659	10,367	2,010	7,479	1,649	2,888
Financial and insurance activities	18,861	14,398	4,463	8,486	2,328	5,912	2,135
Real estate activities	69	0	69	0	69	0	0
Professional, scientific and technical activities	13,398	4,524	8,874	3,400	6,844	1,124	2,030
Administrative and support activities	35,104	12,833	22,271	11,618	15,322	1,215	6,948
Public administration and defence; compulsory social security	68,808	43,680	25,128	36,529	14,351	7,152	10,777
Education	103,434	78,679	24,755	40,591	18,284	38,088	6,471
Human health and social work activities	38,237	28,025	10,211	11,821	3,876	16,204	6,336
Arts, entertainment and recreation	5,743	1,922	3,821	1,754	2,758	168	1,063
Other services	69,017	6,905	62,112	5,059	42,276	1,845	19,836
Activities of households as employers	182,495	1,398	181,097	1,342	84,332	56	96,765
Activities of extraterritorial organizations and bodies	11,845	6,328	5,518	3,422	4,275	2,905	1,243

Table 28 : Formal and informal Sector by sex, branch of economic activity, August 2016

	Total			Male		Female	
	Formal/Informal sector employment			Formal/Informal sector employment		Formal/Informal sector employment	
	Total	Informal sector	Formal sector	Informal sector	Formal sector	Informal sector	Formal sector
Total	2,537,100	2,060,106	476,994	1,176,842	314,337	883,264	162,657
Agriculture forestry and fishing	994,099	954,045	40,055	427,455	21,029	526,590	19,025
Mining and quarrying	37,608	24,308	13,299	22,231	13,027	2,077	272
Manufacturing	154,705	115,038	39,666	69,088	27,215	45,950	12,452
Electricity gas steam and air conditioning supply	2,697	1,321	1,376	1,321	1,265		111
Water supply, gas and remediation services	13,048	9,551	3,497	6,132	2,387	3,419	1,110
Construction	301,544	273,819	27,725	247,041	22,538	26,778	5,187
Whole sale and retail trade; repair of motor vehicles and motorcycles	393,547	336,211	57,336	164,076	39,215	172,135	18,122
Transportation and storage	108,660	90,107	18,552	87,367	16,812	2,740	1,740
Accommodation and food service activities	117,003	91,643	25,361	44,814	16,452	46,829	8,908
Information and communication	14,026	3,590	10,436	2,881	6,607	709	3,829
Financial and insurance activities	18,819	2,607	16,212	1,036	9,778	1,571	6,435
Real estate activities	69	69		69			
Professional, scientific and technical activities	13,398	5,408	7,990	4,806	5,438	602	2,553
Administrative and support activities	34,747	14,981	19,766	11,464	15,119	3,517	4,646
Public administration and defence; compulsory social security	68,622	18,756	49,866	11,447	39,246	7,308	10,620
Education	103,058	19,108	83,950	12,234	46,266	6,874	37,685
Human health and social work activities	38,237	4,298	33,938	2,310	13,387	1,988	20,552
Arts, entertainment and recreation	5,743	1,374	4,369	1,128	3,385	246	984
Other services	68,921	54,695	14,226	38,189	9,051	16,506	5,175
Activities of households as employers	36,705	36,497	208	20,055	123	16,442	85
Activities of extraterritorial organizations and bodies	11,845	2,680	9,166	1,698	5,999	982	3,167

Table 29 : Average number of hours usually worked per week at main job by sex, branch of economic activity, urban/rural area, August 2016

	Rwanda			Urban		Rural	
	All	Male	Female	Male	Female	Male	Female
Employed population	40.0	42.9	35.9	50.7	35.5	31.2	47.4
Agriculture, forestry and fishing	30.4	33.3	28.0	34.9	30.1	28.8	34.7
Mining and quarrying	43.4	42.9	51.8	44.2	43.3	41.0	44.7
Manufacturing	39.3	42.1	34.5	44.4	37.2	32.9	42.9
Electricity, gas, steam and air conditioning supply	41.5	41.2	47.6	42.0	41.0	33.1	43.1
Water supply, sewerage and waste management	34.3	32.7	37.4	32.2	35.5	41.3	31.1
Construction	40.8	40.9	40.2	43.9	39.5	36.4	43.8
Wholesale, retail trade, repair of motor vehicles, motorcycles	42.9	47.0	38.6	49.4	37.7	31.5	48.5
Transportation and storage	52.2	52.8	39.8	55.7	48.8	36.8	55.1
Accommodation and food service activities	41.2	42.6	39.7	57.3	33.3	27.4	53.0
Information and communication	58.2	58.0	58.6	56.6	71.4	85.1	57.3
Financial and insurance activities	55.4	56.7	53.6	54.2	60.9	60.7	54.6
Real estate activities	72.0	72.0		72.0			72.0
Professional, scientific and technical activities	40.3	38.4	46.4	40.9	32.1	46.6	39.9
Administrative and support service activities	63.7	67.2	52.2	64.4	62.7	51.4	66.9
Public administration and defence	51.7	56.4	38.1	57.1	45.0	31.3	56.7
Education	45.2	46.7	43.2	46.1	44.8	47.1	44.6
Human health and social work activities	48.4	51.0	46.6	50.6	46.4	43.7	49.1
Arts, entertainment and recreation	48.6	53.2	31.9	51.7	34.0	20.0	51.9
Other service activities	39.3	42.0	33.5	47.0	34.5	31.5	43.2
Activities of households as employers	60.5	58.9	61.9	64.0	53.8	39.7	62.6
Activities of extraterritorial organizations and bodies	42.8	44.4	39.9	46.2	36.9	37.5	43.6

Table 30 : Average monthly cash income from employment of employees at main job by sex, age group, level of educational attainment, occupation group and urban/rural area, August 2016

	Rwanda			Urban			Rural		
	All	Male	Female	All	Male	Female	All	Male	Female
Total (16+ yrs)	55,737	66,857	39,443	110,593	127,944	81,848	32,935	39,661	23,560
16-24 yrs	29,531	33,421	24,925	42,738	54,001	32,630	23,162	25,264	20,313
25-34 yrs	60,903	69,506	45,256	115,519	125,848	92,474	34,367	39,177	26,412
35-54 yrs	68,951	85,081	46,708	152,574	164,689	129,106	39,001	50,956	24,328
55-64 yrs	54,918	68,650	37,388	215,420	190,115	296,190	31,982	43,810	18,534
65+ yrs	92,015	122,935	25,383	665,990	759,042	129,582	19,845	19,941	19,657
Education Level									
None	28,061	34,443	19,439	42,365	53,731	22,704	24,801	29,480	18,818
Primary	40,293	50,880	22,837	54,893	71,791	29,388	34,238	42,616	19,902
Lower secondary	63,575	74,370	42,547	88,029	109,785	48,199	36,811	37,296	35,798
Upper secondary	86,753	99,214	68,610	109,510	120,882	89,340	60,608	69,694	49,974
University	283,438	317,395	228,376	337,766	380,473	271,792	147,624	169,509	107,466
Occupation group									
Managers	440,159	488,099	321,546	537,275	581,370	413,796	106,940	112,252	97,995
Professionals	142,364	155,380	123,922	216,419	225,412	202,798	74,587	87,826	56,931
Technicians and associate professions	215,229	229,647	184,701	246,758	260,505	219,290	174,543	191,499	135,790
Clerical support workers	166,213	151,869	176,330	185,851	171,894	195,801	63,821	43,219	77,556
Service and sales workers	63,514	67,890	53,304	79,413	84,952	67,509	42,577	46,682	31,864
Skilled agricultural, forestry and fishery workers	25,529	30,859	19,306	32,484	49,484	19,586	24,624	28,966	19,260
Craft and related trades workers	82,255	85,712	33,804	111,009	117,808	40,740	67,157	69,447	27,987
Plant and machine operators, and assemblers	110,925	110,372	150,133	150,780	149,991	200,000	56,825	56,829	56,535
Elementary occupations	24,362	28,071	20,330	33,848	42,472	24,884	22,016	24,604	19,170

Table 31: Median monthly cash income from employment of employees at main job by sex, age group, level of educational attainment, occupation group and urban/rural area, August 2016

	Rwanda			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total (16+ yrs)	20,800	26,000	18,200	48,000	60,000	26,000	18,200	24,000	18,200
16-24 yrs	18,200	20,000	15,600	18,000	25,000	15,000	18,200	18,200	15,600
25-34 yrs	26,000	31,200	18,200	52,000	65,000	40,000	20,800	26,000	18,200
35-54 yrs	26,000	34,000	18,200	66,667	78,000	48,000	20,800	26,000	18,200
55-64 yrs	18,200	25,000	18,200	60,000	60,000	26,000	18,200	20,800	18,200
65+ yrs	18,200	18,200	18,200	90,000	90,000	200,000	18,200	18,000	18,200
Education Level									
None	18,200	20,800	15,600	26,000	31,200	18,200	18,200	20,800	15,600
Primary	20,800	27,000	18,200	26,000	46,000	15,600	20,800	26,000	18,200
Lower secondary	35,000	42,000	30,000	52,000	65,000	35,000	26,000	26,000	20,800
Upper secondary	51,000	66,667	45,000	70,000	82,000	50,000	44,000	45,000	43,000
University	200,000	200,000	172,000	200,000	200,000	200,000	113,000	120,000	105,000
Occupation group									
Managers	200,000	200,000	152,000	200,000	200,000	200,000	90,000	80,000	117,000
Professionals	66,667	90,000	53,000	150,000	150,000	142,000	49,000	56,000	45,000
Technicians and associate professions	170,000	152,000	172,000	200,000	200,000	200,000	100,000	40,000	152,000
Clerical support workers	100,000	150,000	100,000	150,000	200,000	100,000	50,000	37,500	100,000
Service and sales workers	36,000	37,500	35,000	50,000	50,000	50,000	26,000	26,000	20,800
Skilled agricultural, forestry and fishery workers	18,200	18,200	18,200	20,800	26,000	20,000	18,200	18,200	18,200
Craft and related trades workers	65,000	65,000	26,000	91,000	100,000	30,000	52,000	52,000	25,000
Plant and machine operators, and assemblers	66,667	66,667	200,000	100,000	100,000	200,000	40,000	40,000	20,800
Elementary occupations	18,200	20,800	15,600	20,000	26,000	15,600	18,200	18,200	15,600

Table 32 : Size distribution of monthly cash income from employment of employees at main job by sex and urban/rural area, August 2016

	Total	Rwanda			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	1822376	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 20,000 RWF	771,917	42.4	31.4	58.4	22.2	13.6	36.5	50.7	39.4	66.5
20,000 – 29,999 RWF	365,298	20.0	21.2	18.4	14.9	13.9	16.5	22.2	24.4	19.0
30,000 – 49,999 RWF	227,688	12.5	14.7	9.3	12.9	13.5	11.9	12.3	15.2	8.3
50,000 – 99,999 RWF	232,857	12.8	17.2	6.3	20.3	23.8	14.4	9.7	14.2	3.3
100,000 RWF and above	224,616	12.3	15.5	7.6	29.7	35.2	20.5	5.1	6.8	2.8

Table 33 : Median and mean of monthly cash income from employment of employees at main job by quintile, sex and urban/rural area, August 2016

Median	population	Rwanda			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	1822376	20,800	26,000	18,200	48,000	60,000	26,000	18,200	24,000	18,200
Quintile1	365,099	13,000	10,400	13,000	10,000	10,000	10,000	13,000	12,000	13,000
Quintile2	401,077	15,600	15,600	15,600	15,000	15,000	15,000	16,000	15,600	17,333
Quintile3	363,240	24,000	25,000	20,800	24,000	24,000	21,667	24,000	25,000	20,800
Quintile4	329,117	40,000	39,000	40,000	40,000	43,333	40,000	39,000	39,000	40,000
Quintile5	363,843	108,000	104,000	136,000	150,000	130,000	170,000	90,000	80,000	108,000
Mean	population	Rwanda			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	1822376	55,737	66,857	39,443	110,593	127,944	81,848	32,935	39,661	23,560
Quintile1	365,099	10,707	10,216	11,111	9,735	9,588	9,836	10,905	10,330	11,398
Quintile2	401,077	16,543	16,397	16,652	15,685	15,719	15,667	16,683	16,485	16,838
Quintile3	363,240	23,292	23,494	22,952	23,026	23,152	22,849	23,366	23,581	22,984
Quintile4	329,117	40,994	41,053	40,848	42,120	42,502	41,385	40,394	40,368	40,467
Quintile5	363,843	189,857	186,599	201,369	228,249	226,333	233,934	128,576	129,413	124,496

Table 34 : Youth and young Population by sex, and residential area, August 2016

							Participated in subsistence agriculture	Not participated in subsistence agriculture
		Sex			Area of residence			
		Total	Male	Female	Urban	Rural		
Rwanda		3,150,961	1,513,165	1,637,796	419,475	427,791	1,093,690	1,210,005
Employed	16-24	636,144	350,584	285,560	192,716	443,428	235,831	400,314
	16-30	1,238,810	715,496	523,315	399,486	839,324	467,461	771,350
Unemployed	16-24	180,706	79,582	101,124	51,017	129,688	90,281	90,425
	16-30	340,083	147,922	192,160	95,864	244,219	170,907	169,176
Outside Labour Force	16-24	1,198,731	537,152	661,579	280,722	918,009	365,963	832,768
	16-30	1,572,068	649,747	922,321	351,916	1,220,152	575,028	997,040

Table 35: Youth population 16–30 years old by sex, level of educational attainment, labour force status and urban/rural area, August 2016

	Total	Labour force status				Labour force participation rate	Employment-population ratio	Unemployment rate
		Labour force	Employed	Unemployed	Outside labour force			
Youth population 16-30	3,150,961	1,578,893	1,238,810	340,083	1,572,068	50.1	39.3	21.5
None	1,435,525	809,566	650,442	159,124	625,959	56.4	45.3	19.7
Primary	895,629	396,949	323,179	73,770	498,680	44.3	36.1	18.6
Lower secondary	336,845	100,543	78,253	22,290	236,302	29.8	23.2	22.2
Upper secondary	397,381	202,021	137,364	64,657	195,360	50.8	34.6	32
University	85,581	69,813	49,572	20,241	15,767	81.6	57.9	29

	Total	Labour force status				Labour force participation rate	Employment-population ratio	Unemployment rate
		Labour force	Employed	Unemployed	Outside labour force			
Youth population 16-30 yrs (Male)	1,513,165	863,418	715,496	147,922	649,747	57.1	47.3	17.1
None	708,148	454,324	390,184	64,140	253,824	64.2	55.1	14.1
Primary	402,758	209,322	175,505	33,817	193,436	52.0	43.6	16.2
Lower secondary	161,204	53,186	44,845	8,341	108,018	33.0	27.8	15.7
Upper secondary	193,702	105,838	75,486	30,352	87,865	54.6	39.0	28.7
University	47,352	40,748	29,476	11,272	6,604	86.1	62.2	27.7
Youth population 16-30 yrs (Female)	1,637,796	715,475	523,315	192,160	922,321	43.7	32.0	26.9
None	727,377	355,242	260,258.0	94,984.0	372,135	48.8	35.8	26.7
Primary	492,871	187,627	147,674.0	39,953.0	305,244	38.1	30.0	21.3
Lower secondary	175,642	47,358	33,408.0	13,950.0	128,284	27.0	19.0	29.5
Upper secondary	203,678	96,183	61,879.0	34,304.0	107,495	47.2	30.4	35.7
University	38,229	29,065	20,096.0	8,969.0	9,164	76.0	52.6	30.9
Youth population 16-30 yrs (Urban)	847,266	495,350	399,486	95,864	351,916	58.5	47.2	19.4
None	243,049	178,353	153,756	24,597	64,696	73.4	63.3	13.8
Primary	214,516	116,581	101,636	14,945	97,935	54.3	47.4	12.8
Lower secondary	127,874	43,778	34,432	9,346	84,096	34.2	26.9	21.3
Upper secondary	199,442	105,559	73,518	32,041	93,882	52.9	36.9	30.4
University	62,386	51,080	36,145	14,935	11,306	81.9	57.9	29.2
Youth population 16-30 yrs (Rural)	2,303,695	1083543.0	839,324	244,219	1,220,152	47.0	36.4	22.5

	Total	Labour force status				Labour force participation rate	Employment-population ratio	Unemployment rate
		Labour force	Employed	Unemployed	Outside labour force			
None	1,192,476	631214	496687	134527	561262	52.9	41.7	21.3
Primary	681,113	280368	221543	58825	400746	41.2	32.5	21.0
Lower secondary	208,972	56766	43821	12945	152206	27.2	21.0	22.8
Upper secondary	197,939	96461	63846	32615	101477	48.7	32.3	33.8
University	23,195	18733	13427	5306	4461	80.8	57.9	28.3

Table 36: Youth Unemployed by sex, duration of seeking employment, and urban/rural area, August 2016

	Rwanda			Urban		Rural	
	Total	Male	Female	Male	Female	Male	Female
Youth Unemployed (16-24 yrs)	169,075	76,082	92,993	21,803	25,707	54,279	67,286
Less than 1 month	37,575	19,317	18,258	5,629	2,491	13,688	15,767
1 – less than 3 months	37,573	16,777	20,796	2,660	3,789	14,117	17,007
3 – less than 6 months	24,356	8,758	15,598	2,582	4,824	6,176	10,773
6 – less than 12 months	18,810	10,213	8,597	2,260	3,522	7,952	5,075
1 – less than 2 years	22,918	9,455	13,463	3,294	4,389	6,161	9,074
2 years or more	27,844	11,562	16,282	5,378	6,692	6,184	9,590

Table 37: Young Unemployed by sex, duration of seeking employment, and urban/rural area, August 2016

	Rwanda			Urban		Rural	
	Total	Male	Female	Male	Female	Male	Female
Young Unemployed (16-30 yrs)	316,655	141,817	174,838	40,723	49,584	101,094	125,254
Less than 1 month	60,725	32,124	28,601	8,449	3,551	23,675	25,050
1 – less than 3 months	73,088	31,420	41,668	4,634	7,336	26,786	34,332
3 – less than 6 months	46,318	18,758	27,560	6,044	7,896	12,714	19,664
6 – less than 12 months	29,827	15,749	14,079	4,892	4,549	10,857	9,529
1 – less than 2 years	44,344	20,604	23,740	6,863	8,119	13,741	15,621
2 years or more	62,352	23,163	39,189	9,841	18,132	13,322	21,057

Table 38: Youth not in employment and not currently in education or training by sex, age group, and urban/rural area, August 2016

	Total	Male	Female	Male	Female	Male	Female
Young not in employment nor in education (16-30 yrs)	1,146,445	401,721	744,724	68,840	143,635	332,881	601,089
16-19 yrs	255,448	102,354	153,094	13,213	18,513	89,141	134,581
20-24 yrs	405,024	144,675	260,348	28,930	54,947	115,745	205,401
25-30 yrs	485,973	154,692	331,281	26,698	70,174	127,994	261,107
None	622,872	224,370	398,501	18,937	49,814	205,433	348,688
Primary	309,519	99,218	210,301	15,535	34,937	83,683	175,364
Lower secondary	69,133	19,489	49,644	5,673	16,421	13,816	33,223
Upper secondary	121,518	46,425	75,093	19,295	32,614	27,129	42,479
University	23,402	12,219	11,184	9,400	9,849	2,819	1,335

Table 39: Unemployed population by sex, broad age group and urban/rural area, August 2016

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Unemployed population 16+	626,052	293,143	332,909	156,195	469,857	361,291	264,761
16-24 yrs	180,706	79,582	101,124	51,017	129,688	90,281	90,425
25-34 yrs	243,279	106,868	136,411	68,066	175,213	131,873	111,406
35-54 yrs	166,606	85,324	81,282	31,939	134,666	113,911	52,695
55-64 yrs	30,790	18,027	12,763	4,660	26,130	21,833	8,957
65+ yrs	4,671	3,342	1,329	513	4,159	3,393	1,279

Table 40: Unemployed population by sex, level of educational and urban/rural area, August 2016

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Unemployed population 16+	626,052	293,143	332,909	156,195	469,857	361,291	264,761
None	329,551	142,564	186,987	43,317	286,234	219,648	109,903
Primary	156,209	83,599	72,610	34,220	121,989	102,692	53,517
Lower secondary	33,001	13,278	19,722	14,932	18,069	13,581	19,420
Upper secondary	77,155	36,261	40,894	40,349	36,805	22,623	54,532
University	30,137	17,441	12,696	23,377	6,760	2,747	27,390

Table 41: Unemployed population (who looked for a job) by sex, method of seeking employment, and urban/rural area, August 2016

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Unemployed population 16+	571,530	274,686	296,844	146,742	424,789	324,038	247,493
Arranging for financial resources, applying for permits, licences	55,065	22,152	32,912	16,124	38,941	32,259	22,805
Looking for land, premises, machinery, supplies, farming inputs	19,713	9,048	10,665	4,467	15,246	11,844	7,868
Seeking the assistance of friends, relatives or other types of intermediaries	116,247	58,986	57,261	28,636	87,611	62,860	53,387
Registering with or contacting public or private employment services	18,038	10,967	7,071	8,957	9,081	7,305	10,733
Applying to employers directly, checking at worksites, farms, factory gates, markets	315,948	149,434	166,514	57,313	258,635	198,882	117,067
Placing or answering newspaper or online job advertisements	32,246	17,190	15,056	21,413	10,833	6,929	25,317
Placing and updating resumes on professional or social networking sites online	11,624	6,061	5,562	9,051	2,573	1,708	9,915
Other method	2,650	847	1,803	781	1,869	2,250	400
Note: Details may not add to totals because unemployed persons may be using more than one method of seeking employment during the reference period on jobsearch.							

Table 42: Unemployed population(who looked for a job) by sex, duration of seeking employment, and urban/rural area, August 2016

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Unemployed population 16+	571,530	274,686	296,844	146,742	424,789	324,038	247,493
- Less than 1 month	120,809	62,432	58,377	19,196	101,614	78,350	42,460
- 1 month to less than 3 months	141,215	66,114	75,101	21,562	119,653	88,009	53,206
- 3 months to less than 6 months	86,343	41,016	45,327	22,459	63,884	49,124	37,219
- 6 months to less than 12 months	45,715	22,926	22,789	13,983	31,732	22,603	23,111
- One year to less than 2 years	65,366	34,547	30,818	22,165	43,201	31,819	33,547
- Two years or more	112,082	47,651	64,431	47,377	64,705	54,133	57,949

Table 43 : Time related underemployment by age group sex and area of residence

Age group	Total	Sex		Residential area	
		Male	Female	Urban	Rural
Total	848,513	452,848	395,665	140,614	707,899
16-24 yrs	197,656	100,889	96,767	28,478	169,178
25-34 yrs	307,099	176,323	130,776	58,078	249,021
35-54 yrs	290,445	145,352	145,093	49,545	240,901
55-64 yrs	47,430	25,521	21,909	3,345	44,085
65+ yrs	5,882	4,762	1,120	1,168	4,714

Table 44: Time-related underemployed persons by sex, main branch of economic activity and urban-rural areas

ISIC High level	Total	Sex		Residential area	
		Male	Female	Urban	Rural
	848,513	452,848	395,665	140,614	707,899
Agriculture forestry and fishing	446,295	199,522	246,773	27,554	418,741
Mining and quarrying	6,756	6,623	133	390	6,365
Manufacturing	48,806	26,588	22,218	9,034	39,772

Electricity gas steam and air condition	353	353		240	113
Water supply, gas and remediation services	7,516	5,219	2,296	2,410	5,105
Construction	88,555	78,819	9,736	24,349	64,206
Whole sale and retail trade; repair of m	126,595	58,199	68,397	39,805	86,791
Transportation and storage	21,337	19,753	1,584	8,531	12,806
Accommodation and communication	39,547	20,184	19,362	5,310	34,236
Information and communication	207	132	75	134	74
Financial and insurance activities	89		89	89	
Professional, scientific and technical a	3,542	3,317	225	3,166	376
Administrative and support activities	2,469	1,415	1,054	726	1,743
Public administration and defence; compulsory social security	6,510	2,500	4,010	547	5,963
Education	8,944	6,036	2,907	3,361	5,583
Human health and social work activities	1,628	302	1,327	382	1,247
Arts, entertainment and recreation	1,415	645	770	828	587
Other services	20,872	12,415	8,457	6,206	14,666
Activities of households as employers	16,042	10,303	5,738	7,507	8,535
Activities of extraterritorial organization	1,036	523	513	46	990

Table 45 : Population outside the labour force by sex, degree of labour market attachment, and urban/rural area, August 2016

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Population outside the labour force (16+)	3,243,984	1,207,944	2,036,040	565,531	2,678,453	1,664,777	1,579,207
Seeking but not available	16,179	8,095	8,084	2,966	13,212	8,063	8,116
Not seeking but available	1,572,138	561,120	1,011,018	246,833	1,325,305	1,056,735	515,403
Neither seeking nor available but want employment	1,653,839	637,146	1,016,693	314,942	1,338,897	598,755	1,055,084
Neither seeking nor available who do not want employment	1,828	1,583	245	789	1,039	1,224	604

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Table 46: Population outside the labour force by sex, main source of livelihood, and urban/rural area, August 2016

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Population outside the labour force (16+)	3,243,984	1,207,944	2,036,040	565,531	2,678,453	1,664,777	1,579,207
Parents	951,913	456,938	494,975	212,960	738,953	259,286	692,627
Husband/wife	373,139	51,416	321,723	103,471	269,668	162,477	210,662
Child	113,644	22,807	90,837	28,765	84,879	26,071	87,574
Other family members	237,993	87,870	150,124	85,656	152,338	43,316	194,677
Pension	10,828	5,209	5,619	2,920	7,908	5,618	5,209
Own production	1,299,753	469,828	829,925	79,665	1,220,088	1,072,291	227,462
Assistance received [VUP]	37,706	9,845	27,861	2,678	35,028	17,660	20,045
Assistance received [FARG]	9,588	1,680	7,908	3,626	5,962	2,037	7,551
Assistance received [Church, Other NGO]	11,225	5,777	5,448	2,938	8,287	1,963	9,263
Assistance from friends	50,841	13,424	37,417	6,959	43,881	11,170	39,671
Revenue from own property/savings	42,703	22,882	19,820	15,009	27,693	21,005	21,697
Past work	70,671	44,891	25,780	14,610	56,061	33,124	37,547
Scholarship	10,943	6,640	4,302	3,148	7,795	518	10,425
Other	23,038	8,737	14,302	3,127	19,912	8,240	14,798

Table 47: working age population, by reported status of non-employment

	Rwanda			Urban		Rural	
	Total	Male	Female	Male	Female	Male	Female
Total	3,870,036	1,501,087	2,368,950	721,727	3,148,310	2,026,068	1,843,968
Unemployed	1,544,323	629,602	914,721	336,511	1,207,812	892,950	651,372
Performing a job such as unpaid work in	16,887	7,164	9,724	1,980	14,908	8,531	8,356
Pupil, student, post graduate	714,070	370,920	343,150	221,003	493,067	103,266	610,803
Retirement or early retirement or given	298,704	114,565	184,139	38,763	259,942	131,138	167,567
Permanently unable to work due to longest illness	327,325	118,476	208,849	40,852	286,473	91,520	235,805
In compulsory military or civilian service	13,466	4,811	8,655	1,419	12,046	9,734	3,732
Person fulfilling domestic task in own house	926,714	244,147	682,567	77,863	848,851	776,233	150,482
Other status, specify	28,547	11,402	17,145	3,336	25,211	12,696	15,851

Table 48: Average time spent in own-use production work by sex, type of own-use production and urban/rural area, August 2016

	Rwanda	Sex		Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total own-use production	1,362,977	630,721	732,256	229,110	111,075	118,035	1,133,866	519,645	614,221
Collecting firewood for the household including travel time	3.3	3.0	3.5	3.3	2.7	3.6	3.3	3	4
Fetching water for the household, including travel time	2.5	2.5	2.5	1.9	1.7	2.1	2.6	3	3
Searching for fodder or grazing for the household's animals	7.5	8.6	6.6	5.0	6.1	4.0	7.7	9	7
Constructing your dwelling, making major repairs on it, farm	6.0	6.7	4.9	4.0	4.9	3.0	6.1	7	5

	Rwanda	Sex		Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
buildings, private roads, or wells									
Manufacturing household goods for own or family use	6.1	3.2	6.7	1.9	1.5	2.2	6.3	3	7
Doing household chores including shopping, preparing meals	8.5	4.1	10.8	8.6	5.0	11.0	8.5	4	11
Looking after children and elderly	7.0	3.7	8.4	8.8	5.4	10.7	6.6	3	8
Total number of persons(16+)	6,573,248	3,071,437	3,501,811	1,520,508	766,003	754,506	5,052,740	2,305,434	2,747,305
Collecting firewood for the household including travel time	2.3	1.6	2.9	0.9	0.6	1.2	2.7	1.9	3.4
Fetching water for the household, including travel time	2.6	2.2	3.0	1.4	1.0	1.7	3	2.5	3.3
Searching for fodder or grazing for the household's animals	3.3	3.6	2.9	0.6	0.7	0.5	4	4.6	3.6
Constructing your dwelling, making major repairs on it, farm buildings, private roads, or wells	0.6	0.9	0.4	0.2	0.3	0.1	0.7	1.1	0.4
Manufacturing household goods for own or family use	0.4	0.1	0.7	0.1	0.0	0.1	0.5	0.1	0.9
Doing household chores	6.4	2.2	10.0	5.7	2.4	8.9	6.6	2.2	10.3

	Rwanda	Sex		Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
including shopping, preparing meals									
Looking after children and elderly	4.1	1.4	6.5	4.6	1.6	7.5	4	1.3	6.2

Table 49 : Average time spent per week on own-use production of goods of working age population by sex, age group, employment status, and urban/rural area, August 2016

	Rwanda			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total (16+ yrs)	8.5	7.2	9.6	2.8	2.2	3.4	10.2	8.9	11.3
16-24 yrs	7.8	7.0	8.4	2.5	2.3	2.6	9.6	8.7	10.4
25-34 yrs	9.1	7.3	10.8	2.8	2.0	3.8	11.4	9.5	13.1
35-54 yrs	9.1	7.3	10.5	3.4	2.4	4.3	10.6	8.9	11.9
55-64 yrs	9.5	8.0	10.7	3.4	2.9	3.9	10.5	8.9	11.6
65+ yrs	5.8	6.2	5.5	1.5	2.3	1.1	6.3	6.7	6.1
Employed	7.2	5.8	9.1	2.1	1.7	2.7	9.3	7.6	11.7
Unemployed	10.8	9.9	11.6	4.1	2.9	5.1	13.1	12.3	13.7
Outside labour force	9.1	8.4	9.6	3.5	3.1	3.7	10.3	9.6	10.8

Table 50: Average time spent per week on own-use provision of services of working age population by sex, age group and urban/rural area, 2016

	Rwanda			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total (16+ years)	11.5	4.6	17.5	10.6	4.3	17.1	11.7	4.7	17.6
16-24 yrs	7.9	3.1	12.4	7.2	3.2	10.9	8.2	3.1	12.9
25-34 yrs	15	5.5	24.1	13.5	4.9	23.3	15.6	5.8	24.3
35-54 yrs	13.3	5.6	19.7	12.6	5.5	20	13.5	5.7	19.6
55-64 yrs	9.6	4.2	13.9	8.7	2.9	14.7	9.7	4.4	13.8
65-74 yrs	7.3	3.4	9.8	6.6	2.8	8.9	7.3	3.5	9.9
Employed	10.2	4.8	17.6	8.5	4.4	14.6	10.9	5	18.8
Unemployed	15.2	6.5	22.8	17.2	6.7	26.8	14.5	6.5	21.5
Outside labour force	11.8	3.8	16.5	11.8	3.5	17.1	11.8	3.9	16.4

Table 51: Children 5-13 years old by sex, school attendance, current work status, and urban/rural area, August 2016

	Total	Total		Male		Female	
		Schooling	Not schooling	Schooling	Not schooling	Schooling	Not schooling
Total children 5-13 years old	2,743,215	2,383,464	359,751	1,173,749	196,243	1,209,716	163,508
Not working	2,623,608	2,280,315	343,294	1,118,831	187,697	1161484	155596
Work with pay	4,860	3,662	1,198	2,811	465	851	733
Work without pay	114,746	99,487	15,259	52,106	8,081	47,381	7,178
Total children in urban areas	442,139	401,533	40,606	206,115	20,435	195,418	20,171
Not working	431,243	392,930	38,313	202,014	18,930	190,916	19,383
Work with pay	394		394	4,101	1,505		394
Work without pay	10,502	8,604	1,899			4,503	394
Total children in rural areas	2,301,075	1,981,931	319,145	967,634	175,808	1,014,297	143,336
Not working	2,192,365	1,887,385	304,981	916,817	168,767	970,568	136,213
Work with pay	4,466	3,662	804	2,811	465	851	339
Work without pay	104,244	90,884	13,360	48,005	6,576	42,878	6,784

Table 52 : Migrants by sex, age group, urban/rural area and place of residence prior to migration, August 2016

Place of usual residence prior to migration	Sex		Residential Area		Broad Age Group		
	Total	Male	Female	Urban	Rural	0-15 yrs	16+ yrs
Rwanda	1,214,728	591,189	623,539	571,103	643,625	322,757	891,971
Bugesera	71,735	35,954	35,780	18,252	53,483	27,740	43,995
Burera	8,802	3,889	4,913	-	8,802	3,418	5,384
Gakenke	11,625	5,474	6,151	1,097	10,527	2,424	9,201
Gasabo	200,989	102,433	98,556	163,992	36,996	33,596	167,393
Gatsibo	59,118	24,970	34,148	8,354	50,764	23,053	36,065
Gicumbi	16,526	8,066	8,461	7,212	9,314	4,053	12,473
Gisagara	12,275	6,777	5,498	-	12,275	4,629	7,646
Huye	12,046	5,571	6,475	10,356	1,691	2,488	9,558
Kamonyi	54,166	32,313	21,853	31,335	22,831	12,573	41,593
Karongi	28,201	11,540	16,661	7,311	20,890	8,345	19,855
Kayonza	57,014	25,783	31,231	5,719	51,295	24,074	32,940
Kicukiro	154,027	75,521	78,506	141,581	12,446	23,867	130,160
Kirehe	30,267	15,394	14,873	4,047	26,220	10,085	20,182
Muhanga	29,747	11,256	18,491	14,805	14,942	7,803	21,944
Musanze	37,497	17,340	20,156	27,409	10,088	10,598	26,899
Ngoma	17,615	7,855	9,760	4,031	13,584	5,897	11,718
Ngororero	1,827	811	1,016	540	1,287	904	924
Nyabihu	14,991	6,754	8,237	4,084	10,906	5,719	9,272
Nyagatare	117,429	61,151	56,278	19,083	98,345	44,412	73,017
Nyamagabe	9,976	4,387	5,589	2,759	7,217	1,829	8,147
Nyamasheke	13,979	7,658	6,321	3,359	10,620	3,959	10,020
Nyanza	22,841	11,192	11,649	957	21,883	6,245	16,596

Place of usual residence prior to migration	Sex		Residential Area		Broad Age Group		
	Total	Male	Female	Urban	Rural	0-15 yrs	16+ yrs
Nyarugenge	94,063	47,517	46,547	69,305	24,758	15,069	78,994
Nyaruguru	3,971	1,653	2,317	-	3,971	1,740	2,231
Rubavu	18,259	7,842	10,417	11,016	7,242	3,323	14,936
Ruhango	36,782	19,026	17,756	5,280	31,502	10,932	25,850
Rulindo	18,386	7,872	10,514	3,190	15,196	3,645	14,740
Rusizi	15,106	7,188	7,918	4,974	10,132	3,484	11,622
Rutsiro	4,891	1,517	3,373	-	4,891	1,027	3,864
Rwamagana	40,579	16,484	24,095	1,054	39,525	15,825	24,754
Outside Rwanda	88,973	45,241	43,732	43,017	45,956	30,691	58,283
- Burundi	14,239	8,258	5,981	10,617	3,622	1,603	12,636
- Congo-Kinshasa DRC	23,895	11,306	12,589	11,883	12,012	10,366	13,530
- Kenya	1,706	1,047	658	1,706	-	208	1,497
- Tanzania	15,818	7,704	8,114	1,600	14,219	6,892	8,926
- Uganda	25,109	12,288	12,821	9,835	15,274	9,500	15,609
- Rest of Africa	1,370	1,178	192	879	490	-	1,370
- Other country	6,837	3,460	3,377	6,498	339	2,123	4,714

Table 53: Internal and international migrants by labour force status, sex, urban/rural area, August 2016

	Total	Employed	Unemployed	Outside labour force	LFPR	Emp-Pop	UR
Total migrants (16+ yrs)	950,254	542,419	112,491	295,343	68.9	57.1	17.2
Male	463,591	320,826	47,792	94,973	79.5	69.2	13.0
Female	486,663	221,593	64,700	200,370	58.8	45.5	22.6
Urban	497,274	313,368	56,513	127,394	74.4	63.0	15.3
Rural	452,979	229,051	55,979	167,949	62.9	50.6	19.6
Internal migrants (16+ yrs)	891,971	516,398	107,169	268,405	69.9	57.9	17.2
Male	431,921	303,066	45,627	83,228	80.7	70.2	13.1
Female	460,050	213,331	61,542	185,177	59.7	46.4	22.4
Urban	466,670	298,496	52,750	115,424	75.3	64.0	15.0
Rural	425,301	217,901	54,419	152,981	64.0	51.2	20.0
International migrants (16+ yrs)	58,283	26,021	5,323	26,938	53.8	44.6	17.0
Male	31,669	17,759	2,165	11,745	62.9	56.1	10.9
Female	26,613	8,262	3,158	15,193	42.9	31.0	27.7
Urban	30,604	14,871	3,763	11,970	60.9	48.6	20.2
Rural	27,678	11,150	1,560	14,968	45.9	40.3	12.3

Table 54: Internal and international migrants by labour force status and main reason for migration, August 2016

Main reason for migration	Total	Employed	Unemployed	Outside labour force	LFPR	Emp-Pop	UR
Total migrants (16+ yrs)	950,254	542,419	112,491	295,343	68.9	57.1	17.2
Parents moved	87,404	27,799	6,641	52,964	39.4	31.8	19.3
To live with relatives	92,824	31,012	11,542	50,270	45.8	33.4	27.1
To attend school	45,001	9,897	9,630	25,474	43.4	22.0	49.3
Marriage	99,911	36,513	15,333	48,065	51.9	36.5	29.6
Family quarrel	15,761	6,313	1,103	8,345	47.0	40.1	14.9
Divorce	7,691	3,597	2,428	1,667	78.3	46.8	40.3
New job	75,315	71,211	1,776	2,328	96.9	94.6	2.4
Job transfer	24,293	22,423	142	1,728	92.9	92.3	0.6
To look for work	255,160	203,229	30,344	21,587	91.5	79.6	13.0
Looking for land to farm	118,607	60,312	16,358	41,936	64.6	50.9	21.3
Loss of employment	12,905	8,994	1,100	2,811	78.2	69.7	10.9
Employment of spouse	26,386	12,998	3,235	10,153	61.5	49.3	19.9
Coming back in country	24,465	10,605	2,524	11,336	53.7	43.3	19.2
Other	64,531	37,516	10,335	16,680	74.2	58.1	21.6
					0.0	0.0	0.0
Internal migrants (16+ yrs)	891,971	516,398	107,169	268,405	69.9	57.9	17.2
Parents moved	82,647	27,582	6,641	48,424	41.4	33.4	19.4
To live with relatives	85,462	29,668	10,990	44,804	47.6	34.7	27.0
To attend school	41,526	9,275	8,916	23,335	43.8	22.3	49.0
Marriage	98,168	35,751	15,105	47,312	51.8	36.4	29.7
Family quarrel	15,078	5,710	1,103	8,265	45.2	37.9	16.2
Divorce	7,312	3,218	2,428	1,667	77.2	44.0	43.0
New job	72,148	68,456	1,776	1,916	97.3	94.9	2.5
Job transfer	23,232	21,362	142	1,728	92.6	92.0	0.7
To look for work	248,893	197,847	29,585	21,462	91.4	79.5	13.0

Main reason for migration	Total	Employed	Unemployed	Outside labour force	LFPR	Emp-Pop	UR
Looking for land to farm	117,607	60,312	16,358	40,936	65.2	51.3	21.3
Loss of employment	12,065	8,503	1,100	2,462	79.6	70.5	11.5
Employment of spouse	25,295	12,389	3,095	9,812	61.2	49.0	20.0
Coming back in country	5,853	3,181	1,138	1,534	73.8	54.3	26.4
Other	56,684	33,144	8,792	14,748	74.0	58.5	21.0
					0.0	0.0	0.0
International migrants (16+ yrs)	58,283	26,021	5,323	26,938	53.8	44.6	17.0
Parents moved	4,757	217	-	4,540	4.6	4.6	0.0
To live with relatives	7,362	1,344	553	5,465	25.8	18.3	29.1
To attend school	3,475	621	714	2,140	38.4	17.9	53.5
Marriage	1,743	763	227	753	56.8	43.8	23.0
Family quarrel	682	602	-	80	88.2	88.2	0.0
Divorce	380	380	-	-	100.0	100.0	0.0
New job	3,167	2,755	-	412	87.0	87.0	0.0
Job transfer	1,061	1,061	-	-	100.0	100.0	0.0
To look for work	6,267	5,382	759	125	98.0	85.9	12.4
Looking for land to farm	1,000	-	-	1,000	0.0	0.0	
Loss of employment	840	490	-	349	58.4	58.4	0.0
Employment of spouse	1,090	610	140	341	68.7	55.9	18.7
Coming back in country	18,612	7,424	1,386	9,802	47.3	39.9	15.7
Other	7,848	4,373	1,543	1,932	75.4	55.7	26.1

Table 55: Migrant workers by sex, urban/rural area, prior place of residence and branch of economic activity, August 2016

	Total	Male	Female	Urban	Rural	Internal Migrants	External migrants
Total migrant workers (employed migrants)	542,419	320,826	221,593	313,368	229,051	516,398	26,021
Agriculture, forestry and fishing	98,193	50,141	48,053	12,878	85,316	92,213	5,980
Mining and quarrying	2,109	1,983	126	561	1,547	2,109	
Manufacturing	26,197	17,230	8,967	14,094	12,104	26,019	178
Electricity, gas stream and air condition	1,146	1,035	111	635	512	1,091	56
Water supply, gas and remediation services	5,496	3,169	2,326	2,478	3,017	4,989	507
Construction	59,763	52,543	7,220	34,491	25,271	57,472	2,290
Wholesale and retail trade, repair of motor vehicles ...	77,330	39,906	37,424	51,046	26,284	73,047	4,283
Transportation and storage	23,760	22,693	1,067	15,927	7,833	23,167	593
Accommodation and food services activities	23,892	11,423	12,469	12,268	11,624	21,604	2,288
Information and communication	6,979	5,299	1,680	6,979		6,593	386
Financial and insurance activities	8,586	6,313	2,273	7,639	947	8,151	435
Real estate activities	69	69		69		69	
Professional, scientific and technical activities	6,180	4,108	2,072	5,952	228	4,996	1,184
Administrative and support activities	13,134	9,156	3,978	9,590	3,544	13,134	
Public administration and defence, compulsory ...	18,554	15,364	3,190	14,708	3,846	17,114	1,440
Education	23,823	13,821	10,002	11,076	12,747	22,505	1,318
Human health and social work activities	13,601	5,810	7,791	7,813	5,788	12,625	976
Arts, entertainment and recreation	2,900	2,779	122	2,490	410	2,830	70
Other services	14,934	10,543	4,390	11,112	3,821	13,826	1,107
Activities of households as employers	112,827	45,604	67,223	89,079	23,748	110,767	2,060
Activities of extraterritorial organizations	2,946	1,838	1,108	2,483	463	2,076	870

Table 56 : Summary labour force indicators, August 2016 (City of Kigali)

	Total	Sex		Residential Area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Population 16 years old and over	996,039	499,662	496,376	777,864	218,175	109,179	886,860
Labour force	668,460	381,516	286,944	536,858	131,602	61,485	606,974
Employed	549,702	329,074	220,628	446,202	103,500	45,498	504,204
Unemployed	118,758	52,442	66,316	90,655	28,102	15,987	102,770
Outside labour force	327,579	118,146	209,433	241,006	86,573	47,694	279,885
Labour underutilization	356,441	148,774	207,667	252,313	104,128	61,860	294,581
Unemployed	118,758	52,442	66,316	90,655	28,102	15,987	102,770
Time-related underemployed	84,916	49,239	35,677	55,960	28,956	14,271	70,646
Potential labour force	152,767	47,093	105,674	105,697	47,069	31,601	121,165
Labour force participation rate	67.1	76.4	57.8	69.0	60.3	56.3	68.4
Employment-to-population ratio	55.2	65.9	44.4	57.4	47.4	41.7	56.9
LU1 - Unemployment rate	17.8	13.7	23.1	16.9	21.4	26.0	16.9
LU2 - Combined rate of unemployment and time-related underemployment	30.5	26.7	35.5	27.3	43.4	49.2	28.6
LU3 - Combined rate of unemployment and potential labour force	33.1	23.2	43.8	30.6	42.1	51.1	30.8
LU4 - Composite measure of labour underutilization	43.4	34.7	52.9	39.3	58.3	66.5	40.5
Youth unemployment rate (16-24 yrs)	20.1	17.3	22.5	18.9	24.7	38.6	18.9
Unemployment rate of young people (16-30 yrs)	20.8	15.8	26.5	20	24.6	33.4	20
Median monthly cash earnings of employees at main job	52,000	66,667	26,000	52,000	30,000	26,000	52,000

Table 57: Summary labour force indicators, August 2016 (South province)

	Total	Sex		Residential Area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Population 16 years old and over	1,346,466	624,831	721,635	173,519	1,172,947	734,899	611,567
Labour force	637,928	361,288	276,641	104,481	533,447	345,469	292,459
Employed	523,981	307,054	216,926	88,781	435,200	272,006	251,975
Unemployed	113,948	54,233	59,714	15,700	98,247	73,463	40,484
Outside labour force	708,537	263,544	444,994	69,038	639,499	389,430	319,108
Labour underutilization	659,291	287,558	371,733	67,501	591,791	468,430	190,861
Unemployed	113,948	54,233	59,714	15,700	98,247	73,463	40,484
Time-related underemployed	175,989	98,385	77,604	22,854	153,135	125,670	50,318
Potential labour force	369,355	134,940	234,415	28,947	340,409	269,296	100,059
Labour force participation rate	47.4	57.8	38.3	60.2	45.5	47.0	47.8
Employment-to-population ratio	38.9	49.1	30.1	51.2	37.1	37.0	41.2
LU1 - Unemployment rate	17.9	15.0	21.6	15.0	18.4	21.3	13.8
LU2 - Combined rate of unemployment and time-related underemployment	45.4	42.2	49.6	36.9	47.1	57.6	31.0
LU3 - Combined rate of unemployment and potential labour force	48.0	38.1	57.6	33.5	50.2	55.8	35.8
LU4 - Composite measure of labour underutilization	65.5	57.9	72.7	50.6	67.7	76.2	48.6
Youth unemployment rate (16-24 yrs)	19.9	15.9	24.3	20.6	19.7	24.1	17.1
Unemployment rate of young people (16-30 yrs)	19.6	14.7	25.4	16	20.6	25	15.2
Median monthly cash earnings of employees at main job	20,800	26,000	15,600	30,000	18,200	18,200	26,000

Table 58: Summary labour force indicators, August 2016 (West province)

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Population 16 years old and over	1,435,521	655,832	779,690	247,744	1,187,777	789,198	646,323
Labour force	707,476	375,329	332,147	131,742	575,733	428,194	279,282
Employed	543,485	304,301	239,185	110,592	432,894	310,355	233,130
Unemployed	163,990	71,028	92,962	21,151	142,840	117,839	46,151
Outside labour force	728,046	280,503	447,543	116,002	612,043	361,004	367,041
Labour underutilization	687,095	288,615	398,480	97,785	589,309	469,117	217,978
Unemployed	163,990	71,028	92,962	21,151	142,840	117,839	46,151
Time-related underemployed	177,759	89,543	88,215	23,256	154,502	126,144	51,614
Potential labour force	345,346	128,043	217,303	53,378	291,968	225,134	120,212
Labour force participation rate	49.3	57.2	42.6	53.2	48.5	54.3	43.2
Employment-to-population ratio	37.9	46.4	30.7	44.6	36.4	39.3	36.1
LU1 - Unemployment rate	23.2	18.9	28.0	16.1	24.8	27.5	16.5
LU2 - Combined rate of unemployment and time-related underemployment	48.3	42.8	54.5	33.7	51.6	57.0	35.0
LU3 - Combined rate of unemployment and potential labour force	48.4	39.5	56.5	40.3	50.1	52.5	41.6
LU4 - Composite measure of labour underutilization	65.3	57.3	72.5	52.8	67.9	71.8	54.6
Youth unemployment rate (16-24 yrs)	30.2	24.9	36.6	24.8	31.3	35.5	24
Unemployment rate of young people (16-30 yrs)	27.7	22.3	33.7	18.9	29.6	34.2	20.2
Median monthly cash earnings of employees at main job	20,800	26,000	18,200	30,000	18,200	18,200	26,000

Table 59: Summary labour force indicators, August 2016 (North province)

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Population 16 years old and over	1,166,540	536,851	629,689	161,810	1,004,730	713,548	452,992
Labour force	460,912	271,618	189,293	90,443	370,469	261,865	199,047
Employed	384,703	227,231	157,472	74,925	309,778	210,174	174,529
Unemployed	76,209	44,387	31,821	15,517	60,691	51,690	24,518
Outside labour force	705,628	265,232	440,396	71,367	634,261	451,684	253,945
Labour underutilization	552,478	243,048	309,429	67,683	484,794	417,673	134,805
Unemployed	76,209	44,387	31,821	15,517	60,691	51,690	24,518
Time-related underemployed	132,615	66,694	65,921	20,308	112,307	93,881	38,734
Potential labour force	343,654	131,967	211,687	31,858	311,796	272,101	71,552
Labour force participation rate	39.5	50.6	30.1	55.9	36.9	36.7	43.9
Employment-to-population ratio	33.0	42.3	25.0	46.3	30.8	29.5	38.5
LU1 - Unemployment rate	16.5	16.3	16.8	17.2	16.4	19.7	12.3
LU2 - Combined rate of unemployment and time-related underemployment	45.3	40.9	51.6	39.6	46.7	55.6	31.8
LU3 - Combined rate of unemployment and potential labour force	52.2	43.7	60.7	38.7	54.6	60.6	35.5
LU4 - Composite measure of labour underutilization	68.7	60.2	77.2	55.3	71.1	78.2	49.8
Youth unemployment rate (16-24 yrs)	19.6	19.4	19.9	25	18.2	23.4	16.1
Unemployment rate of young people (16-30 yrs)	19.5	19.3	19.8	22.2	18.7	23.6	15.6
Median monthly cash earnings of employees at main job	20,800	26,000	18,200	39,000	20,800	18,200	30,000

Table 60: Summary labour force indicators, August 2016 (East province)

	Total	Sex		Residential area		Participated in subsistence agriculture	Not participated in subsistence agriculture
		Male	Female	Urban	Rural		
Population 16 years old and over	1,628,682	754,261	874,421	159,571	1,469,111	909,689	718,993
Labour force	854,488	473,742	380,746	91,453	763,035	494,723	359,765
Employed	701,340	402,690	298,650	78,281	623,059	392,412	308,928
Unemployed	153,148	71,052	82,096	13,172	139,976	102,311	50,837
Outside labour force	774,194	280,519	493,675	68,118	706,076	414,966	359,228
Labour underutilization	807,578	347,210	460,368	61,327	746,250	558,748	248,829
Unemployed	153,148	71,052	82,096	13,172	139,976	102,311	50,837
Time-related underemployed	277,234	148,986	128,248	18,236	258,998	189,773	87,461
Potential labour force	377,196	127,172	250,024	29,920	347,276	266,665	110,531
Labour force participation rate	52.5	62.8	43.5	57.3	51.9	54.4	50.0
Employment-to-population ratio	43.1	53.4	34.2	49.1	42.4	43.1	43.0
LU1 - Unemployment rate	17.9	15.0	21.6	14.4	18.3	20.7	14.1
LU2 - Combined rate of unemployment and time-related underemployment	50.4	46.4	55.2	34.3	52.3	59.0	38.4
LU3 - Combined rate of unemployment and potential labour force	43.1	33.0	52.7	35.5	43.9	48.5	34.3
LU4 - Composite measure of labour underutilization	65.6	57.8	73.0	50.5	67.2	73.4	52.9
Youth unemployment rate (16-24 yrs)	20.9	16.1	26.6	24.5	20.4	25.1	16.4
Unemployment rate of young people (16-30 yrs)	19.9	14.9	26.3	17.5	20.2	22.9	16.7
Median monthly cash earnings of employees at main job	18,200	20,800	18,000	50,000	18,200	18,200	20,800

Table 61: Employment by sex, urban/rural area and branch of economic activity, August 2016 (City of Kigali)

	Sex			Residential Area	
	Total	Male	Female	Urban	Rural
Employed population 16 years old and over	549,702	329,074	220,628	446,202	103,500
Agriculture, forestry and fishing	36,515	17,327	19,188	10,494	26,021
Mining and quarrying	3,855	3,324	531	1,447	2,408
Manufacturing	34,709	19,812	14,897	25,438	9,271
Electricity, gas steam and air condition	1,172	1,061	111	858	314
Water supply, gas and remediation services	3,540	2,423	1,117	3,003	537
Construction	67,107	56,256	10,851	49,620	17,486
Wholesale and retail trade, repair of motor vehicles	114,431	57,747	56,685	96,237	18,195
Transportation and storage	41,373	39,942	1,431	33,014	8,359
Accommodation and food services	28,226	15,941	12,285	24,120	4,106
Information and communication	8,983	6,454	2,529	8,615	368
Financial and insurance activities	9,059	4,670	4,388	8,896	163
Real estate activities	68.5	68.5	-	68.5	-
Professional, scientific and technical activities	9,502	7,272	2,230	9,273	228
Administrative and support activities	16,192	11,616	4,575	14,924	1,267
Public administration and defense, compulsory ...	22,360	16,510	5,850	20,994	1,365
Education	19,034	10,206	8,828	17,478	1,556
Human health and social work activities	11,546	4,645	6,901	10,064	1,482
Arts, entertainment and recreation	3,834	3,191	644	3,834	-
Other services	18,584	12,329	6,255	16,217	2,367
Activities of households as employers	92,935	33,753	59,182	85,645	7,291
Activities of extraterritorial organizations	6,678	4,525	2,153	5,963	716

Table 62: Employment by sex, urban/rural area and branch of economic activity, August 2016 (South province)

	Total	Sex		Residential area	
		Male	Female	Urban	Rural
Employed population 16 years old and over	523,981	307,054	216,926	88,781	435,200
Agriculture, forestry and fishing	217,614	99,260	118,354	15,962	201,652
Mining and quarrying	11,204	11,099	105	-	11,204
Manufacturing	36,800	20,260	16,539	6,687	30,112
Electricity, gas stream and air condition	39	39	-	-	39
Water supply, gas and remediation services	2,535	1,679	856	-	2,535
Construction	64,148	58,092	6,055	10,795	53,353
Wholesale and retail trade, repair of motor vehicles ...	61,812	34,863	26,949	17,636	44,176
Transportation and storage	16,670	15,906	764	6,533	10,137
Accommodation and food services	14,077	9,119	4,958	2,404	11,672
Information and communication	1,464	991	473	991	473
Financial and insurance activities	1,906	971	934	995	911
Real estate activities	-	-	-	-	-
Professional, scientific and technical activities	1,349	1,349	-	1,349	-
Administrative and support activities	3,805	2,798	1,007	682	3,123
Public administration and defense, compulsory ...	8,205	6,339	1,866	3,450	4,756
Education	19,998	10,097	9,902	3,104	16,895
Human health and social work activities	8,068	2,479	5,588	1,647	6,421
Arts, entertainment and recreation	587	-	587	-	587
Other services	15,035	11,533	3,502	4,227	10,807
Activities of households as employers	36,999	19,287	17,712	11,425	25,574
Activities of extraterritorial organizations	1,668	894	774	894	774

Table 63: Employment by sex, urban/rural area and branch of economic activity, August 2016 (West province)

	Total	Sex		Residential area	
		Male	Female	Urban	Rural
Employed population 16 years old and over	543,485	304,301	239,185	110,592	432,894
Agriculture, forestry and fishing	236,528	100,160	136,368	18,448	218,080
Mining and quarrying	9,533	9,533	-	773	8,760
Manufacturing	35,964	25,654	10,310	8,448	27,516
Electricity, gas stream and air condition	1,083	1,083	-	-	1,083
Water supply, gas and remediation services	1,146	586	560	586	560
Construction	67,332	61,457	5,875	14,459	52,873
Wholesale and retail trade, repair of motor vehicles ...	79,186	31,396	47,790	28,233	50,953
Transportation and storage	17,158	16,627	531	7,097	10,061
Accommodation and food services	17,903	9,294	8,609	3,007	14,896
Information and communication	1,311	905	406	1,311	-
Financial and insurance activities	4,390	2,992	1,398	2,848	1,543
Real estate activities	-	-	-	-	-
Professional, scientific and technical activities	1,196	748	448	448	748
Administrative and support activities	3,688	3,013	675	1,279	2,409
Public administration and defense, compulsory ...	11,120	9,043	2,076	4,942	6,177
Education	19,315	10,815	8,500	6,302	13,014
Human health and social work activities	7,163	2,300	4,863	2,340	4,823
Arts, entertainment and recreation	858	858	-	448	410
Other services	12,780	7,857	4,923	2,171	10,608
Activities of households as employers	15,156	9,305	5,851	7,451	7,704
Activities of extraterritorial organizations	675	675	-	-	675

Table 64: Employment by sex, urban/rural area and branch of economic activity, August 2016 (North province)

	Total	Sex		Residential Area	
		Male	Female	Urban	Rural
Employed population 16 years old and over	384,703	227,231	157,472	74,925	309,778
Agriculture, forestry and fishing	158,246	68,021	90,226	13,186	145,060
Mining and quarrying	7,938	6,225	1,713	464	7,474
Manufacturing	23,688	18,827	4,861	2,239	21,449
Electricity, gas stream and air condition	-	-	-	-	-
Water supply, gas and remediation services	924	924	-	586	338
Construction	40,271	35,860	4,411	10,580	29,691
Wholesale and retail trade, repair of motor vehicles ...	58,404	32,577	25,827	18,289	40,115
Transportation and storage	13,671	11,916	1,755	6,355	7,317
Accommodation and food services	14,344	7,744	6,600	4,217	10,127
Information and communication	661	338	323	-	661
Financial and insurance activities	2,535	1,612	923	1,612	923
Real estate activities	-	-	-	-	-
Professional, scientific and technical activities	-	-	-	-	-
Administrative and support activities	2,848	2,327	521	1,063	1,785
Public administration and defense, compulsory ...	13,096	10,770	2,326	4,449	8,647
Education	18,510	11,021	7,490	2,409	16,101
Human health and social work activities	4,213	2,798	1,415	1,520	2,693
Arts, entertainment and recreation	464	464	-	464	-
Other services	10,359	7,868	2,491	1,486	8,873
Activities of households as employers	13,708	7,395	6,313	5,728	7,980
Activities of extraterritorial organizations	822	545	277	277	545

Table 65: Employment by sex, urban/rural area and branch of economic activity, August 2016 (East province)

	Total	Sex		Residential area	
		Male	Female	Urban	Rural
Employed population 16 years old and over	701,340	402,690	298,650	78,281	623,059
Agriculture, forestry and fishing	358,268	173,186	185,082	13,467	344,801
Mining and quarrying	5,078	5,078	-	794	4,284
Manufacturing	24,284	12,317	11,967	2,163	22,121
Electricity, gas stream and air condition	403	403	-	403	-
Water supply, gas and remediation services	4,904	2,908	1,996	428	4,475
Construction	64,044	58,463	5,581	6,447	57,597
Wholesale and retail trade, repair of motor vehicles ...	82,307	48,329	33,978	17,846	64,461
Transportation and storage	20,240	20,240	-	1,681	18,559
Accommodation and food services	43,504	19,168	24,336	5,230	38,274
Information and communication	1,607	801	806	1,607	-
Financial and insurance activities	972	569	403	972	-
Real estate activities	-	-	-	-	-
Professional, scientific and technical activities	1,351	874	477	1,351	-
Administrative and support activities	8,571	7,186	1,385	3,239	5,332
Public administration and defense, compulsory ...	14,027	8,217	5,810	3,998	10,029
Education	26,576	16,736	9,840	3,656	22,920
Human health and social work activities	7,247	3,474	3,772	2,707	4,539
Arts, entertainment and recreation	-	-	-	-	-
Other services	12,259	7,749	4,510	2,665	9,594
Activities of households as employers	23,698	15,934	7,764	9,152	14,545
Activities of extraterritorial organizations	2,002	1,058	944	477	1,526

Table 66: Labour market indicators and educational type (general and Technical), August 2016

Type of education	LFPR	Emp-pop ratio	UR	LU2	Pop16+
Rwanda	50.6	41.1	18.8	62.3	6,573,248
No level completed	48.5	39.7	18.2	65.9	3,525,128
Completed general	49.6	39.8	19.8	59.5	2,576,415
Completed TVET	72.4	59	18.4	52.7	471,705
Urban					
Urban	62.8	52.5	16.4	45.4	1,520,508
No level completed	64.4	56.1	13	47.3	460,771
Completed general	58.1	47.4	18.5	45.4	862,490
Completed TVET	79.6	66.9	16	41.2	197,248
Rural					
Rural	47	37.7	19.8	67.8	5,052,740
No level completed	46.1	37.2	19.2	69	3,064,357
Completed general	45.3	36	20.6	67	1,713,926
Completed TVET	67.2	53.4	20.5	61.1	274,457
Male					
Male	60.7	51.1	15.7	54.1	3,071,437
No level completed	59.5	51	14.3	58	1,545,488
Completed general	57.5	47.5	17.5	51.7	1,263,651
Completed TVET	83	69.8	15.8	43.7	262,298
Female					
Female	41.9	32.4	22.7	70.3	3,501,811
No level completed	40	30.9	22.6	73	1,979,640
Completed general	41.9	32.4	22.8	67.5	1,312,764
Completed TVET	59.1	45.5	23	64.9	209,407

Table 67: Labour market indicators and attained level of education among those who completed TVET, August 2016

Type of education	LFPR	Emp-pop ratio	UR	LU2	Pop 16+
Rwanda	72.4	59	18.4	52.7	471,705
None	72	56.1	22.1	57.3	120,175
Primary	69.1	58.7	15.1	52.5	216,987
Lower secondary	74	59.9	19	53.9	70,897
Upper secondary	81.5	63.1	22.6	46.1	49,142
University	86.3	70.8	18	36.8	14,504
Urban	79.6	66.9	16	41.2	197,248
None	75.1	62.1	17.4	41.8	37,083
Primary	76.7	67.2	12.4	41.9	75,980
Lower secondary	83.7	72.4	13.5	38.8	37,078
Upper secondary	83.6	64.6	22.8	43.1	35,082
University	87.1	68.8	20.9	37	12,024
Rural	67.2	53.4	20.5	61.1	274,457
None	70.7	53.5	24.3	64.1	83,092
Primary	64.9	54	16.8	58.2	141,007
Lower secondary	63.3	46.2	26.9	71.1	33,819
Upper secondary	76.2	59.4	22.1	53.7	14,060
University	82.8	80.4	2.9	35.9	2,480
Male	83	69.8	15.8	43.7	262,298
None	82.8	66.2	20	49.9	68,177
Primary	80.9	71.3	11.9	40.4	117,813
Lower secondary	85	75	11.8	43.9	32,454
Upper secondary	87	66.9	23.1	44.3	33,725
University	88.2	70.1	20.5	38.1	10,129
Female	59.1	45.5	23	64.9	209,407
None	58	42.9	26	68.3	51,998
Primary	55	43.6	20.6	67.7	99,175
Lower secondary	64.6	47.2	26.9	62.9	38,443
Upper secondary	69.5	54.7	21.2	50.6	15,417
University	82	72.5	11.5	33.9	4,374

Annex D: Questionnaire

Annex E: List of officials involved in the survey

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