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### Integrated business enterprise survey ; 2015

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The Republic of Rwanda



# Integrated Business Enterprise Survey 2015

National Institute of Statistics of Rwanda



**REPUBLIC OF RWANDA**



# Integrated Business Enterprise Survey 2015

**NATIONAL INSTITUTE OF STATISTICS OF RWANDA**

June 30, 2017

Authored by: Department of Economic Statistics

The Integrated Business Enterprise Survey, 2015 (IBES 2015) is produced by the National Institute of Statistics of Rwanda (NISR).

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## Foreword

The Integrated Business Enterprise Survey in Rwanda 2015 (IBES 2015) is a comprehensive enterprise survey undertaken to collect, compile, and analyze data on the level and structure of non-agricultural economic activity in the country for both informal and formal sectors with the formal sector defined as those businesses registered with the Rwanda Revenue Authority (RRA). Also included in formal all those companies which keep business accounts and or have 30 employees or more.

The survey has been carried out by the National Institute of Statistics of Rwanda (NISR) from 10<sup>th</sup> August 2016 to 8<sup>th</sup> January 2017 with the year 2015 as the reference period.

IBES 2015 addresses lack of business data and provide inputs vital to the formulation of government economic policy and the monitoring of performance against development goals, as well as providing information for the expansion of the business sector and market research.

IBES 2015 has drawn crucial lessons from the IBES 2014 and the pilot IBES 2013. These lessons have already been used to introduce improvements to the IBES 2015.

The survey targets all enterprises classified under Sections B to S of the International Standard Industrial Classification of All Economic Activities, Revision 4 (ISIC-4). It gathers detailed enterprise level data through questions on employment, compensation to workers, fixed assets, and background information such as location, ownership status, and business environment to mention but a few.

Conducting an enterprise survey constitutes a challenging and enriching experience, significantly improving NISR capacity to accomplish its mandate. NISR staff was involved in every aspect— the design, formulation of the questionnaire, implementation, data processing, and report writing. At least three levels of training were conducted, and instruction manual was written. NISR has conducted field visits to monitor data collection. Data editing was carried out simultaneously with data collection to ensure timely rectification of any mistakes in data collection.

This report presents main results of the survey. It introduces the survey in Chapter 1, sample design in Chapter 2, and survey results in Chapter 3. Key concepts and data collection methodology are presented in Chapter 4.

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## Acknowledgments

The *2015 Rwanda Integrated Business Enterprise Survey Report* is the outcome of many months of cooperative effort of NISR staff.

The project recognizes the leadership of NISR management at various stages of the survey, spearheading the monitoring of the progress of data collection during the actual survey period. Their suggestions and comments on the report are also acknowledged with thanks.

The Department of Economic Statistics coordinated the field operations and supplied clarifications on technical matters related to the survey. Special thanks are due to the technical committee members, who at all stages of the fieldwork visited enumerators to assess whether data collection guidelines were being followed and suggested remedial measures.

Recognition goes to all primary fieldworkers, all team leaders, and all data editors posted in different districts. Commendations go to them for doing codification and data entry after fieldwork.

Dr. Mohamed Abulata has provided technical expertise to the project from the start of this project. Youll Plan Ltd has been instrumental in the development of survey methodology, including the construction of the survey instruments, instruction manual, tabulation plan, data analysis, and preparation of the report.

Grateful acknowledgments are also given to all formal and informal enterprises which have cooperated and therefore to whom we assure high confidentiality.





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## List of abbreviations

<b>EC</b>	: Establishment Census
<b>EUCL</b>	: Energy Utility Corporation Limited
<b>EWSA</b>	: Energy, Water and Sanitation Authority
<b>IBES 2014</b>	: Integrated Business Enterprise Survey with the year 2014 as the reference period
<b>IBES 2015</b>	: Integrated Business Enterprise Survey with the year 2015 as the reference period
<b>ISIC</b>	: International Standard Industrial Classification
<b>NISR</b>	: National Institute of Statistics of Rwanda
<b>NPISH</b>	: Non Profit Institutions Serving Households
<b>PAYE</b>	: Pay As You Earn
<b>RCPA</b>	: Rwanda Classification of Products by Activity
<b>RURA</b>	: Rwanda Utility Regulatory Agency
<b>TIN</b>	: Tax identification number
<b>VAT</b>	: Value Added Tax
<b>WASAC</b>	: Water and Sanitation Corporation

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## **IBES 2015 sectoral coverage and report highlights**

### **Sectoral coverage**

IBES 2015 covered all non-agricultural enterprises classified under Sections B to S of the International Standard Industrial Classification of All Economic Activities, Revision 4 (ISIC-4). The 16 activities include:

- Mining and quarrying;
- Manufacturing;
- Electricity, gas, steam and air conditioning supply;
- Water supply, sewage, waste management and remediation activity;
- Construction;
- Wholesale and retail trade; repair of motor vehicles and motorcycles;
- Transportation and storage;
- Accommodation and food service activities;
- Information and communication;
- Financial and insurance activities;
- Real estate activities;
- Professional, scientific and technical activities;
- Administrative and support service activities;
- Human health and social work activities;
- Arts, entertainment and recreation; and
- Other service activities

In addition to background information about each enterprise, this survey has collected data on the number of people employed, their compensation, operating expenses and receipts, value of fixed assets, and outstanding loans. In this report, we have presented total assets, total equity and total liabilities for each sector.

### **Key statistics from the survey**

- The estimated total number of workers in formal sector enterprises in 2015 was 183,667 working in estimated 10,172 enterprises;
- 51.7% of employees in the formal business sector were based in Kigali;
- The largest business activity in the formal sector is manufacturing, employing around 14.3% of all employees;
- 49.4% of formal businesses were owned by a single individuals, while around 22.2% were limited companies and 9.9% are cooperatives;
- 2.3% of enterprises employed at least 100 staff, while 38.3% had 3 employees or fewer;
- 90.5% of enterprises were owned by Rwandan resident, while 3.1% were owned by non-residents;
- 47.9% of businesses had been operating for less than 5 years, while 8.4% had been established for at least 20 years;
- Amongst the largest businesses (100 or more employees) 34.2% had been operating for less than 5 years, while 18.9% had been operating for 20 or more years;
- 70.1 % of formal sector employees were men, and 29.9% women.
- In the informal sector, 94.9% of all businesses had at most 3 employees.
- 61.1% of informal workers were men, and 38.9% women.



Tables 0.1 and 0.2 below summarize IBES survey findings for the collected IBES data for 2014 and 2015.

**Table 0.1: IBES key survey findings, 2014-2016**

#	Indicator/Reference year	2014	2015
1	The estimated total number of enterprises in formal sector	9,251	10,172
2	The estimated total number of workers in formal sector enterprises	175,244	183,667
3	Percentage of employees in the formal businesses working in Kigali	48.0	51.7
4	Percentage of formal businesses owned by single individuals	54.0	49.4
5	Percentage of limited companies in formal sector	18.0	22.2
6	Percentage of cooperatives in formal sector	10.0	9.9
7	Percentage of formal enterprises employing at least 100 persons (Large companies)	2.4	2.3
8	Percentage of formal enterprises employing 3 persons or fewer (Small businesses)	41.0	38.3
9	Percentage of formal enterprises owned by Rwandan residents	69.0	90.5
10	Percentage of formal enterprises owned by non-residents	2.4	3.1
11	Percentage of formal businesses of less than 5 years of operations	58.0	47.9
12	Percentage of formal businesses of at least 20 years of operations	9.0	8.4
13	Percentage of the largest businesses (with 100 or more employees) of less than 5 years of operations	31.0	34.2
14	Percentage of the largest businesses (with 100 or more employees) of 20 or more years of operations	18.0	18.9
15	Percentage of employed men in the formal sector	67.0	70.1
16	Percentage of employed women in the formal sector	33.0	29.9
17	Percentage of informal businesses with at most 3 employees (Small businesses)	91.7	94.9
18	Percentage of employed men in the informal sector	64.0	61.1
19	Percentage of employed women in the informal sector	36.0	38.9

Source: NISR, IBES 2014 and IBES 2015

**Table 0.2: Total income and expenditure, 2014-2015, Frw billion**

<b>Description</b>	<b>Income</b>		<b>Expenditure</b>	
	<b>2014</b>	<b>2015</b>	<b>2014</b>	<b>2015</b>
Mining and quarrying	157.3	106.4	163.1	108.2
Manufacturing	461.6	515.9	466.7	507.0
Electricity, gas and steam	72.2	114.6	101.1	111.5
Water supply; sewerage, waste management	2.0	17.2	1.6	16.0
Construction	343.6	416.9	298.7	393.7
Wholesale and retail trade; repair of motor vehicles	1,645.4	1,868.1	1,628.2	1,817.3
Transportation and storage	178.3	230.2	164.7	221.7
Accommodation and food service activities	78.9	96.3	78.7	107.4
Information and communication	207.1	201.8	242.4	293.9
Financial and insurance activities	480.6	375.8	365.5	305.2
Real estate activities	14.5	21.0	26.2	17.4
Professional, scientific and technical	43.4	53.6	40.3	44.6
Administrative and support service activities	40.7	52.1	30.0	44.0
Arts, entertainment and recreation	25.7	19.2	13.0	19.8
<b>Total</b>	<b>5,765.2</b>	<b>6,104.1</b>	<b>5,634.1</b>	<b>6,022.8</b>

Source: NISR, IBES 2015 Survey

# CHAPTER I: INTRODUCTION

## 1.1 Business Survey

The importance of a sound statistical database to development planning cannot be overemphasized. In particular, IBES has been planned to collect invaluable information about the state of business in the country, the number and nature of enterprises, their location, and who they are employing. It also collects information on business income and expenditure that are required for national accounting purposes, including the calculation of input-output ratios by industry. This information is useful for the private sector, the government and the development community alike.

In addition, the IBES project helps build and strengthen the capacity of the NISR - especially in the area of conducting enterprise surveys - including design, implementation, and data processing.

## 1.2 Coverage

IBES 2015 covered all non-agricultural enterprises classified under Sections B to S of the International Standard Industrial Classification of All Economic Activities, Revision 4 (ISIC-4). Meanwhile, the term “enterprise” referred to a commercial organization that operates on a for-profit basis and participates in selling goods or services to consumers. The term enterprise includes micro, small, medium and big businesses depending on the set criteria. The management of an enterprise typically develops a set of organizational objectives and a strategy for meeting those goals to help employees understand where the company is headed and how it intends to get there.

## 1.3 Sample Size

In any economy, the size or scale of operations of enterprises varies enormously, such as in the number of people employed, capital investment, output, and so on. Accordingly, the survey used a dual frame approach to data collection to improve the precision of estimates. A list frame of 2,658 formal enterprises and 2,359 informal enterprises was developed and targeted.

## 1.4 Schedules, Survey Period, Fieldwork

The survey employed simultaneously two schedules of enquiry, one to collect information for the formal sector and the other to collect information for the informal sector. These schedules were pre-tested in the field to ascertain the feasibility of data collection, and certain modifications were incorporated based on experience. Inquiries were almost completed in four months (from August 2016 to December 2016) with few late responses in the first week of January 2017.

A team of 121 primary fieldworkers, 17 team leaders, and 17 data editors did the fieldwork. Before the commencement of fieldwork a two-tier training program was conducted, that is, the training of master trainers/ supervisors and a training of the primary fieldworkers. The training of trainers took 4 days while the training of fieldworkers took 15 days. Data collectors have been trained on concepts and definitions involved in filling up the questionnaire during data collection. Practical sessions have been organized in which fieldworkers exercised on how to fill in the questionnaire modules and solve problems encountered therein.

In addition, at the preliminary stage of the fieldwork, field visits were conducted at selected samples to assess whether the guidelines of data collection were being properly followed in canvassing the schedules of enquiry and to suggest remedial measures. NISR monitored the progress of data collection during the survey period and provided necessary clarifications on technical survey matters. A technical committee comprising of NISR staff reviewed and commented on the new fieldwork revelations, and discussed them to come up with a practical solutions that were later shared to all IBES staff. A team of 60 did the data entry and helped in data cleaning while another team of 19 were helping in questionnaire coding.

### **1.5 Interpreting the Results**

The IBES 2015 is based on a sample of 2,658 formal and 2,359 informal sector enterprises, selected from an estimated 11,539 formal and 47,812 informal enterprises in 50 selected administrative sectors. Chapter II in this report describes the sampling procedure in more details. The survey has been designed so that it provides good quality estimates of shares or averages for the country as a whole.

All the estimates have been produced by ‘grossing-up’ the sample data. The sample was arranged so that all of the larger businesses in the country were completely enumerated, as in a census. But among the smaller formal businesses, only one in up to 13 was sampled. So the data from these sampled businesses are assumed to be representative of those not sampled.

However, errors arising from sampling are not the only kind of error that can occur in this type of exercise. These can include errors of reporting or recording the data and errors when capturing the data. Some businesses have been completely missed and for some no response was obtained. While every effort has been made to minimize these errors, some are likely to have escaped detection. When interpreting these tables, therefore, users should be aware that estimates of the overall levels may differ from the true (unknown) levels.

### **1.6 Comparison with the National Accounts**

The published national accounts statistics also includes estimates of economic activity for the whole of Rwanda. These may differ from the survey estimates if one compiles indicators such as gross value added. A key reason for the difference is that, when producing the national accounts, many other sources of data are used, in addition to information from the business sector. For example data on consumption patterns from the Rwandan household budget survey (Integrated Households Living Conditions Survey EICV), data on international trade, and from other surveys, notably the Seasonal Agricultural Survey.

A further difference between the estimates from this survey and the national accounts arises because of coverage. The IBES covers the formal and informal activities in observable business premises. The national accounts estimates additionally include goods and services produced by household businesses without identifiable premises, often numerous but on a small scale. They also implicitly include estimates for the ‘hidden’ economy (transactions that are not recorded in business accounts) for example, goods that retailers may withdraw from their stocks for their own consumption.

For this reason, the national accounts estimates should be considered as providing the measure of the level of gross value added and output. However, the IBES can be used to enrich understanding of the underlying activity of the business sector by providing more detailed information relating to investment, employment, credit, and the general business environment.

## **CHAPTER II: SAMPLE DESIGN**

### **2.1 Sampling frame**

A sampling frame comprises a list of all units from which a sample survey is selected. An up-to-date, good quality sampling frame is an essential pre-requisite for organizing a sample survey. An Economic Censuses (EC) of all establishments can provide such a sampling frame, giving a listing of enterprises and a count of workers by broad industry groups at the primary level of geographical units such as villages.

The Establishment Census carried out in 2014 (EC2014) served as the sampling frame for both formal IBES 2014 and IBES 2015; while for informal IBES 2016, the 2011 Establishment Census served as the sampling frame for the first stage sample and thereafter for the second stage sample a listing exercise was carried out in the sampled administrative sectors. In addition, for the formal IBES 2015 the EC2014 frame was supplemented using Rwanda Revenue Authority records to ensure that all the largest businesses were covered in the formal sector survey.

### **2.2 Formal sector sample**

The formal sector was defined in both Establishment Census and IBES as those businesses both registered with the Rwanda Revenue Authority (RRA) and keeping business accounts. The formal IBES 2015 sample was produced from four separate components: a partial panel based on the IBES 2014 sample; a top-up based on large firms from the VAT and BIT registers; a fully enumerated stratum taken from the PAYE register (for large NPISH firms); and a sample of smaller (NPISH) firms from the PAYE register. Informal IBES sample has been drawn after a full enumeration in the sampled administrative sectors.

#### **2.2.1 IBES panel**

This includes all firms which responded to the IBES 2014 survey. In total there were 1,876 such enterprises. The purpose of this panel component of the IBES 2015 sample is to preserve a time series element in the overall sample. This is designed to reduce the variance of the estimates of changes in the characteristics of the population over time. In addition, the panel should improve the overall response rate to the survey because all of the enterprises in this component were willing and able to respond in 2014.

#### **2.2.2 Top-up based on large firms from the VAT and BIT registers**

There were 345 enterprises which are registered with RRA for VAT or income tax and which are not in the IBES panel sample. This component of the sample includes all firms registered with RRA with turnover greater than 1 billion RWF in 2014.

#### **2.2.3 Large NPISH from PAYE register**

The IBES sample in 2014 included no more than a handful of non-profit organizations. The PAYE register includes 2,004 firms in this sector. All of those with employment greater than 30 were included in the IBES 2015 sample (273 in total).

## 2.2.4 Sampled NPISH from PAYE register

In addition to the inclusion of the largest NPISH firms from the PAYE register, a random sample of 166 small NPISH firms were selected from the PAYE register. This part of the sample was stratified by size of firm and by RCPA. A minimum stratum sample size of 10 was applied (or full enumeration for strata with fewer than 10 firms). See table below.

**Table II.1: Sampled NPISH from PAYE register**

<b>RCPA\Employees</b>	<b>0-3</b>	<b>4-30</b>	<b>Total</b>
Education	9	22	<b>31</b>
Human health activities	8	10	<b>18</b>
Social work activities	9	10	<b>19</b>
Other arts, entertainment and recreation	0	4	<b>4</b>
Other service activities	25	69	<b>94</b>
<b>Total</b>	<b>51</b>	<b>115</b>	<b>166</b>

Source: NISR

## 2.3 Formal sector estimation

Most of the estimates included in this report have been obtained by multiplying the data for each sampled enterprise by its weight. The weight assigned to completely enumerated businesses was 1, as these businesses represent only themselves. The larger businesses from whom no response was obtained have been excluded from this report.

The initial weights assigned to businesses in the sampled strata were the inverse of the probabilities of selection. For example, if half of the businesses in a stratum were selected, the initial weight was 2. These initial sample weights ranged between 2 and 13. It was also necessary to take account of the businesses for which no response could be obtained within each stratum (around 9% of the updated sampled enterprises in the IBES panel list and 7% for the sampled NPISH) and to take out all non-eligible sampled businesses. The estimated actual, or valid, population of businesses in each stratum was taken as the original population less all non-eligible businesses. Similarly, the valid sample in each stratum was calculated as the original less all non-eligible businesses in the stratum.

As a result, the weights of the responding units were adjusted so as to maintain the original grossed up number of units in each stratum by dividing the valid population by the valid sample for all strata and these final weights were distributed to each sampled enterprise within the stratum. More precisely, if in each sampled stratum  $i$ ,  $n_i$  is the number of valid businesses enumerated out of a valid population of  $N_i$  enterprises in the census, then the weight for each business is  $N_i/n_i$ . The assumption behind this method is that each business from which a valid response was received is representative of the eligible businesses in the wider population.

Overall, the total valid population,  $N$ , was 8,582 and the total valid sample,  $n$ , was 884 for IBES panel while for sampled NPISH  $N$  was 1,446 and  $n$  was 166. The following two tables illustrate how the final weights were derived.

Table II.1: Calculation of final weights for sampled strata (IBES panel)

Activity	Original sampled population	Sample in IBES	Achieved sample weights	Closed	Completed	Missing	Not eligible	Pending	Refused	Valid population	Valid sample	Adjusted design weights	Final weights
<b>Total</b>	<b>8,587</b>	<b>889</b>		<b>54</b>	<b>806</b>	<b>10</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>8,582</b>	<b>884</b>		
Mining and quarrying	29	6	4.8	1	5	0	0	0	0	29	6	4.8	5.70
Manufacturing	458	48	9.5	4	43	0	0	0	1	458	48	9.5	10.66
Electricity, gas, steam and air conditioning supply	13	1	13.0	0	1	0	0	0	0	13	1	13.0	13.02
Water supply; sewerage, waste management and remediation activities													
Construction	99	11	9.0	1	9	1	0	0	0	99	11	9.0	11.00
Wholesale and retail trade; repair of motor vehicles and motorcycles	3,458	281	12.3	28	244	4	1	1	3	3,457	280	12.3	14.17
Transportation and storage	59	7	8.4	0	6	0	0	0	1	59	7	8.4	9.77
Accommodation and food service activities	707	71	10.0	6	62	0	0	3	0	707	71	10.0	11.41
Information and communication	61	12	5.1	1	10	0	0	0	1	61	12	5.1	6.08
Financial and insurance activities	687	60	11.4	1	59	0	0	0	0	687	60	11.4	11.64
Real estate activities	37	5	7.4	1	3	0	0	1	0	37	5	7.4	12.30
Professional, scientific and technical activities	319	43	7.4	2	40	0	0	1	0	319	43	7.4	7.98
Administrative and support service activities	75	9	8.3	0	9	0	0	0	0	75	9	8.3	8.34
Public administration and defence; compulsory social security	12	1	11.5	0	1	0	0	0	0	12	1	11.5	11.53
Education	1,045	154	6.8	0	153	0	1	0	0	1,044	153	6.8	6.82
Human health and social work activities	353	30	11.8	0	30	0	0	0	0	353	30	11.8	11.76
Arts, entertainment and recreation													
Other service activities	1,176	150	7.8	9	131	5	3	1	1	1,173	147	8.0	8.96

Source: NISR

Table II.2: Calculation of final weights for sampled NPISH (IBES panel)

ISIC Section Description	Original sampled population	Sample in IBES	Achieved sample weights	Closed	Completed	Missing	Not eligible	Pending	Refused	Valid population	Valid sample	Adjusted design weights	Final weights
<b>Total</b>	<b>1,446</b>	<b>166</b>		<b>5</b>	<b>139</b>	<b>4</b>	<b>16</b>	<b>1</b>	<b>1</b>	<b>1,430</b>	<b>150</b>		
Education	260	31	8.4	1	30					260	31	8.4	8.7
Human health and social work activities	278	37	7.5	3	27		6		1	272	31	8.8	10.1
Arts, entertainment and recreation	4	4	1.0	1	2		1			3	3	1.0	1.5
Other service activities	904	94	9.6		80	4	9	1		895	85	10.5	11.2

Source: NISR

After the above calculated weights have been applied to the collected data the results have been compared to RRA declared figures. Furthermore, business survey data methodology has been introduced which resulted in the new weights presented in Table II.3 in order to take into account non responses of some enterprises which have declared their turnovers in 2015 by using turnovers for all non NPISH companies and the number of employees for all NPISH companies, see Table II.3.

We have assumed to have a VAT and BIT frame, and identified all IBES 2015 respondents which are in the new frame in order to take into account big non responses. Then, all NPISHs which have complied and responded in IBES 2015 have been excluded and left with their already calculated weights in Table II.2 above.

Two main issues have aroused. The first issue was that of 199 companies which have not provided their turnover in IBES 2015 but which had declared it in the new RRA frame. The second issue was for companies with turnover in IBES 2015 but without it in the new RRA frame. The first ones were treated as non-responses and the second category was considered as self-representing with the weight of 1.

Finally, other final cleanings have been done. These consisted of wrong classification, used currency, nonmatching reported IBES 2015 and RRA figures; and adjustment on water and electricity to take into account the recent reform in this sector. WASAC, the former EWSA, was assumed to have responded by applying a ratio calculated from BIT water and electricity turnovers to the IBES 2015 combined turnover of water and electricity which have been provided by EUCL.

**Table II.3: Weights of business data**

<b>RCPA</b>	<b>RRA Turnover in Frw million</b>	<b>IBES Turnover in Frw million</b>	<b>New weight</b>
B	130,062	117,693	1.1
C	519,097	476,160	1.1
D	92,847	88,692	1.0
E	13,598	13,553	1.0
F	444,639	352,898	1.3
G	2,069,564	1,604,427	1.3
H	180,677	125,393	1.4
I	99,797	63,272	1.6
J	264,824	234,498	1.1
K	557,718	529,239	1.1
L	19,010	10,920	1.7
M	59,125	24,431	2.4
N	58,702	44,409	1.3
O	3,059	2,513	1.2
R	20,031	18,059	1.1
S	128,039	17,211	7.4

<b>RCPA</b>	<b>PAYEE 2015 employees in thousands</b>	<b>IBES 2015 employees in thousands</b>	<b>New weight</b>
P	16,596	7,058	2.4
Q	28,184	9,163	3.1
S	12,490	5,282	2.4

Source: NISR

## 2.4 Informal sector sample

The selection of enterprises in informal sector was based on a two stage sample. The first stage was the selection of administrative sectors, which form the enumeration areas (EAs); where a sample of 50 administrative sectors were selected using the 'probability proportional to size' (PPS) method based on the data from the 2011 Establishment Census. The measure of size used was the number of enterprises in each administrative sector, i.e.

$$MoS_{hi} = \sum_{j=1}^t P(h, i, j),$$

where,  $S_{hi}$  is the administrative sector  $i$ , in geographic stratum  $h$ ; and  $P(h, i, j)$  is the number of enterprises in the economic activity  $j$ , within the sector  $i$ , in geographic stratum  $h$ .



The fieldwork was carried out in the first stage (in 50 selected administrative sectors) where information was collected about the economic activity, number of workers, registration status, maintaining of regular business accounts and time of starting operations. Based on this, a new listing of all the enterprises in the sample EAs was established. At the second stage, the listed enterprises in each sample EA were then stratified by major economic activity (ISIC Rev.4 2 digit), and a sample of enterprises was then selected within each stratum. For some strata all of the listed enterprises were included in the survey with certainty at the second sampling stage in case there were 3 or less enterprises for one ISIC 2 digit code within the sampled administrative sector. The procedure led to a total sample of 2,359 informal enterprises being selected.

## 2.5 Informal sector estimation

The selection probabilities for enterprises in an area sample depend on the sample design. As noted, the IBES informal sector area frame sample was based on a two-stage selection. As such, the probability of selection can be expressed as follows:

$$p_{hij} = \frac{m_h \times MoS_{hi}}{\sum_{i \in h} S_{hi}} \times \frac{n_{hij}}{N_{hij}},$$

where:

$p_{hij}$  = probability of selection for the sample enterprises in the j-th economic activity group within the i-th sample segment (that is administrative sector) in geographic stratum h

$m_h$  = number of sample segments selected in geographic stratum h

$S_{hi}$  = measure of size (based on the indicator established for the PPS selection) for the i-th sample area in geographic stratum h

$n_{hij}$  = number of sample enterprises selected in the j-th economic activity group within the i-th sample area in geographic stratum h

$N_{hij}$  = total number of enterprises in the j-th economic activity group within the i-th sample area in geographic stratum h

In sample strata where all the enterprises for an economic activity are included in the sample at the second sampling stage, the second term of this probability was 1. The weight (or 'raising factor) applied to the data from the informal enterprises is calculated as the inverse of this probability of selection, as follows:

$$W_{hij} = \frac{\sum_{i \in h} S_{hi}}{m_h \times S_{hi}} \times \frac{N_{hij}}{n_{hij}}$$

Finally, a non-response adjustment factor similar to that used for the formal IBES 2015 was applied to this weight, within the economic activity group in the EA. This factor is equal to the valid sample divided by the completed interviews for each stratum.



## CHAPTER III: BUSINESS ACTIVITY IN RWANDA - SURVEY FINDINGS

This chapter presents findings from IBES 2015 for economic activities of enterprises both in the formal sector and in the informal sector. The formal sector was defined in both the Establishment Census and the IBES as those businesses both registered with the Rwanda Revenue Authority (RRA) and keeping accounts. Section III.1 gives an overview of the economic environment in which formal sector activity takes place, and section III.2 analyses the activities of these formal enterprises by industrial sector. The tables in this chapter are all based on the IBES 2015 results, unless otherwise stated.

### 3.1 FORMAL SECTOR OVERVIEW

As stated in the previous chapter, the total estimated 10,172 enterprises in all formal non-agricultural activities were reached in formal IBES 2015 (Table 1). The above estimate is based on a total sample of 2,660 enterprises drawn from the 2014 EC and RRA tax registers.

**Table III.1.1 Estimated total number of enterprises by province, formal sector**

Province	Frequency	Percent
Kigali	5,255	51.7
South	1,286	12.6
West	1513	14.9
North	723	7.1
East	1,394	13.7
<b>Total</b>	<b>10,172</b>	<b>100.0</b>

Source: NISR, IBES 2015 Survey

Kigali City ranks number one with more formal enterprises, almost a half, followed by Western Province, 14.9 per cent. The Northern Province counts the least number of formal enterprises, 7.1 per cent.

**Table III.1.2 Estimated number of enterprises by economic activity, formal sector**

<b>Main Economic Activity</b>	<b>Frequency</b>	<b>Percent</b>
Mining and quarrying	93	0.9
Manufacturing	693	6.8
Electricity, gas, steam and air conditioning supply	20	0.2
Water supply; sewerage, waste management and remediation activities	49	0.5
Construction	161	1.6
Wholesale and retail trade; repair of motor vehicles and motorcycles	3,822	37.6
Transportation and storage	87	0.9
Accommodation and food service activities	853	8.4
Information and communication	117	1.2
Financial and insurance activities	774	7.6
Real estate activities	114	1.1
Professional, scientific and technical activities	425	4.2
Administrative and support service activities	175	1.7
Education	765	7.5
Human health and social work activities	608	6.0
Arts, entertainment and recreation	19	0.2
Other service activities	1332	13.1
Activities of extraterritorial organizations and bodies	64	0.6
<b>Total</b>	<b>10,172</b>	<b>100.0</b>

Source: NISR, IBES 2015 Survey

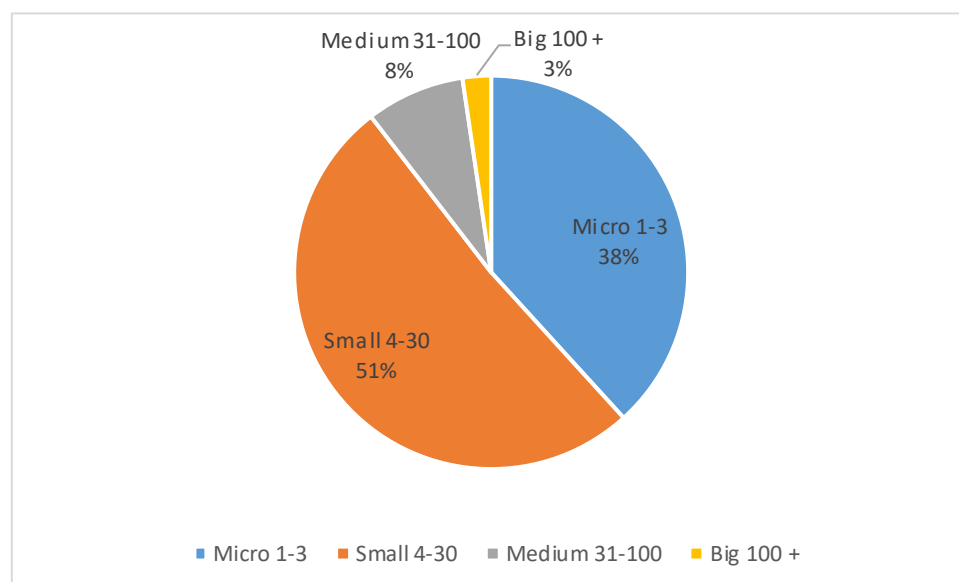
Table III.1.2 above illustrates that in 2015 IBES Wholesale and retail trade; repair of motor vehicles and motorcycles, Other service activities and Accommodation and food service activities were the dominating economic sectors occupying 37.6, 13.1, and 8.4 per cent of the total formal business enterprises respectively.

When all formal business enterprises are classified by their legal status, the outcome shows that more of them, 49.4 per cent are individually owned followed by company limited by shares, 22.0 per cent, as shown in Table III.1.3.

**Table III.1.3 Distribution of enterprises by ownership, formal sector**

Legal status of the enterprise	Frequency	Percent
Individual owner	5,030	49.4
Company limited by shares	2,233	22.0
Company limited by guarantee	18	0.2
Company limited by both shares and guarantee	12	0.1
Unlimited company	13	0.1
Cooperative	1002	9.9
Government	253	2.5
NGO	1,119	11.0
Other	492	4.8
<b>Total</b>	<b>10,172</b>	<b>100.0</b>

Source: NISR, IBES 2015 Survey

**Chart III.1.1 Distribution of enterprises by size (number of employees), formal sector**

Source: NISR, IBES 2015 Survey

Chart III.1.1 above highlights the distribution of businesses by size. It illustrates that slightly more than a half is made of small enterprises employing between 4 and 30 persons. The big enterprises, those employing more than 100 persons, represent 3 per cent.

Table III.1.4 shows the distribution of formal enterprises by economic activity and the enterprise size. This shows for example that most manufacturing enterprises are small, 57.0 per cent, while more of education and construction companies are medium (employing between 30 and 101 employees), 48.0, and 37.5 per cent respectively.

**Table III.1.4 Percentage of formal enterprises by size band within each activity, formal sector**

Main Economic Activity	Micro 1-3	Small 4-30	Medium 31-100	Big 100+	Total	Freq.
Mining and quarrying	16.5	49.1	16.1	18.3	100	93
Manufacturing	28.2	57.0	9.3	5.6	100	693
Electricity, gas, steam and air conditioning supply	60.0	15.0	10.0	15.0	100	20
Water supply; sewerage, waste management and remediation ac	20.9	64.7	6.2	8.2	100	49
Construction	20.1	28.8	37.5	13.7	100	161
Wholesale and retail trade; repair of motor vehicles and motorcy	66.4	31.4	1.6	0.6	100	3,822
Transportation and storage	6.9	72.4	11.5	9.2	100	87
Accommodation and food service activities	23.6	70.0	5.3	1.2	100	853
Information and communication	25.8	57.9	12.0	4.3	100	117
Financial and insurance activities	13.3	82.1	1.9	2.7	100	774
Real estate activities	46.5	50.0	2.6	0.9	100	114
Professional, scientific and technical activities	47.3	50.6	1.4	0.7	100	425
Administrative and support service activities	52.5	26.7	10.5	10.3	100	175
Education	2.2	47.9	48.0	2.0	100	765
Human health and social work activities	9.6	71.8	15.0	3.6	100	608
Arts, entertainment and recreation	26.2	47.6	21.0	5.2	100	19
Other service activities	24.0	71.0	3.1	1.9	100	1,332
Activities of extraterritorial organizations and bodies	0.0	92.2	7.8	0.0	100	64
<b>Total</b>	<b>38.3</b>	<b>51.3</b>	<b>8.1</b>	<b>2.3</b>	<b>100</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

Furthermore, as shown in Table III.1.5, almost three quarters (65.2 per cent) of all micro enterprises are concentrated in trade; while almost a half (44.5 per cent) of all medium enterprises are in education sector. Manufacturing is mainly located under big enterprises (16.4 per cent of all big ones).

**Table III.1.5 Percentage of formal enterprises by activity within each size band, formal sector**

Main Economic Activity	Micro 1-3	Small 4-30	Medium 31-100	Big 100+	Total
Mining and quarrying	0.4	0.9	1.8	7.1	0.9
Manufacturing	5.0	7.6	7.8	16.4	6.8
Electricity, gas, steam and air conditioning supply	0.3	0.1	0.2	1.3	0.2
Water supply; sewerage, waste management and remediation ac	0.3	0.6	0.4	1.7	0.5
Construction	0.8	0.9	7.3	9.3	1.6
Wholesale and retail trade; repair of motor vehicles and motorcy	65.2	23.0	7.4	10.1	37.6
Transportation and storage	0.2	1.2	1.2	3.4	0.9
Accommodation and food service activities	5.2	11.4	5.5	4.2	8.4
Information and communication	0.8	1.3	1.7	2.1	1.2
Financial and insurance activities	2.6	12.2	1.8	8.8	7.6
Real estate activities	1.4	1.1	0.4	0.4	1.1
Professional, scientific and technical activities	5.2	4.1	0.7	1.3	4.2
Administrative and support service activities	2.4	0.9	2.2	7.6	1.7
Education	0.4	7.0	44.5	6.3	7.5
Human health and social work activities	1.5	8.4	11.1	9.2	6.0
Arts, entertainment and recreation	0.1	0.2	0.5	0.4	0.2
Other service activities	8.2	18.1	5.0	10.7	13.1
Activities of extraterritorial organizations and bodies	-	1.1	0.6	-	0.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Freq.</b>	<b>3,891</b>	<b>5,218</b>	<b>825</b>	<b>238</b>	<b>10,172</b>

**Source: NISR, IBES 2015 Survey**

Table III.1.6 shows the percentage by type of ownership of formal enterprises (grossed to the population of estimated total numbers of enterprises). For example, there were an estimated 9,208 formal enterprises owned by Rwandan residents against 319 owned by non-residents.

**Table III.1.6 Distribution of enterprises by economic activity and ownership, formal sector**

Main Economic Activity	Government	Rwandan Resident	Foreign Resident	Non-Resident	Total
Mining and quarrying	1.3	90.1	2.3	6.3	100
Manufacturing	0.6	89.3	6.2	3.9	100
Electricity, gas, steam and air conditioning supply	10.0	72.5	0.0	17.5	100
Water supply; sewerage, waste management and remediation ac	0.3	74.9	0.6	24.3	100
Construction	0.6	76.0	16.4	6.9	100
Wholesale and retail trade; repair of motor vehicles and motorcy	1.0	92.4	4.8	1.8	100
Transportation and storage	2.3	69.9	23.0	4.8	100
Accommodation and food service activities	2.1	96.9	0.6	0.4	100
Information and communication	1.7	78.5	15.7	4.1	100
Financial and insurance activities	4.9	87.9	2.5	4.7	100
Real estate activities	0.9	85.1	11.8	2.3	100
Professional, scientific and technical activities	0.0	89.6	5.1	5.3	100
Administrative and support service activities	0.9	95.7	1.7	1.7	100
Education	3.4	88.0	4.4	4.2	100
Human health and social work activities	2.6	80.8	6.1	10.6	100
Arts, entertainment and recreation	0.0	79.0	5.2	15.7	100
Other service activities	0.8	96.1	2.2	0.9	100
Activities of extraterritorial organizations and bodies	2.4	54.4	35.4	7.8	100
<b>Total</b>	<b>1.6</b>	<b>90.5</b>	<b>4.7</b>	<b>3.1</b>	<b>100</b>
<b>Freq.</b>	<b>165</b>	<b>9,208</b>	<b>480</b>	<b>319</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

The distribution of formal business enterprise by age and economic activity, seen in Table III.1.7, demonstrates that they are dominated by young ones (less than 5 years old), at 47.9 per cent, while those whose operations started 20 or more years ago was just 8.4 per cent.



**Table III.1.7 Distribution of enterprises by age and main economic activity, formal sector**

<b>Economic activity/Years in operations</b>	<b>&lt;3</b>	<b>3-5</b>	<b>6-9</b>	<b>10-14</b>	<b>&gt;=15</b>	<b>Total</b>
Mining and quarrying	39.8	38.7	15.1	2.2	4.3	100.0
Manufacturing	28.0	30.9	22.9	9.7	8.4	100.0
Electricity, gas, steam and air conditioning supply	30.0	5.0	65.0	0.0	0.0	100.0
Water supply; sewerage, waste management and remediation activities	6.1	16.3	77.6	0.0	0.0	100.0
Construction	16.8	16.8	47.2	3.7	14.9	100.0
Wholesale and retail trade; repair of motor vehicles and motorcycles	34.1	34.3	20.8	6.5	4.3	100.0
Transportation and storage	17.2	36.8	33.3	5.7	6.9	100.0
Accommodation and food service activities	51.0	28.0	10.8	6.8	3.3	100.0
Information and communication	15.4	47.9	23.9	12.0	0.9	100.0
Financial and insurance activities	12.8	24.9	53.1	3.6	5.7	100.0
Real estate activities	21.1	46.5	20.2	10.5	0.9	100.0
Professional, scientific and technical activities	24.9	32.9	27.1	6.6	8.7	100.0
Administrative and support service activities	33.1	27.4	32.0	4.0	3.4	100.0
Education	11.0	11.4	19.3	9.4	48.9	100.0
Human health and social work activities	22.2	4.9	15.3	10.4	47.2	100.0
Arts, entertainment and recreation	15.8	52.6	10.5	5.3	15.8	100.0
Other service activities	28.4	14.3	11.9	11.7	33.9	100.0
Activities of extraterritorial organizations and bodies	15.6	34.4	3.1	1.6	45.3	100.0
<b>Total</b>	<b>28.9</b>	<b>26.5</b>	<b>22.1</b>	<b>7.6</b>	<b>14.9</b>	<b>100.0</b>

Source: NISR, IBES 2015 Survey

Table III.1.7 also shows that the sectors that have the most old enterprises are: education sector, 48.9 per cent; Human Health and Social Work, 47.2 per cent; Extraterritorial, 45.3 per cent; whereas, sectors with more young enterprises are: Accommodation and food service activities, 51.0 per cent; Mining and quarrying, 39.8 per cent, and trade 34.1 per cent.

Table III.1.8 shows the distribution of formal sector enterprises by size and age. For example, 66.4 per cent of all formal micro enterprises (with 3 or fewer employees) have been established in the last 5 years, whereas 18.9 per cent of large enterprises (with 100 or more employees) have been established at least 20 years ago.

**Table III.1.8 Distribution of enterprises by age and size, formal sector**

Size (employees)	Year of business commencement					Total	Freq.
	<= 5 Years	>5-10 Years	10-15 Years	15-20 Years	20+ Years		
Micro 1-3	66.4	23.9	6.0	2.5	1.3	100	3,891
Small 4-30	39.7	31.0	10.4	10.3	8.7	100	5,217
Medium 31-100	16.8	21.6	10.6	14.1	36.9	100	825
Big 100 +	34.2	22.2	13.0	11.7	18.9	100	238
<b>Total</b>	<b>47.9</b>	<b>27.3</b>	<b>8.8</b>	<b>7.7</b>	<b>8.4</b>	<b>100</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

Table III.1.9 shows the numbers of male and female employees in the formal sector by main economic activity.

**Table III.1.9: Numbers of employees by gender and activity, formal sector**

Main Economic Activity	Number of Workers		
	Males	Females	Total
Mining and quarrying	4,069	660	4,729
Manufacturing	17,401	8,850	26,251
Electricity, gas, steam and air conditioning supply	1,157	217	1,374
Water supply; sewerage, waste management and remediation activities	765	548	1,313
Construction	13,420	2,862	16,282
Wholesale and retail trade; repair of motor vehicles and motorcycles	16,104	5,826	21,930
Transportation and storage	2,415	690	3,105
Accommodation and food service activities	6,782	3,776	10,558
Information and communication	1,897	720	2,617
Financial and insurance activities	7,495	6,179	13,674
Real estate activities	535	243	778
Professional, scientific and technical activities	2,482	947	3,429
Administrative and support service activities	15,813	2,415	18,228
Education	16,249	9,546	25,795
Human health and social work activities	7,818	6,615	14,433
Arts, entertainment and recreation	544	246	790
Other service activities	13,134	4,183	17,317
Activities of extraterritorial organizations and bodies	602	465	1,067
<b>Total</b>	<b>128,681</b>	<b>54,986</b>	<b>183,667</b>

Source: NISR, IBES 2015 Survey

## **3.2 FORMAL SECTOR RESULTS BY MAIN ECONOMIC ACTIVITY**

This part is split into seven sections in which the results are analysed for formal sector enterprises in the IBES survey, and considers their activity by main industry. The details on acquisition and disposal of fixed assets are presented in the last section, specifically:

Section III.2.1: Industry sector

Section III.2.2: Services sector

Section III.2.3: Financial sector

Section III.2.4: Education sector

Section III.2.5: Health sector

Section III.2.6: NPISH sector

Section III.2.7: Acquisition and disposal of fixed assets

The activities of the sectors dominated by non-market activity (public administration and defence, Health and Social Work and Education) are not considered here.

Note that the results in this section are based on a weighted set of the data, using the methodology described in Chapter II. Importantly, each business in the IBES sample is regarded as representing a similar set of enterprises in the population of businesses as a whole. The largest enterprises are treated as representing only themselves, while the data for smaller enterprises have been multiplied by a factor (between 5 and 15, depending on their economic activity and number of employees). The results also include a small number of imputations for enterprises with more than 30 employees for which a survey response was not received. The counts of number of enterprises in the tables in this chapter therefore differ slightly from those in chapter II, which was limited to the actual number of responses received by NISR.

### **Section III.2.1: Industry sector**

#### **A. Introduction**

In this report, the industry sector is made of the following five economic sectors: Mining and quarrying, Manufacturing, Electricity, gas, steam and air conditioning supply, Water supply; sewerage, waste management and remediation activities, and Construction.

Mining and quarrying sector includes the extraction of minerals occurring naturally as solids (coal and ores), liquids (petroleum) or gases (natural gas). Extraction can be achieved by different methods such as underground or surface mining, well operation, seabed mining etc. This also includes supplementary activities aimed at preparing the crude materials for marketing, for example, crushing, grinding, cleaning, drying, sorting, concentrating ores, liquefaction of natural gas and agglomeration of solid fuels. These operations are often carried out by the units that extracted the resource and/or others located nearby.

Manufacturing includes the physical or chemical transformation of materials, substances, or components into new products. The materials, substances, or components transformed are raw materials that are products of agriculture, forestry, fishing, mining or quarrying as well as products of other manufacturing activities. Substantial alteration, renovation or reconstruction of goods is generally considered to be manufacturing.

Electricity, gas, steam and air conditioning supply includes the activity of providing electric power, natural gas, steam, hot water and the like through a permanent infrastructure (network) of lines, mains and pipes. The dimension of the network is not decisive; also included are the distribution of electricity, gas, steam, hot water and the like in industrial parks or residential buildings. This, therefore, includes the operation of electric and gas utilities, which generate, control and distribute electric power or gas. Also included is the provision of steam and air-conditioning supply. This excludes the operation of water and sewerage utilities and also the (typically long-distance) transport of gas through pipelines.

Water supply; sewerage, waste management and remediation activities includes activities related to the management (including collection, treatment and disposal) of various forms of waste, such as solid or non-solid industrial or household waste, as well as contaminated sites. The output of the waste or sewage treatment process can either be disposed of or become an input into other production processes. Activities of water supply are also included, since they are often carried out in connection with, or by units also engaged in, the treatment of sewage.

Construction includes general construction and specialized construction activities for buildings and civil engineering works. It includes new work, repair, additions and alterations, the erection of prefabricated buildings or structures on the site and also construction of a temporary nature.

General construction is the construction of entire dwellings, office buildings, stores and other public and utility buildings, farm buildings etc., or the construction of civil engineering works such as motorways, streets, bridges, tunnels, railways, airfields, harbours and other water projects, irrigation systems, sewerage systems, industrial facilities, pipelines and electric lines, sports facilities etc.

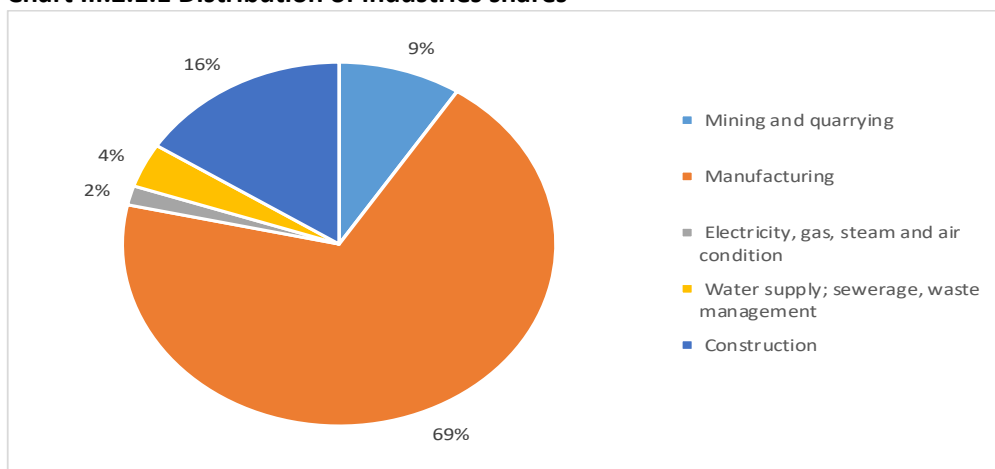
This work can be carried out on own account or on a fee or contract basis. Portions of the work and sometimes even the whole practical work can be subcontracted out. A unit that carries the overall responsibility for a construction project is classified here. Also included is the repair of buildings and engineering works, the complete construction of buildings, the complete construction of civil engineering works, as well as specialized construction activities, if carried out only as a part of the construction process.

The renting of construction equipment with operator is classified with the specific construction activity carried out with this equipment. This also includes the development of building projects for buildings or civil engineering works by bringing together financial, technical and physical means to realize the construction projects for later sale. If these activities are carried out not for later sale of the construction projects, but for their operation (e.g. renting of space in these buildings, manufacturing activities in these plants), the unit would not be classified here, but according to its operational activity, i.e. real estate, manufacturing etc.

## **B. Analysis of industry sector**

The results of IBES 2015 show that 69 percent of all enterprises in industry sector are in manufacturing. Construction sector occupies the second position with 16 percent. The smallest sector in the industry sector with fewer enterprises is Electricity, gas, steam and air condition sub sector, see chart III.2.1.

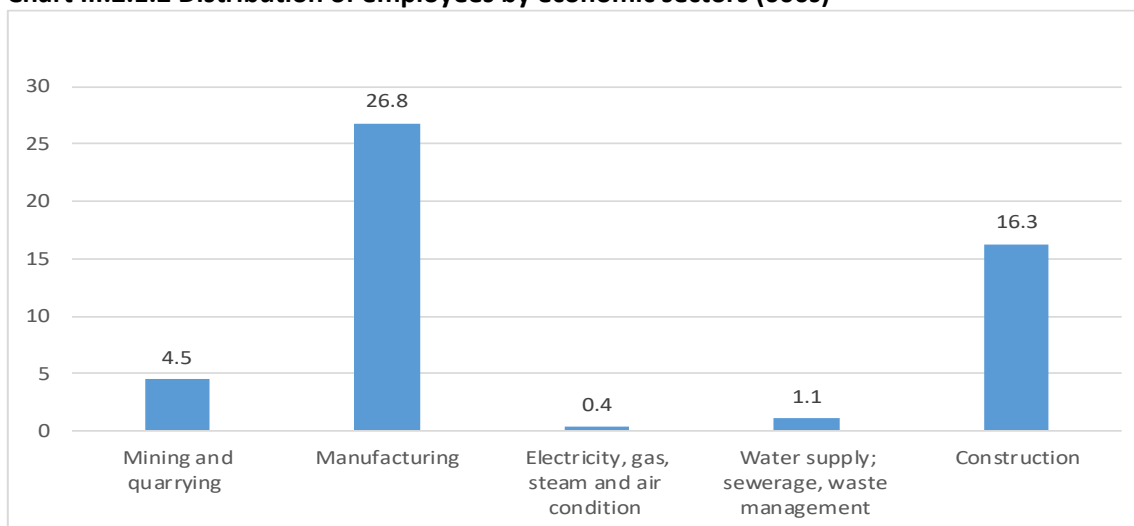
**Chart III.2.1.1 Distribution of industries shares**



Source: NISR, IBES 2015 Survey

The survey estimates show that in total more than 49 thousand persons are employed in the industry sector with more employees in the manufacturing sub-sector where we have more than a half of all employees, 26.8 thousand. The more the number of companies in a specific sector the more persons are employed, see chart III.2.2.

**Chart III.2.1.2 Distribution of employees by economic sectors (000s)**



Source: NISR, IBES 2015 Survey

Table III.2.1.1 below highlights the distribution of income components by industrial activities. The results show that manufactured goods have yielded more income, Frw 515.9 billion. On the second position is the construction work done which produced Frw 416.9 billion of revenue.

**Table III.2.1.1: Income statement for industry sector, Frw billion**

Income components	Mining and quarrying	Manufacturing	Electricity, gas, steam and air condition	Water supply; sewerage, waste management	Construction	Total
Sales of goods in the same condition as purchased	55.4	20.3	-	-	1.7	77.4
Sales of manufactured, mined or quarried products	49.0	463.8	22.3	0.6	1.8	537.4
Sales of electricity	-	2.1	62.2	-	-	64.4
Sales of water by pipe or bouser	-	-	-	15.6	-	15.6
Construction work done	-	-	-	-	369.1	369.1
Delivery charges if invoiced separately	-	0.0	-	-	-	0.0
Transport, storage and travel services rendered	-	5.5	-	-	-	5.5
Hotel & catering services	-	0.5	-	-	-	0.5
Telecommunication & internet connections	-	-	-	-	-	-
Sales of professional & scientific services	-	3.0	-	-	1.3	4.3
Rent of land receivable	-	-	-	-	-	-
Rent of buildings received / receivable	0.0	2.2	-	-	25.7	28.0
Dividends or other profits realised	0.7	2.4	-	-	6.7	9.8
All other income	1.3	16.4	30.1	0.9	10.6	59.3
<b>Total</b>	<b>106.4</b>	<b>515.9</b>	<b>114.6</b>	<b>17.2</b>	<b>416.9</b>	<b>1,171.0</b>

Source: NISR, IBES 2015 Survey

Table III.2.1.2 below highlights the distribution of expenditure components by industrial activities. The purchase of raw materials and construction materials have been bought more as they also yielded more income than others.

**Table III.2.1.2: Expenditure statement for industry sector, Frw billion**

Expenditure components	Mining and quarrying	Manufacturing	Electricity, gas, steam and air condition	Water supply; sewerage, waste management	Construction	Total
Purchases of goods for resale	52.5	17.4	-	-	1.0	70.9
Purchases of raw materials, etc., used in manufacturing	21.9	280.8	-	6.4	0.8	309.9
Fuel used for mining & quarrying	11.1	19.9	0.3	0.2	-	31.5
Construction sub-contracts, equipment hire, fuel, materials	-	-	-	-	236.3	236.3
Purchases of food and drinks for catering & bar services	-	0.4	-	-	-	0.4
Rent of land paid / payable	0.0	0.7	0.1	0.0	2.7	3.5
Rent of buildings paid / payable	0.2	2.4	0.1	0.0	3.1	5.8
Other goods & services purchased (not interest, etc see below)	5.5	68.5	76.8	2.7	70.4	224.0
Wages & salaries paid (Social security & other benefits included)	7.9	41.7	5.6	1.5	33.7	90.3
Interests paid (excluding other bank charges)	0.4	23.0	6.4	0.0	13.2	43.1
Business licenses, rates and fees payable to government	1.2	2.4	0.9	1.6	1.9	8.0
Depreciation charges for the year on fixed assets	1.8	36.5	11.9	3.6	18.8	72.6
All other costs, losses, provisions, etc.	5.6	14.3	9.3	-	12.0	41.2
<b>Total</b>	<b>108.2</b>	<b>507.0</b>	<b>111.5</b>	<b>16.0</b>	<b>394.3</b>	<b>1,137.1</b>

Source: NISR, IBES 2015 Survey

Table III.2.1.3 below displays the summary income and expenditure statement by enterprise size and the change in inventory.

**Table III.2.1.3: Summary statement by enterprise size, Frw billion**

Enterprise size	Total income 2015	expenditure 2015	Net profit (loss) before tax of the year	Value of the total change in inventories
<=3	1.6	1.6	0.2	0.1
>3, <=9	30.1	31.1	46.6	47.6
>9, <=19	104.4	79.2	48.0	22.9
>19, <=99	303.2	298.8	11.0	6.6
100+	731.6	726.4	50.1	44.9
<b>Total</b>	<b>1,171.0</b>	<b>1,137.1</b>	<b>156.0</b>	<b>122.1</b>

Source: NISR, IBES 2015 Survey

Table III.2.1.4 summarizes assets of the industry sector. Mining and construction sectors have more assets in 2015 Frw910.5 billion and Frw769.4 billion respectively.

**Table III.2.1.4: Summary assets of the industry sector, Frw billion**

RCPA Code	B	C	D	E	F	Total
Assets	Mining and quarrying	Manufacturing	Electricity, gas, steam and air condition	Water supply; sewerage, waste	Construction	Total
<b>Non-current assets</b>	<b>224.0</b>	<b>534.8</b>	<b>475.0</b>	<b>0.9</b>	<b>196.3</b>	<b>1,431.1</b>
Fixed assets	222.4	437.7	204.5	0.9	142.1	1,007.7
Land	2.5	49.4	0.0	-	8.3	60.2
Buildings	3.7	73.6	1.1	0.0	8.6	87.1
Vehicles and Machines	215.2	247.9	188.2	0.2	117.8	769.2
Others	1.0	67.0	15.2	0.8	7.4	91.3
Work in progress	0.1	69.5	15.7	-	13.2	98.6
Other investments	1.5	27.5	254.7	0.0	41.0	324.7
<b>Current assets</b>	<b>686.5</b>	<b>234.6</b>	<b>51.9</b>	<b>0.5</b>	<b>645.8</b>	<b>1,619.2</b>
Inventories	407.5	114.8	9.4	0.1	356.3	888.2
Debtors & other receivables	109.8	76.5	36.3	0.3	235.1	457.9
Cash and cash equivalents	169.2	43.3	6.2	0.1	54.3	273.1
<b>Total assets</b>	<b>910.5</b>	<b>769.4</b>	<b>526.9</b>	<b>1.4</b>	<b>842.1</b>	<b>3,050.3</b>

Source: NISR, IBES 2015 Survey

The following table summarizes the owners' equity and liabilities of the industry sector.



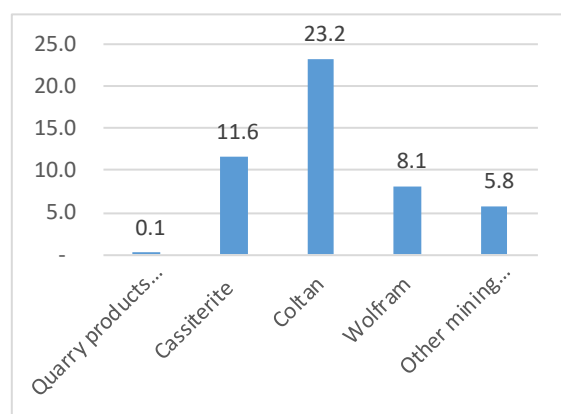
**Table III.2.1.5: Summary equity and liabilities, Frw billion**

RCPA Code	B	C	D	E	F	Total
Liabilities	Mining and quarrying	Manufacturing	Electricity, gas, steam and air condition	Water supply; sewerage, waste management	Construction	Total
<b>Equity</b>	<b>(37.4)</b>	<b>300.4</b>	<b>87.0</b>	<b>0.6</b>	<b>243.1</b>	<b>593.7</b>
Share capital	281.8	233.0	71.6	0.1	98.1	684.6
Reserves	(10.6)	48.6	(1.3)	0.1	136.8	173.7
Other equity	(308.7)	18.8	16.7	0.4	8.2	(264.6)
<b>Non-current liabilities</b>	<b>25.2</b>	<b>211.9</b>	<b>380.6</b>	<b>0.7</b>	<b>268.2</b>	<b>886.6</b>
Loans and borrowings	3.8	164.5	78.2	0.5	226.3	473.3
Other non-current liabilities	21.4	47.4	302.4	0.2	41.9	413.3
<b>Current liabilities</b>	<b>922.7</b>	<b>257.1</b>	<b>59.3</b>	<b>0.2</b>	<b>330.8</b>	<b>1,570.1</b>
<b>Total-Liability</b>	<b>910.5</b>	<b>769.4</b>	<b>526.9</b>	<b>1.4</b>	<b>842.1</b>	<b>3,050.3</b>

Source: NISR, IBES 2015 Survey

The value of produced quarrying and mining products has amounted to Frw 48.8 billion in 2015 with more of mined coltan worth Frw 23.2 billion (Chart III.2.1.3).

**Chart III.2.1.3 Value of the produced quarrying and mining products, Frw Billion**



Source: NISR, IBES 2015 Survey

Table III.2.1.6 below depicts the distribution of details on goods produced or processed made of all manufactured food, beverages and tobacco. More food items have been produced, that is Frw 193.8 billion against Frw 103.3 billion of manufactured beverage and tobacco products.

**Table III.2.1.6: Details of manufactured food, beverages and tobacco, Frw billion**

Type of products	Manufacturing of food	Manufacturing of beverages & tobacco	Total
Meat and fish products	1.2	0.0	1.2
Vegetable and fruit juices	4.8	0.0	4.8
Other vegetables, fruit and nut products	0.2	0.0	0.2
Animal and vegetable oils and fats	7.2	0.0	7.2
Dairy products	16.1	0.1	16.1
Maize flour	5.9	0.0	5.9
Wheat flour	44.6	0.0	44.6
Cassava flour	0.1	0.0	0.1
Rice, semi- or wholly milled	8.5	0.0	8.5
Bakery products	2.1	0.0	2.2
Animal feed	3.1	0.0	3.1
Coffee, decaffeinated or roasted	18.0	0.0	18.0
Tea dried	61.0	0.0	61.0
Sugar refined	6.3	0.0	6.3
Other processed food products	10.1	0.0	10.1
Modern beer	0.0	73.5	73.5
Traditional beer	0.4	1.3	1.7
Other alcohol	0.0	0.8	0.8
Soft drinks	0.0	25.1	25.1
Drinking water	4.2	0.5	4.7
Tobacco products	0.0	2.0	2.0
<b>Total</b>	<b>193.8</b>	<b>103.3</b>	<b>297.2</b>

Source: NISR, IBES 2015 Survey

Table III.2.1.7 presents the details of goods produced or processed. Manufacturing of metal products, machinery and equipment has the biggest share at Frw 72.5 billion followed by Chemicals, rubber and plastic products worth Frw 31.8 billion.

**Table III.2.1.7: Details of goods produced or processed, Frw billion**

Type of products	Manufacturing of textiles, clothing & leather goods	Manufacturing of wood & paper; printing	Manufacturing of chemicals, rubber & plastic products	Manufacturing of non-metallic mineral products	Manufacturing of metal products, machinery & equipment	Furniture & other manufacturing	Total
Textiles, clothing, footwear and leather goods	3.7	0.0	0.0	0.0	0.0	0.0	3.7
Wood paper and printing products; furniture	0.0	12.2	0.2	0.0	0.0	1.4	14.2
Chemicals, rubber and plastic products	0.0	2.9	23.5	0.0	2.0	11.0	39.4
Manufactured non-metallic mineral products	0.0	0.0	0.0	20.1	11.7	0.0	32.5
Manufacturing of metal products, machinery and equipment	0.0	0.0	0.0	0.0	58.7	1.6	77.5
Other manufactured products, please specify	0.1	1.4	8.0	0.0	0.1	0.5	13.6
<b>Total</b>	<b>3.8</b>	<b>16.5</b>	<b>31.8</b>	<b>20.1</b>	<b>72.5</b>	<b>14.5</b>	<b>181.0</b>

Source: NISR, IBES 2015 Survey

The manufactured textiles, clothing, footwear and leather goods are the least produced items with the value of Frw 3.8 billion. In total, the value of all produced or processed products was Frw 181.0 billion in 2015.

**Table III.2.1.8: Purchases of raw materials, Frw billion**

Type of products	Mining & quarrying	Manufacturing of food	Manufacturing of beverages & tobacco	Manufacturing of textiles, clothing & leather goods	Manufacturing of wood & paper; printing	Manufacturing of chemicals, rubber & plastic products	Manufacturing of non-metallic mineral products	Manufacturing of metal products, machinery & equipment	Furniture & other manufacturing	Total
Cereals	0.0	48.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	51.0
Other agricultural crops; trees	0.0	29.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	31.7
Livestock and fresh or frozen fish	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Raw milk, skins and other raw livestock products	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2
Flour and other processed edible products	0.0	4.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	4.7
Textile materials, leather	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	1.6
Sawn wood and other wood products	0.0	0.1	0.0	0.0	2.7	0.1	0.0	0.1	0.7	3.6
Paper used in printing	0.0	0.0	0.0	0.2	4.6	0.0	0.0	0.0	0.1	5.0
Chemicals, rubber and plastic products	0.0	1.6	0.2	0.0	0.6	10.3	0.0	1.6	3.9	18.1
Non-metallic minerals	3.0	0.0	0.0	0.0	0.0	0.0	5.2	0.1	0.0	8.3
Metals and metal ores	7.6	0.2	0.0	0.0	0.0	0.0	0.0	40.6	1.5	49.8
Other raw materials	11.4	28.0	47.0	0.0	2.0	12.4	3.8	13.4	3.7	121.6
<b>Total</b>	<b>21.9</b>	<b>118.8</b>	<b>53.0</b>	<b>1.8</b>	<b>9.8</b>	<b>22.8</b>	<b>9.0</b>	<b>55.7</b>	<b>9.9</b>	<b>302.8</b>

Source: NISR, IBES 2015 Survey

The total value of all purchased raw materials in 2015 was Frw 302.8 billion made of mainly: Cereals, Metals and metal ores, Other agricultural crops; trees, and Chemicals, rubber and plastic products. Table III.2.1.8 gives more details.

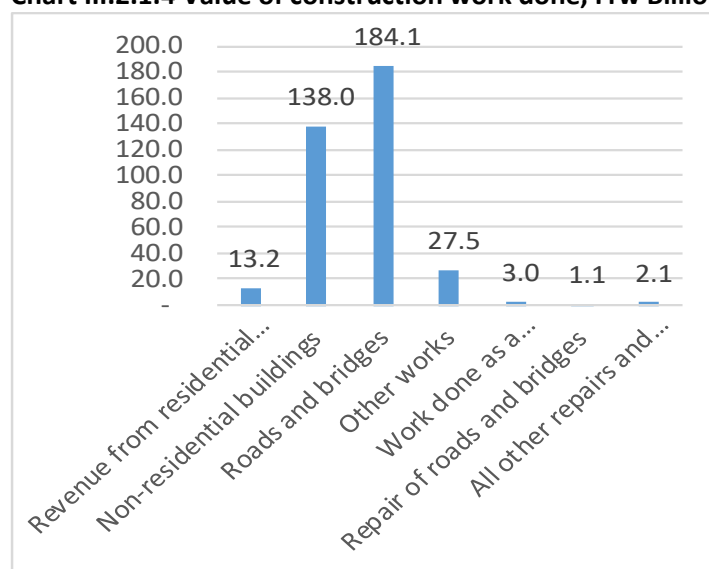
Purchases of fuel for manufacturing, mining and quarrying were valued at Frw 30.2 billion. The following sectors were the most buyers Mining and quarrying, Manufacturing of non-metallic mineral products, Manufacturing of food, Manufacturing of chemicals, rubber and plastic products. The most purchased product category was made of the petroleum products. Table III.2.1.9 gives more details.

**Table III.2.1.9: Purchases of fuel for manufacturing, mining and quarrying, Frw billion**

Type of products	Firewood, charcoal	Coal	Petroleum products	Electricity	Natural gas	Total
Mining and quarrying	0.1	0.0	10.5	0.4	0.0	11.1
Manufacturing of food	0.7	0.0	1.9	2.1	0.0	4.2
Manufacturing of beverages and tobacco	0.0	0.0	0.8	0.4	0.0	1.2
Manufacturing of textiles, clothing and leather good	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing of wood and paper; printing	0.0	0.0	0.0	0.4	0.0	0.4
Manufacturing of chemicals, rubber and plastic prod	0.0	0.0	0.4	0.2	0.1	2.5
Manufacturing of non-metallic mineral products	0.0	0.7	5.9	1.7	0.0	8.4
Manufacturing of metal products, machinery and eqi	0.0	0.0	1.4	0.1	0.3	1.8
Furniture and other manufacturing	0.0	0.0	0.0	0.1	0.0	0.1
<b>Total</b>	<b>0.9</b>	<b>0.8</b>	<b>21.4</b>	<b>5.5</b>	<b>0.4</b>	<b>30.2</b>

Source: NISR, IBES 2015 Survey

**Chart III.2.1.4 Value of construction work done, Frw Billion**

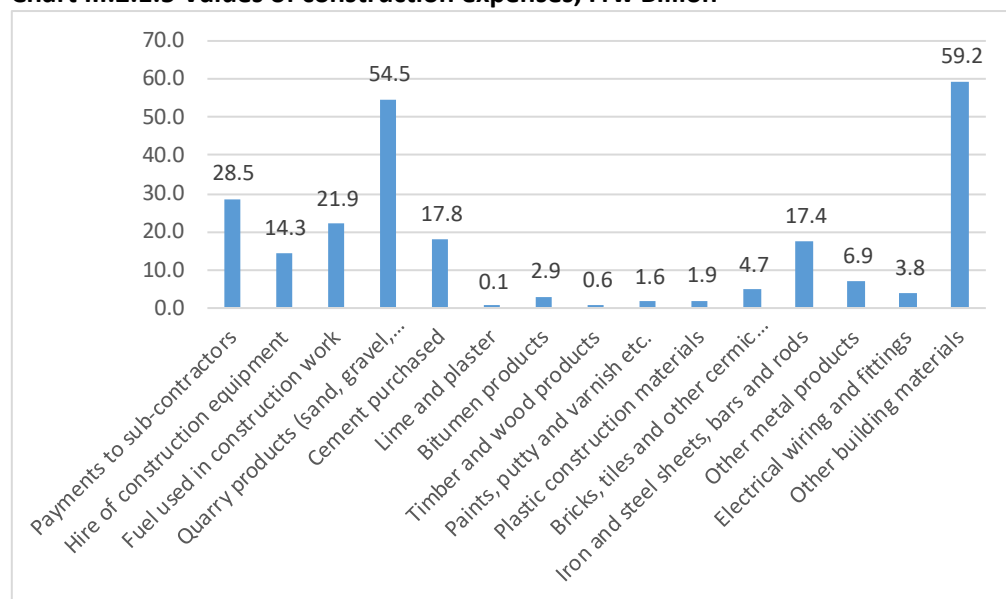


Source: NISR, IBES 2015 Survey

Chart III.2.1.4 summarizes the distribution of the value of the construction work done. The total value of the constructed structures is Frw 369.1 billion. Roads and bridges and non-residential buildings were the most constructed structures with Frw 184.1 billion and Frw 138.0 billion respectively.

The construction expenses were Frw 236.3 billion. More money was spent on Quarry products (sand, gravel, stone etc), Payments to sub-contractors, Cement purchased, Fuel used in construction work, Iron and steel sheets, bars and rods, and Hire of construction equipment. Chart III.2.1.5 summarizes the distribution of the value of the construction expenses.

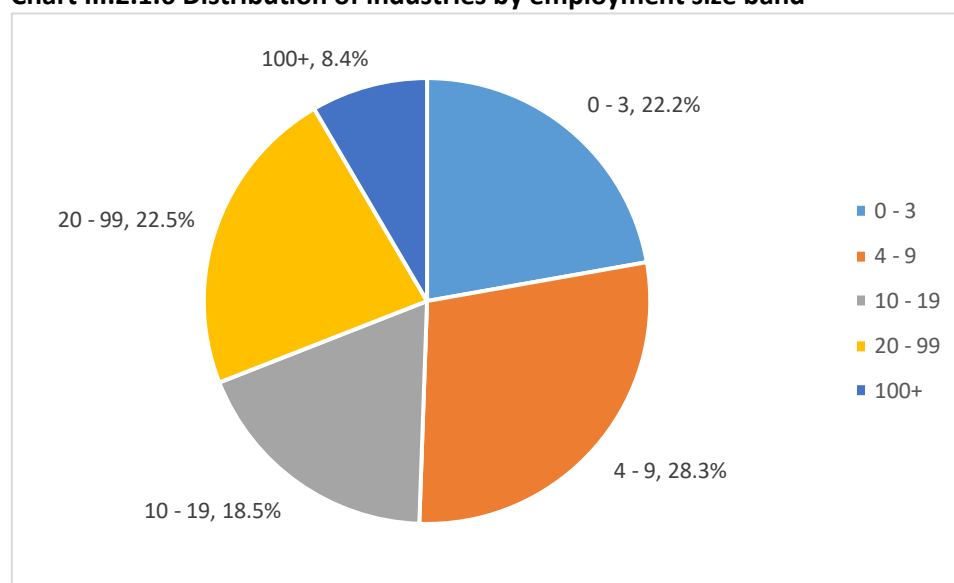
**Chart III.2.1.5 Values of construction expenses, Frw Billion**



Source: NISR, IBES 2015 Survey

The distribution of industrial enterprises by employment size illustrates that more of them are in the category of enterprises which employ between 4 and 9 employees, 28.3 per cent, while the category with fewer enterprises are in the category that employ more than 100 employees, see Chart III.2.1.6.

**Chart III.2.1.6 Distribution of industries by employment size band**

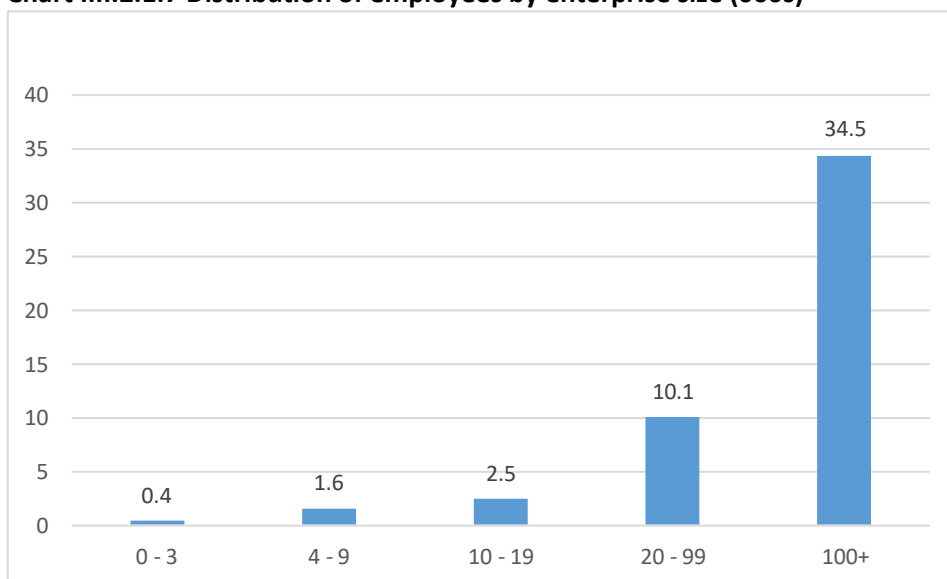


Source: NISR, IBES 2015 Survey

The observation of Chart III.2.1.7 below demonstrates that out of 49.1 thousand employees in the industrial sector 34.5 thousand work in the very large enterprises with 100 and more employees. Therefore, very large

enterprises with 100 and more employees each employ more persons even though they represent 8.4 per of all industrial enterprises, see Chart III.2.1.6.

**Chart III.2.1.7 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

## **Section III.2.2: Services sector**

### **A. Introduction**

The services sector is made of trade, transportation, accommodation, information and communication, real estate activities, professional, scientific and technical services, administrative and support services, arts, other services except financial, education, and health.

#### **i. Wholesale and retail trade; repair of motor vehicles and motorcycles**

Wholesale and retail trade; repair of motor vehicles and motorcycles includes wholesale and retail sale (i.e. sale without transformation) of any type of goods and the rendering of services incidental to the sale of these goods. Wholesaling and retailing are the final steps in the distribution of goods. Goods bought and sold are also referred to as merchandise.

Also included are the repair of motor vehicles and motorcycles. Sale without transformation is considered to include the usual operations (or manipulations) associated with trade, for example sorting, grading and assembling of goods, mixing (blending) of goods (for example sand), bottling (with or without preceding bottle cleaning), packing, breaking bulk and repacking for distribution in smaller lots, storage (whether or not frozen or chilled), cleaning and drying of agricultural products, cutting out of wood fiberboards or metal sheets as secondary activities.

Wholesale and retail trade; repair of motor vehicles and motorcycles includes all activities related to the sale and repair of motor vehicles and motorcycles, include all other sale activities. The distinction between wholesale and retail sale is based on the predominant type of customer. Wholesale is the resale (sale

without transformation) of new and used goods to retailers, to industrial, commercial, institutional or professional users, or to other wholesalers, or involves acting as an agent or broker in buying goods for, or selling goods to, such persons or companies. The principal types of businesses included are merchant wholesalers, i.e. wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, exporters, importers, and cooperative buying associations, sales branches and sales offices (but not retail stores) that are maintained by manufacturing or mining units apart from their plants or mines for the purpose of marketing their products and that do not merely take orders to be filled by direct shipments from the plants or mines. Also included are merchandise brokers, commission merchants and agents and assemblers, buyers and cooperative associations engaged in the marketing of farm products. Wholesalers frequently physically assemble, sort and grade goods in large lots, break bulk, repack and redistribute in smaller lots, for example pharmaceuticals; store, refrigerate, deliver and install goods, engage in sales promotion for their customers and label design.

Retailing is the resale (sale without transformation) of new and used goods mainly to the general public for personal or household consumption or utilization, by shops, department stores, stalls, mail-order houses, door-to-door sales persons, hawkers and peddlers, consumer cooperatives, auction houses etc. Most retailers take title to the goods they sell, but some act as agents for a principal and sell either on consignment or on a commission basis.

## **ii. Transportation and storage**

Transportation and storage includes the provision of passenger or freight transport, whether scheduled or not, by rail, pipeline, road, water or air and associated activities such as terminal and parking facilities, cargo handling, storage etc. Included in this category is the renting of transport equipment with driver or operator. Also included are postal and courier activities.

This category excludes maintenance and repair of motor vehicles which is classified in the Wholesale and retail trade; repair of motor vehicles and motorcycles, and other transportation equipment which is classified in manufacturing. Also excluded in this class is the construction, maintenance and repair of roads, railroads, harbours, airfields, which is included in Construction, as well as the renting of transport equipment without driver or operator which is found in Administrative and support service activities.

## **iii. Accommodation and food service activities**

This section includes the provision of short-stay accommodation for visitors and other travellers and the provision of complete meals and drinks fit for immediate consumption. The amount and type of supplementary services provided within this section can vary widely.

This section excludes the provision of long-term accommodation as primary residences, which is classified in Real estate activities. Also excluded is the preparation of food or drinks that are either not fit for immediate consumption or that are sold through independent distribution channels, i.e. through wholesale or retail trade activities. The preparation of these foods is classified in Manufacturing.

## **iv. Information and communication**

Information and communication includes the production and distribution of information and cultural products, the provision of the means to transmit or distribute these products, as well as data or

communications, information technology activities and the processing of data and other information service activities.

The main components are publishing activities, including software publishing, motion picture and sound recording activities, radio and programming activities, telecommunications activities and information technology activities and other information service activities.

Publishing includes the acquisition of copyrights to content (information products) and making this content available to the general public by engaging in (or arranging for) the reproduction and distribution of this content in various forms. All the feasible forms of publishing (in print, electronic or audio form, on the internet, as multimedia products such as CD-ROM reference books etc.) are included.

**v. Real estate activities**

This section includes acting as lessors, agents and/or brokers in one or more of the following: selling or buying real estate, renting real estate, providing other real estate services such as appraising real estate or acting as real estate escrow agents. Activities in this section may be carried out on own or leased property and may be done on a fee or contract basis. Also included is the building of structures, combined with maintaining ownership or leasing of such structures. This section includes real estate property managers.

**vi. Professional, scientific and technical activities**

This section includes specialized professional, scientific and technical activities. These activities require a high degree of training, and make specialized knowledge and skills available to users like legal, accounting, and photographic activities.

**vii. Administrative and support service activities**

This section includes a variety of activities that support general business operations. These activities differ from those in Professional, scientific and technical activities, since their primary purpose is not the transfer of specialized knowledge.

**viii. Arts, entertainment and recreation**

This section includes a wide range of activities to meet varied cultural, entertainment and recreational interests of the general public, including live performances, operation of museum sites, gambling, sports and recreation activities.

**ix. Other service activities**

This section (as a residual category) includes the activities of membership organizations, the repair of computers and personal and household goods and a variety of personal service activities not covered elsewhere.

**B. Analysis of the services sector**

In this report the services sector consists of the following sectors:

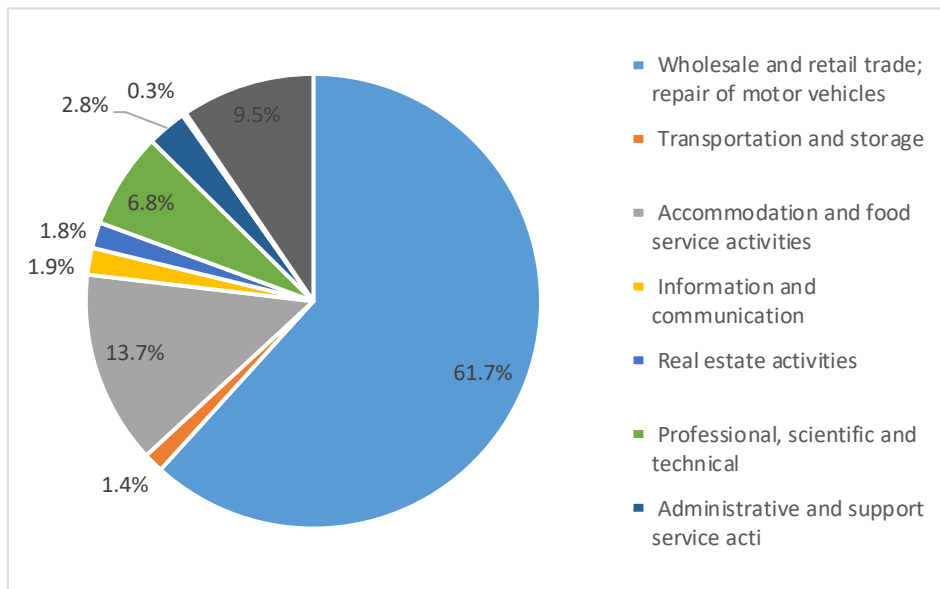
Wholesale and retail trade; repair of motor vehicles and motorcycles



Transportation and storage  
 Accommodation and food service activities  
 Information and communication  
 Real estate activities  
 Professional, scientific and technical activities

The below chart III.2.2.1 suggests that the Wholesale and retail trade; repair of motor vehicles and motorcycles sector holds 61.7 per cent enterprises whereas the Real estate activities sector has 0.3 per cent enterprises.

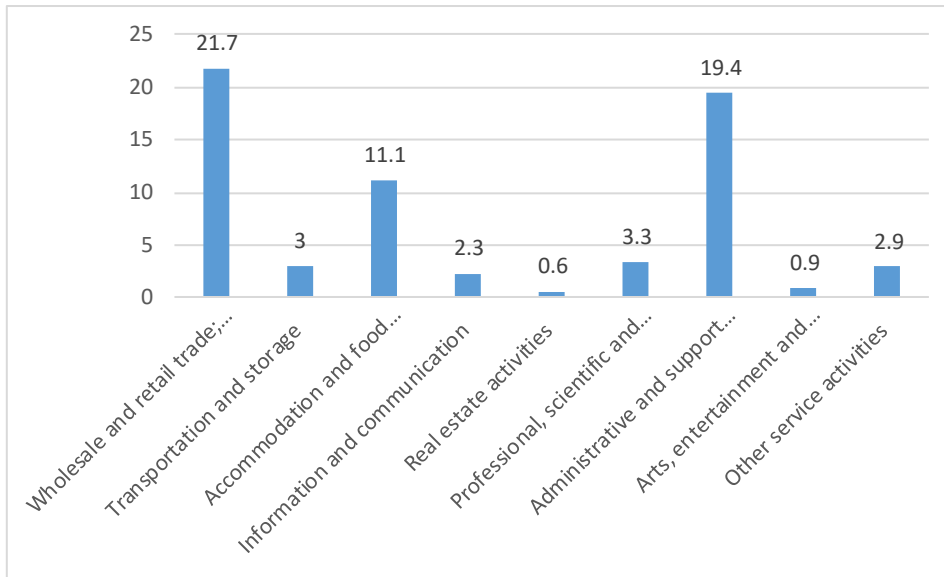
**Chart III.2.2.1 Distribution of enterprises by services type**



Source: NISR, IBES 2015 Survey

The next below chart III.2.2.2 illustrates that Wholesale and retail trade; repair of motor vehicles and motorcycles sector employ 21.7 thousand people while the Real estate activities sector employs only 0.6 thousand. This goes in line with the previous Chart III.2.2.1 that suggested that the said large sector holds more enterprises.

**Chart III.2.2.2 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

The income statement for service sector clearly indicates that the sale of goods in the same condition as purchased yielded more income (RWF 1,848.4 billion) than other components across all service sectors as shown by the below Table III.2.2.1.

**Table III.2.2.1: Income statement for service sector, Frw billion**

Income components	Wholesale and retail trade; repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Real estate activities	Professional, scientific and technical	Administrative and support service activities	Arts, entertainment and recreation	Other service activities	Total
Sales of goods in the same condition as purchased	1,828.4	5.8	2.2	7.5	0.0	0.3	4.2	-	0.0	1,848.4
Sales of manufactured, mined or quarried products	4.8	-	-	-	-	0.0	-	0.0	0.2	5.0
Sales of electricity	0.8	-	-	0.2	-	-	-	-	-	1.0
Sales of water by pipe or bouser	-	-	-	-	-	-	-	-	0.0	0.0
Construction work done	4.7	-	-	-	-	-	-	-	-	4.7
Delivery charges if invoiced separately	0.0	-	-	-	-	-	-	-	-	0.0
Transport, storage and travel services rendered	4.2	150.2	0.1	-	-	0.6	5.7	-	0.0	160.8
Hotel & catering services	0.3	1.7	89.3	-	-	0.2	0.5	-	0.9	92.9
Telecommunication & internet connections	0.1	-	0.5	161.0	-	-	-	-	-	161.6
Sales of professional & scientific services	0.0	2.2	-	4.8	0.1	39.5	1.7	-	1.6	49.7
Rent of land receivable	0.2	-	0.0	-	0.1	-	-	-	-	0.2
Rent of buildings received / receivable	2.2	0.0	0.4	-	3.5	0.0	-	-	0.0	6.1
Dividends or other profits realised	0.4	0.1	0.1	0.0	0.0	0.2	-	-	-	0.9
All other income	20.5	70.2	3.6	28.3	17.3	12.7	40.1	19.2	5.9	217.9
<b>TOTAL INCOME FOR THE YEAR 2015</b>	<b>1,868.1</b>	<b>230.2</b>	<b>96.3</b>	<b>201.8</b>	<b>21.0</b>	<b>53.6</b>	<b>52.1</b>	<b>19.2</b>	<b>8.6</b>	<b>2,550.9</b>

Source: NISR, IBES 2015 Survey

Table III.2.1.2 highlights the distribution of expenditure components by industrial activities. The purchase of raw materials and construction materials have been bought more as they also yielded more income than others.

**Table III.2.2.2: Expenditure statement for services sector, Frw billion**

Expenditure components	Wholesale and retail trade; repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Real estate activities	Professional, scientific and technical	Administrative and support service activities	Arts, entertainment and recreation	Other service activities	Total
Purchases of goods for resale	1,600.6	4.1	2.1	6.3	-	0.2	2.1	-	0.0	1,615.5
Purchases of raw materials, etc., used in manufacturing	3.5	-	-	-	-	0.0	-	0.0	0.1	3.6
Fuel used for mining & quarrying	-	-	-	-	-	-	-	-	-	-
Construction sub-contracts, equipment hire, fuel, materials	3.8	-	-	-	-	-	-	-	-	3.8
Purchases of food and drinks for catering & bar services	0.2	0.3	26.9	-	-	0.3	0.1	-	0.3	28.0
Rent of land paid / payable	0.4	-	0.0	-	-	0.0	0.0	-	0.0	0.4
Rent of buildings paid / payable	14.3	1.7	2.9	2.4	0.1	1.5	0.5	0.4	0.7	24.5
Other goods & services purchased (not interest, etc see below)	94.4	83.9	22.7	114.7	2.8	18.0	15.1	7.0	3.9	362.6
Wages & salaries paid (Social security & other benefits included)	32.7	21.2	21.5	36.1	1.4	16.3	14.7	1.0	1.3	146.4
Interests paid (excluding other bank charges)	15.8	14.9	6.6	50.3	5.9	0.6	1.0	0.1	0.0	95.3
Business licenses, rates and fees payable to government	4.4	1.9	0.5	5.8	0.1	0.6	0.2	0.1	0.1	13.7
Depreciation charges for the year on fixed assets	12.3	21.0	21.1	39.5	4.8	4.0	1.4	0.6	0.6	105.1
All other costs, losses, provisions, etc.	25.3	72.1	3.0	38.8	2.5	3.0	8.9	10.6	0.2	164.3
<b>Total expenditure</b>	<b>1,849.0</b>	<b>221.7</b>	<b>107.4</b>	<b>297.9</b>	<b>17.4</b>	<b>44.6</b>	<b>44.0</b>	<b>19.8</b>	<b>7.6</b>	<b>2,609.3</b>

Source: NISR, IBES 2015 Survey

Table III.2.2.3 below displays the summary income and expenditure statement by enterprise size and the change in inventory.

**Table III.2.2.3: Summary statement by enterprise size for the services sector, Frw billion**

Enterprise size	Total income 2015	Total expenditure 2015	Net profit (loss)	Value of the total change
<=3	294.7	295.8	3.2	4.3
>3, <=9	304.7	303.8	5.8	4.9
>9, <=19	345.8	329.5	16.5	0.3
>19, <=99	972.2	1,013.8	(35.0)	6.6
100+	633.5	666.4	(29.5)	3.4
<b>Total</b>	<b>2,550.9</b>	<b>2,609.3</b>	<b>(39.0)</b>	<b>19.5</b>

Source: NISR, IBES 2015 Survey

**Table III.2.2.4: Summary assets of the services sector, Frw billion**

Assets	Wholesale and retail trade; repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Real estate activities	Professional, scientific and technical	Administrative and support service activities	Arts, entertainment and recreation	Other service activities	Total
<b>Non-current assets</b>	769.1	185.4	192.9	356.0	300.3	73.5	12.9	2.4	5.9	1,898.4
Fixed assets	743.0	176.1	175.0	258.3	261.4	24.2	8.1	2.0	5.9	1,654.0
Land	369.6	4.0	11.0	1.4	168.3	12.2	1.2	0.1	1.3	569.2
Buildings	102.5	9.0	143.1	7.6	89.4	0.6	2.9	0.6	3.4	359.1
Vehicles and Machines	255.0	162.5	11.5	38.5	3.5	1.2	2.6	0.0	0.4	475.1
Others	12.8	0.7	9.5	210.9	0.1	10.2	1.3	1.2	0.8	247.4
Work in progress	11.3	0.1	2.7	3.5	34.5	2.5	4.0	-	-	58.7
Other investments	14.8	9.2	15.2	94.2	4.4	46.8	0.8	0.4	0.0	185.8
<b>Current assets</b>	5,391.6	51.0	27.9	159.6	17.1	34.8	25.4	1.3	2.9	5,711.6
Inventories	4,635.9	2.0	3.7	8.0	0.0	1.7	0.8	0.1	0.2	4,652.4
Debtors & other receivables	564.2	30.0	11.6	83.3	7.4	26.2	19.3	0.7	0.8	743.5
Cash and cash equivalents	191.5	19.0	12.6	68.3	9.6	6.9	5.3	0.5	2.0	315.7
<b>Total assets</b>	<b>6,161.3</b>	<b>236.4</b>	<b>220.8</b>	<b>515.6</b>	<b>317.4</b>	<b>108.3</b>	<b>38.3</b>	<b>3.7</b>	<b>8.9</b>	<b>7,610.7</b>

Source: NISR, IBES 2015 Survey

Table III.2.1.4 above presents the distribution of assets of the services sector while Table III.2.2.5 below summarizes the equity and liabilities of the services sector.

**Table III.2.2.5: Summary equity and liabilities of the services sector, Frw billion**

Liabilities	Wholesale and retail trade; repair of motor vehicles	Transportation and storage	Accommodation and food service activities	Information and communication	Real estate activities	Professional, scientific and technical	Administrative and support service activities	Arts, entertainment and recreation	Other service activities	Total
<b>Equity</b>	<b>1,159.8</b>	<b>(18.4)</b>	<b>98.0</b>	<b>(194.8)</b>	<b>63.2</b>	<b>60.4</b>	<b>15.6</b>	<b>(0.4)</b>	<b>7.7</b>	<b>1,191.2</b>
Share capital	1,000.4	57.8	71.4	70.9	54.1	35.0	3.3	0.1	5.6	1,298.6
Reserves	35.0	(95.1)	23.6	32.6	9.9	6.8	4.7	(1.1)	0.6	17.1
Other equity	126.5	18.9	3.1	(298.3)	(0.9)	18.6	7.6	0.6	2.1	(121.7)
<b>Non-current liabilities</b>	<b>170.7</b>	<b>155.8</b>	<b>86.6</b>	<b>529.1</b>	<b>245.3</b>	<b>17.8</b>	<b>8.0</b>	<b>0.0</b>	<b>0.9</b>	<b>1,214.2</b>
Loans and borrowings	128.4	119.7	49.4	379.7	43.2	16.1	7.5	0.0	0.7	744.7
Other non-current liabilities	42.4	36.1	37.2	149.4	202.2	1.7	0.5	-	0.2	469.5
<b>Current liabilities</b>	<b>4,830.1</b>	<b>99.0</b>	<b>36.2</b>	<b>181.3</b>	<b>8.9</b>	<b>30.1</b>	<b>14.7</b>	<b>4.0</b>	<b>0.3</b>	<b>5,204.6</b>
<b>Total-Liability</b>	<b>6,161.3</b>	<b>236.4</b>	<b>220.8</b>	<b>515.6</b>	<b>317.4</b>	<b>108.3</b>	<b>38.3</b>	<b>3.7</b>	<b>8.9</b>	<b>7,610.7</b>

Source: NISR, IBES 2015 Survey

The following chart suggests that 53.6 per cent enterprises in the service sector have not more than three employees while only 1.2 per cent enterprises have a Hundred or more employees.

The analysis of details on sales and purchases of goods for resale shows that the following items have a big trading share: food, petroleum products, alcoholic drinks, soft drinks, drinking water, tobacco products, construction materials, personal and household goods and supplies, agricultural raw materials, livestock raw materials, and electronic equipment. See Table III.2.2.5 for more details.

**Table III.2.2.5: Details of goods sold in the same condition as purchased, Frw billion**

Type of products	Values of sales			Purchases
	Sold in bulk (Whole sale)	sold in Retail	Total	Total
Petroleum products	231.6	292.2	523.8	478.0
Motor vehicles, motorcycles and bicycles	28.3	33.7	62.0	49.2
Parts of motor vehicles, motorcycles and bicycles	5.0	11.9	16.9	13.6
Electronic equipment (including TVs, telephones, computers, etc)	73.5	22.5	95.9	90.3
Machinery of all kinds not elsewhere specified	0.2	3.6	3.8	2.3
Parts of machinery and equipment sold to customers	2.1	0.3	2.4	1.1
Agricultural raw materials and livestock	63.7	3.7	67.4	58.7
Agricultural and livestock products (not food)	26.1	5.2	31.3	28.0
Metals (unworked) and metal ores	6.3	1.9	8.2	7.3
Construction materials and supplies	101.1	41.0	142.1	124.9
Food (including dairy products, fruit juices, etc)	423.6	30.5	454.0	392.7
Alcoholic drinks, soft drinks, drinking water and tobacco products	221.1	13.1	234.2	210.3
Textiles, clothing, footwear and leather goods	17.0	0.4	17.4	15.8
Books, newspapers, stationery and office supplies	6.5	3.6	10.1	8.4
Pharmaceutical products and medical supplies (not cosmetics)	42.7	14.7	57.5	39.4
Personal and household goods and supplies not els	61.1	19.5	80.6	71.1
Other goods, please specify the main types	17.3	3.6	20.9	19.1
<b>Total</b>	<b>1,327.1</b>	<b>501.2</b>	<b>1,828.2</b>	<b>1,609.8</b>

Source: NISR, IBES 2015 Survey

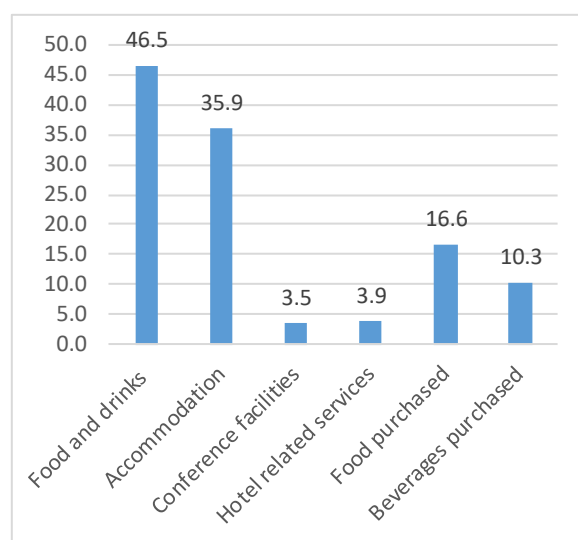
**Table III.2.2.6: Details of transport, storage, travel and related services revenue, Frw billion**

Type of products	Land transport & Air transport	Other transport & postal services	Total
<b>Good Transport</b>			
Transport of goods Within Rwanda	141.0	0.0	141.0
International transport of goods	26.0	0.0	26.0
<b>Passengers transport</b>	17.8	0.0	17.8
Transport of goods Within Rwanda	8.2	0.0	8.2
International transport of goods	7.3	0.1	7.4
Revenue from storage and other transport related services	10.3	<b>0.3</b>	<b>10.6</b>
Gross receipts from clients	14.9	0.0	14.9
Net revenue from travel and tour operator services	9.0	0.0	9.0
<b>Revenue for transport services</b>	<b>160.7</b>	<b>0.4</b>	<b>161.0</b>

Source: NISR, IBES 2015 Survey

Table III.2.2.6 contains the details of transport, storage, travel and related services revenue. In total, Frw 150.2 billion were collected as revenue from this sector. The transport of passengers has dominated the list. Chart III.2.2.3 summarizes the distribution of the revenue details for hotel and catering services. The total revenue is Frw 89.9 billion while the total purchases were valued at Frw 26.9 billion. The two categories Food and drinks, and Accommodation accounted for the highest income with Frw 46.5 billion and Frw 35.9 billion respectively.

**Chart III.2.2.3 Details for hotel and catering services, Billion Frw**



Source: NISR, IBES 2015 Survey

**Table III.2.2.7: Details of telecommunication services and internet connection, Frw billion**

Type of products	Telecommunication	Information technology services	Total
Sales of telephone and internet services	141.0	0.0	141.0
Revenue/commissions due from other service providers	26.0	0.0	26.0
<i>Locals</i>	17.8	0.0	17.8
<i>Internationals</i>	8.2	0.0	8.2
Revenue from mobile money services	7.3	0.1	7.4
Sales of other telecommunication materials	10.3	0.3	10.6
Commissions paid to local providers	14.9	0.0	14.9
Commissions paid to international providers	9.0	0.0	9.0
<b>Net revenue</b>	<b>160.7</b>	<b>0.4</b>	<b>161.0</b>

Source: NISR, IBES 2015 Survey

Table III.2.2.7 illustrates the distribution of different types of revenue and expenses of the telecommunication and information technology services. The sale of telephones, internet services and other telecommunication materials dominated the revenue of these two sectors with Frw 151.3 billion for the telecommunication sector and Frw 0.3 billion for information technology services sector.

**Table III.2.2.8: Detailed revenue of legal, accounting, consulting and similar services, Frw billion**

Type of service	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Arts, entertainment and recreation	Other service activities	Total
Management fees received from a subsidiary	0.0	0.0	0.0	0.0	0.0	0.0
Legal services	0.0	6.9	0.0	0.0	1.5	8.4
Auditing, accountants' fees, and other professional services	0.0	10.4	0.0	0.0	0.0	10.4
Management consulting services	0.1	11.1	0.0	0.0	0.0	11.2
Architectural and engineering services	0.0	8.9	0.0	0.0	0.0	8.9
IT consultancy services	0.0	0.0	1.7	0.0	0.1	1.8
Scientific research and development	0.0	0.0	0.0	0.0	0.0	0.0
Advertising and market research	0.0	1.5	0.0	0.0	0.0	1.5
Veterinary services	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>0.1</b>	<b>38.9</b>	<b>1.7</b>	<b>0.0</b>	<b>1.5</b>	<b>42.2</b>

Source: NISR, IBES 2015 Survey

Table III.2.2.8 above summarizes the revenue of legal, accounting, consulting and similar services category. This category's total revenue is Frw 42.2 billion. The most generating services in this category are: Management consulting services, Auditing, accountants' fees, and other professional services, Architectural and engineering services, and Legal services.

Table III.2.2.9 summarizes the revenue from miscellaneous services. This category's total revenue is Frw 93.8 billion. The most generating sub-sectors in this category are: Administrative and support service activities, Real estate activities, and Arts, entertainment and recreation.

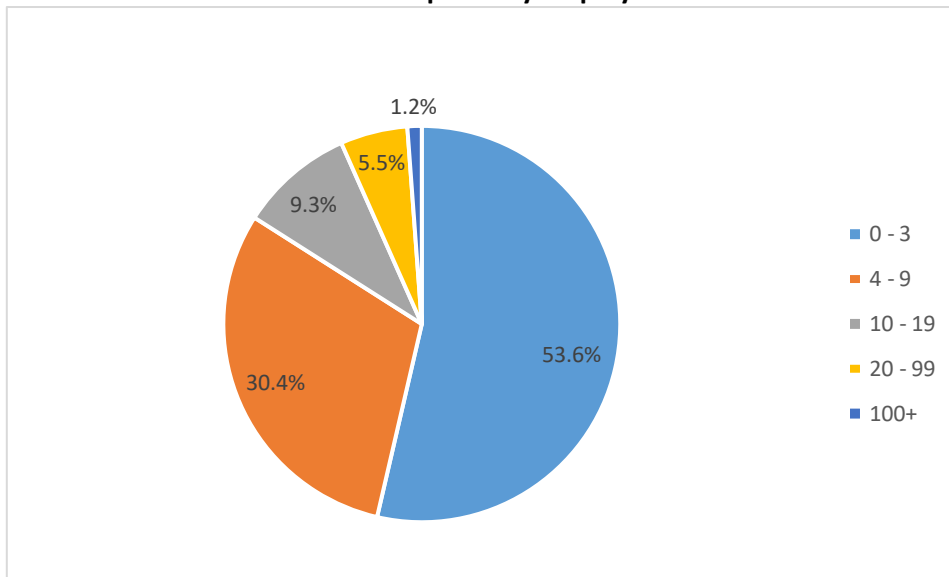
**Table III.2.2.9: Revenue from miscellaneous services, Frw billion**

Type of products	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Arts, entertainment and recreation	Other service activities	Total
Manufacturing work done for others on their raw materials	0.0	0.0	0.0	0.0	0.0	0.0
Waste water treatment	0.0	0.1	0.0	0.0	0.0	0.1
Waste disposal and recycling services	0.0	0.0	0.0	0.0	0.0	0.0
Publishing activity	0.0	0.1	0.0	0.0	0.0	0.1
Video, audio production, TV and broadcasting	0.0	0.3	0.0	0.0	0.0	0.3
Repair and maintenance of motor vehicles	0.0	0.0	0.0	0.0	0.0	0.0
Hire of motor vehicles	0.0	0.0	0.0	0.0	0.0	0.0
Hire of construction machinery and equipment	0.0	0.0	5.9	0.0	0.0	5.9
Hire of other machines or equipment	0.0	0.0	0.0	0.0	0.0	0.0
Repair services for computers and domestic equipment	0.0	0.0	0.0	0.0	0.0	0.0
Security services	0.0	0.0	25.7	0.0	0.0	25.7
Ancillary financial services	0.0	0.0	0.0	0.0	0.4	0.4
Real estate activities	14.9	1.6	0.0	0.0	0.0	16.5
Health-related technical services	4.1	0.0	0.0	0.0	0.0	4.1
Commercial education and training services	0.0	0.0	0.0	0.0	0.0	0.0
Hairdressing and personal care services	0.0	0.0	0.2	0.0	1.5	1.7
Cleaning services	0.0	0.0	3.0	0.0	0.0	3.1
Other services, please specify	0.0	9.5	3.7	18.9	3.6	35.7
<b>Total</b>	<b>19.0</b>	<b>11.5</b>	<b>38.7</b>	<b>18.9</b>	<b>5.7</b>	<b>93.8</b>

Source: NISR, IBES 2015 Survey



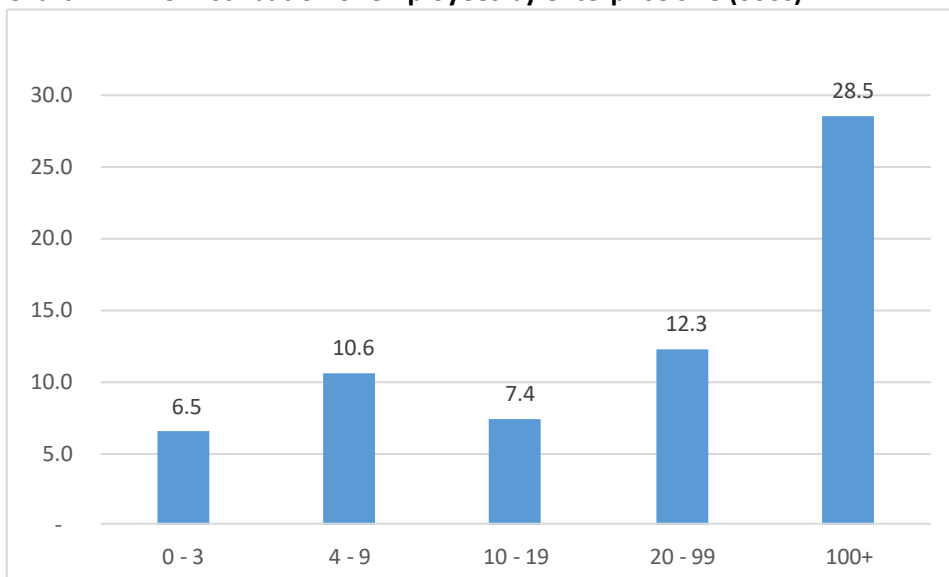
**Chart III.2.2.4 Distribution of enterprises by employment size band**



Source: NISR, IBES 2015 Survey

The following chart illustrates that big sized enterprises have employed 28.5 thousands employees.

**Chart III.2.2.5 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

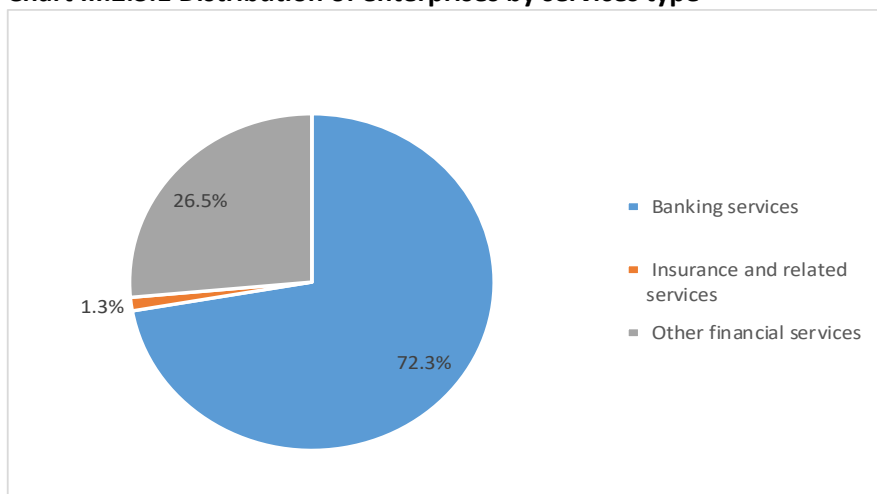
### Section III.2.3: Financial and insurance activities

#### A. Introduction

Financial and insurance activities include financial service activities, insurance, reinsurance and pension funding activities and activities to support financial services. It also includes the activities of holding assets, such as activities of holding companies and the activities of trusts, funds and similar financial entities.

#### B. Analysis of financial and insurance activities

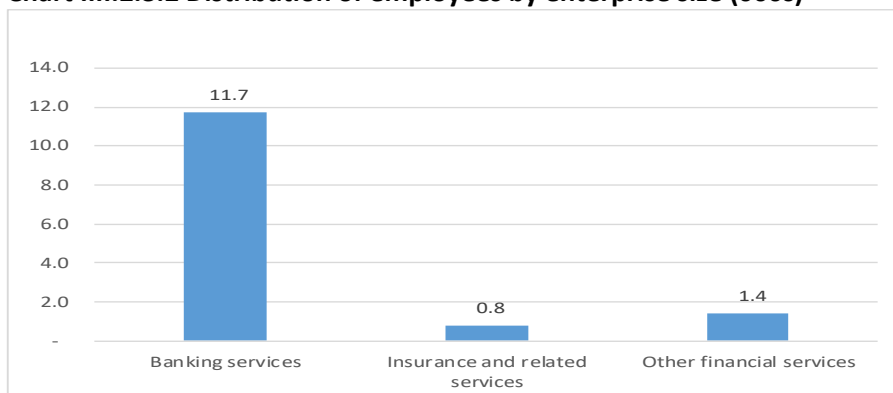
**Chart III.2.3.1 Distribution of enterprises by services type**



Source: NISR, IBES 2015 Survey

The more enterprises in the sector, the more persons employed. This is shown in the below chart whereby 11.7 thousands persons are employed in the banking services while 0.8 thousand persons are employed in the insurance and related services.

**Chart III.2.3.2 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

The income statement of the Financial sector, hereafter in the table below reveals that interest received/premium earned constituted the top income generator for this sector for it realised Frw 271.0 Billion in 2015 while the Gains on the sale of fixed assets made Rwf 0.4 billion.

**Table III.2.3.1: Income statement for financial sector, Frw billion**

Income component	Monetary institutions	Insurance, reinsurance and pension funding, except compulsory social security	Other financial services	Total
Interest received/premiums earned	227.4	35.0	8.6	271.0
Fees & commisions/claim received	42.9	1.4	0.4	44.6
Commissions received for agents, brokerage services	3.2	2.5	3.3	9.0
Rent of land received/recievable	0.0	0.0	0.0	0.0
Rent of buildings received /recievable	0.0	0.2	0.6	0.8
Rent/lease of machinery and equipment	0.0	0.0	0.0	0.0
Interest received/receivable	0.0	1.0	0.1	1.1
Exchange dealings/Other investment	22.6	2.9	1.5	27.0
Insurance income	0.0	4.0	0.2	4.2
Dividend received/receivable	0.5	3.2	0.0	3.8
Grants received	1.9	0.0	0.0	1.9
Gains on the sale of fixed assets	0.4	0.0	0.0	0.4
Bad debts written back/ Revaluations on fixed assets	2.2	0.6	0.2	3.1
Other income, please specify major items	8.1	0.9	0.1	9.0
<b>Total</b>	<b>309.0</b>	<b>51.7</b>	<b>15.1</b>	<b>375.8</b>

Source: NISR, IBES 2015 Survey

On the side of expenditure in the financial sector, the table below reveals that interests/claims paid/payable consists of a big expenditure component as it registered Rwf 93.4 billion in 2015.

**Table III.2.3.2: Expenditure statement for financial sector, Frw billion**

Expenditure component	Monetary institutions	Insurance, reinsurance and pension funding, except compulsory social security	Other financial services	Total
Interests /Claims paid/payable	61.2	22.9	9.2	93.4
Staff costs (Wages, salaries, social security & other benefits)	72.0	8.1	2.3	82.4
Commissions paid for financial services	2.4	1.5	0.1	3.9
Rent of land paid/payable	1.3	0.0	0.0	1.3
Rent of buildings paid/payable	5.4	0.8	0.3	6.5
Payments for rental or lease of machinery and equipment	1.4	0.0	0.0	1.4
Depreciation charges	13.1	1.4	2.2	16.8
Regulatory fees and licences paid to government	2.3	0.5	0.1	2.9
Interests paid/payable on loans contracted (excluding	1.6	0.0	0.0	1.6
Fines, penalties & donations	0.4	0.3	0.0	0.7
Payments made for telephone, internet, postage, courier	3.4	0.3	0.0	3.8
Net impairment charge on loans and advances/Provision for bad	19.5	0.7	0.4	20.6
Loss on the sale of fixed assets	2.7	0.3	0.0	3.0
Cost of all other consumable goods & services purchased(Specify)	58.1	5.5	3.1	66.7
<b>Total</b>	<b>244.9</b>	<b>42.4</b>	<b>18.0</b>	<b>305.2</b>

Source: NISR, IBES 2015 Survey

The following Table III.2.2.3 below displays the summary income and expenditure statement by enterprise size.

**Table III.2.3.3: Summary statement by enterprise size for the financial sector, Frw billion**

Enterprise size	Total income 2015	Total expenditure 2015	Net profit (loss) before tax
<=3	0.3	0.2	0.0
>3, <=9	2.5	2.3	0.2
>9, <=19	1.1	1.0	0.2
>19, <=99	44.0	39.0	(0.0)
100+	327.9	262.7	64.2
<b>Total</b>	<b>375.8</b>	<b>305.2</b>	<b>64.6</b>

Source: NISR, IBES 2015 Survey

Table III.2.3.4 summarizes assets of the financial sector by financial institution type. Monetary institutions have more assets than any other, Frw2,266.6 billion against Frw 93.4 billion for the insurance companies.

**Table III.2.3.4: Summary assets of the financial sector, Frw billion**

RCPA Code	K01	K02	K03	Total
Description	Monetary institutions	Insurance companies	Other financial services	Total
Cash and balances with other FIs	407.9	-	1.7	409.6
Overdrawn accounts & loans to clients	1,369.1	-	0.4	1,369.5
Financial instruments	351.2	-	0.0	351.2
Cash and cash equivalents	-	51.9	17.1	69.0
Fixed assets	104.6	19.2	4.2	128.0
Other assets	33.8	22.2	1.1	57.1
<b>Total</b>	<b>2,266.6</b>	<b>93.4</b>	<b>24.5</b>	<b>2,384.5</b>

Source: NISR, IBES 2015 Survey

The summary of equity and liabilities of the financial sector reveals deposits dominates all other types of liabilities in the monetary institutions, Frw 1,516.3 billion.

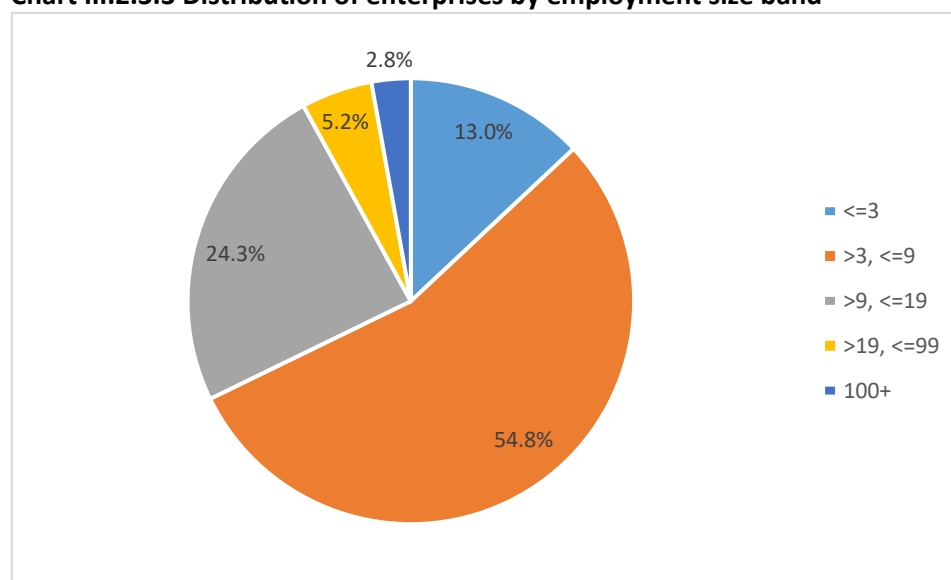
**Table III.2.3.5: Summary equity and liabilities of the financial sector, Frw billion**

RCPA Code	K01	K02	K03	Total
	Monetary institutions	Insurance companies	Other financial services	Total
<b>Description</b>				
Balances due from other FIs	190.3	-	0.0	190.3
Deposit liabilities	1,516.0	-	0.3	1,516.3
Financial instruments	21.0	-	0.0	21.1
Other liabilities	153.7	36.5	15.4	205.6
Provision for contingent liabilities	5.5	26.9	0.1	32.5
Equity	387.9	26.7	6.2	420.8
<b>Total</b>	<b>2,274.4</b>	<b>90.1</b>	<b>22.1</b>	<b>2,386.6</b>

Source: NISR, IBES 2015 Survey

As illustrated in the chart below, 54.8 per cent financial sector enterprises employ not more than 9 (nine) persons while a narrow 2.8 per cent enterprises employ 100 and more persons.

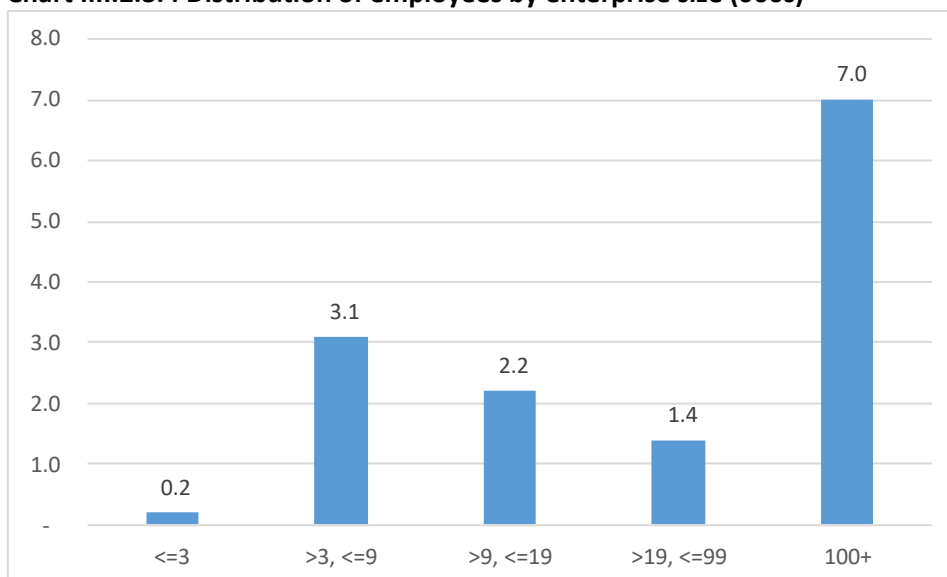
**Chart III.2.3.3 Distribution of enterprises by employment size band**



Source: NISR, IBES 2015 Survey

The above chart presents enterprises by employment size, while the chart below shows that enterprises in the range of 100 and more employees had 7 thousands persons employed whereas the small ones employed 0.2 thousands persons in 2015.

**Chart III.2.3.4 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

## **Section III.2.4: Education sector**

### **A. Introduction**

This section includes education at any level or for any profession, oral or written as well as by radio and television or other means of communication. It includes education by the different institutions in the regular school system at its different levels as well as adult education, literacy programmes etc. Also included are military schools and academies, prison schools etc. at their respective levels.

For each level of initial education, the classes include special education for physically or mentally handicapped pupils. This section also includes instruction primarily concerned with sport and recreational activities such as bridge or golf and education support activities.

In IBES this section includes only private and semi-public pre-primary, primary, secondary, technical vocational education and training (TVET) educational institutions as well as all private, semi-public and public higher learning institutions.

## B. Analysis of education sector

**Table III.2.4.1: Income statement for Education sector**

Income components	Billion Frw
Tuition fees paid : By students	103.5
Tuition fees paid : By REB	39.8
Tuition fees paid : By FARG	13.6
Tuition fees paid : By other supporters	2.6
Registration fees	4.9
Boarding	4.6
Government subsidies or grant	24.7
Development partners	8.8
Meals	2.0
Uniforms	1.1
Rent of land received/ receivable	0.2
Rent of buildings received/ receivable	0.3
Rent/lease of machinery and equipment	0.2
Research income	5.2
All other income	14.2
<b>Total income for 2015</b>	<b>225.8</b>

Source: NISR, IBES 2015 Survey

The above table describes the income statement of the education sector with almost a half being constituted by tuition fees paid by students, Frw 103.5 billion out of Frw 225.8 billion. Table 2.4.2 shows that the cost of staff and labor has been the most expenditure component for education sector in 2015, Frw 104.5 billion.

**Table III.2.4.2: Expenditure statement for Education sector**

Expenditure component	Billion Frw
Text books	2.4
Cost of uniforms	1.6
Cost of meals	10.3
Examination costs	1.4
Rent of land paid/payable	0.1
Rent of buildings paid/payable	2.6
Payments for rental or lease of machinery and equipment	2.6
Cost of staff and labour (wages, salaries, social security and other benefits)	104.5
Research expenses	3.9
Depreciation charges	18.6
Regulatory fees and licences paid to government	2.4
Interests paid /payable (excluding other bank charges)	3.9
Penalties, fines and donations	0.9
Provision for bad or doubtful debts	1.4
Loss on sale of fixed assets and other losses	0.3
Other goods and services purchased	83.3
<b>Total expenditures for 2015</b>	<b>241.3</b>

Source: NISR, IBES 2015 Survey



The following table illustrates that, in education sector, big establishments make more income and expenditure when compared to others.

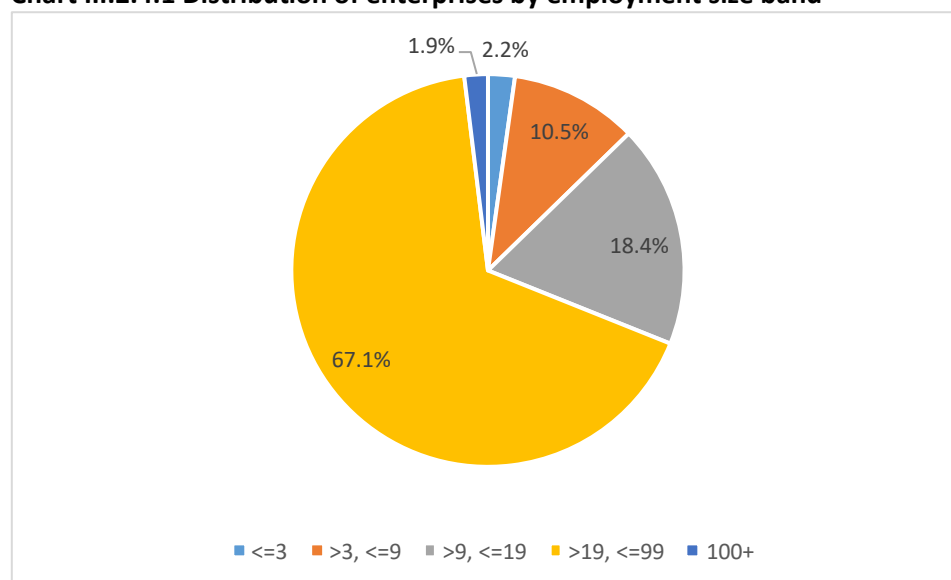
**Table III.2.4.3: Summary statement by enterprise size for education sector, Frw billion**

Enterprise size	Total	
	income	expenditure
<=3	0.0	0.0
>3, <=9	0.1	0.1
>9, <=19	1.7	2.0
>19, <=99	68.0	67.6
100+	156.0	170.6
<b>Total</b>	<b>225.8</b>	<b>240.2</b>

Source: NISR, IBES 2015 Survey

The chart below clearly indicates that 67.1 per cent of the education enterprises employ the number of persons in the range of >19, <=99 while only 1.9 per cent enterprises employs a 100 and more persons.

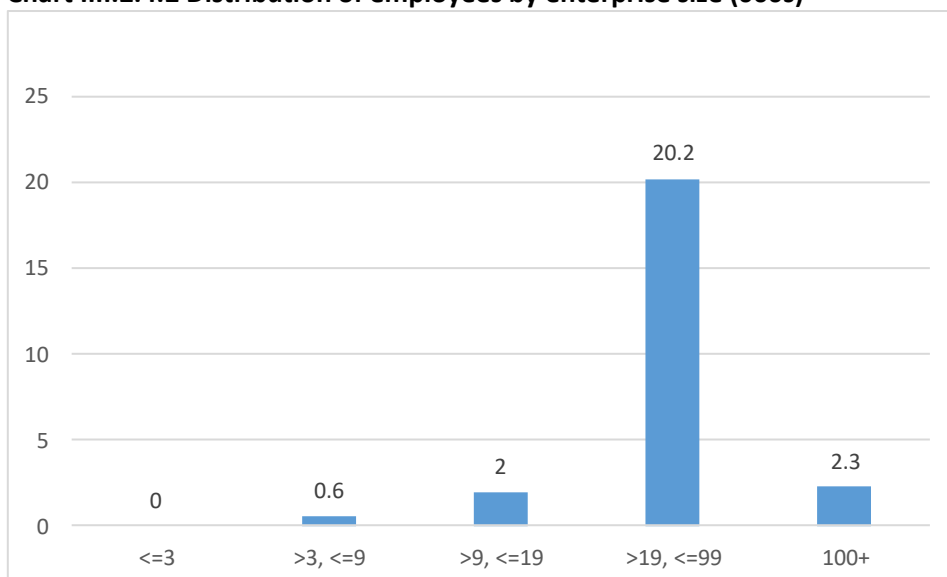
**Chart III.2.4.1 Distribution of enterprises by employment size band**



Source: NISR, IBES 2015 Survey

In the other hand, the following chart stipulates that 20.2 thousands persons are employed in the >19, <=99 sized range education enterprises while it is rare to get a small sized (not more than 3 persons) education enterprise.

**Chart III.2.4.2 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

## **Section III.2.5: Human health and social work activities**

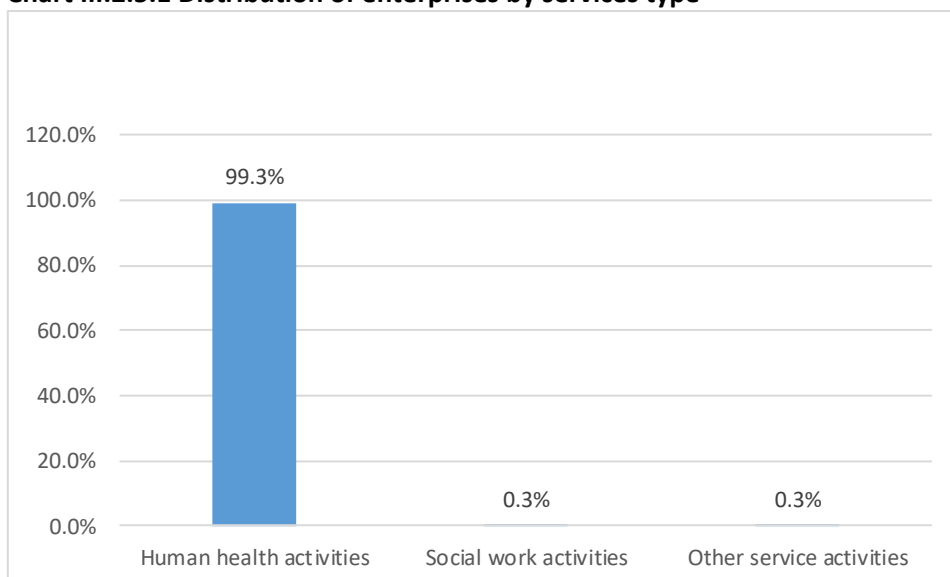
### **A. Introduction**

This section includes the provision of health and social work activities. Activities include a wide range of activities, starting from health care provided by trained medical professionals in hospitals and other facilities, over residential care activities that still involve a degree of health care activities to social work activities without any involvement of health care professionals.

### **B. Analysis of human health and social work activities**

As described in the below chart, the Human health activities own a share of 99.3 per cent in the Health sector followed by both social work and other service activities with 0.3 per cent of share respectively.

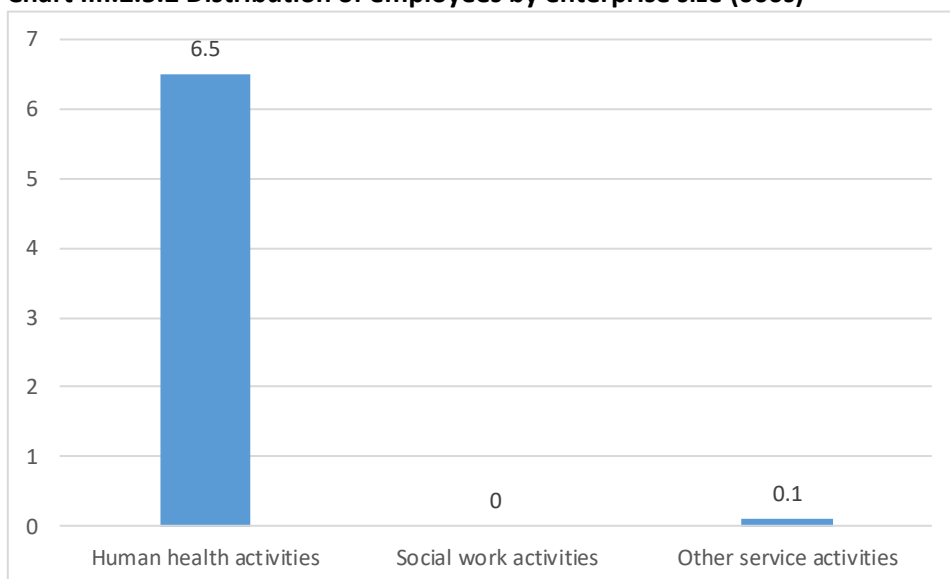
**Chart III.2.5.1 Distribution of enterprises by services type**



Source: NISR, IBES 2015 Survey

Also, on the other hand, as described in the following chart, the human health activities employ 6.5 thousands persons while the social work activities hold less than a thousand.

**Chart III.2.5.2 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

The following table describes the income statement of the health sector and it indicates that the government plays a big role in this sector as it contributed Frw 83.0 billion as the subsidies and grant in 2015.

**Table III.2.5.1: Income statement for the health sector**

<b>Income component</b>	<b>Billion Frw</b>
Income fees paid by patients or their supporters	34.2
Income fees paid by Mutuelle de Santé	31.4
Income fees paid by RAMA	15.3
income fees paid by other insurance companies	13.8
Grants from international organisations and charities	30.2
Grants from local organisations and charities	10.6
Rent of land received/receivable	0.0
Rent of buildings received/receivable	0.1
Rent/lease of machinery and equipment	0.0
Interests and dividends received/receivable	0.3
Government subsidies and grant received	83.0
All other income	15.1
<b>Total income in 2015</b>	<b>234.0</b>

Source: NISR, IBES 2015 Survey

The top expenditure component for the health sector is the cost of staff and labour (wages, salaries, social security and other benefits) which accounted for consumed Frw 108.5 billion in 2015.

**Table III.2.5.2: Expenditure statement for Health sector**

<b>Expenditure component</b>	<b>Billion Frw</b>
Purchases of pharmaceuticals and medical supplies	32.3
Cleaning materials	2.8
Laboratory services paid/payable	5.1
Rent of land paid/payable	0.0
Rent of buildings paid/payable	1.0
Payments for rental or lease of machinery and equipment	0.8
Cost of staff and labour (wages, salaries, social security and other benefits)	108.5
Depreciation charges	2.3
Regulatory fees and licences paid to government	1.2
Penalties, fines and donations	1.5
Provision for bad or doubtful debts	0.9
Loss on sale of fixed assets	0.0
Other goods and services purchased (not interest, etc see above)	62.7
<b>Total expenditures in 2015</b>	<b>217.8</b>

Source: NISR, IBES 2015 Survey

The following table illustrates that, in health sector, big health facilities make more income and expenditure when compared to others.

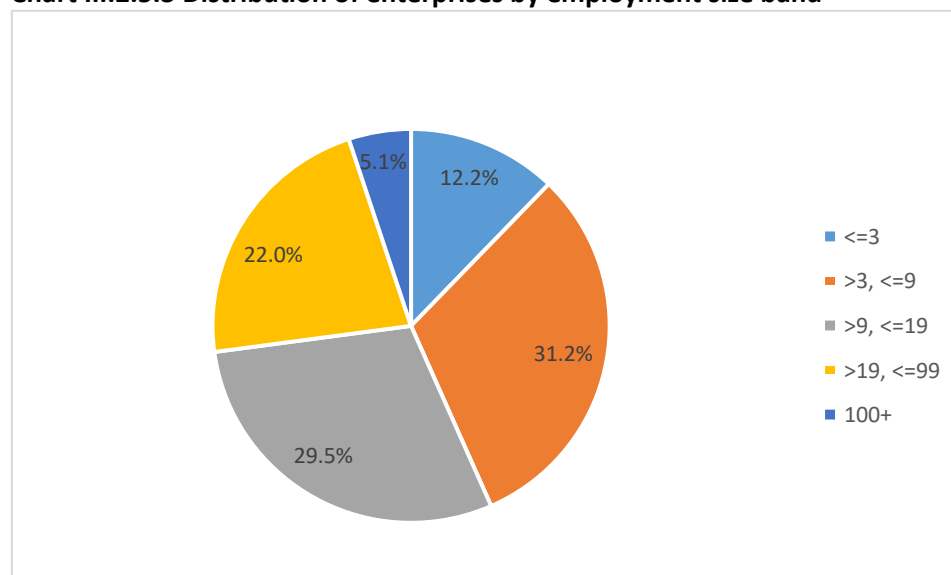
**Table III.2.5.3: Summary statement by enterprise size for the health sector, Frw billion**

Enterprise size	Total	
	income	expenditure
<=3	0.0	0.0
>3, <=9	0.3	0.1
>9, <=19	2.7	2.7
>19, <=99	57.0	55.0
100+	174.0	161.2
<b>Total</b>	<b>234.0</b>	<b>219.1</b>

Source: NISR, IBES 2015 Survey

The following chart indicates that 31.2 per cent enterprises employ the persons in the range of >3, <=9 while 5.1 per cent enterprises employ not more than three (3) persons.

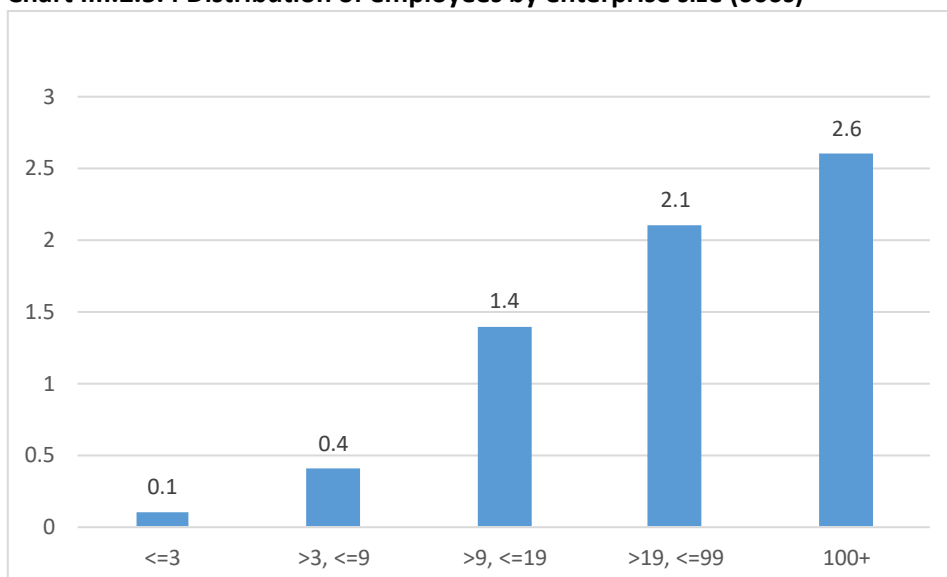
**Chart III.2.5.3 Distribution of enterprises by employment size band**



Source: NISR, IBES 2015 Survey

The following chart is about the number of employees by enterprise size and it is shown hereafter that the big sized enterprises (100+ persons) employ 2.6 thousands persons.

**Chart III.2.5.4 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

## **Section III.2.6: Non-profit institutions serving households (NPISH)**

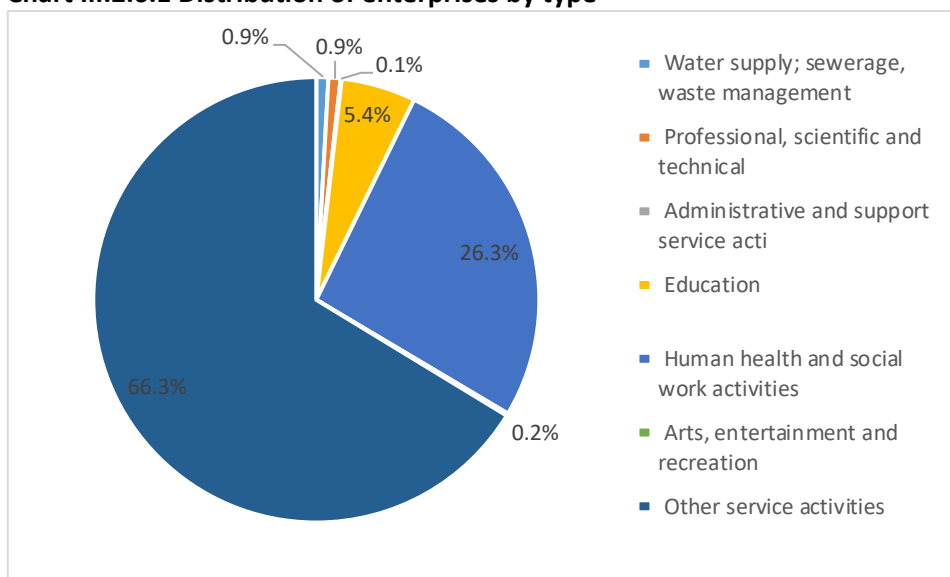
### **A. Introduction**

Non-profit institutions are legal or social entities, created for the purpose of producing goods and services, whose status does not permit them to be a source of income, profit or other financial gain for the units that establish, control or finance them. In practice, their productive activities are bound to generate either surpluses or deficits but any surpluses they happen to make cannot be appropriated by other institutional units. The articles of association by which they are established are drawn up in such a way that the institutional units that control or manage them are not entitled to a share in any profits or other income they receive. For this reason, they are frequently exempted from various kinds of taxes. IBES excludes all NPISH created by the government.

### **B. Analysis of NPISH activities**

As described below in the following chart, 66.3 per cent NGO enterprises are engaged in other services activities while few as 0.1 per cent are engaged in the administrative and support services.

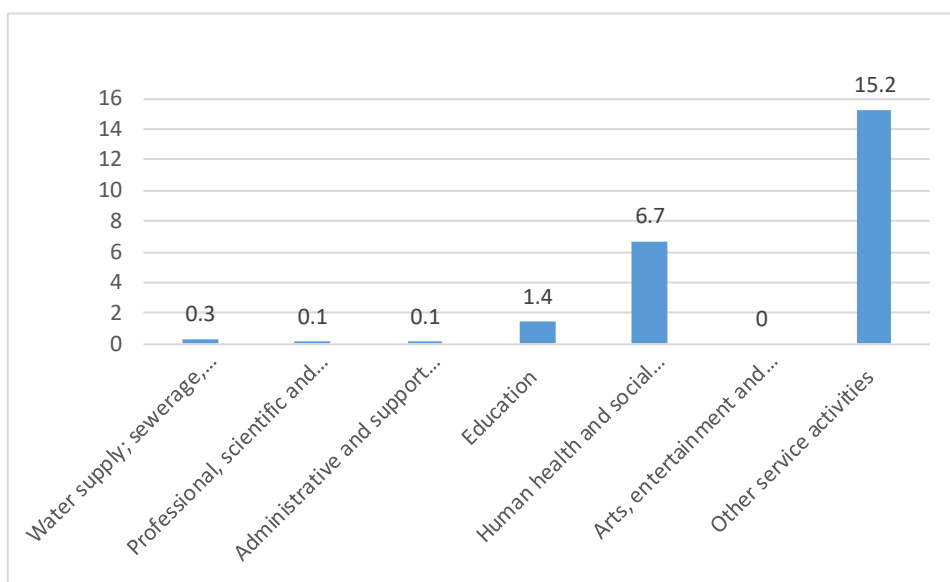
**Chart III.2.6.1 Distribution of enterprises by type**



Source: NISR, IBES 2015 Survey

As most NGO enterprises are in the other services, this implies that the same sector employs more persons than others. This is clearly shown by the below chart that is indicating that the other service sector employs 15.2 thousands persons.

**Chart III.2.6.2 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

Transfers from non-resident related or affiliated organisation has been the main source of the NPISHs income in 2015 as it contributed Frw 211.0 billion as shown by the below table.

**Table III.2.6.1: Income statement for NPISH sector, Frw billion**

Income components	Human health and social work activities	Other service activities	Total
Membership fees	0.1	10.3	10.4
Transfers from government	0.0	5.2	5.2
Transfers from resident related or affiliated organization	0.0	22.8	22.8
Transfers from non-resident related or affiliated organization	7.4	203.6	211.0
Donations, bequests and legacies	0.0	40.5	40.5
Rent of land received/ receivable	0.0	0.0	0.0
Rent of buildings received/ receivable	0.0	2.8	2.8
Rent/lease of machinery and equipment	0.0	0.1	0.1
Interest and dividends received	0.0	0.2	0.2
Grants and subsidies received	0.0	40.5	40.5
All other income	0.3	40.0	40.3
<b>Total</b>	<b>7.8</b>	<b>366.1</b>	<b>373.9</b>

Source: NISR, IBES 2015 Survey

Transfer to resident related or affiliated organizations was the most expenditure component for the NPISH sector in 2015, Frw 107.3 billion.

**Table III.2.6.2: Expenditure statement for NPISH sector, Frw billion**

Expenditure component	Human health and social work activities	Other service activities	Total
Transfer to resident related or affiliated organization:	0.1	107.1	107.3
Transfers to non-residents or affiliated organizations	0.0	45.0	45.0
Rent of land paid/payable	0.0	0.1	0.1
Rent of buildings paid/payable	0.0	4.1	4.1
Payments for rental or lease of machinery and equipment	0.0	1.5	1.5
Cost of staff and labour (wages, salaries, social security)	3.1	84.1	87.2
Depreciation charges	0.1	10.9	11.0
Regulatory fees and licences paid to government	0.0	1.2	1.2
Interests paid/payable (excluding other bank charges)	0.0	2.4	2.4
Penalties, fines and donations	0.0	14.4	14.4
Provision for bad or doubtful debts	0.0	0.1	0.1
Loss on sale of fixed assets	0.0	0.0	0.0
Other goods and services purchased (not interest, etc see above)	4.4	84.8	89.3
<b>Total</b>	<b>7.7</b>	<b>355.8</b>	<b>363.5</b>

Source: NISR, IBES 2015 Survey

The following table illustrates that, in NPISH sector, enterprises employing between 19 and 100 employees have made more income and expenditure when compared to others.



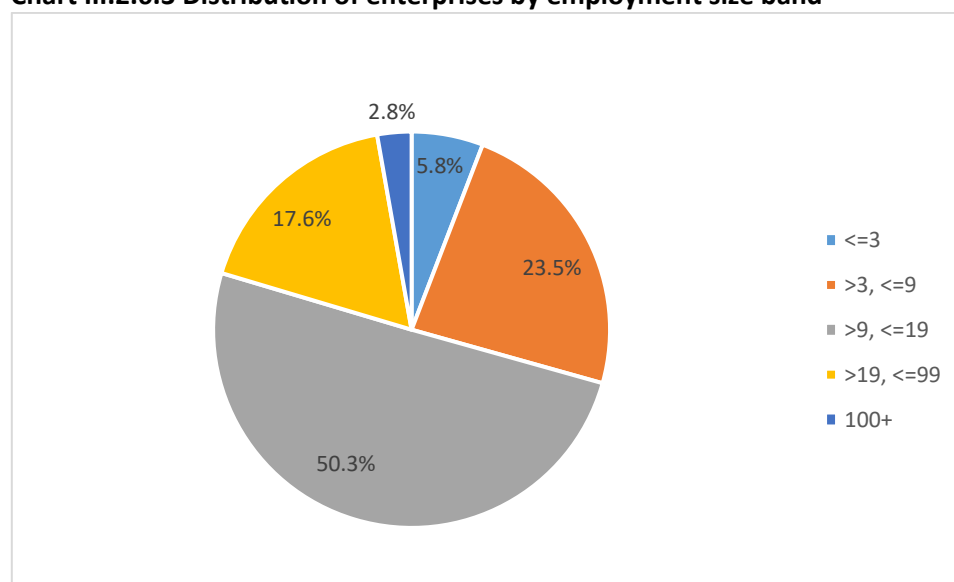
**Table III.2.6.3: Summary statement by enterprise size for NPISH sector, Frw billion**

Enterprise size	Total	
	income	expenditure
<=3	0.4	0.4
>3, <=9	7.7	7.2
>9, <=19	23.6	23.5
>19, <=99	223.5	192.3
100+	118.7	138.0
<b>Total</b>	<b>373.9</b>	<b>361.4</b>

Source: NISR, IBES 2015 Survey

Around 50.3 per cent NPISH enterprises employ a number of persons lying in the range of >9, <=19 persons.

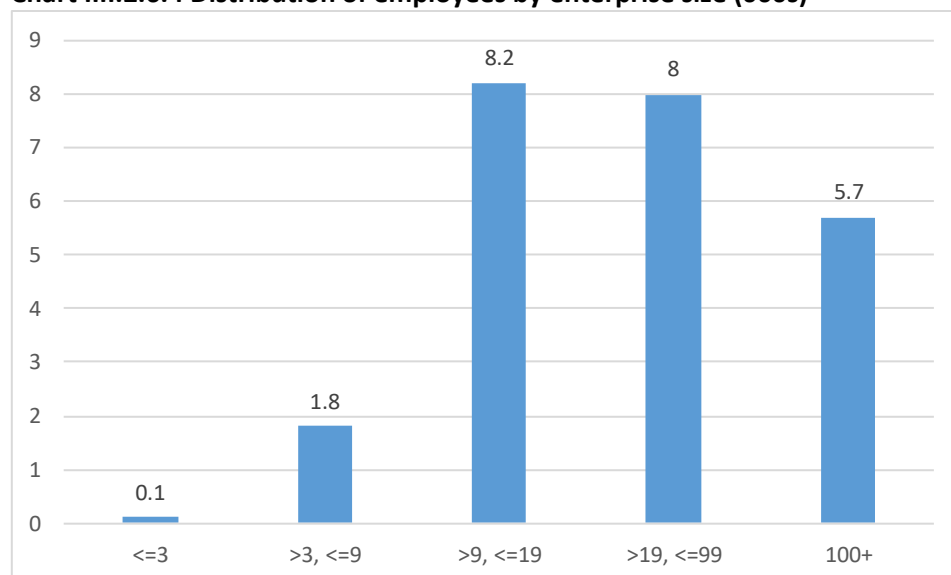
**Chart III.2.6.3 Distribution of enterprises by employment size band**



Source: NISR, IBES 2015 Survey

The medium sized NPISH enterprises (>9, <=19) employ 8.2 thousands persons while the small ones only employ the 0.1 billion persons, see Chart III.2.6.4.

**Chart III.2.6.4 Distribution of employees by enterprise size (000s)**



Source: NISR, IBES 2015 Survey

## **Section III.2.7: Acquisition and disposal of fixed assets**

### **A. Introduction**

All goods, except minor tools and equipment, expected to have a productive life of more than one year and intended for use by the establishment (land, mineral deposits, timber tracts, buildings, machinery, equipment and vehicles) are considered capital goods or fixed assets. Also included in this category are additions, modifications and improvements to existing fixed assets that extend their normal economic life or increase their productivity. Fixed assets may either be purchased or produced by the unit's own labour. In the latter case, the value of the asset is also given as an output. Also included are fixed assets purchased under financial lease, that is, where lease payments over the contract life will equal the asset's value.

### **B. Analysis of Acquisition and disposal of fixed assets**

Table III.2.7.1 below presents the acquisition and disposal of fixed assets in 2015. Opening values, net additions and closing values are distributed by different economic activities.

**Table III.2.7.1: Acquisition and disposal of fixed assets in 2015, Frw billion**

<b>Economic activity</b>	<b>Opening value</b>	<b>Net addition</b>	<b>Closing value</b>
Mining and quarrying	12.3	(1.0)	11.3
Manufacturing	316.9	124.8	441.7
Electricity, gas, steam and air condition	16.6	188.0	204.5
Water supply; sewerage, waste management	1.0	(0.0)	0.9
Construction	104.4	39.9	142.2
Wholesale and retail trade; repair of motor vehicles	98.9	37.1	136.4
Transportation and storage	191.2	(15.1)	176.1
Accommodation and food service activities	188.9	(16.6)	187.8
Information and communication	246.5	13.0	258.3
Financial and insurance activities	52.9	3.1	56.1
Real estate activities	274.0	(11.3)	261.4
Professional, scientific and technical	18.3	11.7	30.1
Administrative and support service acti	7.7	0.3	8.0
Education	257.3	4.2	264.5
Human health and social work activities	28.0	(0.7)	27.4
Arts, entertainment and recreation	1.4	0.6	2.0
Other service activities	115.8	5.2	122.0
<b>Total</b>	<b>1,932.0</b>	<b>383.1</b>	<b>2,330.7</b>

Source: NISR, IBES 2015 Survey

### 3.3 BUSINESS ENVIRONMENT

This section cover the information that has been collected on the business environment in general, information technology and internet use, environment protection, capacity utilization, access to Rwandan produced raw materials, access to reliable power, exportation, and access to finance.

#### 3.3.1 Business environment in general

**Table III.3.1 Ranking of factors by the level of their impact on business**

Factor	No problem	Minor problem	Serious problem	Very serious problem	Not applicable	Total
Availability of affordable finance or bank loans	57.5	20.6	15.4	4.0	2.6	100
Availability of tools and machinery	59.4	20.9	8.9	2.1	8.8	100
Availability of working space	69.4	18.3	9.4	2.7	0.1	100
Availability of skilled or technical labour	79.8	13.1	3.4	1.0	2.7	100
Availability of electricity	67.5	20.0	6.8	4.7	1.0	100
Availability of water	61.4	16.3	9.8	6.9	5.6	100
Availability of land	48.8	10.5	8.1	3.3	29.4	100
Availability of input materials	10.7	3.7	1.7	1.0	82.9	100
Availability of transport facilities and infrastructures	70.5	14.4	9.0	3.9	2.1	100
Regulatory environment	82.0	12.3	3.4	2.0	0.3	100
Marketing problems	57.3	24.0	8.4	2.4	7.9	100
Telecommunications	84.0	10.1	3.8	1.0	1.1	100
Internet connection	50.1	17.8	9.2	7.9	15.1	100
<b>Total</b>	<b>61.4</b>	<b>15.6</b>	<b>7.5</b>	<b>3.3</b>	<b>12.3</b>	<b>100</b>

**Source:** NISR, IBES 2015 Survey

As described by the Table III.3.1, 15.4 per cent of companies have reported that availability of affordable finance or bank loan is a serious problem on their business while 82.0 per cent of the companies declared not having any problem with regulatory environment.

### 3.3.2 Information technology and internet use

**Table III.3.2 Average number of employees using a computer by economic activity**

Activity	Computer use mean	Staff mean	Companies
Mining and quarrying	1.6	51.0	93
Manufacturing	3.7	38.0	693
Electricity, gas, steam and air conditioning supply	33.9	69.0	20
Water supply; sewerage, waste management and ren	5.3	27.0	49
Construction	7.4	101.0	161
Wholesale and retail trade; repair of motor vehicles a	1.9	6.0	3,822
Transportation and storage	8.0	36.0	87
Accommodation and food service activities	1.9	12.0	853
Information and communication	18.1	22.0	117
Financial and insurance activities	12.8	18.0	774
Real estate activities	2.2	7.0	114
Professional, scientific and technical activities	4.6	8.0	425
Administrative and support service activities	4.5	104.0	175
Education	8.9	34.0	765
Human health and social work activities	8.8	24.0	608
Arts, entertainment and recreation	11.8	41.0	19
Other service activities	2.1	13.0	1,332
Activities of extraterritorial organizations and bodies	13.2	17.0	64
<b>Total</b>	<b>4.4</b>	<b>18.0</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

Based on the above Table III.3.2, on average 18.08 out of 22 employees in the Information and communication industry are using a computer in their job whereas the Mining and quarrying industry records the least with on average 1.59 out of 51 employees who use a computer in their job.

**Table III.3.3 Distribution of enterprises with internet connection by size**

Enterprise size	Yes	No	Total	Companies
Micro 1-3	26.9	73.1	100	3,891
Small 4-30	62.6	37.4	100	5,217
Medium 31-100	91.5	8.5	100	825
Big 100 +	92.0	8.0	100	238
<b>Total</b>	<b>52.0</b>	<b>48.0</b>	<b>100</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

From the above Table III.3.3, 92.0 per cent of big enterprises have an internet connection in their premises however only 26.9 per cent of micro enterprises have an internet connection.

**Table III.3.4 Distribution of enterprises with internet connection by economic activity**

<b>Activity</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>	<b>Companies</b>
Mining and quarrying	30.1	69.9	100	93
Manufacturing	43.7	56.3	100	693
Electricity, gas, steam and air conditioning supply	90.0	10.0	100	20
Water supply; sewerage, waste management and ren	73.5	24.5	100	49
Construction	98.8	1.2	100	161
Wholesale and retail trade; repair of motor vehicles a	33.6	66.4	100	3,822
Transportation and storage	87.4	12.6	100	87
Accommodation and food service activities	36.2	63.8	100	853
Information and communication	81.2	18.8	100	117
Financial and insurance activities	89.0	11.1	100	774
Real estate activities	60.5	39.5	100	114
Professional, scientific and technical activities	96.5	3.8	100	425
Administrative and support service activities	57.7	42.3	100	175
Education	77.8	22.2	100	765
Human health and social work activities	88.0	12.0	100	608
Arts, entertainment and recreation	89.5	10.5	100	19
Other service activities	38.5	61.6	100	1,332
Activities of extraterritorial organizations and bodies	82.8	17.2	100	64
<b>Total</b>	<b>52.0</b>	<b>48.0</b>	<b>100</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

Companies in the construction sector have internet connection on their premises at the level of 98.8 per cent while the Mining and Quarrying companies record the least with 30.1 per cent.

**Table III.3.5 Distribution of enterprises by type of internet used**

<b>Internet type</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>	<b>Frequency</b>
Wireless(WiFi)	37.9	62.1	100	5,288
Broadband(fiber optic)	8.25	91.75	100	5,288
Modem	75.06	24.94	100	5,288
VPN	4.09	95.91	100	5,288
Telephone	32.2	67.8	100	5,288
<b>Total</b>	<b>31.5</b>	<b>68.5</b>	<b>100</b>	<b>5,288</b>

Source: NISR, IBES 2015 Survey

As shown in the above Table, modem is used by 75.06 per cent companies while only 4.09 per cent companies are using VPN.

**Table III.3.6 Per cent distribution of enterprises by communication means used and enterprise size**

Means of Communication	Micro 1-3	Small 4-30	Medium 31-100	Big 100 +	Total
Email address to communicate with clients or suppliers	17.8	61.45	15.71	5.03	100
Email portal	15.64	62.13	16.69	5.53	100
Own website	13.53	51.96	23.35	11.16	100
<b>Total</b>	<b>16.35</b>	<b>60.08</b>	<b>17.34</b>	<b>6.24</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

As indicated by the above Table III.3.6, the small companies lead others in possessing email address (61.45 per cent), email portal (62.13 per cent) and website (51.96 per cent).

**Table III.3.7 Percent distribution of enterprises by what internet is used for**

Internet use	Yes	No	Total	Companies
Make purchases for this enterprise	27.7	72.3	100	5,288
Deliver services to this enterprise's clients	39.9	60.1	100	5,288
Receipts from customers payments	19.3	80.7	100	5,288
Do research and develop ideas on new products	61.9	38.1	100	5,288
Advertise job vacancies	18.8	81.2	100	5,288
Declaration of taxes	89.7	10.3	100	5,288
Payment of taxes	48.0	52.1	100	5,288
Internet banking	33.3	66.7	100	5,288
Video conference	11.5	88.5	100	5,288
Staff training	17.9	82.1	100	5,288
Advertise Company's products	20.5	79.5	100	5,288
<b>Total</b>	<b>35.3</b>	<b>64.7</b>	<b>100</b>	<b>5,288</b>

Source: NISR, IBES 2015 Survey

As described in the Table III.3.7 above, 89.7 per cent of companies are use internet for taxes declaration while only 11.5 per cent are using it for video conferences.

**Table III.3.8 Percent distribution of enterprises by internet use enterprise size**

<b>Internet use</b>	<b>Micro 1-3</b>	<b>Small 4-30</b>	<b>Medium 31-100</b>	<b>Big 100 +</b>	<b>Total</b>
Make purchases for this enterprise	19.5	57.1	16.2	7	100
Deliver services to this enterprise's clients	22.7	55.2	15.1	7	100
Receipts from customers payments	9.1	57.8	23.5	10	100
Do research and develop ideas on new products	17.9	61.4	15.9	5	100
Advertise job vacancies	11.2	53.8	23.4	12	100
Declaration of taxes	18.4	62.5	14.7	4	100
Payment of taxes	21.2	57.9	15.0	6	100
Internet banking	16.2	58.9	17.4	7	100
Video conference	7.4	62.8	17.0	13	100
Staff training	10.2	61.7	19.0	9	100
Advertise company's products	11.1	58.6	19.8	10	100
<b>Total</b>	<b>17.1</b>	<b>59.4</b>	<b>16.7</b>	<b>7</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

In harmony with the previous table, Table III.3.8 above indicates that small enterprises lead others in all internet usages.



### 3.3.3 Environment protection

The table below shows that in the total economy, 98.8 per cent possess either scraps or waste while only 7.2 per cent do not. The activities of extraterritorial organizations and manufacturing sectors seem to be above other sectors in terms of scraps and waste possession with 100 and 98.1 per cent of their companies respectively.

**Table III.3.9 Distribution of enterprises economic activity and scraps or waste possession**

Activity	Yes	No	Total Companies	
Mining and quarrying	79.6	20.4	100	93
Manufacturing	98.1	1.9	100	693
Electricity, gas, steam and air conditioning supply	95.0	5.0	100	20
Water supply; sewerage, waste management and ren	89.8	10.2	100	49
Construction	81.4	18.0	100	161
Wholesale and retail trade; repair of motor vehicles a	92.7	7.3	100	3,822
Transportation and storage	83.9	16.1	100	87
Accommodation and food service activities	96.2	3.8	100	853
Information and communication	82.9	17.1	100	117
Financial and insurance activities	88.6	11.4	100	774
Real estate activities	89.5	10.5	100	114
Professional, scientific and technical activities	84.2	15.8	100	425
Administrative and support service activities	87.4	12.6	100	175
Education	97.5	2.5	100	765
Human health and social work activities	97.9	2.1	100	608
Arts, entertainment and recreation	94.7	5.3	100	19
Other service activities	93.2	6.9	100	1,332
Activities of extraterritorial organizations and bodies	100.0	0.0	100	64
<b>Total</b>	<b>92.8</b>	<b>7.2</b>	<b>100</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

Only the mining sector has a percentage (79.6) lower than 80 per cent of companies with scraps and waste possession.

**Table III.3.10 Percent distribution of enterprises by type of scraps and waste and enterprise size**

Type	Micro 1-3	Small 4-30	Medium 31-100	Big 100 +	Total
Solid	38.2	50.8	8.5	2.5	100
Liquid	19.4	62.0	14.4	4.2	100
Gas	1.5	66.7	19.7	12.1	100
<b>Total</b>	<b>35.1</b>	<b>52.6</b>	<b>9.5</b>	<b>2.8</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

The table above illustrates that the majority of companies with scraps and waste possession are of small size (52.6 per cent) while big companies have a lower percentage of 2.8. The trend is the same for scraps and waste type as small companies dominate with 50.8, 62.0 and 66.7 for solid, liquid and gas respectively. The only exception arises for gas scraps and waste where big companies are above micro one with a percentage of 12.1 versus 1.5.

**Table III.3.11 Percent distribution of enterprises by mode of disposal of scraps and waste**

Mode of disposal	Yes	No	Total
Pay some one to remove the waste	65.7	34.3	100
Sells the waste	3.3	96.7	100
Dumping in free land	11.8	88.2	100
Discharging into river or streams	0.2	99.8	100
Burying in specified places or burning	26.1	73.9	100
Recycling	3.8	96.2	100
<b>Total</b>	<b>18.5</b>	<b>81.5</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

From the above table, we can see that most companies pay someone to remove the waste as their mode of waste disposal (65.72), this method is followed by burying in specific places or burning them (26.06). The recycling is still at a lower level as only 3.77 per cent of companies use this mode of waste disposal. On the other hand discharging waste into rivers or streams is disappearing as only 0.22 per cent of companies are using this method. This may be considered as a good sign in terms of environmental protection.

**Table III.3.12 Percentage distribution of enterprises by water source**

Source of water	Yes	No	Total
WASAC	60.8	39.2	100
Rainwater storage	11.6	88.4	100
Well	3.0	97.0	100
Lake or dam	2.5	97.5	100
Delivered by other in tank	3.2	96.8	100
Recycled water	1.1	98.9	100
Water from spring	8.3	91.7	100
<b>Total</b>	<b>12.9</b>	<b>87.1</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

WASAC appear to be the main source of water for Rwandan enterprises with a percentage of 60.8, followed by rainwater storage (11.6 per cent) as shown in the table above. The use of recycled water is still very low with only 1.1 per cent.

**Table III.3.13 Distribution of enterprises by economic activity and whether they store water or not**

Activity	Yes	No	Total	10,172
Mining and quarrying	24.7	75.3	100	10,172
Manufacturing	36.6	63.4	100	10,172
Electricity, gas, steam and air conditioning supply	15.0	85.0	100	10,172
Water supply; sewerage, waste management and ren	54.4	45.6	100	10,172
Construction	41.7	58.3	100	10,172
Wholesale and retail trade; repair of motor vehicles a	9.6	90.4	100	10,172
Transportation and storage	2.3	97.7	100	10,172
Accommodation and food service activities	55.8	44.2	100	10,172
Information and communication	22.4	77.6	100	10,172
Financial and insurance activities	41.4	58.6	100	10,172
Real estate activities	37.6	62.4	100	10,172
Professional, scientific and technical activities	8.9	91.1	100	10,172
Administrative and support service activities	21.6	78.4	100	10,172
Education	76.6	23.4	100	10,172
Human health and social work activities	70.4	29.6	100	10,172
Arts, entertainment and recreation	47.6	52.4	100	10,172
Other service activities	28.4	71.6	100	10,172
Activities of extraterritorial organizations and bodies	30.4	69.6	100	10,172
<b>Total</b>	<b>30.5</b>	<b>69.5</b>	<b>100</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

Enterprises which store water represent 30.5 per cent of all enterprises. Some sectors are a step ahead of others in water storing. These include Education and Human health and social work activities for which 76.6 per cent and 70.4 of their respective companies have a water storing system. The transportation and storage sector is below others with only 2.3 per cent of enterprises that store water.

**Table III.3.14 Percent distribution of enterprises storing water by type of water storing device**

<b>Water storing Device</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>	<b>Companies</b>
Dam	0.6	99.4	100	10,172
Pond	2.5	97.5	100	10,172
Tanks	26.7	73.3	100	10,172
Others	0.9	99.1	100	10,172

Source: NISR, IBES 2015 Survey

The tank is the most possessed water storing device with a percentage of 26.7 while the dam is the least possessed device with only 0.6 per cent of companies with water storing systems.

**Table III.3.15 Distribution of enterprises by economic activity and firewood as a main source of energy**

<b>Activity</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>	<b>Companies</b>
Mining and quarrying	43.0	57.0	100	93
Manufacturing	19.0	81.0	100	693
Electricity, gas, steam and air conditioning supply	0.0	100.0	100	20
Water supply; sewerage, waste management and ren	0.0	100.0	100	49
Construction	0.0	100.0	100	161
Wholesale and retail trade; repair of motor vehicles a	0.7	99.3	100	3,822
Transportation and storage	0.0	100.0	100	87
Accommodation and food service activities	24.2	75.8	100	853
Information and communication	0.0	100.0	100	117
Financial and insurance activities	0.0	100.0	100	774
Real estate activities	0.0	100.0	100	114
Professional, scientific and technical activities	1.9	98.1	100	425
Administrative and support service activities	0.6	99.4	100	175
Education	48.6	51.4	100	765
Human health and social work activities	37.6	62.4	100	608
Arts, entertainment and recreation	0.0	100.0	100	19
Other service activities	23.6	76.4	100	1,332
Activities of extraterritorial organizations and bodies	3.1	96.9	100	64
<b>Total</b>	<b>13.1</b>	<b>86.9</b>	<b>100</b>	<b>10,172</b>

Source: NISR, IBES 2015 Survey

Education, Mining and quarrying and Human health and social work activities are the sectors in which firewood are mostly used with a percentage of 48.6, 43.0 and 37.6 of their companies respectively. In the total economy, the use of firewood as source of energy is at 13.1 per cent of surveyed enterprises.

**Table III.3.16 Volume of firewood used by economic activity**

<b>Activity</b>	<b>m<sup>3</sup></b>	<b>Companies</b>
Mining and quarrying	9,671	40
Manufacturing	91,636	132
Wholesale and retail trade; repair of motor vehicles and motorcycles	944	26
Accommodation and food service activities	28,028	207
Professional, scientific and technical activities	16	8
Administrative and support service activities	364	1
Education	139,980	372
Human health and social work activities	37,914	228
Other service activities	46,501	314
Activities of extraterritorial organizations and bodies	543	2
<b>Total</b>	<b>355,596</b>	<b>1,330</b>

Source: NISR, IBES 2015 Survey

The volume of firewood used in 1,330 Rwandan enterprises is 355,596 m<sup>3</sup>. Education and manufacturing enterprises are the most users of firewood with 139,980 and 91,636 m<sup>3</sup> respectively while Professional, scientific and technical activities are the least users with 16 m<sup>3</sup>.

**Table III.3.17 Volume of firewood used by enterprise size**

<b>Enterprise size</b>	<b>m<sup>3</sup></b>	<b>Companies</b>
Micro 1-3	10,097	94
Small 4-30	171,268	872
Medium 31-100	103,871	332
Big 100 +	70,360	32
<b>Total</b>	<b>355,596</b>	<b>1,330</b>

Source: NISR, IBES 2015 Survey

Small and medium enterprises are the one that use a bigger volume of firewood as they have used 171,268 and 103,871 cubic meters respectively from the total volume of 355,596 cubic meters used in the total economy.

### 3.3.4 Capacity utilization

**Table III.3.18 Capacity utilization mean in production units by economic activity in 2015**

<b>Activity</b>	<b>Utilization mean</b>	<b>Companies</b>
Mining and quarrying	51.1	20
Manufacturing	64.7	469
Electricity, gas, steam and air conditioning supply	84.2	6
Water supply; sewerage, waste management and ren	81.6	5
Construction	70	2
Wholesale and retail trade; repair of motor vehicles a	28.5	35
Accommodation and food service activities	99.9	24
Information and communication	65	1
Professional, scientific and technical activities	100	1
Arts, entertainment and recreation	85	1
Other service activities	43.1	23
<b>Total</b>	<b>63.1</b>	<b>586</b>

Source: NISR, IBES 2015 Survey

Among all sectors, capacity utilisation in production units stands at 63.1 per cent. Only Professional scientific and technical activities and Accommodation and food service activities seem to utilise their capacities at maximum with percentages of 100 and 99.9 respectively. Wholesale and retail trade, repair of motor vehicle is the least sector in terms of capacity utilisation as it only uses 28.5 per cent.

**Table III.3.19 Capacity utilization mean of production units by enterprise size in 2015**

<b>Enterprise size</b>	<b>Capacity utilization</b>	<b>Companies</b>
Micro 1-3	49.8	81
Small 4-30	61.3	380
Medium 31-100	75.5	73
Big 100+	79.8	52
<b>Total</b>	<b>63.1</b>	<b>586</b>

Source: NISR, IBES 2015 Survey

Taking into account the size of enterprises, big companies are ranked the first in capacity utilisation with a percentage of 79.8 as can be seen in the table above. The micro enterprises are the least with only 49.8 per cent of their capacity used.

**Table III.3.20 Distribution of enterprises that are underutilizing their capacity by economic activity**

Activity	Yes	No	Total	Companies
Mining and quarrying	50.8	49.2	100	20
Manufacturing	68.1	31.9	100	469
Electricity, gas, steam and air conditioning supply	66.7	33.3	100	6
Water supply; sewerage, waste management and ren	60.0	40.0	100	5
Construction	100.0	0.0	100	2
Wholesale and retail trade; repair of motor vehicles a	44.9	55.1	100	35
Accommodation and food service activities	52.8	47.2	100	24
Information and communication	100.0	0.0	100	1
Professional, scientific and technical activities	0.0	100.0	100	1
Arts, entertainment and recreation	100.0	0.0	100	1
Other service activities	100.0	0.0	100	23
<b>Total</b>	<b>66.8</b>	<b>33.2</b>	<b>100</b>	<b>586</b>

Source: NISR, IBES 2015 Survey

At national level, the enterprises declared underutilizing their capacity represent 66.8 per cent. The manufacturing sector seems to have influenced this level as it shows a percentage of 68.1 with 469 over 586 companies that have answered this question.

**Table III.3.21 Reasons of capacity underutilization**

Reasons of underutilization	Yes	No	Total
Low Demand	64.2	35.8	100
Unreliable supply of power	24.3	75.7	100
Unreliable supply of inputs	42.0	58.0	100
Lack of skilled workers	10.5	89.5	100
Bottleneck in the producion line	13.4	86.6	100
Lack of working capital	33.3	66.7	100
Lsbor market regulations	14.2	85.8	100
Lack of necessary specilaized technology,machinery & spare parts	22.0	78.0	100
Old equipment	17.3	82.7	100
other	15.0	85.0	100
<b>Total</b>	<b>25.6</b>	<b>74.4</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

The table above shows that the main reason of capacity underutilization is the low demand as reported by 64.2 per cent of all the respondents. It is followed by the unreliable supply of inputs by 42.0 per cent of enterprises. The least mentioned reason is the lack of skilled workers with 10.5 per cent.

### 3.3.5 Access to Rwandan produced raw materials

**Table III.3.22 Production units by whether they use Rwandan raw materials and by economic activity**

<b>Activity</b>	<b>Yes</b>	<b>No</b>	<b>Total Companies</b>	
Mining and quarrying	89.8	10.2	100	20
Manufacturing	77.1	22.9	100	469
Electricity, gas, steam and air conditioning supply	83.3	16.7	100	6
Water supply; sewerage, waste management and ren	100.0	0.0	100	5
Construction	50.0	50.0	100	2
Wholesale and retail trade; repair of motor vehicles a	42.0	58.0	100	35
Accommodation and food service activities	95.8	4.2	100	24
Information and communication	100.0	0.0	100	1
Professional, scientific and technical activities	100.0	0.0	100	1
Arts, entertainment and recreation	100.0	0.0	100	1
Other service activities	100.0	0.0	100	23
<b>Total</b>	<b>77.4</b>	<b>22.6</b>	<b>100</b>	<b>586</b>

Source: NISR, IBES 2015 Survey

The use of Rwandan raw materials is at the level of 77.4 per cent. The main driver of this percentage appears to be the manufacturing sector with a number of 469 companies out of 586 interviewed and a percentage of 77.1. The least user of local raw materials is the wholesale and retail trade at a percentage of 42.0 out of 35 trade concerned enterprises.



**Table III.3.23 Production units using Rwandan raw materials by importance and economic activity**

Activity	Not important	Somewhat important	Important	Very important	Total	Freq.
Mining and quarrying	0.0	5.6	66.1	28.2	100	18
Manufacturing	8.0	22.4	20.9	48.7	100	361
Electricity, gas, steam and air conditioning supply	0.0	0.0	60.0	40.0	100	5
Water supply; sewerage, waste management and ren	20.0	0.0	60.0	20.0	100	5
Construction	0.0	0.0	0.0	100.0	100	1
Wholesale and retail trade; repair of motor vehicles a	0.0	6.8	72.7	20.5	100	15
Accommodation and food service activities	0.0	50.7	4.4	44.9	100	23
Information and communication	100.0	0.0	0.0	0.0	100	1
Professional, scientific and technical activities	0.0	0.0	0.0	100.0	100	1
Arts, entertainment and recreation	100.0	0.0	0.0	0.0	100	1
Other service activities	0.0	51.1	4.4	44.5	100	23
<b>Total</b>	<b>7.0</b>	<b>23.4</b>	<b>23.4</b>	<b>46.2</b>	<b>100</b>	<b>454</b>

Source: NISR, IBES 2015 Survey

The use of Rwandan raw materials is very important in 46.2 per cent of concerned enterprises. The construction sector and professional, scientific and technical activities like local raw materials with 100 per cent.

**Table III.3.24 Quality rating of Rwandan raw materials by economic activity**

Activity	Low	Somewhat low	Somewhat high	High	Total	Freq.
Mining and quarrying	0	5.6	77.4	16.9	100	18
Manufacturing	11.5	12.2	40	36.4	100	361
Electricity, gas, steam and air conditioning supply	0	20	60	20	100	5
Water supply; sewerage, waste management and remediation activities	0	20	60	20	100	5
Construction	0	0	100	0	100	1
Wholesale and retail trade; repair of motor vehicles and motorcycles	6.8	72.7	0	20.5	100	15
Accommodation and food service activities	50.7	0	0	49.3	100	23
Information and communication	0	100	0	0	100	1
Professional, scientific and technical activities	0	0	0	100	100	1
Arts, entertainment and recreation	0	0	100	0	100	1
Other service activities	0	51.1	4.4	44.5	100	23
<b>Total</b>	<b>11.9</b>	<b>15.5</b>	<b>36.9</b>	<b>35.7</b>	<b>100</b>	<b>454</b>

Source: NISR, IBES 2015 Survey

### 3.3.6 Access to reliable power

The table below shows that 84.4 per cent of enterprises were connected to the national power grid.

**Table III.3.25 Distribution of production units by whether they are connected to the national power grid or not**

Activity	Yes	No	Total	Freq.
Mining and quarrying	55.8	44.2	100	20
Manufacturing	85.5	14.5	100	469
Electricity, gas, steam and air conditioning supply	83.3	16.7	100	6
Water supply; sewerage, waste management and remediation activities	60	40	100	5
Construction	100	0	100	2
Wholesale and retail trade; repair of motor vehicles and motorcycles	100	0	100	35
Accommodation and food service activities	52.8	47.2	100	24
Information and communication	100	0	100	1
Professional, scientific and technical activities	100	0	100	1
Arts, entertainment and recreation	0	100	100	1
Other service activities	100	0	100	23
<b>Total</b>	<b>84.4</b>	<b>15.6</b>	<b>100</b>	<b>586</b>

Source: NISR, IBES 2015 Survey

The following table shows that 14.5 per cent on the national power grid units need additional power in future whereas 85.5 per cent of the national power grid units do not need additional power in future

**Table III.3.26 National power grid units needing additional power in future by economic activity**

<b>Activity</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>	<b>Freq.</b>
Mining and quarrying	36.4	63.6	100	11
Manufacturing	13.4	86.6	100	401
Electricity, gas, steam and air conditioning supply	60	40	100	5
Water supply; sewerage, waste management and ren	66.7	33.3	100	3
Construction	100	0	100	2
Wholesale and retail trade; repair of motor vehicles a	20.1	79.9	100	35
Accommodation and food service activities	0	100	100	12
Information and communication	0	100	100	1
Professional, scientific and technical activities	0	100	100	1
Other service activities	0	100	100	23
<b>Total</b>	<b>14.5</b>	<b>85.5</b>	<b>100</b>	<b>494</b>

Source: NISR, IBES 2015 Survey

Table III.3.27 shows the distribution of production units by number of power outages and economic activity, 401 are estimated to be in manufacturing sector and 73.2 per cent of them have experienced less than three number of power outages in 2015.

**Table III.3.27 Distribution of production units by number of power outages and economic activity**

<b>Activity/Number of power outages</b>	<b>Less than 1</b>	<b>1 to 3</b>	<b>4 to 10</b>	<b>10 to 20</b>	<b>Above 20</b>	<b>Total</b>	<b>Fr.</b>
Mining and quarrying	45.5	45.5	0.0	9.1	0.0	100	11
Manufacturing	32.7	40.5	11.9	12.5	2.5	100	401
Electricity, gas, steam and air conditioning supply	40.0	20.0	0.0	20.0	20.0	100	5
Water supply; sewerage, waste management and ren	66.7	0.0	0.0	33.3	0.0	100	3
Construction	0.0	50.0	0.0	50.0	0.0	100	2
Wholesale and retail trade; repair of motor vehicles a	5.7	82.8	5.7	5.7	0.0	100	35
Accommodation and food service activities	0.0	8.0	0.0	0.0	92.0	100	12
Information and communication	0.0	0.0	100.0	0.0	0.0	100	1
Professional, scientific and technical activities	0.0	0.0	0.0	100.0	0.0	100	1
Other service activities	91.2	4.4	4.4	0.0	0.0	100	23
<b>Total</b>	<b>32.9</b>	<b>40.5</b>	<b>10.5</b>	<b>11.5</b>	<b>4.5</b>	<b>100</b>	<b>494</b>

Source: NISR, IBES 2015 Survey

Table III.3.28 illustrates the distribution of production units by length of power outages and economic activity, 2.9 per cent of manufacturing companies in 401 companies have had above 20 hours power outages.

**Table III.3.28 Distribution of production units by length of power outages and by economic activity**

Activity/Hours	Less than 1	1 to 3	4 to 10	10 to 20	Above 20	Total	Fr.
Mining and quarrying	45.5	45.5	9.1	0.0	0.0	100	11
Manufacturing	59.6	22.4	11.4	3.7	2.9	100	401
Electricity, gas, steam and air conditioning supply	100.0	0.0	0.0	0.0	0.0	100	5
Water supply; sewerage, waste management and ren	66.7	33.3	0.0	0.0	0.0	100	3
Construction	50.0	0.0	50.0	0.0	0.0	100	2
Wholesale and retail trade; repair of motor vehicles a	14.4	49.4	2.9	33.4	0.0	100	35
Accommodation and food service activities	92.0	8.0	0.0	0.0	0.0	100	12
Information and communication	0.0	0.0	100.0	0.0	0.0	100	1
Professional, scientific and technical activities	100.0	0.0	0.0	0.0	0.0	100	1
Other service activities	91.2	8.8	0.0	0.0	0.0	100	23
<b>Total</b>	<b>58.7</b>	<b>23.5</b>	<b>10.1</b>	<b>5.3</b>	<b>2.4</b>	<b>100</b>	<b>494</b>

Source: NISR, IBES 2015 Survey

### 3.3.7 Exportation

The table below shows that 22.9 per cent of enterprises have exported in 2015 their products abroad. 69.5 per cent of mining and quarrying enterprises were engaged in exportation.

**Table III.3.29 Distribution of enterprises by whether they exported in 2015 and by economic activity**

Activity	Yes	No	Total	Freq.
Mining and quarrying	69.5	30.5	100	20
Manufacturing	24.3	75.7	100	469
Electricity, gas, steam and air conditioning supply	16.7	83.3	100	6
Water supply; sewerage, waste management and ren	20	80	100	5
Construction	0	100	100	2
Wholesale and retail trade; repair of motor vehicles a	8.6	91.4	100	35
Accommodation and food service activities	0	100	100	24
Information and communication	0	100	100	1
Professional, scientific and technical activities	100	0	100	1
Arts, entertainment and recreation	100	0	100	1
Other service activities	0	100	100	23
<b>Total</b>	<b>22.9</b>	<b>77.1</b>	<b>100</b>	<b>586</b>

Source: NISR, IBES 2015 Survey

The following table illustrates that 67.3 per cent of the big sized enterprises have exported their products in 2015.

**Table III.3.30 Distribution of enterprises by whether they exported in 2015 and by enterprise size**

<b>Enterprise size</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>	<b>N</b>
Micro 1-3	23.2	76.8	100	81
Small 4-30	15.4	84.6	100	380
Medium 31-100	30.1	69.9	100	73
Big 100 +	67.3	32.7	100	52
<b>Total</b>	<b>22.9</b>	<b>77.1</b>	<b>100</b>	<b>586</b>

Source: NISR, IBES 2015 Survey

Table III.3.31 shows that 26.9 per cent of enterprises had the reason of not exporting in 2015, the most reason of not exporting was that enterprises could not found financing.

**Table III.3.31 Distribution of enterprises by reasons of not exporting**

<b>Reasons of not exporting</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
Could not find clients	33.5	66.5	100
could not find financing to export	39	61	100
problems with certification of the product	20.1	79.9	100
too high quality standards in the country of destination	22.4	77.6	100
Insufficient production volume to meet demand	28.3	71.7	100
Unfavorable exchange rate	20.7	79.3	100
Lack of information on potential destinations	30.8	69.2	100
Transport costs	32.2	67.8	100
Other reasons	15.4	84.6	100
<b>Total</b>	<b>26.9</b>	<b>73.1</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

### 3.3.8 Access to finance

As described in the following table, 70.7 per cent of small enterprises had a saving account and that most enterprises use a current account in micro small enterprises while medium and big one prefer using the foreign exchange and letter of credit.

**Table III.3.32 Distribution of enterprises by financial services type used and by enterprise size**

Financial services	Micro 1-3	Small 4-30	Medium 31-100	Big 100 +	Total	Freq.
Current account	38.3	51.2	8.2	2.4	100	9,979
Savings accounts	17.2	70.7	7.8	4.3	100	1,094
Foreign exchange	23.4	50.9	17.5	8.2	100	1,100
Letters of credits	17.0	49.4	17.5	16.1	100	261
Insurance	29.3	53.7	12.7	4.3	100	5,350

Source: NISR, IBES 2015 Survey

The following table shows that medical or life insurance was the most insurance type used by enterprises with 66 per cent.

**Table III.3.33 Distribution of enterprises by the type of insurance used**

Type of insurance	Yes	No	Total	Freq.
Motorvehicles	45	55	100	5,350
Medical and/or Life insurance	66	34	100	5,350
Other property	45	55	100	5,350

Source: NISR, IBES 2015 Survey

Table III.3.34 shows that personal cash was the most important source of finance with 83 per cent.

**Table III.3.34 Distribution of enterprises by the ranking of their source of finance, 1 is the most important**

Source of Financing/Rank	1	2	3	4	5	6	7	Total	Freq.
Personal Cash	83.0	15.8	1.2	0.0	0.0	0.0	0.0	100	9,103
Parent company in Rwanda	27.0	63.8	2.2	1.3	0.5	0.0	5.2	100	225
Loans from Rwanda	25.6	70.5	3.5	0.1	0.0	0.0	0.3	100	4,054
Loans from outside Rwanda	17.5	70.0	7.9	0.0	0.0	0.4	4.2	100	278
Government	50.9	39.9	6.5	0.5	0.2	0.3	1.8	100	643
NGOs	73.8	20.2	4.1	0.2	0.0	0.0	1.6	100	846
Others	35.7	48.2	14.5	0.8	0.1	0.0	0.7	100	1,743

Source: NISR, IBES 2015 Survey

The table below illustrates that 87 per cent of the enterprises have started their business by using equity capital whilst none of the enterprises start with credit card.

**Table III.3.35 Distribution of enterprises by the type of start-up finance used**

Financial source	Yes	No	Total	Freq.
Equity capital	87	13	100	10,172
Bank overdraft	7	93	100	10,172
Credit card	0	100	100	10,172
Subsidized bank loan	1	99	100	10,172
Short term bank loan	14	86	100	10,172
Long term bank loan	5	95	100	10,172
Microfinance loan	3	97	100	10,172
Trade credit	3	97	100	10,172
Hire-purchase agreements (leasing)	1	99	100	10,172
Retained earning	8	92	100	10,172
Sales of assets	1	99	100	10,172
Sharedholders and related enterprises	6	94	100	10,172
Friends or family	9	91	100	10,172

Source: NISR, IBES 2015 Survey

The Table III.3.36 shows that equity capital was the main source of finance used by enterprise from 2011 to 2015 but a decline has been observed over time.

**Table III.3.36 Distribution of enterprises by used source of financing from 2011 to 2015**

<b>Financial source</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Equity capital	58.2	58.1	57.0	56.1	55.7
Bank overdraft	4.3	4.7	4.8	4.8	4.6
Credit card	0.1	0.2	0.3	0.2	0.3
Subsidized bank loan	0.5	0.4	0.4	0.6	0.8
Short term bank loan	5.7	5.5	7.8	9.4	9.1
Long term bank loan	3.4	3.5	3.6	3.2	3.1
Microfinance loan	1.2	1.2	1.5	1.0	1.4
Trade credit	2.5	2.5	2.3	2.3	2.3
Hire-purchase agreements (leasing)	0.6	0.8	0.8	0.6	0.6
Retained earning	12.2	12.6	11.4	11.6	12.1
Sales of assets	0.6	0.6	0.6	0.6	0.7
Shareholders and related enterprises	4.9	4.6	4.4	3.9	3.9
Friends or family	5.9	5.4	5.2	5.7	5.5
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

Table III.3.37 illustrates that short and medium term bank loans were the most financial source received 100 per cent by enterprises from 2011 to 2015.

**Table III.3.37 Distribution of enterprises that received 100 per cent of finance by negotiated source of finance, 2011-2015**

<b>Financial source</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Short and medium term bank loan	457	614	995	1,389	1,443
Long term bank loan	323	316	366	404	425
Credit line or card or overdraft	325	379	509	573	564
Trade credit	146	181	217	243	259

Source: NISR, IBES 2015 Survey



### 3.4 SURVEY FINDINGS: INFORMAL SECTOR

This section provides an overview of the structure of informal economic activity as reported in the IBES 2015. In addition, as noted earlier, an Establishment Census (EC) was also undertaken in 2014 which provided information on the informal sector. The census indicated that there are some 137,251 informal enterprises at the time the listing for the census was compiled, and the number of employees working in these enterprises was 209,863 (covering enterprises in all activities excluding Agriculture, Public Administration, Education and Health and Social Work). In the tables of this report section the estimates from the IBES 2015 sample survey are presented as percentages of this estimated total number of informal enterprises (or estimated total number of employees).

The IBES 2015 informal survey was undertaken from 17<sup>th</sup> November to 24<sup>th</sup> December, 2015. The sample was therefore not selected directly from the Census listing. There are therefore some differences in the structure of the sample when compared to the EC. For example, comparing the percentage of micro-enterprises (i.e. those with three or fewer employees), the EC gives a figure of 96.4 percent while, based on the IBES 2015 sample, the estimate is 91.7 percent.

Given the nature of informal businesses, notably that they are not registered for tax purposes, the actual total number of such enterprises in Rwanda is difficult to estimate with certainty. The IBES 2015 survey of these enterprises was therefore designed to produce estimates of the composition of activity, rather than an estimate of the levels. NISR remains committed to improving these estimates, which will be achieved in part through further surveys of the informal sector, but also by utilizing information from the a wider set of data sources, including data on international imports and exports, the Agricultural Survey, and the Integrated Household Living Conditions Survey (Enquête Intégrale sur les Conditions de Vie des Ménages, EICV).

Table III.4.1 shows the percentage distribution of informal enterprises by province and by ownership. For example, 24.77 per cent of all informal enterprises in Rwanda are estimated to be in the Northern Province and owned by Rwanda residents.

**Table III.4.1 Percentage distribution of informal enterprises by province and ownership<sup>1</sup>**

Province	Government	Resident Rwandans	Resident foreigners	Non-resident	Total
Kigali	0.00	16.35	0.12	0.00	16.47
South	0.00	13.17	0.05	0.00	13.22
West	0.00	21.01	0.97	0.00	21.98
North	0.00	24.77	0.02	0.00	24.79
East	0.02	23.52	0.01	0.00	23.54
<b>Total</b>	<b>0.02</b>	<b>98.81</b>	<b>1.16</b>	<b>0.00</b>	<b>100.00</b>

Source: NISR, IBES 2015 Survey

Note1: The estimated total number of informal enterprises based on the Informal IBES-2015 is 141,543.

Table III.4.2 shows the percentage distribution of informal enterprises by activity and by ownership. For example, 51.37 per cent of all informal enterprises in Rwanda are estimated to be in Wholesale and retail trade, and owned by Rwanda residents.

**Table III.4.2 Percentage distribution of informal enterprises by activity and ownership<sup>1</sup>**

ISIC1_names	Government	Resident Rwandans	Resident foreigners	Non-resident	Total
Mining and quarrying	0.00	0.05	0.00	0.00	0.05
Manufacturing	0.00	9.84	0.06	0.00	9.90
Water supply; sewerage, waste management	0.02	0.23	0.00	0.00	0.25
Construction	0.00	0.01	0.00	0.00	0.02
Wholesale and retail	0.00	51.37	0.98	0.00	52.35
Transportation and storage	0.00	0.15	0.00	0.00	0.15
Accommodation and food service activities	0.00	25.41	0.04	0.00	25.45
Information and communication	0.00	0.37	0.01	0.00	0.37
Financial and insurance	0.00	0.00	0.00	0.00	0.00
Real estate activities	0.00	0.01	0.00	0.00	0.01
Professional, scientific and technical activities	0.00	0.48	0.00	0.00	0.48
Administrative and support service activities	0.00	0.43	0.00	0.00	0.43
Arts, entertainment and recreation	0.00	0.06	0.00	0.00	0.06
Activities of household	0.00	10.40	0.06	0.00	10.46
<b>Total</b>	<b>0.02</b>	<b>98.81</b>	<b>1.16</b>	<b>0.00</b>	<b>100.00</b>

**Source:** NISR, IBES 2015 Survey

**Note1:** The estimated total number of informal enterprises based Informal IBES-2015 is 141,543.

**Table III.4.3 Percentage of total informal sector employees by gender and activity<sup>1</sup>**

ISIC1_names	Male	Female	Total
Mining and quarrying	1.74%	0.41%	2.15%
Manufacturing	9.42%	4.07%	13.49%
Water supply; sewerage, waste management	0.10%	0.08%	0.18%
Construction	0.03%	0.01%	0.04%
Wholesale and retail	21.57%	20.78%	42.35%
Transportation and storage	0.37%	0.05%	0.42%
Accommodation and food service activities	15.30%	10.91%	26.21%
Information and communication	0.37%	0.06%	0.43%
Financial and insurance	0.00%	0.00%	0.00%
Real estate activities	0.01%	0.00%	0.01%
Professional, scientific and technical activities	0.46%	0.08%	0.54%
Administrative and support service activities	0.32%	0.10%	0.42%
Arts, entertainment and recreation	0.11%	0.01%	0.12%
Activities of household	11.26%	2.37%	13.63%
<b>Total</b>	<b>61.07%</b>	<b>38.93%</b>	<b>100.00%</b>

**Source:** NISR, IBES 2016 Survey

**Note 1:** The estimated total number of employees in informal enterprises based on the informal IBES 2015 is 236,617 (covering enterprises in all activities excluding Agriculture, Public Administration, Education and Health and Social Work).

Table III.4.4 shows the percentage distribution of informal enterprises by activity and by size of enterprise. For example, 51.83 per cent of all informal enterprises in Rwanda are estimated to be the Wholesale and retail trade sector and employing three or fewer workers.

**Table III.4.4 Percentage distribution of informal enterprises by size<sup>1</sup>**

Activity	Micro 1-3	Small 4-3	Medium 31	Total
Mining and quarrying	0.00	0.01	0.04	0.05
Manufacturing	8.06	1.81	0.00	9.87
Water supply; sewerage, waste management	0.25	0.00	0.00	0.25
Construction	0.01	0.01	0.00	0.02
Wholesale and retail	51.83	0.33	0.00	52.16
Transportation and storage	0.06	0.09	0.00	0.15
Accommodation and food service activities	23.73	1.76	0.00	25.50
Information and communication	0.36	0.01	0.00	0.37
Financial and insurance	0.00	0.00	0.00	0.00
Real estate activities	0.01	0.00	0.00	0.01
Professional, scientific and technical activities	0.44	0.04	0.00	0.48
Administrative and support service activities	0.41	0.01	0.00	0.43
Arts, entertainment and recreation	0.05	0.01	0.00	0.06
Activities of household	9.70	0.96	0.00	10.66
<b>Total</b>	<b>94.92</b>	<b>5.04</b>	<b>0.04</b>	<b>100.00</b>

**Source:** NISR, IBES 2015 Survey

Note1: The estimated total number of informal enterprises based on the Informal IBES-2015 is 141,543. Table III.4.5 shows the percentage distribution of informal enterprises by size of enterprise and gender of employees. For example, 46 per cent of all informal enterprises in Rwanda are estimated to be males working in micro enterprises (i.e. with three or fewer workers).

**Table III.4.5 Percentage of employees by gender and size of informal enterprises<sup>1</sup>**

Size Band	Male	Female	Total
Micro 1-3	44.03%	33.31%	77.34%
Small 4-30	15.26%	5.16%	20.42%
Medium 31-100	1.78%	0.45%	2.24%
<b>Total</b>	<b>61.07%</b>	<b>38.93%</b>	<b>100.00%</b>

**Source:** NISR, IBES 2015 Survey

Note 1: The estimated total number of employees in informal enterprises based on the informal IBES 2015 is 236,617 (covering enterprises in all activities excluding Agriculture, Public Administration, Education and Health and Social Work).

**Table III.4.6 Percentage distribution of informal enterprises by economic activity and TIN ownership**

<b>Economic activities</b>	<b>With TIN</b>	<b>No TIN</b>	<b>Total</b>
Mining and quarrying	6.8	93.2	100
Manufacturing	15.0	85.0	100
Water supply; sewerage, waste management	1.1	98.9	100
Construction	83.8	16.2	100
Wholesale and retail trade; repair of motor vehicles	14.8	85.2	100
Transportation and storage	17.7	82.3	100
Accommodation and food service activities	6.3	93.7	100
Information and communication	20.0	80.0	100
Real estate activities	10.4	89.6	100
Professional, scientific and technical	37.2	62.8	100
Administrative and support service activities	47.1	52.9	100
Arts, entertainment and recreation	7.1	92.9	100
Other service activities	5.5	94.5	100
<b>Total</b>	<b>11.9</b>	<b>88.1</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

Table III.4.6 above shows that 11.9 per cent of informal enterprises don't have the tax identification number (TIN). In 2015, the construction sector had more informal businesses with TIN, 83.8 per cent.

**Table III.4.7 Distribution of informal enterprises by economic activity and years in operations**

<b>Economic activities/Years in operations</b>	<b>&lt;3</b>	<b>3-5</b>	<b>6-9</b>	<b>10-14</b>	<b>15-19</b>	<b>&gt;=20</b>	<b>Total</b>
Mining and quarrying	96.9	3.2	0.0	0.0	0.0	0.0	100
Manufacturing	64.6	17.7	8.2	5.4	2.4	1.7	100
Water supply; sewerage, waste management	66.4	21.6	0.3	2.6	5.0	4.2	100
Construction	52.2	39.2	0.0	0.0	8.7	0.0	100
Wholesale and retail trade; repair of motor vehicles	76.0	13.8	5.1	2.9	1.7	0.5	100
Transportation and storage	68.1	29.3	0.5	0.0	2.1	0.0	100
Accommodation and food service activities	72.3	21.3	2.3	2.8	1.2	0.0	100
Information and communication	85.3	6.6	5.2	1.8	0.7	0.4	100
Real estate activities	13.3	62.5	5.2	13.7	5.3	0.0	100
Professional, scientific and technical	60.3	30.3	7.0	1.9	0.6	0.0	100
Administrative and support service activities	56.4	37.8	4.0	1.3	0.5	0.0	100
Arts, entertainment and recreation	97.1	1.4	0.0	0.0	0.0	1.4	100
Other service activities	68.0	6.7	9.1	6.5	3.4	6.3	100
<b>Total</b>	<b>73.0</b>	<b>15.5</b>	<b>5.1</b>	<b>3.5</b>	<b>1.8</b>	<b>1.1</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

Table III.4.7 presents the distribution of informal enterprises by economic activity and years in operations. 73.0 per cent of all informal businesses in 2015 had less than three years of operations while 1.1 were in existence of 20 years and above.

**Table III.4.8 Percentage distribution of informal enterprises by enterprise size and TIN ownership**

Enterprise size/Years in operations	<3	3-5	6-9	10-14	15-19	>=20	Total
Micro 1-3	73.2	16.0	4.8	3.5	1.7	0.8	100
Small 4-30	71.8	6.9	6.1	3.2	4.8	7.4	100
Medium 31-100	95.0	1.7	0.0	3.3	0.0	0.0	100
<b>Total</b>	<b>73.2</b>	<b>15.6</b>	<b>4.8</b>	<b>3.5</b>	<b>1.8</b>	<b>1.1</b>	<b>100</b>

Source: NISR, IBES 2015 Survey

Table III.4.8 highlights the distribution of informal enterprises by enterprise size and TIN ownership. Medium informal businesses are younger than other where 73.2 per cent had less than 3 year of operations in 2015.



## CHAPTER IV: KEY CONCEPTS AND DATA COLLECTION METHODOLOGY

### 4.1 Distinction between Enterprise and Establishment

An enterprise is an institutional unit as a producer of goods and services. It has the autonomy in decision-making and allocating resources. It may be engaged in one or more economic (productive) activities. It can be a corporate or non-corporate enterprise. An establishment is an enterprise or part of the enterprise located in a single location and normally a single economic activity is carried out in the establishment. It is to be noted that in the majority of the cases, and particularly for the smaller or medium-sized units, enterprise and establishment are identical. Efforts were made to list and record details for each enterprise including all its branches. Information on whether or not the establishment was part of an enterprise was also recorded

### 4.2 Activity Coverage and Listing of Enterprises

The IBES considered only non-agricultural activities. Agricultural activities- the primary production of agricultural and plantation crops, livestock and poultry, agricultural services, forestry and fishing were not covered. Activities relating to the processing of the primary produce of agricultural and allied activities were treated as non-agricultural. The sale of agricultural produce by the producer himself directly to wholesalers, retailers, or even consumers was considered agricultural.

Detailed guidelines were provided to determine the broad activity category of an enterprise. Some are reproduced here. Manufacturing involves the transformation of raw materials into finished products. Trade is an act of purchase of goods and their resale, either wholesale or retail, without any intermediate physical transformation of the goods. A hotel (Division 55 of ISIC-4) provides accommodation with or without arrangements for meals, other prepared food and refreshments. A restaurant (Division 56 of ISIC-4) generally provides eating and drinking services where prepared meals, food, and refreshment and other snacks are sold for immediate consumption without any provision for lodging. Such enterprises are variously known as restaurants, cafes, cafeteria, snack bar, lunch counters, refreshment stands, milk bar, canteens etc. Bars and other drinking places also come under this category.

Transport is the act of carrying passengers and/or goods from one place to another. The operation of storage and warehouses on hire to the farm producer, dealer or trader, processor and manufacturing enterprises, including the general public, as a business is in the storage and warehousing industry (Division 52 of ISIC-4). But warehouses meant for storing farm produce, trading commodities, manufactured goods etc., owned by the owner of the farm, trader or manufacturer himself, were not treated as storage and warehousing.

### 4.3 Items of Information and Related Concepts

Apart from collecting background information, the IBES 2014 collected data on the number of people the enterprise employed and how much it paid them, its operating expenses and receipts, the value of fixed assets, and its outstanding loans.

- **Method of data collection:** this depended on whether the enterprise maintained accounts. If it did, data were collected from them. Otherwise, the information was collected orally, as reported by the respondent. In both cases, primary field workers visited the sites of the enterprises and collected data from the

respondents by interviewing them. Key concepts and methodology involved in data collection are discussed below.

- **Reference year/last year:** For most of the items, namely compensation, operating expenses/inputs, and receipts/output, the reference or last year meant last accounting year for the enterprises maintaining accounts and the previous 12 months for those not maintaining accounts.

- **Last day of the year:** Information on the value of fixed assets and outstanding loans related to the last day of the year. 'Last day' meant the closing day of the last accounting year for enterprises maintaining accounts. In other cases, it was the day preceding the date of survey.

- **Background information about the enterprise:** Certain background information about the enterprise was collected first. These included broad activity of the enterprise for which 12 codes were provided, main activity of the enterprise in terms of 4-digit code as per ISIC-Rev 4, location (within permanent structure or within temporary structure or without any structure), ownership status, whether registered under any Act, age of the enterprise, if received any government assistance during last 2 years, nature of problem faced during last year, whether accounts maintained, and whether establishment was part of an enterprise in case of an establishment.

- **Employment and compensation of employees:** As regards the employment position, data on average number of workers working per day during the major period of working in the last year were collected. Break-up of number of paid and unpaid workers was also recorded. Paid workers were those who got regular salary or wages. Break-up employment was also noted by (a) sex, (b) occupation (i.e. manager/professional/administrative and others), and (c) nationals or foreigners. Compensation payable to the workers included wages/salaries to hired workers and other remunerations in the form of providing food, canteen facility, health care facility or other facilities to its workers.

Given the importance of employment related statistics, a specific module (Labor Module) was designed to cover all the details judged to be important.

- **Operating expenses:** All the expenses incurred by the enterprise during last year including (a) compensation to workers, (b) rent on hired land and building (if any) and (c) interest payable on loan (if any) were covered under the head of expenditure. The relevant information was collected through two sections of the questionnaire module– one giving the details of the main inputs/raw materials used by the enterprise and the other recording the residual operating expenses involved in the day to day running of the enterprise. Value figures were recorded at the purchase price of raw materials and other inputs.

- **Income:** Information on income was also collected through two sections of the questionnaire – one furnishing details of the main receipts of the enterprise directly associated with the value of goods and services produced while the other recording other receipts of the enterprise. Valuation of income was at the sale value if sold or at the market value of goods made ready for sale in the market or at producer's prices for manufactured goods.

- **Fixed assets:** Information on value of fixed assets as on last day of the year was collected. It was the book value if the enterprise maintained accounts otherwise it was the market value of the asset owned or rented/hired. This apart, data on net addition to fixed assets and rent payable for hired assets were also collected.



## Appendix 1: Rwanda Classification of Products by Activity, Level 2

<i>RCPA</i>	<i>Rwanda Classification of products by Activity</i>	<i>RCPA</i>	<i>Rwanda Classification of products by Activity</i>
A1	Food crops	H1	Land transport
A2	Export crops	H2	Air transport
A3	Livestock & livestock products	H3	Other transport & postal services
A4	Forestry	I0	Hotels & restaurants
A5	Fishing	J1	Publishing & broadcasting activities
B0	Mining & quarrying	J2	Telecommunication
C1	Manufacturing of food	J3	Information technology services
C2	Manufacturing of beverages & tobacco	K0	Financial services
C3	Manufacturing of textiles, clothing & leather goods	L0	Real estate activities
C4	Manufacturing of wood & paper; printing	M0	Professional, scientific and technical activities
C5	Manufacturing of chemicals, rubber & plastic products	N0	Administrative and support service activities
C6	Manufacturing of non-metallic mineral products	O0	Public administration and defense; compulsory social security
C7	Manufacturing of metal products, machinery & equipment	P0	Education
C8	Furniture & other manufacturing	Q0	Human health and social work activities
D0	Electricity	R0	Arts, entertainment and recreation
E0	Water & waste management	S0	Other service activities
F0	Construction	T0	Domestic services
G1	Maintenance and repair of motor vehicles	V0	Travel debits & credits
G2	Wholesale & retail trade	X0	Unallocated products



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