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THE REPUBLIC OF RWANDA



Integrated Business Enterprise Survey 2018

NATIONAL INSITUTE OF STATISTICS OF RWANDA

December 31, 2019

Authored by: Department of Economic Statistics

Foreword

It is my pleasure to share with you the findings of the *Integrated Business Enterprise Survey* (IBES) which is an annual survey conducted by the National Institute of Statistics of Rwanda (NISR). IBES 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) and that keeps regular business accounts. The formal sector also includes companies that have 30 or more employees. Data collection has been carried out by NISR from 20th May up to 30th August 2019 with the year 2018 (January – December) being the reference period.

IBES provides 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. This information is relevant for monitoring the performance of various development programs and goals, as well as providing information for the expansion of the business sector and market research thereby enabling the formulation of economic policies.

IBES 2018 has drawn crucial lessons from the previous survey rounds: IBES 2017, IBES 2016, IBES 2015, IBES 2014 and the pilot IBES 2013. These lessons have already been used to introduce improvements to the IBES 2018. 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). In addition, IBES does not cover all activities of public administration and extraterritorial organizations.

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

This report presents main results of the survey. It introduces the survey in Chapter 1, business activities in Chapter 2, business environment in Chapter 3, and business performance in Chapter 4.

Yusuf MURANGWA
Director General

Acknowledgments

The IBES 2018 report is the outcome of many months of cooperative efforts of NISR staff. The project recognizes the leadership of NISR management at various stages of the survey and spearheading the monitoring of 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 field operations and provided 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.

Grateful acknowledgments are given to all formal and informal enterprises which have cooperated and to whom we guarantee maximum confidentiality.

Recognition also goes to primary fieldworkers, team leaders, data editors, and regional supervisors posted in different parts of the country. Commendations are due to them for their work done of codification and data entry after fieldwork.

Recognition goes to all Stakeholders who have been instrumental in the development of survey methodology, including the construction of the survey instruments, the questionnaire, instruction manual, tabulation plan, data analysis, and preparation of the report.

Contents

FOREWORD	I
ACKNOWLEDGMENTS	II
LIST OF TABLES	IV
LIST OF FIGURES	V
LIST OF ABBREVIATIONS	VI
EXECUTIVE SUMMARY	VII
CHAPTER 1: OVERVIEW AND KEY CONCEPTS.....	1
1.1 INTEGRATED BUSINESS ENTERPRISE SURVEY	1
1.2 COVERAGE	1
1.3 SAMPLE DESIGN	1
1.3.1 SAMPLING FRAME	1
1.3.1.1 FORMAL SECTOR SAMPLE AND ESTIMATION	2
1.3.1.2 INFORMAL SECTOR SAMPLE AND ESTIMATION	2
1.4 SCHEDULES, SURVEY PERIOD, AND FIELDWORK.....	4
1.5 COMPARISON WITH NATIONAL ACCOUNTS AND TURNOVERS FROM REVENUE AUTHORITY	4
1.6 KEY CONCEPTS AND DATA COLLECTION METHODOLOGY	5
1.6.1 DISTINCTION BETWEEN ENTERPRISE AND ESTABLISHMENT.....	5
1.6.2 ACTIVITY COVERAGE AND LISTING OF ENTERPRISES	5
1.6.3 ITEMS OF INFORMATION AND RELATED CONCEPTS	5
CHAPTER 2: BUSINESS ACTIVITIES IN RWANDA.....	8
2.1 INTRODUCTION.....	8
2.2 STRUCTURE OF BUSINESS ACTIVITIES	8
CHAPTER 3: BUSINESS ENVIRONMENT	11
3.1 INTRODUCTION.....	11
3.2 BUSINESS ENVIRONMENT FACTORS	11
3.2.1 FORMAL BUSINESS ENVIRONMENT FACTORS BY EMPLOYMENT SIZE	12
3.2.2 INFORMATION TECHNOLOGY AND INTERNET USE	14
3.2.3 ENVIRONMENT PROTECTION	16
3.2.4 CAPACITY UTILIZATION	18
3.2.5 ACCESS TO RWANDAN PRODUCED RAW MATERIALS	19
3.2.6 ACCESS TO RELIABLE POWER IN FORMAL SECTOR.....	20
3.2.7 EXPORTATION	21
3.2.8 ACCESS TO FINANCE	22
CHAPTER 4: BUSINESS PERFORMANCE.....	25
4.1 OVERVIEW OF SECTOR PERFORMANCE	25
4.2 INCOME AND EXPENDITURE.....	26
4.3 BALANCE SHEET	26
4.4 ACQUISITION AND DISPOSAL OF FIXED ASSETS	28
APPENDICES.....	29

List of tables

Table 0.1: IBES key survey findings	viii
Table 0.2: Total Income and Expenditure, Frw Billion.....	ix
Table 2.2: Distribution of enterprises by ownership for formal sector	9
Table 2.3 Distribution of enterprises by employment size.....	9
Table 2.4 Distribution of enterprises by residency	9
Table 2.5 Enterprises by period of commencement for formal & informal sector	10
Table 3.1: Ranking of factors by the level of their impact on formal micro enterprises	12
Table 3.2: Ranking of factors by the level of their impact on formal small enterprises	13
Table 3.3: Ranking of factors by the level of their impact on formal medium enterprises	13
Table 3.4: Ranking of factors by the level of their impact on formal big enterprises	14
Table 3.5: Distribution of enterprises with internet connection by economic activity	15
Table 3.6 Percentage of enterprises by type of internet used	16
Table 3.7: Distribution of enterprises by what internet is used for	16
Table 3.8: Distribution of enterprises by type of scraps and waste and enterprise employment size	17
Table 3.9: Percent distribution of formal enterprises by mode of disposal of wastes and scraps	17
Table 3.10: Percentage distribution of formal enterprises by water source.....	17
Table 3.11: Percent distribution of formal enterprises storing water by type of water storing device	18
Table 3.12: Volume of firewood used by formal economic activity	18
Table 3.13: Volume of firewood used by enterprise employment size.....	18
Table 3.14: Capacity utilization mean of production units by enterprise employment size	19
Table 3.15: Production units by whether they use Rwandan raw materials and by economic activity	19
Table 3.16 Production units using Rwandan raw materials by importance and economic activity	20
Table 3.17 Production units by connection to the national power grid or not	20
Table 3.18 National power grid units needing additional power in future by economic activity	20
Table 3.19 Production units by the number of power outages in month.....	21
Table 3.20 Distribution of production units by length of power outages and by economic activity	21
Table 3.21 Distribution of enterprises by whether they exported and by economic activity	21
Table 3.22 Distribution of enterprises by whether they have exported and by enterprise employment size	21
Table 3.24 Distribution of formal enterprises by the type of insurance used.....	23
Table 3.25 Enterprises by the ranking of their source of finance, 1 is the most important.....	23
Table 3.26 Enterprises that received 100.0 percent of finance by negotiated source of finance .	23
Table 4.1. Income and expenditure statement by Sector (Billion, FRW)	26
Table 4.2. Income and expenditure statement by employment size (Billion, FRW).....	26
Table 4.3. Balance sheet assets by sector in billion Frw	27
Table 4.4. Balance sheet assets by employment size in billion Frw.....	27
Table 4.5. Equity and liabilities by sector in billion Frw	27
Table 4.6. Balance sheet liabilities by employment size in billion Frw	28
Table 4.7. Acquisition and disposal of fixed assets by sector in billion Frw.....	28

List of figures

Chart 2.1: Estimated total number of enterprises by province	8
Chart 3.1 Ranking of factors by level of their impact on businesses in percentages	11
Chart 3.2: Percentage distribution of enterprises with internet connection by size	15
Chart 3.3: Reasons of capacity underutilization	19
Chart 3.4: Distribution of enterprises by reasons of not exporting	22
Chart 3.23 Distribution of enterprises by financial services type used and by enterprise size....	22

List of abbreviations

DES	: Department of Economic Statistics
EC	: Establishment Census
Freq.	: Frequency
IBES	: Integrated Business Enterprise Survey
ISIC	: International Standard Industrial Classification
NISR	: National Institute of Statistics of Rwanda
NPISHs	: Non Profit Institutions Serving Households
PAYE	: Pay as You Earn
RCPA	: Rwanda Classification of Products by Activity
TIN	: Taxpayer Identification Number
VAT	: Value Added Tax
VPN	: Virtual Private Network
WASAC	: Water and Sanitation Corporation

Executive summary

Sectoral coverage

IBES 2018 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). In addition, IBES does not cover all activities of public administration and extraterritorial organizations. 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 employed by enterprises in formal sector in 2018 was 242,659 working in an estimate of 15,821 enterprises;
- 62.5% of employees in the formal business sector were based in Kigali;
- The largest business activity in the formal sector is manufacturing, employing around 15.9% of all employees;
- 36.0% of formal businesses were owned by a single individual, while around 45.7% were limited companies and 5.4% are cooperatives;
- 9.1% of enterprises employed at least 100 staff, while 21.0% had 3 employees or fewer;
- 76.7% of enterprises were owned by Rwandan resident, while 6.9% were owned by non-residents;
- 43.6% of businesses had been operating for less than 5 years, while 11.0% had been in existence for at least 20 years;
- Amongst the largest businesses (those with 100 or more employees) 24.5% had been operating for less than 5 years, while 20.2% had been operating for 20 or more years;
- 70.4 % of formal sector employees were men, and 29.6% women.

- In the informal sector, 84.3% of all businesses were found to have at most 3 employees.
- 71.5% of informal workers were men, and 28.5% women.

Tables 0.1 and 0.2 below summarize IBES survey findings for the previous IBES data collected for the years 2014, 2015, 2016, 2017 and 2018.

Table 0.1: IBES key survey findings

Indicator/Reference year	2014	2015	2016	2017	2018
1.Estimated total number of enterprises in formal sector	9,251	10,172	12,172	13,244	15,821
2.Estimated total number of workers in formal sector enterprises	175,244	183,667	216,524	223,043	242,659
3.Percentage of employees in the formal businesses working in Kigali	48	51.7	53.7	55.7	62.5
4.Percentage of formal businesses owned by single individuals	54	49.4	40.3	36	36.0
5.Percentage of limited companies in formal sector	18	22.2	22.3	28.3	45.7
6.Percentage of cooperatives in formal sector	10	9.9	9.2	10	5.43
7.Percentage of formal enterprises employing at least 100 persons (Large companies)	2.4	2.3	1.9	2.7	9.1
8.Percentage of formal enterprises employing 3 persons or fewer (Small businesses)	41	38.3	33.5	27.7	21.0
9.Percentage of formal enterprises owned by Rwandan residents	69	90.5	83.8	75.8	76.7
10.Percentage of formal enterprises owned by non-residents	2.4	3.1	3	3.6	6.9
11.Percentage of formal businesses of less than 5 years of operations	58	47.9	43.9	40.1	43.6
12.Percentage of formal businesses of at least 20 years of operations	9	8.4	12.7	15.1	11.0
13.Percentage of the largest businesses (with 100 or more employees) of less than 5 years of operations	31	34.2	22.6	33.9	24.5
14.Percentage of the largest businesses (with 100 or more employees) of 20 or more years of operations	18	18.9	31.7	25.1	20.2
15.Percentage of employed men in the formal sector	67	70.1	68.2	66.4	70.4
16.Percentage of employed women in the formal sector	33	29.9	31.8	33.6	29.6
17.Percentage of informal businesses with at most 3 employees (Small businesses)	91.7	94.9	95	96.3	84.3
18.Percentage of employed men in the informal sector	64	61.1	59.8	66.8	71.5
19.Percentage of employed women in the informal sector	36	38.9	40.2	33.2	28.5

Source: NISR, IBES Surveys

Table 0.2: Total Income and Expenditure, Frw Billion

Description	Income					Expenditure				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Mining and quarrying	157.3	106.4	87.5	93.3	107.7	163.1	108.2	84.6	92.9	113.5
Manufacturing	461.6	515.9	621.2	787.4	821.1	466.7	507.0	615.3	785.9	817.9
Utilities	74.2	131.8	186.5	178.0	181.6	102.7	127.5	183.2	168.5	180.1
Construction	343.6	416.9	465.4	503.6	479.2	298.7	393.7	475.2	482.4	464.7
Wholesale and retail trade; repair of motor vehicles	1,645.4	1,868.1	2,408.3	2,311.0	2,507.3	1,628.2	1,817.3	2,360.4	2,294.7	2,281.5
Transportation and storage	178.3	230.2	220.7	308.6	375.1	164.7	221.7	208.3	299.6	412.3
Accommodation and food service activities	78.9	96.3	160.6	151.8	137.6	78.7	107.4	189.4	212.2	139.2
Information and communication	207.1	201.8	429.7	112.4	278.5	242.4	293.9	523.2	136.2	294.2
Financial and insurance activities	480.6	375.8	455.5	490.5	592.7	365.5	305.2	393.9	437.8	493.1
Real estate activities	14.5	21.0	23.6	40.6	33.5	26.2	17.4	109.2	50.2	37.6
Professional, scientific and technical	43.4	53.6	47.2	102.3	51.7	40.3	44.6	43.2	98.5	49.7
Administrative and support service activities	40.7	52.1	71.2	96.9	73.7	30.0	44.0	63.1	85.7	61.2
Arts, entertainment and recreation	25.7	19.2	34.9	44.3	39.5	13.0	19.8	23.0	11.7	20.5
Other service activities	78.3	8.6	126.3	88.5	211.8	75.5	8.9	133.3	80.2	199.2
Total	3,829.5	4,097.7	5,334.5	5,309.2	5,891.1	3,695.6	4,016.7	5,324.4	5,236.7	5,564.6

Source: NISR, IBES Surveys

CHAPTER 1: OVERVIEW AND KEY CONCEPTS

1.1 Integrated Business Enterprise Survey

IBES has been planned to collect information about the state of business in the country, the number and nature of enterprises, their location, who and how many 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 2018 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). In addition, IBES does not cover all activities of public administration and extraterritorial organizations. The term “**enterprise**” is defined as a legal entity possessing the right to conduct business on its own, for example to enter into contracts, own property, incur liabilities and establish bank accounts. It may be a corporation, a quasi- corporation, a non-profit institution, or an unincorporated enterprise. Small and medium-sized enterprises (SMEs) employ fewer than 100 people. SMEs are further subdivided into micro enterprises (fewer than 3 employees), small enterprises (4 to 30 employees), and medium-sized enterprises (31 to 100 employees). Big enterprises employ 100 or more people. 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 Design

1.3.1 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 Census (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 2017 (EC2017) served as the sampling frame for both formal IBES 2018 and informal IBES 2019. For informal IBES 2019, EC2017 served as the sampling frame for the first stage sample and a listing exercise was carried out in the sampled administrative sectors in the second stage. In addition, for formal IBES 2018 the EC2017 frame was supplemented using IBES panel enterprises to ensure that all previous complying businesses were covered in the formal sector survey.

The IBES 2018 is based on a sample of 2,443 formal and 2,562 informal sector enterprises, selected from an estimated 15,821 formal and 171,826 informal enterprises. Informal enterprises were sampled from 50 selected administrative sectors. Thus, the survey has been designed so that it provides good quality estimates of shares or averages for the country as a whole.

1.3.1.1 Formal sector sample and estimation

The formal sector is defined as those businesses registered in RRA and keeping business accounts. The formal IBES 2018 sample was produced from the following separate components: a panel component based on the IBES 2017 and large firms from the VAT and BIT registers which were not in the IBES panel. Informal IBES 2019 sample has been drawn after a full enumeration in the sampled administrative sectors.

The IBES panel includes all firms which responded to the IBES 2017 survey. The purpose of this panel component of the IBES 2017 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 for formal IBES 2017.

In addition, the sample was topped up based on large firms from the VAT and BIT registers. These enterprises were those 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 2018. A sample of 2,443 formal enterprises and 2,562 informal enterprises was developed and targeted.

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. It was also necessary to take into account of the businesses for which no response could be obtained within each stratum 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 theses 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. Tables 1.1 and 1.2 in Appendices illustrate how the final weights were derived.

1.3.1.2 Informal sector sample and estimation

The selection of enterprises in the 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 data from EC2017. The measure of size (MoS) used was the number of enterprises in each administrative sector, i.e.

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

Where, S_{hi} is the size of 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, maintenance 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. At the second sampling stage, all of the listed enterprises for some strata were included in the survey with certainty 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 2,562 informal enterprises being selected.

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:

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

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

MoS_{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:

$$W_{hij} = \frac{\sum_{ich} S_{hi}}{m_h \times MoS_{hi}} \times \frac{N_{hij}}{n_{hij}}$$

Finally, a non-response adjustment factor similar to that used for the formal IBES 2018 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.

1.4 Schedules, survey period, and 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 almost three months (from 20th May up to 30th August 2019).

A team of 96 primary fieldworkers, 16 team leaders, 16 data editors, and 6 regional supervisors did the fieldwork. Before the commencement of the fieldwork, a two-tier training program was conducted which covered the training of trainers/supervisors and a training of the primary fieldworkers. The training of trainers took 2 days while the training of fieldworkers lasted for 11 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, commented, discussed and came up with practical solutions to the new fieldwork revelations that were later shared to all IBES staff. A team of 50 did the data entry and helped in data cleaning while another team of 20 performed coding of questionnaires.

1.5 Comparison with National Accounts and turnovers from revenue authority

The published national accounts statistics include estimates of economic activity for the whole of Rwanda. These may differ from the survey estimates when 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.

1.6 Key concepts and data collection methodology

1.6.1 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

1.6.2 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.

1.6.3 Items of Information and Related Concepts

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

- **Enterprise size:** In this report the enterprise size is measured by the number of employees; Micro enterprise (1 to 3 employees), Small enterprise (4 to 30 employees), Medium enterprise (31 to 100 employees), and Big enterprise (more than 100 employees).

- **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.

CHAPTER 2: BUSINESS ACTIVITIES IN RWANDA

2.1 Introduction

This chapter presents IBES 2018 findings for economic activities of enterprises both in formal and informal sectors. The formal sector is defined as those businesses both registered with RRA and keeping business accounts. This Chapter gives an overview of the general description of the structure of business activities in Rwanda.

2.2 Structure of business activities

As stated in the previous chapter, the total estimated enterprises were 15,821 in IBES 2018 for all formal non-agricultural activities as shown in chart 2.1 below. This estimated number was based on a total sample of 2,443 enterprises drawn from IBES panel and RRA tax registers while in informal sector, the total estimated number of enterprises was 171,294.

Kigali City ranks number one with more formal and informal enterprises, with 65.9 and 41.3 percent respectively, followed by the Western Province with 10.7 and 18.0 percent respectively.

Chart 2.1: Estimated total number of enterprises by province

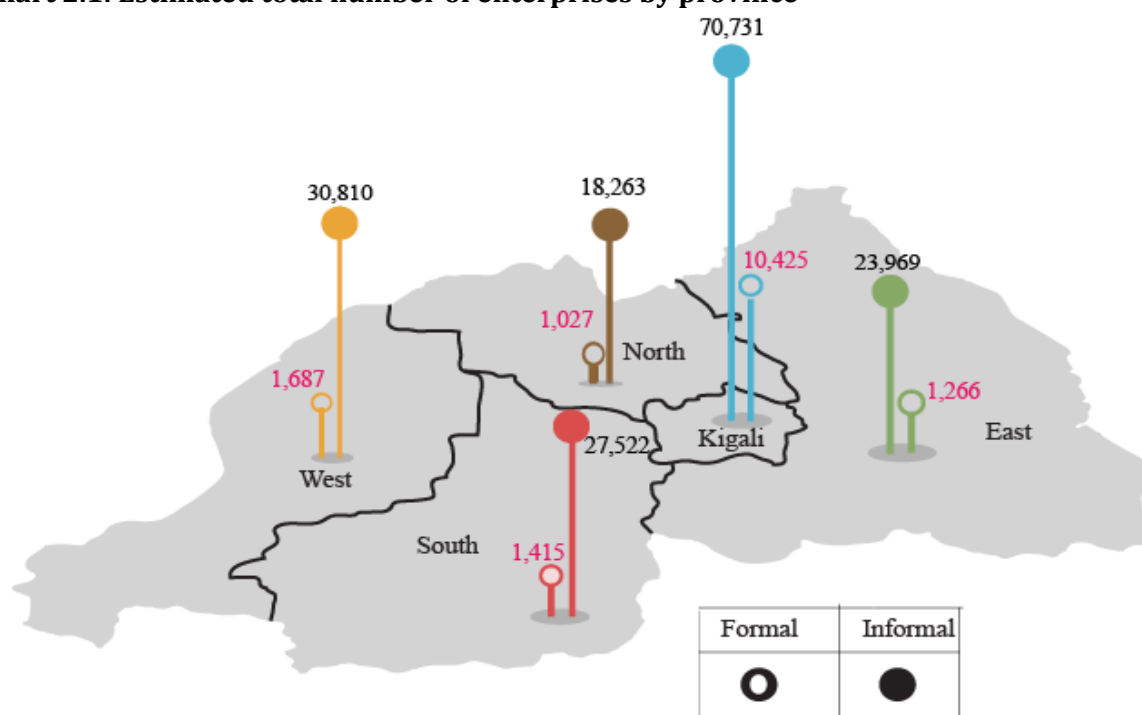


Table 2.1 in appendices illustrates that Wholesale and retail trade; repair of motor vehicles and motorcycles, Accommodation and food service activities, and Manufacturing were the dominating economic sectors occupying 49.4, 14.6, and 7.8 percent of the total formal business enterprises respectively.

When all formal business enterprises are classified by their legal status, the outcome shows that more of them, 45.3 percent are companies limited by shares followed by individually owned businesses at 36.0 percent as shown in Table 2.2 below.

Table 2.2: Distribution of enterprises by ownership for formal sector

Legal status of the enterprise	Formal		Informal	
	Frequency	Percent	Frequency	Percent
Individual owner	5,690	36.0	158,825	92.7
Company limited by shares	7,173	45.3	7,234	4.2
Company limited by guarantee	46	0.3	267	0.2
Company limited by both shares and guarantee	15	0.1		
Unlimited company	51	0.3		
Cooperative	859	5.4	2,452	1.4
Government	821	5.2		
NPISHs	591	3.7	1836	1.1
Other	574	3.6	680	0.4
Total	15,821	100	171,294	100

Source: NISR, IBES 2018 Survey

Table 2.3 below illustrates that in formal sector, 47.1 percent of enterprises employ between 4 and 30 persons (small businesses). While in the informal sector, 84.3 percent of enterprises employ not more than 3 persons (micro businesses).

Table 2.3 Distribution of enterprises by employment size

Size (employees)	Formal		Informal	
	Freq.	Percent	Freq.	Percent
Micro	3,314	20.9	144,350	84.3
Small	7,459	47.1	26,532	15.5
Medium	3,611	22.8	413	0.2
Big	1,436	9.1		
Total	15,821	100	171,294	100

Source: NISR, IBES 2018 Survey

Table 2.4 below highlights the distribution of enterprises by ownership of the enterprise. It shows that Resident Rwandans own 76.7 percent of all formal enterprises and 98.8 percent of all informal enterprises.

Table 2.4 Distribution of enterprises by residency

Ownership of the enterprise	Formal		Informal	
	Frequency	Percent	Frequency	Percent
Government of Rwanda	944	6.0	13	0
Resident Rwandans	12,141	76.7	169,217	98.8
Resident foreigners	1,649	10.4	1,989	1.2
Non-residents Rwandan or foreigners	1,086	6.9	75	0
Total	15,821	100	171,294	100

Source: NISR, IBES 2018 Survey

Table 2.5 below highlights the distribution of formal and informal enterprises by period of commencement of their respective economic activities whereby 43.6 and 82.1 per cent for formal and informal respectively are less than 5 (five) years old.

Table 2.5 Enterprises by period of commencement for formal & informal sector

Period of commencement	Formal		Informal	
	Freq.	Percent	Freq.	Percent
<=5Years	6,904	43.6	140,580	82.1
>5-10 Years	4,689	29.6	18,594	10.9
>10-15 Years	1,556	9.8	5,753	3.4
>15-20 Years	939	5.9	3,681	2.1
20+Years	1,733	11.0	2686	1.6
Total	15,821	100	171,294	100

Source: NISR, IBES 2018 Survey

CHAPTER 3: BUSINESS ENVIRONMENT

3.1 Introduction

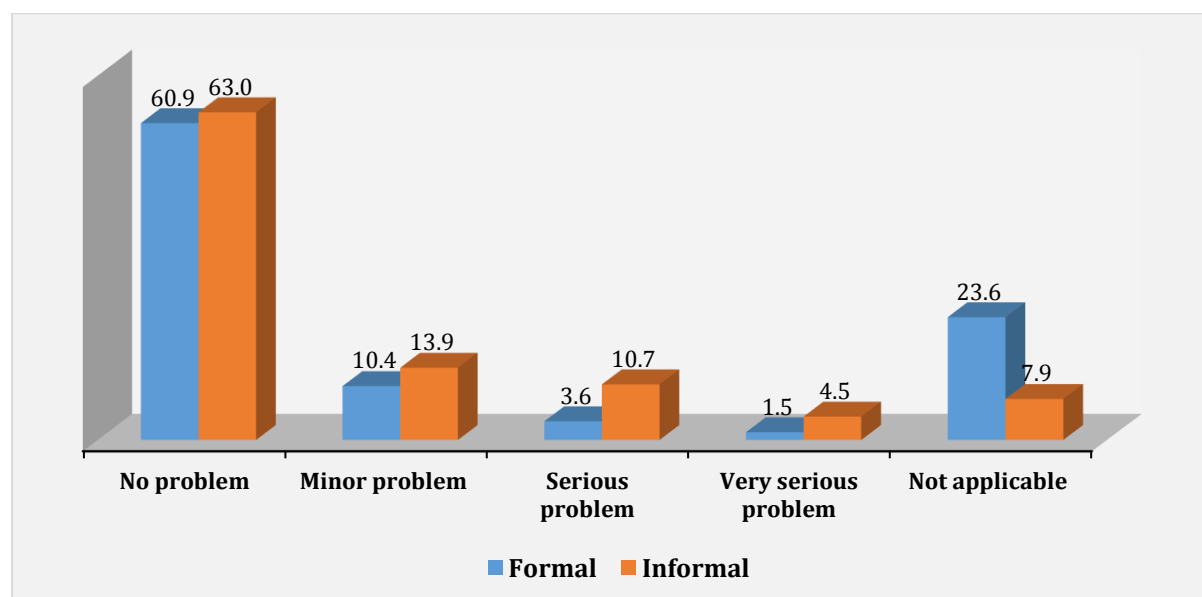
This chapter covers information that has been collected on business environment factors in general, for both formal and informal sectors. Areas covered include: environment protection, capacity utilization, access to Rwandan produced raw materials, access to reliable power, exportation, and access to finance. Also included is the disaggregation of factors explaining business environment by enterprise size. In this chapter, all presented data are for both formal and informal sector except otherwise specified. Some tables have been taken in the appendices for more details.

3.2 Business environment factors

The business environment includes a combination of internal and external factors that influence businesses' performance. Those factors are mainly: availability of affordable finance or bank loans, tools and machinery, working space, skilled or technical labour, electricity, water, land, input materials, transport facilities, regulatory environment, marketing problems, telecommunications and internet connection. These factors are ranked by 5 levels: no problem, minor problem, serious problem, very serious problem and not applicable.

Chart 3.1 below shows an aggregated view of the factors ranked by formal and informal sector. It shows that 60.9 percent in the formal sector and 63.0 percent in the informal sector reported that they do not have a problem with any of the factors. Furthermore, 1.5 percent in the formal sector and 4.5 percent in the informal reported having very serious problem with some of the factors. For more details, see Table 3.27 in appendices.

Chart 3.1 Ranking of factors by level of their impact on businesses in percentages



Source: NISR, IBES 2018 Survey

3.2.1 Formal business environment factors by employment size

The survey has revealed that businesses are affected depending on their size; micro businesses are most affected compared to others. Table 3.1 below depicts business environment factors that affects businesses by size; 4.4 percent of micro businesses have reported that availability of affordable finance or bank loan is a serious problem while 81.5 percent and 91.4 of companies declared not having any problem with the regulatory environment and availability of electricity respectively.

Table 3.1: Ranking of factors by the level of their impact on formal micro enterprises

Factor	No problem	Minor problem	Serious problem	Very serious problem	Not applicable	Total (%)
Availability of affordable finance or bank loans	79.4	11.6	4.4	0.6	4.0	100
Availability of tools and machinery	35.2	4.9	1.6	0.2	58.1	100
Availability of working space	82.5	13.0	3.0	0.8	0.7	100
Availability of electricity	91.4	6.2	1.0	1.0	0.4	100
Availability of water	80.2	7.0	4.5	2.6	5.6	100
Availability of land	32.8	10.4	6.1	3.7	47.1	100
Availability of input materials	5.1	1.2	0.0	0.0	93.8	100
Availability of transport facilities and infrastructures	84.9	9.5	3.6	0.7	1.2	100
Regulatory environment	81.5	14.0	4.2	0.0	0.4	100
Marketing problems	62.3	23.2	9.1	2.1	3.4	100
Telecommunications	89.9	5.3	3.3	1.0	0.6	100
Internet connection	64.5	10.0	4.7	1.1	19.9	100
Packing materials	37.7	5.5	0.4	0.0	56.0	100
Other problems	16.4	1.6	1.8	0.6	79.6	100
Total	60.3	8.8	3.4	1.1	26.5	100

Source: NISR, IBES 2018 Survey

Table 3.2 below shows perception of business environment factors in the small size band where 1.3 percent reported that availability of affordable finance or bank loan is a serious problem while 86.5 percent, 86.2 percent and 85.5 percent of companies declared not having any problem with the, Telecommunication, availability of electricity and the regulatory environment respectively.

Table 3.2: Ranking of factors by the level of their impact on formal small enterprises

Factor	No problem	Minor problem	Serious problem	Very serious problem	Not applicable	Total
Availability of affordable finance or bank loans	76.1	8.6	6.2	1.3	7.8	100
Availability of tools and machinery	42.5	9.3	2.5	0.7	45.0	100
Availability of working space	80.8	15.1	3.3	0.6	0.3	100
Availability of electricity	86.2	9.5	2.2	1.7	0.4	100
Availability of water	79.2	9.7	4.4	3.5	3.2	100
Availability of land	45.4	10.1	4.1	2.2	38.2	100
Availability of input materials	7.1	3.6	1.8	0.1	87.4	100
Availability of transport facilities and infrastructures	80.8	9.9	4.8	2.5	1.9	100
Regulatory environment	85.5	10.0	3.0	1.1	0.4	100
Marketing problems	63.5	22.5	6.2	0.8	7.0	100
Telecommunications	86.5	9.7	2.9	0.6	0.5	100
Internet connection	71.7	16.8	5.0	1.8	4.7	100
Packing materials	23.6	4.0	1.4	0.9	70.1	100
Other problems	17.3	2.6	1.6	2.3	76.3	100
Total	60.4	10.1	3.5	1.4	24.5	100

Source: NISR, IBES 2018 Survey

Table 3.3 below illustrates that 0.9 percent of medium sized enterprises reported that availability of affordable finance or bank loan is a serious problem while 86.6 percent, 83.0 percent and 81.4 percent of companies declared not having any problem with the regulatory environment, availability of electricity and Telecommunication respectively

Table 3.3: Ranking of factors by the level of their impact on formal medium enterprises

Factor	No problem	Minor problem	Serious problem	Very serious problem	Not applicable	Total
Availability of affordable finance or bank loans	74.5	11.0	3.7	0.9	10.0	100
Availability of tools and machinery	49.5	10.8	2.3	1.7	35.7	100
Availability of working space	75.2	17.6	6.2	1.1	0.0	100
Availability of electricity	83.0	10.7	3.6	2.5	0.1	100
Availability of water	76.6	11.8	5.3	5.0	1.4	100
Availability of land	54.2	9.7	5.5	3.5	27.3	100
Availability of input materials	15.1	6.3	2.5	1.4	74.6	100
Availability of transport facilities and infrastructures	79.8	10.6	6.4	2.9	0.4	100
Regulatory environment	86.6	7.6	5.5	0.3	0.2	100
Marketing problems	69.1	18.6	2.4	1.9	8.1	100
Telecommunications	81.4	14.5	3.3	0.7	0.0	100
Internet connection	71.8	18.9	5.5	3.3	0.5	100
Packing materials	28.7	6.2	1.3	1.8	62.0	100
Other problems	21.6	4.0	2.8	1.4	70.2	100
Total	61.9	11.3	4.0	2.0	20.8	100

Source: NISR, IBES 2018 Survey

Table 3.4 below shows business environment factors as reported by big businesses. Among them, 0.4 percent reported that availability of affordable finance or bank loan is a serious problem while 85.0 percent, 83.7 percent and 80.4 percent of companies declared not having any problem with the regulatory environment, telecommunication and availability of electricity respectively.

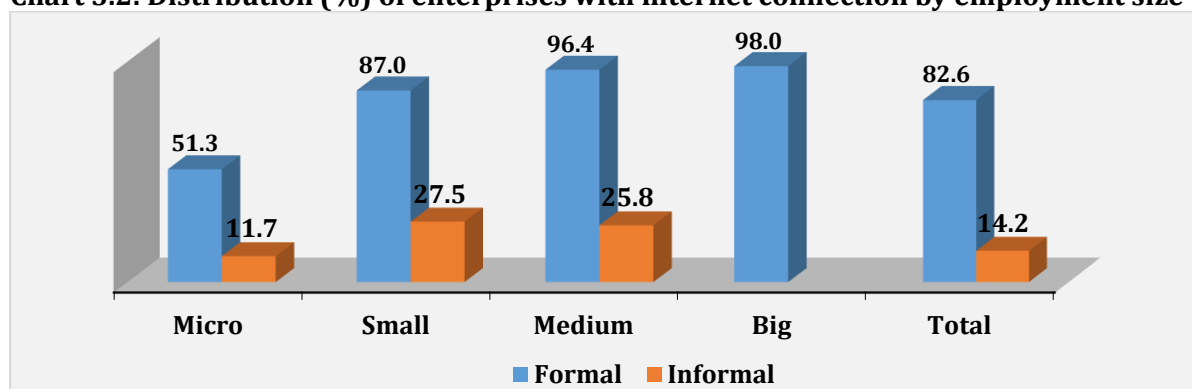
Table 3.4: Ranking of factors by the level of their impact on formal big enterprises

Factor	No problem	Minor problem	Serious problem	Very serious problem	Not applicable	Total
Availability of affordable finance or bank loans	73.8	15.3	4.5	0.4	6.0	100
Availability of tools and machinery	46.4	17.0	4.7	1.1	30.8	100
Availability of working space	79.0	15.8	4.1	0.7	0.4	100
Availability of electricity	80.4	12.5	5.0	1.5	0.6	100
Availability of water	80.2	13.1	3.7	2.3	0.7	100
Availability of land	53.9	6.9	4.0	1.2	34.0	100
Availability of input materials	23.3	8.8	2.4	2.2	63.3	100
Availability of transport facilities and infrastructures	79.9	13.8	2.3	3.6	0.4	100
Regulatory environment	85.0	12.1	1.3	1.0	0.6	100
Marketing problems	66.8	22.6	5.5	0.6	4.5	100
Telecommunications	83.7	13.3	2.0	0.4	0.6	100
Internet connection	75.1	18.4	4.9	0.1	1.4	100
Packing materials	23.2	11.1	2.2	3.5	60.1	100
Other problems	22.3	2.0	0.7	2.4	72.5	100
Total	62.4	13.1	3.4	1.5	19.7	100

Source: NISR, IBES 2018 Survey

3.2.2 Information technology and internet use

Survey findings on access to information technology and the use of internet by formal businesses show that on average 42 out of 48 employees in the Information and communication industry are using a computer in their job whereas in Other Services only 3 out of 15 employees on average use a computer. In general, 11 out 47 employees on average use computers in their jobs. For more details see Tables 3.2 and 3.3 in appendices.

Chart 3.2: Distribution (%) of enterprises with internet connection by employment size

Source: NISR, IBES 2018 Survey

Table 3.5 below shows the prevalence of companies with internet connection by formal and informal sector and by economic activity. In the Information and communication sector, all formal companies have access to internet against 59.6 percent in informal sector. Electricity, gas, steam and air conditioning supply and ICT sectors have reported highest levels of internet connection in the formal sector with 100 percent. Informal construction service was the leading activity with internet connection in the informal sector with 87.5 percent. Overall, 82.6 percent of formal companies have reported to be connected to internet against 14.2 percent in informal sector.

Table 3.5: Distribution of enterprises with internet connection by economic activity

Activity/Sector	Formal (%)	Formal (Freq.)	Informal (%)	Informal (Freq.)
Mining and quarrying	71.2	145	11.1	300
Manufacturing	86.5	1,238	10.4	10,074
Electricity, gas, steam and air conditioning supply	100.0	43	71.4	19
Water supply; sewerage, waste management	90.9	48	5.2	2200
Construction	98.7	139	87.5	16
Wholesale and retail trade; repair of motor vehicles and motorcycles	76.1	7,817	14.5	88,630
Transportation and storage	97.1	138	33.3	58
Accommodation and food service activities	95.0	2,310	14.1	49,633
Information and communication	100.0	176	59.6	649
Financial and insurance activities	97.1	841		
Real estate activities	83.3	82	50	60
Professional, scientific and technical activities	98.5	535	72.3	874
Administrative and support service activities	91.2	407	44.1	1672
Education	85.8	720		
Human health and social work activities	96.8	387		
Arts, entertainment and recreation	87.5	55	14.1	462
Other service activities	54.0	741	8.3	16,649
Total	82.6	15,821	14.2	171,294

Source: NISR, IBES 2018 Survey

Modems were most frequently used by both formal and informal sectors while the usage of VPN and fiber optic was the least, see Table 3.6 below.

Table 3.6 Percentage of enterprises by type of internet used

Internet type	Formal (%)	Formal (Freq.)	Informal (%)	Informal (Freq.)
Wireless (Wi-Fi)	64.5	12,914	31	24,338
Broadband (fiber optic)	17.1	12,914	1.4	24,338
Modem	47.4	12,914	52.4	24,338
VPN	4.3	12,914	1	24,338
Telephone	37.2	12,914	44.4	24,338

Source: NISR, IBES 2018 Survey

Table 3.7 below shows that formal and informal enterprises mostly use internet for tax declaration (93.2 and 72.0 percent respectively). Video conferencing and staff training remain low in using internet in both sectors.

Table 3.7: Distribution of enterprises by what internet is used for

Internet use	Formal (%)	Formal (Freq.)	Informal (%)	Informal (Freq.)
Make purchases for this enterprise	50.5	12,914	12.1	24,338
Deliver services to this enterprise's clients	58.6	12,914	36.3	24,338
Receipts from customers payments	39.2	12,914	9.7	24,338
Do research and develop ideas on new products	59.1	12,914	44.4	24,338
Advertise job vacancies	23.4	12,914	3.5	24,338
Declaration of taxes	93.2	12,914	72.0	24,338
Payment of taxes	67.5	12,914	37.5	24,338
Internet banking	55.1	12,914	10.1	24,338
Video conference	17.1	12,914	1.0	24,338
Staff training	21.5	12,914	1.6	24,338
Advertise Company's products	29.5	12,914	8.5	24,338

Source: NISR, IBES 2018 Survey

3.2.3 Environment protection

This section is about the source of energy, water and waste management habits used in protecting environment. Table 3.7 in the appendices shows that 95.1 percent of formal enterprises have either scraps or waste. In the formal sector, Electricity, gas, steam and air conditioning supply, and Accommodation and food service activities produce the most scraps or waste with 100.0 and 99.2 percent respectively.

Table 3.8 below demonstrates that the majority of formal companies with scraps or waste are of small size (45.74 percent) while big companies have a lower percentage of 10.52. The trend is the same for scraps and waste type as small companies dominate with 47.52, 39.44, 19.82 percent for solid, liquid and gas respectively.

Table 3.8: Distribution of enterprises by type of scraps and waste and enterprise employment size

Sector	Type\Enterprise size	Micro	Small	Medium	Big	Total
Formal	Solid	20.82	47.52	22.78	8.87	100
	Liquid	4.27	39.44	39.75	16.54	100
	Gas	2.07	19.82	46.54	31.57	100
	Total	17.68	45.74	26.06	10.52	100
Informal	Solid	84.2	15.6	0.2	0	100
	Liquid	71.6	27.8	0.6	0	100
	Gas	97.1	2.9	0	0	100
	Total	84.27	15.49	0.24	0	100

Source: NISR, IBES 2018 Survey

Table 3.9 below demonstrates that formal companies that pay someone to remove wastes or scraps as a mode of waste disposal are 81.4 percent; this method is followed by burying in specific places or burning waste and scraps (16.4 percent). Recycling stands at 4.9 percent of companies that use this mode of wastes and scraps disposal. Discharging waste into rivers or streams is at 0.2 percent

Table 3.9: Percent distribution of formal enterprises by mode of disposal of wastes and scraps

Mode of disposal	Yes	No	Total
Pay someone to remove the waste	81.4	18.6	100
Sells the waste	5.4	94.6	100
Dumping in free land	8.5	91.5	100
Discharging into river or streams	0.2	99.8	100
Burying in specified places or burning	16.4	83.7	100
Recycling	4.9	95.1	100

Source: NISR, IBES 2018 Survey

WASAC appears to be the main source of water for all formal enterprises with a percentage of 66.4, followed by rainwater storage (21.7 percent) as shown in Table 3.10 below. The use of recycled water was at only 1.4 percent.

Table 3.10: Percentage distribution of formal enterprises by water source

Source of water	Yes	No	Total
WASAC	66.4	33.6	100
Rainwater storage	21.7	78.3	100
Well	2.2	97.8	100
Lake or dam	1.6	98.4	100
Delivered by other in tank	2.0	98.0	100
Recycled water	1.4	98.6	100
Water from spring	4.8	95.2	100

Source: NISR, IBES 2018 Survey

The tank is the most possessed water storing device with a percentage of 35.9 while other storing devices are the least possessed devices with 0.2 percent of companies with other water storing systems, see Table 3.11 below.

Table 3.11: Percent distribution of formal enterprises storing water by type of water storing device

Water storing device	Yes	No	Total	Companies
Dam	0.7	99.3	100	15,821
Pond	3.9	96.1	100	15,821
Tanks	35.9	64.1	100	15,821
Others	0.2	99.8	100	15,821

Source: NISR, IBES 2018 Survey

The volume of firewood used in 1,692 formal enterprises is 415,681m³. Manufacturing and Accommodation & food service activities enterprises are the most users of firewood with 187,095 and 116,338m³ respectively while mining and quarrying are the least users with 2,147m³. Table 3.12 below has more details.

Table 3.12: Volume of firewood used by formal economic activity

Activity	m3	Companies
Mining and quarrying	2,147	47
Manufacturing	187,095	205
Accommodation and food service activities	116,338	687
Education	79,331	514
Human health and social work activities	4,697	49
Other service activities	26,073	189
Total	415,681	1,692

Source: NISR, IBES 2018 Survey

Table 3.13 below illustrates that Medium and Big enterprises are the one that use a bigger volume of firewood as they have used 168,012 and 145,940 cubic meters respectively from the total volume of 415,681 cubic meters used in the total economy.

Table 3.13: Volume of firewood used by enterprise employment size

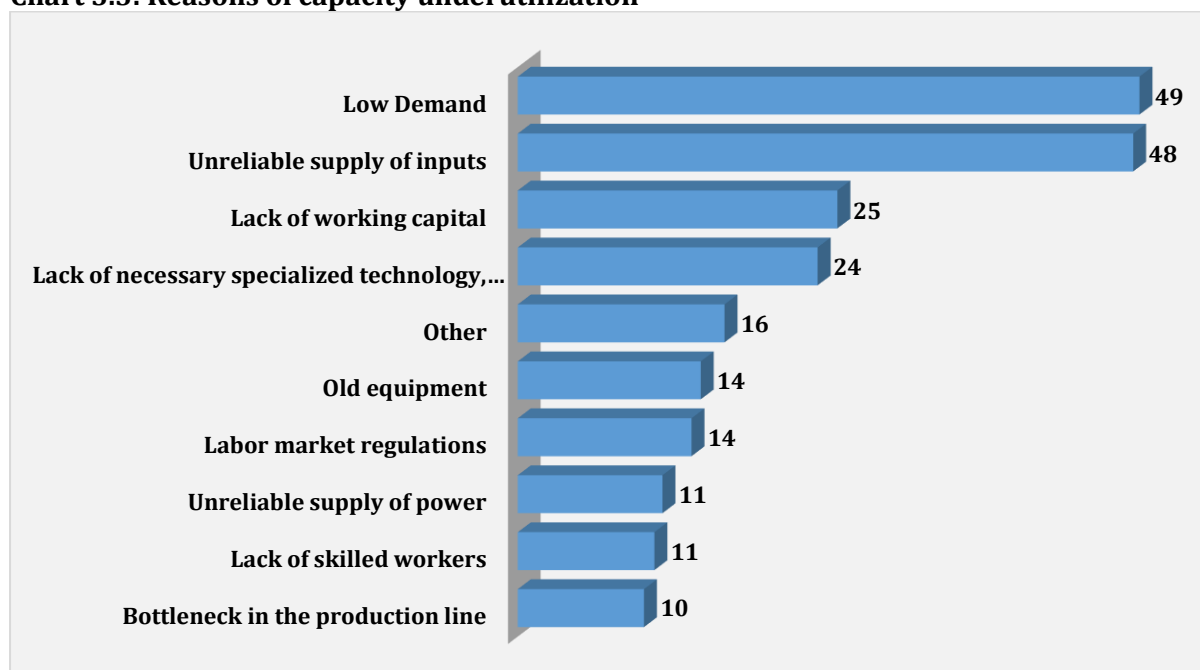
Enterprise size	m3	Companies
Micro	16,527	40
Small	85,202	575
Medium	168,012	920
Big	145,940	157
Total	415,681	1,692

Source: NISR, IBES 2018 Survey

3.2.4 Capacity utilization

In the formal sector, 71.7 percent of companies have reported to maximize the utilization of their capacity. The remaining 28.3 percent underutilize their capacity due to low demand (62 percent), lack of working capital (37 percent) and unreliable supply of inputs (34 percent). The least mentioned reason is the Bottleneck in the production line with 10 percent. For more details, see Chart 3.3 and Table 3.17 below.

Chart 3.3: Reasons of capacity underutilization



Source: NISR, IBES 2018 Survey

Taking into account the size of formal enterprises, medium enterprises are ranked first in capacity utilisation with a percentage of 76.6, see Table 3.14 below. Micro enterprises are the least with only 62.4 percent of their capacity used.

Table 3.14: Capacity utilization mean of production units by enterprise employment size

Enterprise size	Capacity utilization (%)	Companies (freq.)
Micro	62.4	41
Small	66.2	387
Medium	74.0	501
Big	76.6	281
Total	71.7	1,211

Source: NISR, IBES 2018 Survey

3.2.5 Access to Rwandan produced raw materials

Table 3.15 below summarizes the use of Rwandan raw materials, which was at the level of 68.2 percent. Formal Mining and quarrying enterprises that use Rwandan produced raw materials are 84.6 percent against 67.2 and 64.4 percent of formal manufacturing and utilities companies respectively.

Table 3.15: Production units by whether they use Rwandan raw materials and by economic activity

Activity	Yes	No	Total	Companies
Mining and quarrying	84.6	15.4	100	72
Manufacturing	67.2	32.8	100	1,116
Utilities	64.4	35.6	100	22
Total	68.2	31.8	100	1,211

Source: NISR, IBES 2018 Survey

Table 3.16 below describes importance of Rwandan raw materials. Overall, formal companies that considered Rwandan produced raw materials as very important were 52.6 percent in 2018.

Table 3.16 Production units using Rwandan raw materials by importance and economic activity

Activity	Not important	Somewhat important	Important	Very important	Total	Freq.
Mining and quarrying	9.1	4.5	31.8	54.5	100	50
Manufacturing	6	15.4	25.6	53	100	1,014
Utilities	0	25	50	25	100	22
Total	6.1	14.7	26.5	52.6	100	1,086

Source: NISR, IBES 2018 Survey

3.2.6 Access to reliable power in formal sector

Table 3.17 below shows that 89.7 percent of formal enterprises were connected to the national power grid while 10.3 percent were not in 2018.

Table 3.17 Production units by connection to the national power grid or not

Activity	Yes (%)	No (%)	Total (%)	Freq.
Mining and quarrying	69.2	30.8	100	72
Manufacturing	90.8	9.2	100	1,116
Utilities	100	0	100	22
Total	89.7	10.3	100	1,211

Source: NISR, IBES 2018 Survey

Table 3.18 below shows that 22.7 percent on the national power grid units need additional power in future whereas 77.3 percent of the national power grid units do not need additional power in future.

Table 3.18 National power grid units needing additional power in future by economic activity

Activity	Yes	No	Total	Freq.
Mining and quarrying	16.7	83.3	100	50
Manufacturing	22.8	77.2	100	1,014
Utilities	32.2	67.8	100	22
Total	22.7	77.3	100	1,086

Source: NISR, IBES 2018 Survey

Table 3.19 shows production units by number of power outages and economic activity. In 2018, 64.1 percent have experienced less than three power outages in a month.

Table 3.19 Production units by the number of power outages in month

Power outages in a month	1 to 3	4 to 10	10 to 20	Above 20	Total	Freq.
Mining and quarrying	55.6	44.4	0.0	0.0	100	50
Manufacturing	65.2	22.8	7.6	4.4	100	1,014
Utilities	32.2	48.3	0.0	19.5	100	22
Total	64.1	24.3	7.1	4.5	100	1,086

Source: NISR, IBES 2018 Survey

Table 3.20 below describes variation in the length of power outages by economic activity. In 2018, 0.4 percent of businesses have experienced power outages of more than eight hours. The frequency of power outages was relatively high in Mining and quarrying sector where 77.8 percent of the businesses experienced power outages of less than one hour against 64.4 in Utilities sector.

Table 3.20 Distribution of production units by length of power outages and by economic activity

Activity/Hours	Less than 1 hour	1 to 2 hours	2 to 4 hours	4 to 8 hours	Above 8 hours	Freq
Mining and quarrying	77.8	16.7	5.6	0.0	0.0	100
Manufacturing	75.3	15.8	5.1	3.8	0.0	100
Utilities	64.4	16.1	0.0	0.0	19.5	100
Total	75.2	15.9	5.0	3.5	0.4	100

Source: NISR, IBES 2018 Survey

3.2.7 Exportation

Table 3.21 below shows that 45.4 percent of enterprises have exported their products abroad. 50 percent of 72 companies in mining and quarrying enterprises were engaged in exportation activity.

Table 3.21 Distribution of enterprises by whether they exported and by economic activity

Activity	Yes	No	Total	Freq.
Mining and quarrying	50	50	100	72
Manufacturing	46.0	54.0	100	1,116
Utilities	0.0	100	100	22
Total	45.4	54.6	100	1,211

Source: NISR, IBES 2018 Survey

Table 3.22 below shows that 72.7 percent of big enterprises have exported their products.

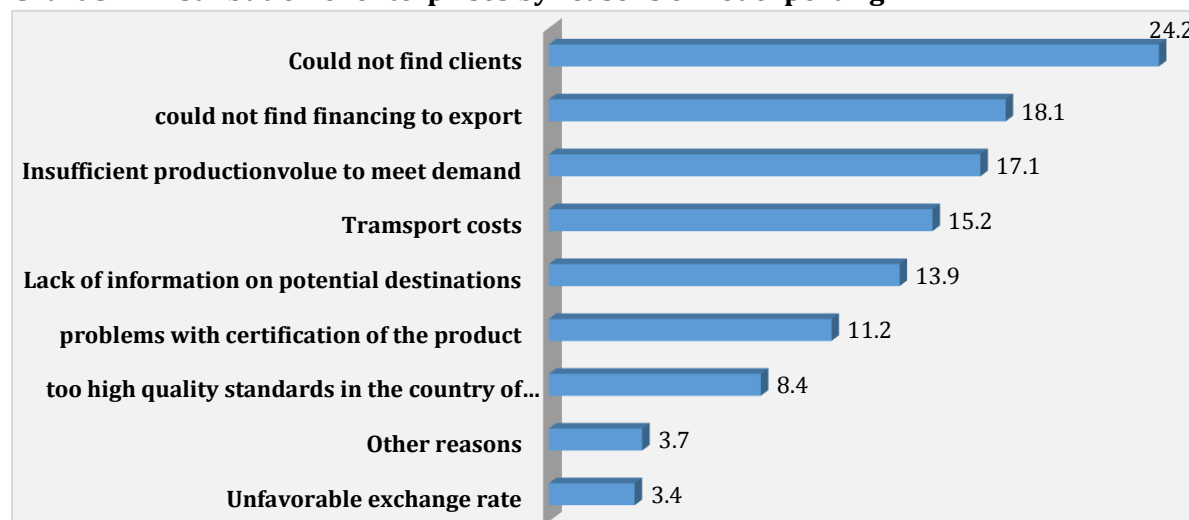
Table 3.22 Distribution of enterprises by whether they have exported and by enterprise employment size

Enterprise size	Yes	No	Total	Freq.
Micro	15.6	84.5	100	41
Small	35.6	64.4	100	387
Medium	40.1	60.0	100	501
Big	72.7	27.3	100	281
Total	45.4	54.6	100	1,211

Source: NISR, IBES 2018 Survey

Chart 3.4 below demonstrates that the main reason of not exporting was that enterprises could not find clients, 24.2 percent; followed by the lack of export finance 18.13 percent.

Chart 3.4: Distribution of enterprises by reasons of not exporting

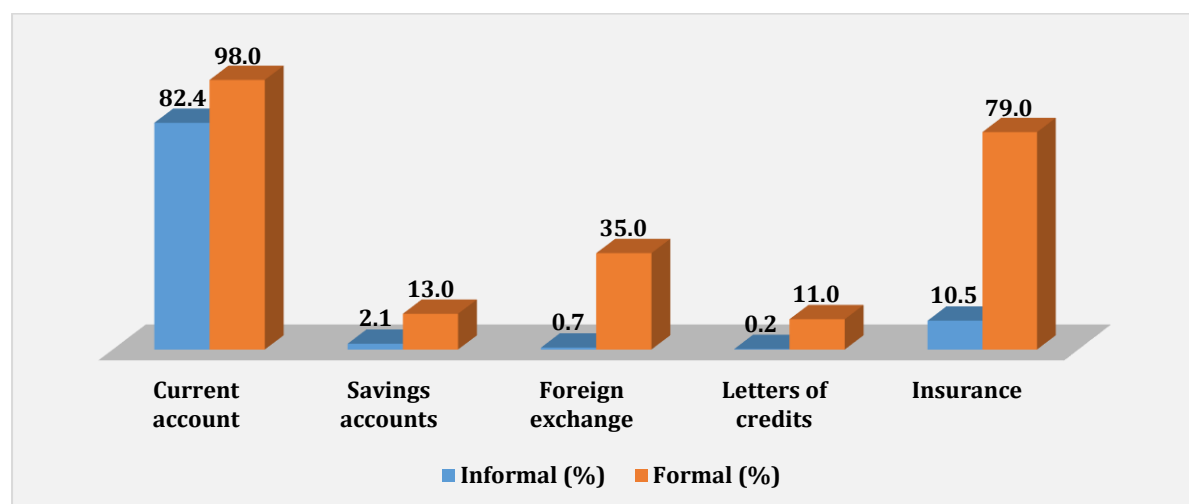


Source: NISR, IBES 2018 Survey

3.2.8 Access to finance

Chart 3.5 below shows that 98 percent in formal sector have a current account against 82.4 percent of companies in informal sector.

Chart 3.5 Distribution of enterprises by financial services type used and by enterprise sector



Source: NISR, IBES 2018 Survey

Table 3.24 below shows that motor vehicle and non-general insurance were the most insurance type used by enterprises with 74 and 70 percent respectively.

Table 3.24 Distribution of formal enterprises by the type of insurance used

Type of insurance	Yes	No	Total	Freq.
Motor vehicles	74	26	100	12,531
Medical and or Life insurance	52	48	100	12,531
Other property	70	30	100	12,531

Source: NISR, IBES 2018 Survey

Table 3.25 below summarizes the ranking of different sources of finance, where 1 is the most important source. It shows that 83.3 percent of those enterprises that use personal cash as a source of finance have ranked it their most important source.

Table 3.25 Enterprises by the ranking of their source of finance, 1 is the most important

Source of Financing/Rank	1	2	3	4	5	6	Total	Freq.
Personal cash	12,216	2,318	128	1	0	0	0	14,664
Parent company in Rwanda	183	189	39	6	0	0	25	442
Loans from Rwanda	1,967	5,667	181	1	4	8	10	7,838
Loans from outside Rwanda	179	404	95	14	5	5	23	726
Government	771	353	63	17	16	5	38	1,263
NPISHs	388	181	118	25	5	0	38	755
Others	448	1,055	524	30	14	8	30	2,108

Source: NISR, IBES 2018 Survey

Table 3.26 below illustrates that short and medium term bank loans were the most financial sources that were received in totality as requested by enterprises.

Table 3.26 Enterprises that received 100.0 percent of finance by negotiated source of finance

Financial source	2012	2013	2014	2015	2016	2017	2018
Short and medium term bank loan	602	604	869	937	1,008	1,875	2,631
Long term bank loan	202	217	276	374	294	1,135	1,994
Credit line or card or overdraft	261	361	419	431	435	674	2,543
Trade credit	180	226	262	279	294	225	999

Source: NISR, IBES 2018 Survey

CHAPTER 4: BUSINESS PERFORMANCE

4.1 Overview of sector performance

This chapter comprises survey results of the formal sector. The main activities have been analysed and key highlighted aggregates are: income, expenditure, balance sheet, and disposal of fixed assets. All data have been presented for the following sectors: Industry, Finance, Education, Health, Non Profit Institutions Serving Households (NPISHs) and Other Services.

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. The 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.

In addition, the education sector 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 programs 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.

Health sector 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.

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.

Finally, 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, and other services except financial, education, and health.

4.2 Income and expenditure

Table 4.1 below highlights the distribution of income and expenditure by economic sectors. For income, the results show that Other Services yielded more income of Frw 3,582 billion. On the second position is the industry sector which produced Frw 1,590 billion of revenue. For expenditure, Other Services registered expenditure of Frw 3,379 billion. On the second position is the industry sector which registered expenditure of Frw 1,576 billion.

Table 4.1. Income and expenditure statement by Sector (Billion, FRW)

Description	Total income	Total expenditure
Industry	1,590	1,576
Finance	593	493
Education	112	117
Health	102	104
NPISHs	250	236
Other services	3,582	3,379
Total	6,228	5,906

Source: NISR, IBES 2018 Survey

Table 4.2 below highlights the distribution of income and expenditure by enterprise size. For income, the results show that big enterprises have produced more income of Frw 2,731 billion. Micro enterprises have produced income of Frw 703 billion. For expenditure, big enterprises registered expenditure of Frw 2,619 billion against Frw 685 billion of micro enterprises.

Table 4.2. Income and expenditure statement by employment size (Billion, FRW)

Enterprise size	Income	Expenditure
Micro	703	685
Small	1,829	1,645
Medium	966	958
Big	2,731	2,619
Total	6,228	5,906

Source: NISR, IBES 2018 Survey

4.3 Balance sheet

Survey results show that total assets of all economic sectors were Frw 10,629 billion. Finance have scored more assets valued at Frw 4,103 billion, of which non-current and current assets were Frw 171 billion and Frw 3,932 billion respectively.

Other Services sector's total assets were Frw 2,855 billion, of which non-current and current assets were Frw 1,688 billion and Frw 1,167 billion respectively while the total

assets of Education sector were Frw 1,068 billion of which non-current and current assets were Frw 901 billion and Frw 167 billion respectively. Table 4.3 below provides aggregates of assets by economic sectors.

Table 4.3. Balance sheet assets by sector in billion Frw

Description	Non-current assets	Current assets	Total assets
Industry	1,368	914	2,282
Finance	171	3,932	4,103
Education	901	167	1,068
Health	9	17	25
NPISHs	245	50	295
Other services	1,688	1,167	2,855
Total	4,381	6,248	10,629

Source: NISR, IBES 2018 Survey

Total assets of all sectors stood at Frw 10,629billion. Big enterprises owned more assets of Frw 6,725 billion, of which non-current and current assets were Frw 2,253billion and Frw 4,472 billion respectively; while micro enterprises owned less assets of Frw 342 billion, of which non-current and current assets were Frw 188 billion and Frw 153 billion respectively. Table 4.4 below shows types of assets by enterprise size.

Table 4.4. Balance sheet assets by employment size in billion Frw

Description	Non-current assets	Current assets	Total assets
Micro	188	153	342
Small	1,452	977	2,429
Medium	488	645	1,133
Big	2,253	4,472	6,725
Total	4,381	6,248	10,629

Source: NISR, IBES 2018 Survey

Table 4.5 below displays the owners' equity and liabilities by economic sectors. Finance had more total equity and liabilities of Frw 4,103 billion, of which equity and liabilities were Frw 1,146 billion and Frw 2,957 billion respectively. On the second position was the Other Services sector which had total equity and liabilities of Frw 2,855 billion, of which equity and liabilities were Frw 479 billion and Frw 2,376 billion respectively.

Table 4.5. Equity and liabilities by sector in billion Frw

Description	Total equity	Total liabilities	Total
Industry	437	1,845	2,282
Finance	1,146	2,957	4,103
Education	978	90	1,068
Health	6	20	25
NPISHs	238	57	295
Other services	479	2,376	2,855
Total	3,284	7,344	10,629

Source: NISR, IBES 2018 Survey

Table 4.6 below shows the distribution of equity and liabilities by enterprise size. Big companies had more of equity and liabilities than other enterprises.

Table 4.6. Balance sheet liabilities by employment size in billion Frw

Description	Total equity	Total liabilities	Total
Micro	174	168	342
Small	1,353	1,076	2,429
Medium	343	790	1,133
Big	1,414	5,311	6,725
Total	3,284	7,344	10,629

Source: NISR, IBES 2018 Survey

4.4 Acquisition and disposal of fixed assets

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.

Table 4.7 below depicts opening and closing values of fixed assets by economic sectors for all companies who have managed to provide information on their fixed assets. Other Services had more opening and closing values of fixed assets: Frw 1,293 billion and Frw 1,259 billion respectively.

Table 4.7. Acquisition and disposal of fixed assets by sector in billion Frw

Description	Opening value	Closing value
Industry	836	903
Finance	163	171
Education	140	140
Health	8	8
NPISHs	132	174
Other services	1,293	1,259
Total	2,572	2,654

Source: NISR, IBES 2018 Survey

Appendices

Appendix I: Survey findings

Table 1.1: Calculation of final formal IBES weights (Frequency)

Activity	Valid population	Valid sample	Final weight
Mining and quarrying	142	52	2.7
Manufacturing	1,232	193	6.4
Electricity, gas, steam and air conditioning supply	43	12	3.6
Water supply; sewerage, waste management and remedy	48	11	4.3
Construction	139	75	1.8
Whole sale and retail trade; repair of motor vehicles and motorcycles	7,831	573	13.7
Transportation and storage	138	68	2.0
Accommodation and food service activities	2,310	121	19.1
Information and communication	176	28	6.3
Financial and insurance activities	822	159	5.2
Real estate activities	82	30	2.7
Professional, scientific and technical activities	535	67	8.0
Administrative and support service activities	407	57	7.1
Education	721	569	1.3
Human health and social work activities	387	283	1.4
Arts, entertainment and recreation	55	8	6.8
Other services activities	741	137	5.4

Source: NISR

Table 1.2: Calculation of final weights for informal IBES

Activity	Original population	Sample	Achieved sample weights	Completed	Closed	Refused	Missing	Not eligible	Valid population	Valid sample	Adjusted design weights	Final weights
Mining and quarrying	306	20	15.3	9	2	0	0	4	300	14	21.4	33.3
Manufacturing	10,166	659	15.4	461	41	1	7	28	10,097	590	17.1	21.9
Electricity, gas, steam and air conditioning supply	20	13	1.5	7	0	0	0	1	19	12	1.6	2.7
Water supply; sewerage, waste management and remediation activities	2,222	97	22.9	77	5	0	0	17	2,200	75	29.3	28.6
Construction	27	18	1.5	8	2	0	1	9	16	7	2.2	2.0
Wholesale and retail trade; repair of motor vehicles and motorcycles	88,900	397	223.9	429	31	5	8	31	88,838	335	265.2	207.1
Transportation and storage	65	27	2.4	9	1	1	1	6	58	20	2.9	6.4
Accommodation and food service activities	49,672	218	227.9	191	28	0	1	10	49,634	180	275.7	259.9
Information and communication	660	139	4.7	109	7	1	0	4	649	128	5.1	6.0
Real estate activities	60	23	2.6	18	0	1	0	0	60	23	2.6	3.3
Professional, scientific and technical activities	888	180	4.9	129	7	4	7	14	867	159	5.5	6.7
Administrative and support service activities	1,698	221	7.7	152	10	0	3	16	1,672	195	8.6	11.0
Arts, entertainment and recreation	524	130	4.0	66	17	1	5	30	477	83	5.7	7.2
Other service activities	16,998	420	40.5	464	30	4	4	27	16,941	363	46.7	36.5

Source: NISR, IBES 2018 Survey

Table 2.1: Estimated number of enterprises by economic activity

Main economic activity	Formal		Informal	
	Frequency	Percent	Frequency	Percent
Mining and quarrying	145	0.9	300	0.2
Manufacturing	1,238	7.8	10,074	5.9
Electricity, gas, steam and air conditioning supply	43	0.3	19	0.0
Water supply; sewerage, waste management and remediation activities	48	0.3	2,200	1.3
Construction	139	0.9	16	0.0
Wholesale and retail trade; repair of motor vehicles and motorcycles	7,817	49.4	88,630	51.7
Transportation and storage	138	0.9	58	0.0
Accommodation and food service activities	2,310	14.6	49,633	29
Information and communication	176	1.1	649	0.4
Financial and insurance activities	841	5.3		
Real estate activities	82	0.5	60	0.0
Professional, scientific and technical activities	535	3.4	874	0.5
Administrative and support service activities	407	2.6	1,672	1.0
Education	720	4.6		
Human health and social work activities	387	2.4		
Arts, entertainment and recreation	55	0.3	462	0.3
Other service activities	741	4.7	16,649	9.7
Total	15,821	100	171,294	100

Source: NISR, IBES 2018 Survey

Table 3.27 Ranking of factors by the level of their impact on formal businesses

Factor	No problem	Minor problem	Serious problem	Very serious problem	Not applicable	Total
Availability of affordable finance or bank loans	76.2	10.4	5.1	1.0	7.3	100
Availability of tools and machinery	42.9	9.4	2.5	0.9	44.3	100
Availability of working space	79.7	15.3	4.0	0.8	0.3	100
Availability of electricity	86.1	9.4	2.5	1.7	0.4	100
Availability of water	78.9	9.9	4.6	3.5	3.1	100
Availability of land	45.5	9.8	4.8	2.7	37.2	100
Availability of input materials	10.0	4.2	1.6	0.6	83.7	100
Availability of transport facilities and infrastructures	81.4	10.3	4.7	2.3	1.3	100
Regulatory environment	84.9	10.5	3.7	0.7	0.4	100
Marketing problems	64.8	21.8	5.9	1.3	6.3	100
Telecommunications	85.8	10.2	3.0	0.7	0.4	100
Internet connection	70.5	16.0	5.1	1.8	6.6	100
Packing materials	27.7	5.4	1.2	1.2	64.4	100
Other problems	18.5	2.6	1.8	1.8	75.3	100
Total	60.9	10.4	3.6	1.5	23.6	100

Source: NISR, IBES 2018 Survey

Table 3.28: Average number of employees using a computer by economic activity, formal sector

Activity	Computer use mean	Staff mean	Companies
Mining and quarrying	5	124	145
Manufacturing	12	129	1,238
Electricity, gas, steam and air conditioning supply	54	180	43
Water supply; sewerage, waste management and remediation activities	33	157	48
Construction	23	261	139
Wholesale and retail trade; repair of motor vehicles and motorcycles	5	16	7,817
Transportation and storage	23	85	138
Accommodation and food service activities	10	55	2,310
Information and communication	42	48	176
Financial and insurance activities	38	47	841
Real estate activities	4	11	82
Professional, scientific and technical activities	15	25	535
Administrative and support service activities	26	463	407
Education	12	46	720
Human health and social work activities	24	57	387
Arts, entertainment and recreation	83	106	55
Other service activities	3	15	741
Total	11	47	15,821

Source: NISR, IBES 2018 Survey

Table 3.29: Distribution of enterprises with internet connection by employment size, formal sector

Enterprise size	Yes	No	Total	Companies
Micro	51.3	48.7	100	3,314
Small	87.0	13.0	100	7,459
Medium	96.4	3.6	100	3611
Big	98.0	2.0	100	1436
Total	82.6	17.4	100	15,821

Source: NISR, IBES 2018 Survey

Table 3.30: Capacity utilization mean in production units by economic activity, formal sector

Activity	Utilization mean	Companies
Mining and quarrying	70.2	72
Manufacturing	71.8	1,116
Utilities	71.3	22
Total	71.7	1,211

Source: NISR, IBES 2018 Survey

Table 3.31: Reasons of capacity underutilization, formal sector

Reasons of underutilization	Yes	No	Total
Low Demand	48.9	51.1	100
Unreliable supply of power	11.4	88.6	100
Unreliable supply of inputs	48.4	51.6	100
Lack of skilled workers	10.7	89.3	100
Bottleneck in the production line	9.9	90.1	100
Lack of working capital	25.1	74.9	100
Labor market regulations	13.6	86.4	100
Lack of necessary specialized technology, machinery & spare parts	23.6	76.5	100
Old equipment	14.4	85.6	100
Other	16.2	83.8	100
Total	22.2	77.8	100

Source: NISR, IBES 2018 Survey

Table 3.32: Distribution of enterprises that are underutilizing their capacity by economic activity, formal sector

Activity	Yes	No	Total	Companies
Mining and quarrying	76.9	23.1	100	72
Manufacturing	73.6	26.4	100	1,116
Utilities(water & electricity)	32.2	67.8	100	22
Total	73.0	27.0	100	1,211

Source: NISR, IBES 2018 Survey

Table 3.33 Percentage distribution of enterprises economic activity and scraps or waste possession, formal sector

Activity	Yes	No	Companies
Mining and quarrying	82.7	17.3	145
Manufacturing	97.9	2.1	1,238
Electricity, gas, steam and air conditioning supply	100.0	0.0	43
Water supply; sewerage, waste management and remediation activities	72.7	27.3	48
Construction	96.0	4.0	139
Wholesale and retail trade; repair of motor vehicles and motorcycles	95.5	4.5	7,817
Transportation and storage	86.8	13.2	138
Accommodation and food service activities	99.2	0.8	2,310
Information and communication	82.1	17.9	176
Financial and insurance activities	80.4	19.6	841
Real estate activities	93.3	6.7	82
Professional, scientific and technical activities	92.5	7.5	535
Administrative and support service activities	93.0	7.0	407
Education	98.6	1.4	720
Human health and social work activities	99.7	0.4	387
Arts, entertainment and recreation	100.0	0.0	55
Other service activities	94.9	5.1	741
Total	95.1	4.9	15,821

Source: NISR, IBES 2018 Survey

Table 3.34: Distribution of enterprises by economic activity and whether they store water or not, formal sector

Activity	Yes	No	Total	Frequency
Mining and quarrying	42.3	57.7	100	145
Manufacturing	67.4	32.6	100	1,238
Electricity, gas, steam and air conditioning supply	41.7	58.3	100	43
Water supply; sewerage, waste management and remediation activities	36.4	63.6	100	48
Construction	49.3	50.7	100	139
Wholesale and retail trade; repair of motor vehicles and motorcycles	16.9	83.1	100	7,817
Transportation and storage	30.9	69.1	100	138
Accommodation and food service activities	84.3	15.7	100	2,310
Information and communication	25.0	75.0	100	176
Financial and insurance activities	29.7	70.3	100	841
Real estate activities	53.3	46.7	100	82
Professional, scientific and technical activities	22.4	77.6	100	535
Administrative and support service activities	31.6	68.4	100	407
Education	90.2	9.8	100	720
Human health and social work activities	86.2	13.8	100	387
Arts, entertainment and recreation	25.0	75.0	100	55
Other service activities	54.7	45.3	100	741
Total	39.8	60.2	100	15,821

Source: NISR, IBES 2018 Survey

Table 3.35: Distribution of enterprises by economic activity and firewood use

Activity	Informal Sector				Formal sector			
	Yes	No	Total	Companies	Yes	No	Total	Companies
Mining and quarrying	11.1	88.9	100	300	32.7	67.3	100	145
Manufacturing	6.1	93.9	100	10,074	18.7	81.4	100	1,238
Electricity, gas, steam and air conditioning supply	0	100	100	19	0	100	100	43
Water supply; sewerage, waste management and remediation activities	0	100	100	2,200	0	100	100	48
Construction	0	100	100	16	0	100	100	139
Wholesale and retail trade; repair of motor vehicles and motorcycles	1.2	98.8	100	88,630	0	100	100	7,817
Transportation and storage	0	100	100	58	0	100	100	138
Accommodation and food service activities	13.6	86.4	100	49,633	29.8	70.3	100	2,310
Information and communication	0	100	100	649	0	100	100	176
Financial and insurance activities					0	100	100	841
Real estate activities	0	100	100	60	0	100	100	82
Professional, scientific and technical activities	0	100	100	874	0	100	100	535
Administrative and support service activities	0	100	100	1,672	0	100	100	407
Education					71.4	28.7	100	720
Human health and social work activities					12.7	87.3	100	387
Arts, entertainment and recreation	3.1	96.9	100	462	0	100	100	55
Other service activities	2.4	97.6	100	16,649	25.6	74.5	100	741
Total	5.2	94.8	100	171,294	10.9	89.1	100	15,821

Source: NISR, IBES 2018 Survey

Table 3.36: Distribution of enterprises by the type of start-up finance used, formal sector

Financial source	Yes	No	Total	Freq.
Equity capital	93	7	100	15,821
Bank overdraft	14	86	100	15,821
Credit card	2	98	100	15,821
Subsidized bank loan	1	99	100	15,821
Short term bank loan	15	85	100	15,821
Long term bank loan	12	88	100	15,821
Microfinance loan	1	99	100	15,821
Trade credit	4	96	100	15,821
Hire-purchase agreements (leasing)	1	99	100	15,821
Retained earning	12	88	100	15,821
Sales of assets	2	98	100	15,821
Shareholders and related enterprises	9	91	100	15,821
Friends or family	5	95	100	15,821

Source: NISR, IBES 2018 Survey

Table 3.37: Distribution of enterprises by used source of financing, formal sector

Financial source	2012	2013	2014	2015	2016	2017	2018
Equity capital	54.5	54.8	54.1	53	52.4	53.4	55.0
Bank overdraft	2.9	3.3	3.5	3.2	3.5	3.6	8.1
Credit card	0.2	0.2	0.3	0.3	0.2	0.1	1.0
Subsidized bank loan	0.1	0.3	0.2	0.3	0.4	0.4	0.5
Short term bank loan	5.5	5	5.9	6.2	6.4	9.6	9.0
Long term bank loan	1.9	1.7	1.9	2.1	2	6.6	7.0
Microfinance loan	0.5	0.5	0.5	0.6	0.6	0.5	0.5
Trade credit	1.4	1.5	1.6	1.6	1.5	1.5	2.3
Hire-purchase agreements (leasing)	0.5	0.3	0.3	0.4	0.3	0.5	0.6
Retained earning	21.5	21.3	21.2	21.7	21.8	16.5	7.0
Sales of assets	0.3	0.4	0.6	0.6	0.9	1.2	0.9
Shareholders and related enterprises	4.6	4.6	4.1	4.2	4.2	3.4	5.2
Friends or family	6.1	6.4	5.9	6	5.8	2.8	3.1
Total	100	100	100	100	100	100	100

Source: NISR, IBES 2018 Survey

Table 4.1: Percentage of formal enterprises by size band within each activity

Main economic activity\Enterprise size	Micro	Small	Medium	Big	Total	Freq.
Mining and quarrying	7.7	25.0	32.7	34.6	100	145
Manufacturing	3.1	35.8	40.4	20.7	100	1238
Electricity, gas, steam and air conditioning supply	16.7	16.7	33.3	33.3	100	43
Water supply; sewerage, waste management and remediation activities	0.0	54.6	18.2	27.3	100	48
Construction	9.3	37.3	16.0	37.3	100	139
Wholesale and retail trade; repair of motor vehicles and motorcycles	35.4	50.8	10.8	3.0	100	7,817
Transportation and storage	4.4	39.7	35.3	20.6	100	138
Accommodation and food service activities	1.7	36.4	48.8	13.2	100	2310
Information and communication	10.7	42.9	35.7	10.7	100	176
Financial and insurance activities	15.3	61.2	9.3	14.2	100	841
Real estate activities	23.3	70.0	6.7	0.0	100	82
Professional, scientific and technical activities	10.5	67.2	19.4	3.0	100	535
Administrative and support service activities	8.8	24.6	17.5	49.1	100	407
Education	0.2	23.7	72.1	4.0	100	720
Human health and social work activities	2.1	55.1	25.8	17.0	100	387
Arts, entertainment and recreation	12.5	37.5	25.0	25.0	100	55
Other service activities	21.2	70.1	5.8	2.9	100	741
Total	21.0	47.2	22.8	9.1	100	15,821

Source: NISR, IBES 2018 Survey

Table 4.2: Percentage of formal enterprises by activity within each size band

Main economic activity\Enterprise size	Micro	Small	Medium	Big	Total
Mining and quarrying	0.3	0.5	1.3	3.5	0.9
Manufacturing	1.2	5.9	13.9	17.9	7.8
Electricity, gas, steam and air conditioning supply	0.2	0.1	0.4	1.0	0.3
Water supply; sewerage, waste management and remediation activities	0.0	0.4	0.2	0.9	0.3
Construction	0.4	0.7	0.6	3.6	0.9
Wholesale and retail trade; repair of motor vehicles and motorcycles	83.6	53.2	23.4	16.2	49.4
Transportation and storage	0.2	0.7	1.3	2.0	0.9
Accommodation and food service activities	1.2	11.3	31.2	21.3	14.6
Information and communication	0.6	1.0	1.7	1.3	1.1
Financial and insurance activities	3.9	6.9	2.2	8.3	5.3
Real estate activities	0.6	0.8	0.2	0.0	0.5
Professional, scientific and technical activities	1.7	4.8	2.9	1.1	3.4
Administrative and support service activities	1.1	1.3	2.0	13.9	2.6
Education	0.0	2.3	14.4	2.0	4.6
Human health and social work activities	0.3	2.9	2.8	4.6	2.5
Arts, entertainment and recreation	0.2	0.3	0.4	1.0	0.4
Other service activities	4.7	7.0	1.2	1.5	4.7
Total	100	100	100	100	100
Freq.	3,314	7,459	3,611	1,436	15,821

Source: NISR, IBES 2018 Survey

Table 4.3: Distribution of formal enterprises by economic activity and ownership

Main economic activity	Government	Rwandan Resident	Foreign Resident	Non-Resident	Total
Mining and quarrying	1.9	82.7	7.7	7.7	100.0
Manufacturing	1.6	74.1	16.1	8.3	100.0
Electricity, gas, steam and air conditioning supply	16.7	50.0	16.7	16.7	100.0
Water supply; sewerage, waste management and remediation activities	9.1	81.8	0.0	9.1	100.0
Construction	0.0	57.3	25.3	17.3	100.0
Wholesale and retail trade; repair of motor vehicles and motorcycles	1.2	79.6	13.3	5.9	100.0
Transportation and storage	5.9	75.0	10.3	8.8	100.0
Accommodation and food service activities	2.5	87.6	5.0	5.0	100.0
Information and communication	0.0	71.4	14.3	14.3	100.0
Financial and insurance activities	1.9	81.4	2.5	14.2	100.0
Real estate activities	0.0	80.0	16.7	3.3	100.0
Professional, scientific and technical activities	1.5	64.2	13.4	20.9	100.0
Administrative and support service activities	1.8	79.0	12.3	7.0	100.0
Education	68.7	29.4	0.7	1.2	100.0
Human health and social work activities	53.7	36.8	3.5	6.0	100.0
Arts, entertainment and recreation	0.0	25.0	37.5	37.5	100.0
Other service activities	2.2	95.6	1.5	0.7	100.0
Total	6.0	76.7	10.4	6.9	100

Source: NISR, IBES 2018 Survey

Table 4.4: Distribution of enterprises by age and main economic activity, formal sector

Main economic activity	Year of business commencement						
	<= 5 Years	>5-10 Years	>10-15 Years	>15-20 Years	20+ Years	Total	Freq.
Mining and quarrying	50.0	40.4	7.7	0.0	1.9	100	145
Manufacturing	38.9	30.6	11.9	4.7	14.0	100	1,238
Electricity, gas, steam and air conditioning supply	66.7	33.3	0	0	0	100	43
Water supply; sewerage, waste management and remediation activities	36.4	36.4	18.2	9.1	0.0	100	48
Construction	42.7	28.0	17.3	2.7	9.3	100	139
Wholesale and retail trade; repair of motor vehicles and motorcycles	38.7	38.4	11.2	6.3	5.4	100	7,817
Transportation and storage	45.6	26.5	10.3	5.9	11.8	100	138
Accommodation and food service activities	46.3	30.6	9.1	6.6	7.4	100	2,310
Information and communication	53.6	17.9	21.4	3.6	3.6	100	176
Financial and insurance activities	15.3	56.9	19.2	2.5	6.2	100	841
Real estate activities	40.0	46.7	10.0	0.0	3.3	100	82
Professional, scientific and technical activities	19.4	37.3	23.9	11.9	7.5	100	535
Administrative and support service activities	22.8	47.4	17.5	3.5	8.8	100	407
Education	6.3	9.1	8.8	9.1	66.6	100	720
Human health and social work activities	13.1	13.8	13.1	7.4	52.7	100	387
Arts, entertainment and recreation	62.5	25.0	12.5	0.0	0.0	100	55
Other service activities	20.4	19.0	8.8	11.0	40.9	100	741
Total	35.1	34.6	11.9	6.3	12.2	100	15,821

Source: NISR, IBES 2018 Survey

Table 4.5: 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	0.2	26.3	-	-	1.8	28.3
Sales of manufactured, mined or quarried products	107.1	770.8	-	-	0.2	878.0
Sales of electricity	-	-	94.8	-	-	94.8
Sales of water by pipe or bouser	-	-	-	0.4	-	0.4
Construction work done	-	-	0.2	-	408.0	408.1
Delivery charges if invoiced separately	-	1.5	-	-	-	1.5
Transport, storage and travel services rendered	-	3.2	-	-	0.3	3.5
Hotel & catering services	-	0.2	-	-	-	0.2
Sales of professional & scientific services	-	0.0	1.9	-	0.0	2.0
Rent of buildings received / receivable	-	1.4	-	-	0.0	1.4
Dividends or other profits realized	-	7.7	3.8	11.5	5.4	28.4
All other income	0.5	10.0	64.3	0.1	7.5	82.4
Total	107.7	821.1	165.0	12.0	423.3	1,529.1

Source: NISR, IBES 2018 Survey

Table 4.6: Expenditure statement for industry sector in billion Frw, formal sector

Expenditure components	Mining and quarrying	Manufacturing	Electricity, gas, steam and air condition	Water supply, sewerage, waste management	Construction	Total
Purchases of goods for resale	0.2	19.1	-	-	0.1	19.4
Purchases of raw materials, supplies, etc., used in manufacturing	74.7	444.0	84.2	-	1.7	604.6
Fuel used for manufacturing, mining & quarrying	16.3	32.2	25.9	-	0.0	74.4
Construction sub-contracts, equipment hire, fuel, materials	-	-	1.7	-	264.4	266.1
Purchases of food and drinks for catering & bar services	-	0.1	0.0	-	-	0.1
Rent of land paid / payable	0.1	0.5	-	-	0.1	0.6
Rent of buildings paid / payable	0.3	4.4	0.4	0.4	1.6	7.1
Other goods & services purchased	8.1	102.1	19.5	6.8	58.5	195.1
Wages & salaries paid (Social security & other benefits included)	7.1	67.8	13.2	2.5	38.2	128.7
Interests paid (excluding other bank charges)	2.0	42.0	1.3	0.5	3.5	49.3
Business licenses, rates and fees payable to government	1.9	2.2	0.0	0.1	1.1	5.4
Depreciation charges for the year on fixed assets	1.3	57.7	11.4	0.7	26.7	97.8
Dividends paid/payable	1.4	44.6	5.4	0.0	7.5	59.0
All other costs, losses, provisions, etc.	0.1	1.2	-	-	0.0	1.3
Total	113.5	817.9	163.1	11.0	403.4	1,508.9

Source: NISR, IBES 2018 Survey

Table 4.7 Summary assets of the industry sector in billion Frw, formal sector

Assets	Mining and quarrying	Manufacturing	Electricity, gas, steam and air condition	Water supply; sewerage, waste management	Construction	Total
Non-current assets	11.1	636.3	599.0	3.4	118.4	1,368.1
Fixed assets	10.9	528.5	273.9	2.5	104.7	920.5
Land	0.9	36.3	0.0	0.2	15.7	53.0
Buildings	0.7	152.1	194.7	0.6	13.7	361.7
Vehicles and Machines	7.5	209.1	7.8	1.6	37.3	263.3
Others	1.8	131.1	71.4	0.1	38.0	242.4
Work in progress	0.0	29.0	309.2	-	9.4	347.6
Other investments	0.2	78.8	15.9	0.9	4.2	99.9
Current assets	29.7	393.7	93.0	2.6	395.0	914.0
Inventories	9.6	180.0	19.0	0.0	38.1	246.7
Debtors & other receivables	16.9	145.1	45.7	2.3	322.8	532.7
Cash and cash equivalents	3.2	68.5	28.3	0.3	34.1	134.5
Total assets	40.8	1,030.0	692.0	6.0	513.4	2,282.1

Source: NISR, IBES 2018 Survey

Table 4.8: Income statement for financial sector in billion Frw, formal sector

Income components	Monetary institutions	Insurance, reinsurance and pension funding, except compulsory social security	Other financial services	Total
Interest received/premiums earned	364.1	51.1	0.2	415.4
Fees & commissions/claim received	57.3	3.3	2.4	63.0
Commissions received for agents, brokerage services	7.6	3.2	0.1	10.9
Rent of land received/receivable	-	-	-	-
Rent of buildings received /receivable	-	1.6	-	1.6
Rent/lease of machinery and equipment	-	-	-	-
Interest received/receivable	-	2.4	-	2.4
Exchange dealings/Other investment	56.2	5.0	9.2	70.4
Insurance income	-	5.1	-	5.1
Dividend received/receivable	0.2	0.0	-	0.2
Grants received	0.7	-	0.0	0.7
Gains on the sale of fixed assets	2.0	-	-	2.0
Bad debts written back/ Revaluations on fixed assets	9.4	-	-	9.4
Other income	12.6	2.3	-	14.9
Total	510.1	70.7	11.9	592.7

Source: NISR, IBES 2018 Survey

Table 4.9: Expenditure statement for financial sector in billion Frw, formal sector

Expenditure component	Monetary institutions	Insurance, reinsurance and pension funding, except compulsory social security	Other financial services	Total
Interests /Claims paid/payable	84.6	39.5	0.0	124.1
Staff costs (Wages, salaries, social security & other benefits)	102.5	9.8	0.9	113.2
Commissions paid for financial services	12.9	6.6	3.8	23.3
Rent of land paid/payable	0.0	0.1	0.0	0.2
Rent of buildings paid/payable	24.4	0.4	0.5	25.2
Payments for rental or lease of machinery and equipment	2.1	0.0	-	2.1
Depreciation charges	22.9	8.4	0.2	31.4
Regulatory fees and licenses paid to government	3.7	1.2	0.1	4.9
Interests paid/payable on loans contracted (excluding other bank charges)	17.4	0.6	0.0	18.0
Fines, penalties & donations	7.4	0.1	0.0	7.5
Payments made for telephone, internet, postage, courier	3.8	-	0.0	3.8
Net impairment charge on loans and advances/Provision for bad	27.2	0.0	-	27.2
Loss on the sale of fixed assets	20.4	0.3	0.0	20.7
Cost of all other consumable goods & services purchased(Specify)	25.4	0.2	0.4	26.1
Total	412.8	68.5	11.8	493.1

Source: NISR, IBES 2018 Survey

Table 4.10: Income statement for Education sector, formal sector

Income components	Billion Frw
Tuition fees received	63.5
Registration fees	1.7
Boarding	1.8
Government subsidies or grant	2.0
Development partners	3.5
Meals	3.8
Uniforms	0.5
Rent of land received/ receivable	0.1
Rent of buildings received/ receivable	0.2
Rent/lease of machinery and equipment	0.0
Research income	0.3
All other types of service rendered (see B8)	2.7
Grants or subsidies received from government	28.6
Interest received/receivable	0.0
Dividends or other profits realized	0.1
All other income, revaluations, write-backs etc.	2.7
Total income	111.7

Source: NISR, IBES 2018 Survey

Table 4.11: Expenditure statement for Education sector, formal sector

Expenditure component	Billion Frw
Text books	0.9
Cost of uniforms	1.2
Cost of meals	11.5
Examination costs	1.2
Rent of land paid/payable	0.2
Rent of buildings paid/payable	1.3
Payments for rental or lease of machinery and equipment	0.0
Research expenses	1.0
All other goods and services purchased	22.8
Wages & salaries paid (Social security & other benefits included)	59.9
Interests paid / payable (not other bank charges)	3.4
Business licenses, rates and fees payable to government	0.6
Depreciation charges for the year on fixed assets	10.8
All other costs, losses, provisions, etc.	-
Total expenditure	116.8

Source: NISR, IBES 2018 Survey

Table 4.12: Income statement for the health sector, formal sector

Income component	Billion Frw
Income fees paid by patients or their supporters	18.9
Income fees paid by Medical insurances	35.3
Grants from international organizations & charities	13.8
Grants from local organizations & charities	3.7
Rent of land received/receivable	0.0
Rent of buildings received/receivable	0.0
Rent/lease of machinery and equipment	0.0
All other types of service rendered	1.2
Grants or subsidies received from government	28.4
Interest received/receivable	0.0
Dividends or other profits realized	0.1
All other income, revaluations, write-backs etc.	0.9
Total income	102.4

Source: NISR, IBES 2018 Survey

Table 4.13: Expenditure statement for Health sector, formal sector

Expenditure component	Billion Frw
Purchases of pharmaceuticals and medical supplies	19.1
Cleaning materials	2.4
Laboratory services paid/payable	1.5
Rent of land paid/payable	0.0
Rent of buildings paid/payable	0.9
Payments for rental or lease of machinery and equipment	0.1
All other goods and services purchased	27.9
Wages & salaries paid (Social security & other benefits included)	50.7
Interests paid / payable (no other bank charges)	1.0
Business licenses, rates and fees payable to government	0.2
Depreciation charges for the year on fixed assets	0.8
All other costs, losses, provisions, etc.	0.0
Total expenditures for the year	104.5

Source: NISR, IBES 2018 Survey

Table 4.14: Income statement for service sector in billion Frw, formal sector

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	2,429.7	4.9	0.1	3.0	-	1.7	2.0	-	42.1	2,483.5
Sales of manufactured, mined or quarried products	42.9	4.5	0.6	-	-	-	0.2	-	0.8	48.9
Sales of electricity	-	0.4	-	-	0.1	-	-	-	-	0.5
Sales of water by pipe or bouser	-	-	-	-	-	-	-	-	-	-
Construction work done	6.2	-	-	-	-	2.8	-	-	-	9.0
Value of completed projects on own account	-	-	-	-	-	-	-	-	-	-
Delivery charges if invoiced separately	0.1	-	-	-	-	-	0.1	-	1.3	1.5
Transport, storage and travel services rendered	4.7	243.1	0.2	-	-	0.2	11.3	-	0.8	260.2
Hotel & catering services	0.3	-	135.8	-	0.1	-	1.1	0.0	-	137.2
Telecommunication & internet connections	-	0.0	-	194.4	-	-	-	-	-	194.5
Sales of professional& scientific services	3.3	2.4	-	31.1	-	35.0	5.3	-	0.1	77.1
Rent of land receivable	0.1	-	0.0	-	-	-	-	-	-	0.1
Rent of buildings received/receivable	2.6	0.4	0.0	1.4	1.4	0.0	0.2	-	0.0	6.1
Dividends or other profits realized	6.4	6.5	0.3	40.8	30.0	7.9	39.9	39.5	37.4	208.6
All other income	11.0	113.0	0.8	6.7	2.0	0.2	13.8	0.0	2.7	150.1
Total income	2,507.3	375.1	137.6	277.4	33.5	47.8	73.7	39.5	85.2	3,577.2

Source: NISR, IBES 2018 Survey

Table 4.15: Expenditure statement for other services sector in billion Frw, formal sector

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 activities	Administrative and support service activities	Arts, entertainment and recreation	Other service activities	Total
Purchases of goods for resale	1,999.3	5.0	0.1	2.1	-	1.3	1.4	-	35.2	2,044.4
Purchases of raw materials, etc., used in manufacturing	8.9	3.9	0.2	-	-	-	-	-	0.3	13.3
Fuel used for mining & quarrying	0.0	-	0.0	-	-	-	0.1	-	-	0.2
Construction sub-contracts, equipment hire, fuel, materials	18.6	-	-	-	-	1.9	-	-	-	20.5
Purchases of food and drinks for catering & bar services	0.2	-	37.0	-	-	-	0.4	0.0	-	37.6
Rent of land paid / payable	0.2	0.0	0.3	0.0	-	-	0.0	0.0	-	0.6
Rent of buildings paid / payable	13.2	2.2	2.4	10.4	1.0	1.4	0.9	0.8	1.3	33.7
Other goods & services purchased (not interest, etc see below)	134.4	80.5	32.1	144.2	6.0	20.4	29.5	1.9	25.8	474.6
Wages & salaries paid (Social security & other benefits included)	41.2	35.2	31.8	37.1	1.7	16.1	20.1	1.7	11.0	195.9
Interests paid (excluding other bank charges)	23.6	34.9	9.9	39.0	12.8	1.2	1.1	0.0	1.8	124.2
Business licenses, rates and fees payable to government	4.2	1.3	0.6	7.8	1.9	0.1	0.3	0.1	1.5	17.8
Depreciation charges for the year on fixed assets	23.7	34.7	18.2	22.4	11.7	1.2	3.2	0.6	2.1	117.8
Dividends paid/payable	12.9	213.7	6.4	6.2	2.7	2.9	4.2	15.4	3.9	268.2
All other costs, losses, provisions, etc.	1.0	1.0	-	23.8	-	0.0	0.0	-	0.0	25.9
Total expenditure	2,281.5	412.3	139.2	293.1	37.6	46.4	61.2	20.5	83.0	3,374.6

Source: NISR, IBES 2018 Survey

Appendix II: 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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