2023

RWANDA INTEGRATED BUSINESS ENTERPRISE SURVEY REPORT

March 2025

Foreword

The 2023 Rwanda *Integrated Business Enterprise Survey* (IBES2023) is a comprehensive business enterprise survey undertaken to collect, compile, and analyse 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 keep regular business accounts. Data collection has been carried out by the National Institute of Statistics of Rwanda (NISR) from June to September 2024 with the year 2023 being the reference period.

IBES seeks to address the lack of business data and provide inputs vital to the formulation of government economic policy and the monitoring of performance against development goals, as well as providing information for the expansion of the business sector and market research. IBES 2023 has drawn crucial lessons from the previous survey rounds: IBES 2022, IBES 2019/2021, IBES 2018, IBES 2017, IBES 2016, IBES 2015, IBES 2014 and the pilot IBES 2013. These lessons have already been used to introduce improvements.

The survey targets all business enterprises classified under Sections B to S of the International Standard Industrial Classification of all economic activities, Revision 4 (ISIC-4). The IBES does not cover the agriculture sector as agricultural activities are covered by another special survey called Seasonal Agriculture Survey (SAS). In addition, IBES does not cover all activities of public administration and extraterritorial organizations. It gathers detailed business enterprise level data through questions on employment, compensation to workers, fixed assets, and background information such as location, ownership status, and business environment to mention but a few.

Conducting a business 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. The field visits to monitor data collection have been conducted. 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. Business activities in Rwanda are presented in section one, business environment in section two, and conclusions and areas of research in section three.

MURENZI Ivan

Director General

Acknowledgments

The IBES 2023 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.

Recognition also goes to primary fieldworkers and their team leaders. Commendations are due to them for their work done of codification and data entry after fieldwork.

Lastly, grateful acknowledgments are given to all stakeholders and all formal and informal business enterprises which have cooperated and to whom we guarantee maximum confidentiality.

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List of abbreviations

BIT	: Business Income Tax
DES	: Department of Economic Statistics
EC	: Establishment Census
IBES	: Integrated Business Enterprise Survey
ISIC	: International Standard Industrial Classification
LFS	: Labour Force Survey
NISR	: National Institute of Statistics of Rwanda
RWF	: Rwandan Franc
VAT	: Value Added Tax
WASAC	: Water and Sanitation Corporation

SUMMARY OF KEY MESSAGES

88% was the rate of informality of Rwanda's business landscape in 2023.

Insufficient collaterals was cited as the main barrier to the access to finance with 12.0% of formal businesses and 23.0% of informal businesses

21.1% of formal compared to 19.3% of informal businesses used personal resources for financing

3.4% for formal and 0.2% of informal businesses are engaged in exports

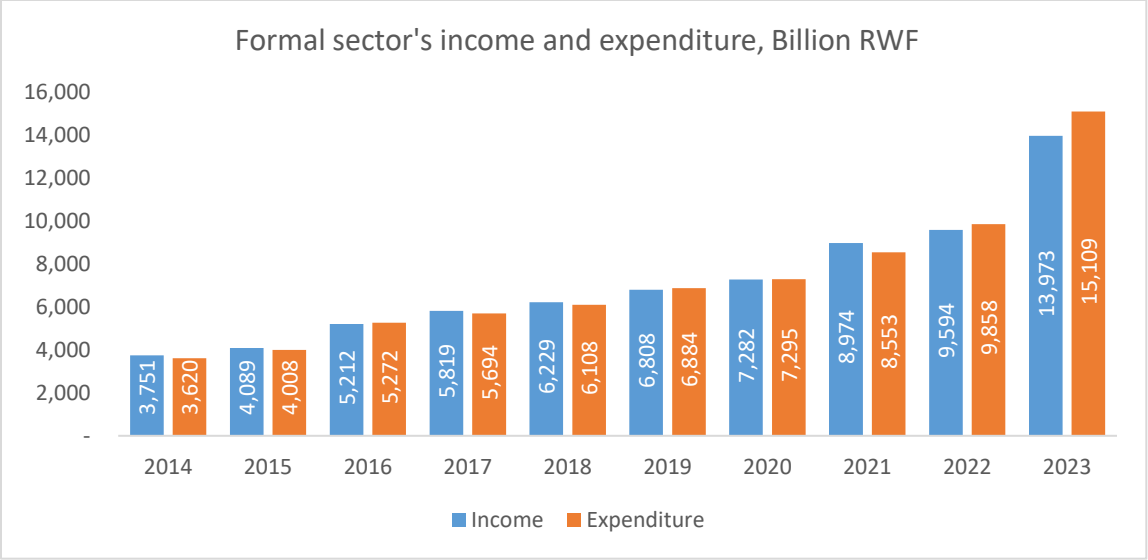
50.9% of manufacturing companies reports that they do not use their full capacity utilization. Among the reasons for underutilizations include low demand and reliable supply of inputs.

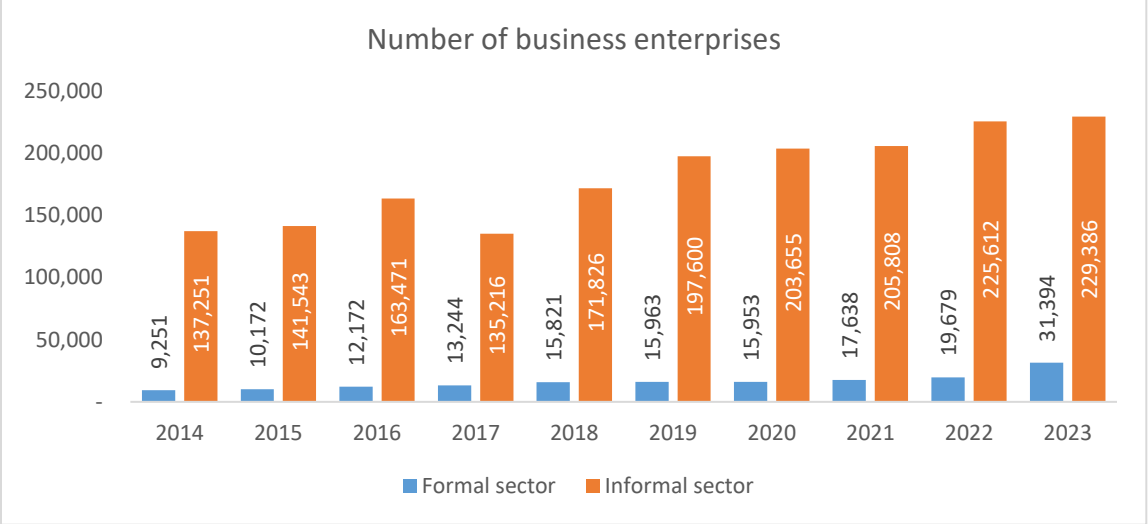
Both communication in foreign language and advanced or specialized IT skills top the skills gap concerns amongst business enterprise managers.

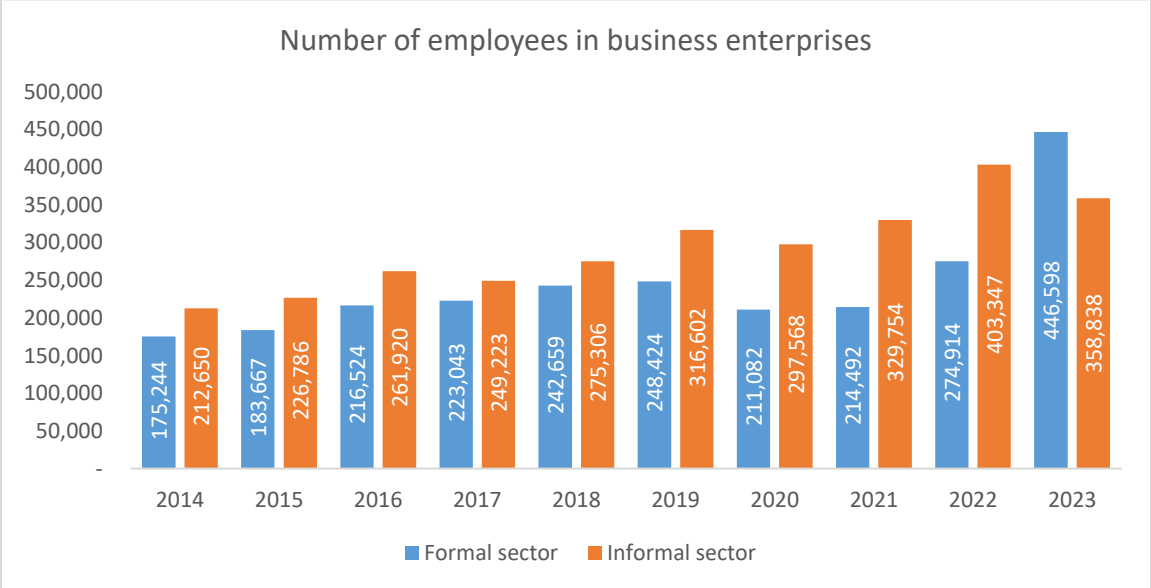
5.3% of formal business enterprises present lack of fund as the main barrier for Staff trainings

77.1% of formal business enterprises and 59.1% of informal business enterprises pay someone to dispose waste from their enterprises.

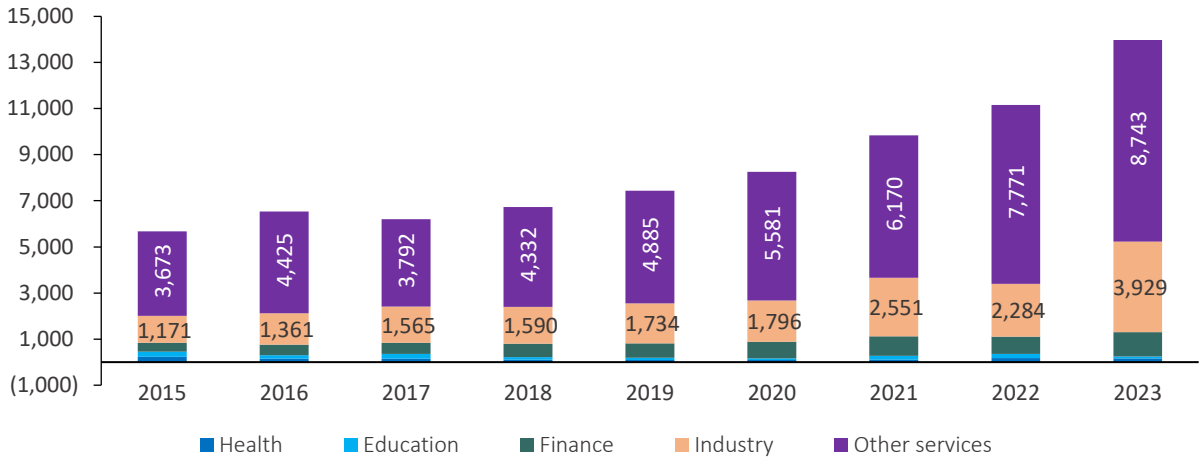
Given the increasing energy demand, the use of solar energy by Rwandan business enterprises is still very low. Results shows that it is used by 5.6% of formal and 4.1% of informal businesses.


Formal sector's income and expenditure, Billion RWF
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
3,751
3,620
4,089
4,008
5,212
5,272
5,819
5,694
6,229
6,108
6,808
6,884
7,282
7,295
8,974
8,553
9,594
9,858
13,973
15,109
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Income
Expenditure

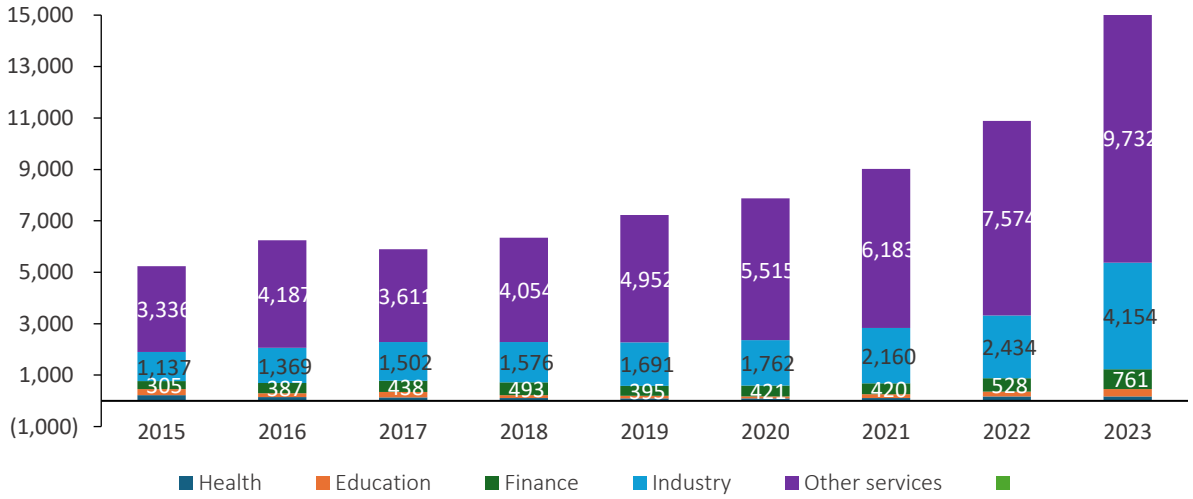

Number of business enterprises
250,000
200,000
150,000
100,000
50,000
-
9,251
137,251
10,172
141,543
12,172
163,471
13,244
135,216
15,821
171,826
15,963
197,600
15,953
203,655
17,638
205,808
19,679
225,612
31,394
229,386
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Formal sector
Informal sector

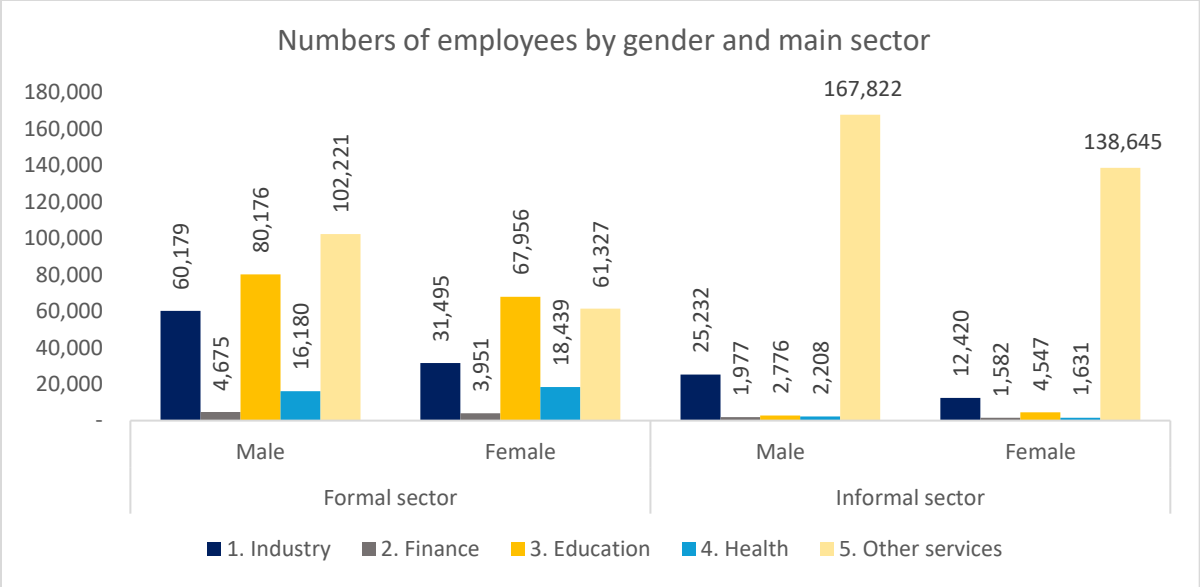

Number of employees in business enterprises
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
175,244
212,650
183,667
226,786
216,524
261,920
223,043
249,223
242,659
275,306
248,424
316,602
211,082
297,568
214,492
329,754
274,914
403,347
446,598
358,838
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
Formal sector
Informal sector

Distribution of formal income by main sectors in Billion RWF



Formal expenditure by main sectors in Billion RWF




Numbers of employees by gender and main sector
180,000
160,000
140,000
120,000
100,000
80,000
60,000
40,000
20,000
-
60,179
4,675
80,176
16,180
102,221
31,495
3,951
67,956
18,439
61,327
25,232
1,977
2,776
2,208
167,822
12,420
1,582
4,547
1,631
138,645
Male
Female
Male
Female
Formal sector
Informal sector
1. Industry
2. Finance
3. Education
4. Health
5. Other services

1. BUSINESS ACTIVITIES IN RWANDA

1.1. Introduction - Macroeconomic Conditions

The Integrated Business Enterprise Report 2023 provides a detailed analysis and description of Rwanda's business enterprise environment. These include market, institutional, behavioral, and infrastructural characteristics in which business enterprises operate. The operations are inextricably linked to the overall macroeconomic conditions in the country. Therefore, this section is a framework of Rwanda's business environment by economic activities, and it explains what the Integrated Business Enterprise Survey (IBES) is all about.

Further, the report presents statistics and data on the nature of business-enterprises, their labour employment patterns, ownership and legal characteristics of the businesses which lay an insight on the businesses-enterprises' operations and perspective of the business environment in Rwanda. Also, the survey covers detailed statistics on business aspects such as access to finance, waste management practices, energy usage and utilization of information communication technologies. Further, it entails the business performance by sector and size of business enterprises. However, the IBES does not cover the agriculture sector as agricultural activities are covered by another special survey called Seasonal Agriculture Survey (SAS). In addition, IBES does not cover all activities of public administration and extraterritorial organizations.

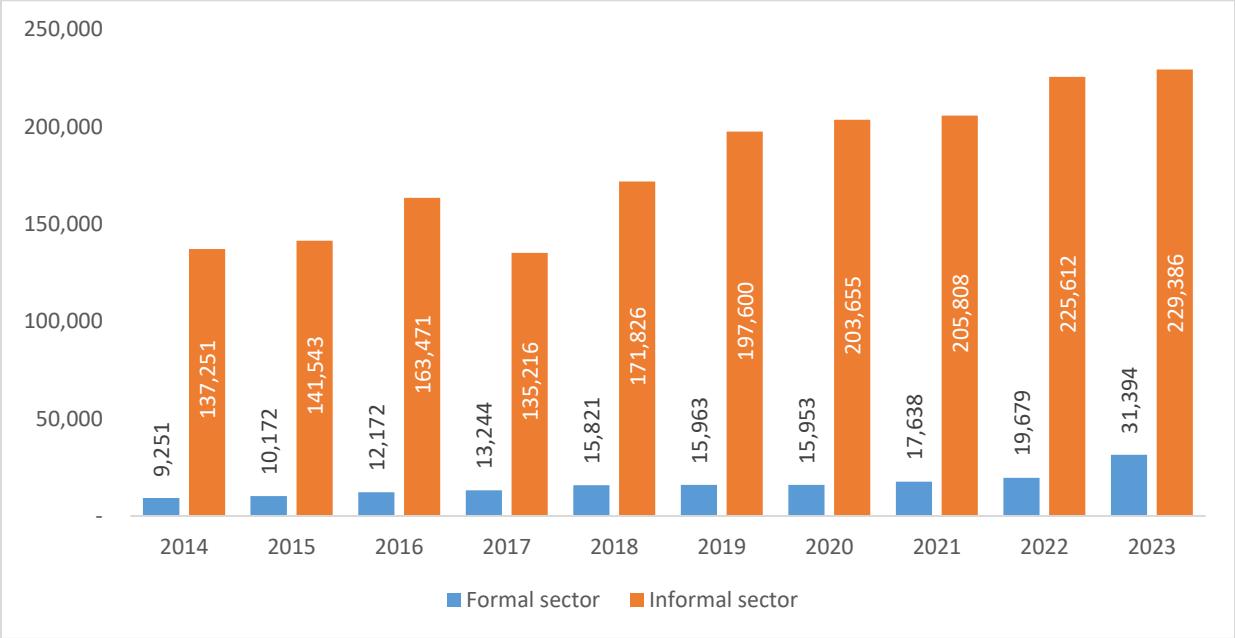
This section details the key characteristics of business enterprises based on geographic location, size, age of the business enterprises, economic activity, among others. It further disaggregates the features by formality.

1.2. Characteristics of Rwanda's Business enterprises and their activities

In 2023, the total number of business enterprises was estimated to be 260,780. The survey results show that, business-enterprise activities in Rwanda are overwhelmingly informal, with informal business enterprises accounting for 88 percent of total business enterprises. The number of formal businesses grew by 12.6 percent between 2020 and 2023, while the number of informal businesses increased by 96.8 percent. In 2023, the number of formal businesses expanded by 59.5% year on year, while informal businesses increased by 1.7 percent [1].

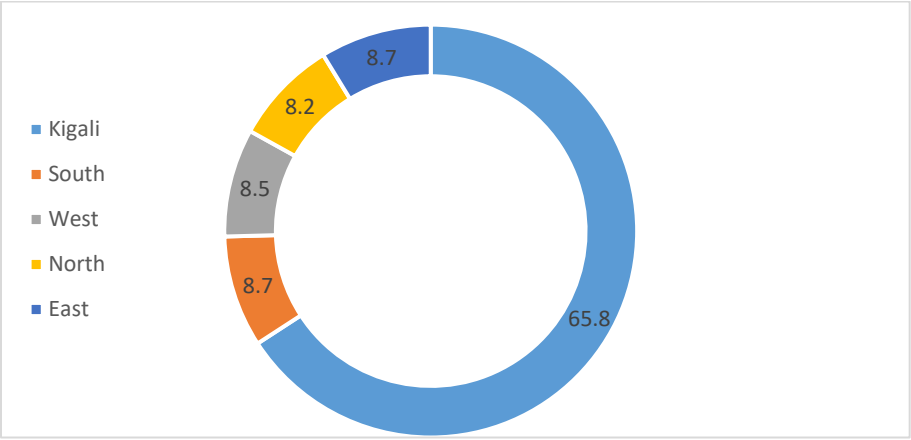
[1] These are population estimates based on the sample.

Graph 1.1. Trend of Business Enterprises in Rwanda



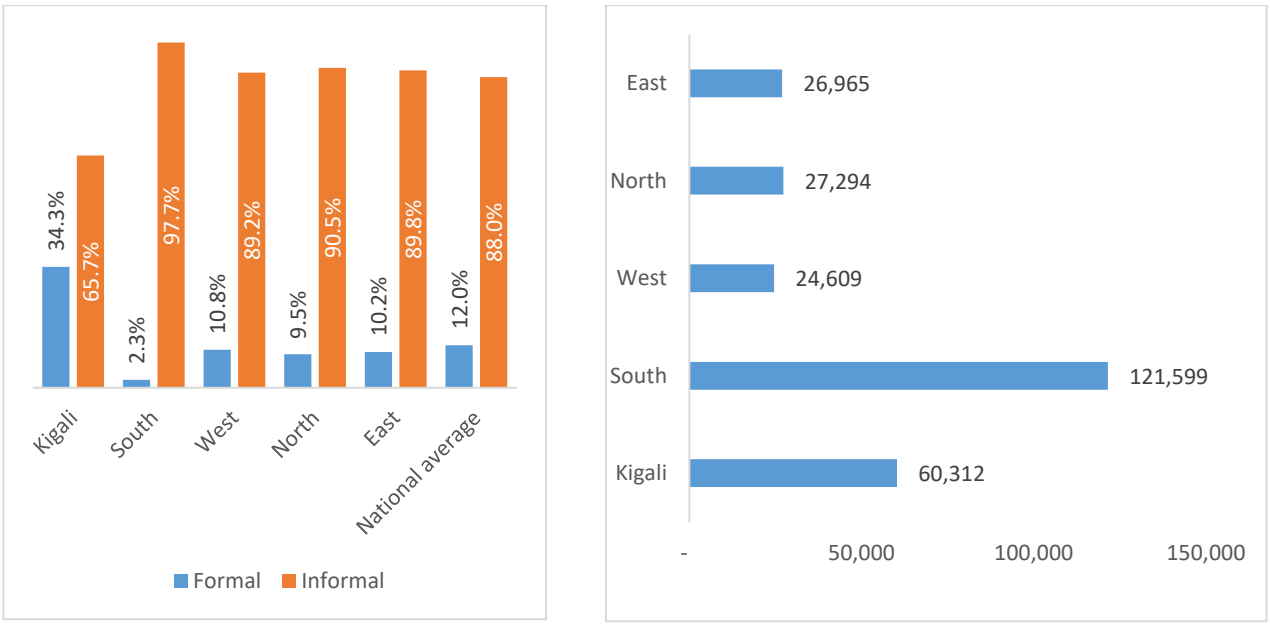
Based on Graph 1.1, business formality rates have been dropping since their peak in 2017, when 8.9% percent of business enterprises were formal. In 2023, the rate of business formality keeps rising from the lowest level of 7.3% in 2020 to 12.0%.

Graph 1.2. Distribution of Formal Business Enterprises per provinces



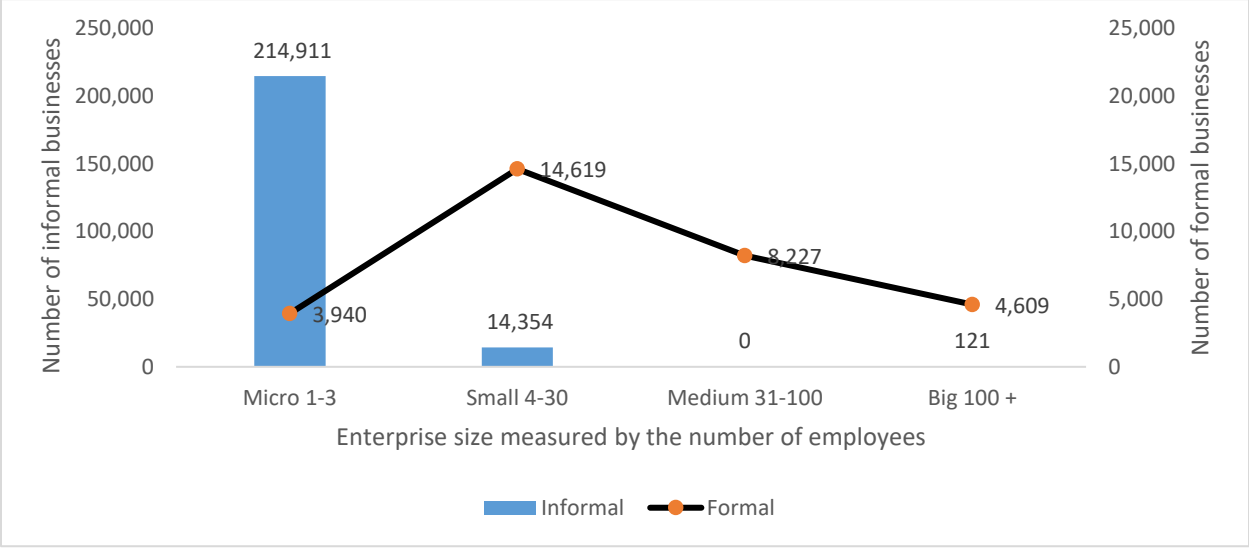
Kigali of City accounts for the highest concentration of formal business enterprises with 65.8% of total formal businesses. The Southern and Eastern provinces have 8.7 percent each; while Western and Northern provinces have 8.5%, and 8.2% of total formal businesses respectively.

Graph 1.3: ***Geographic*** *Distribution of Businesses, 2023*



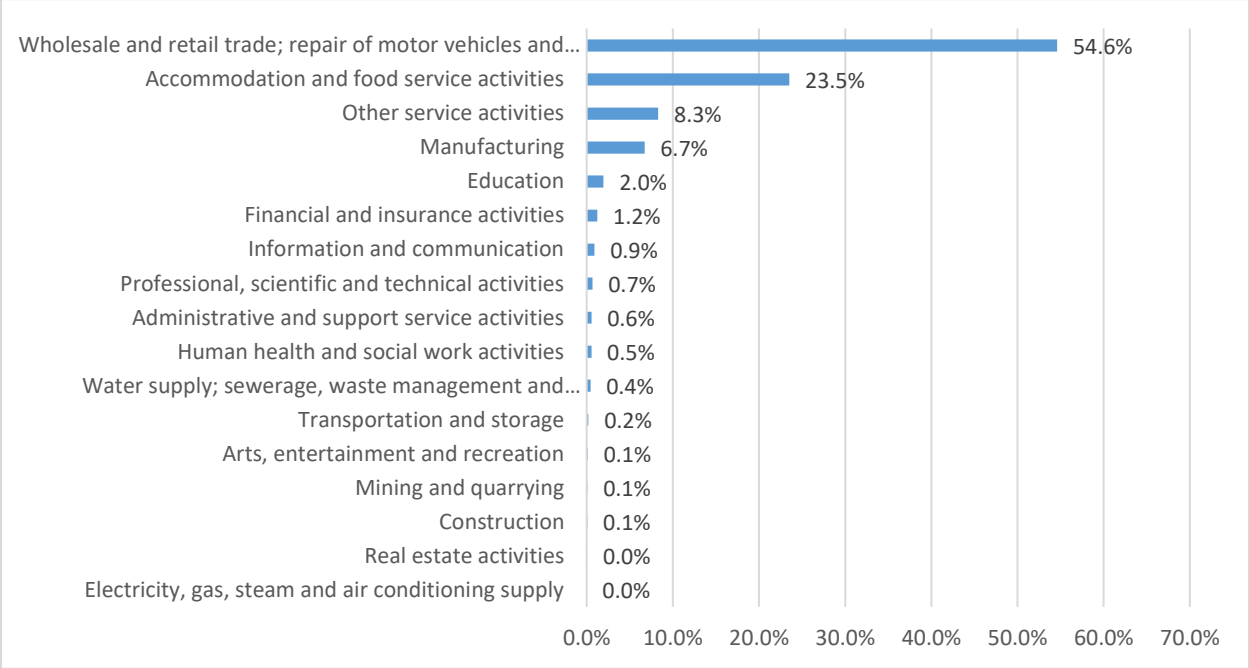
Micro business enterprises are backbone of business enterprise activities in Rwanda (Graph 1.4). Micro business enterprises, which employ 1 to 3 people, account for 83.9% of all business activities in Rwanda. They predominantly operate informally, accounting for 93.7% of businesses in the informal sector and approximately 12.5% of activities in the formal sector in Rwanda.

Graph 1.4: Number of Business Enterprises by Size, 2023



Formal business enterprises are mainly characterised by small business enterprises which employ 4 to 30 people. Formal small business enterprises account for almost half of total formal business enterprises (46.6%) and about 50.5% of total small business enterprises.

Graph 1.5: Distribution of Business Enterprises by Economic activity, 2023



Wholesale and retail trade activities dominate the economic activity landscape with 54.6% of all business enterprises in Rwanda, followed by accommodation and food services with 23.5%.

Formality by economic activity declines as the number of business enterprises per category increases (Figure 1.6). While the wholesale and retail sub-sector generally dominates the economic activity landscape, the sub-sector is only 10.0% formal.

Graph 1.6. Business Enterprises by Economic Activity, 2023

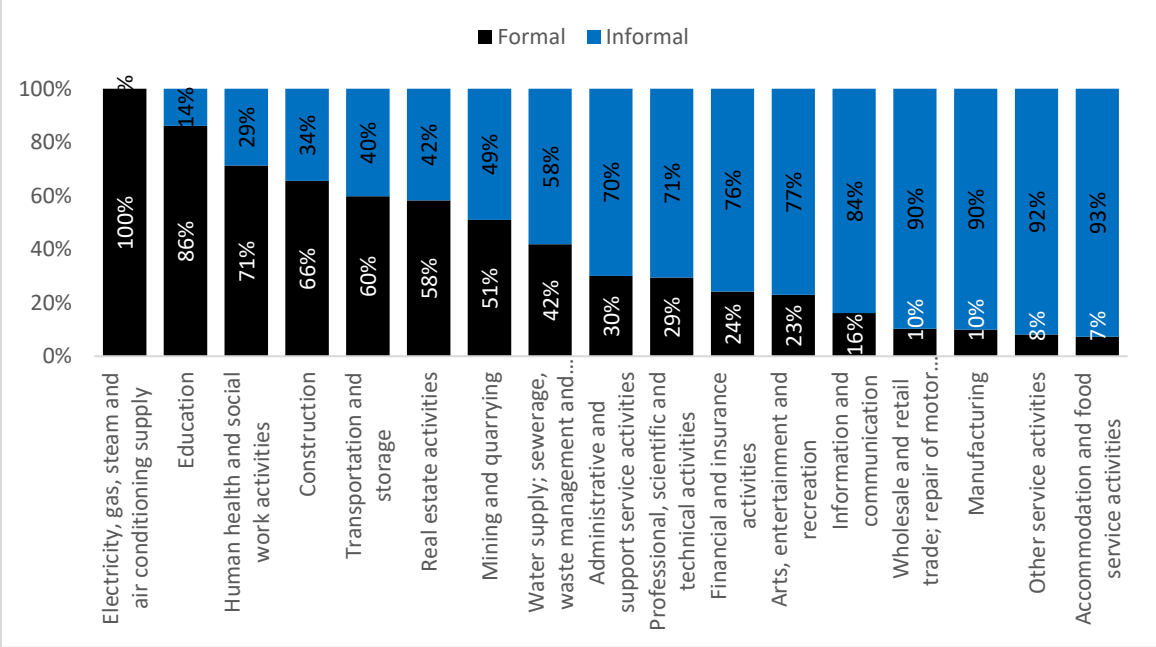
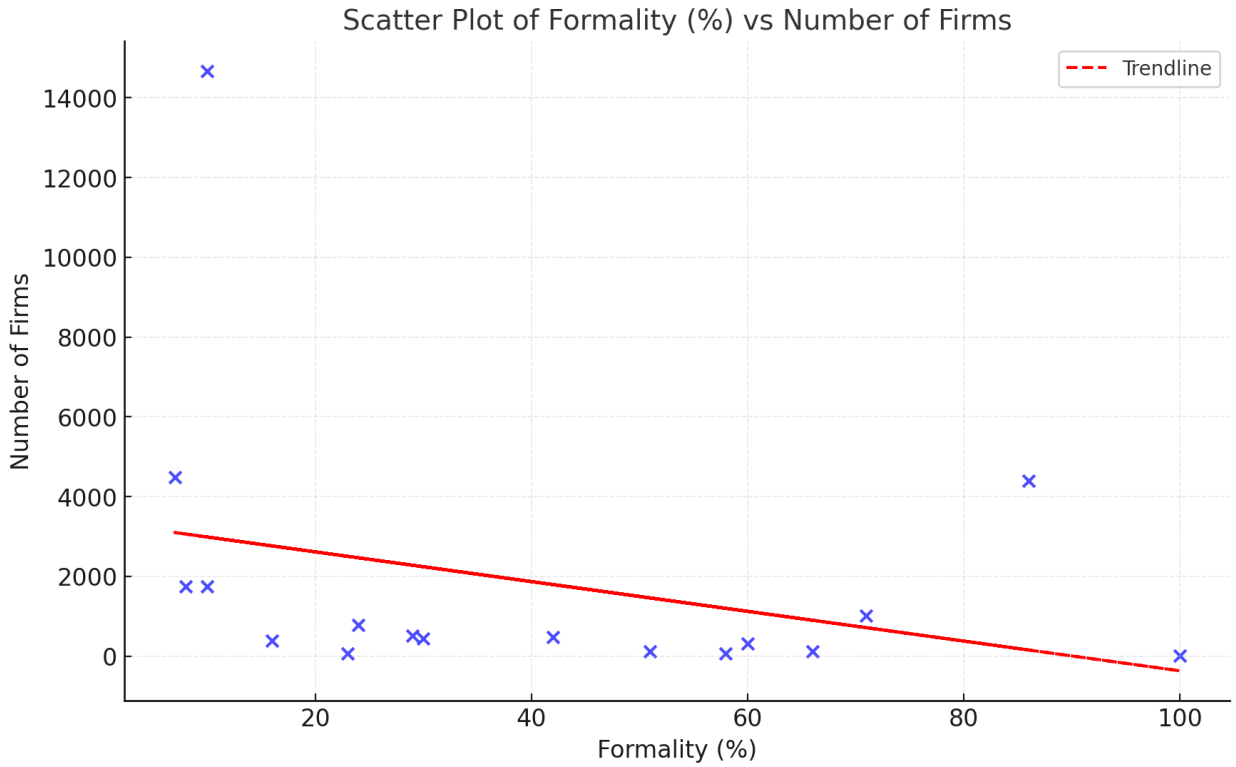


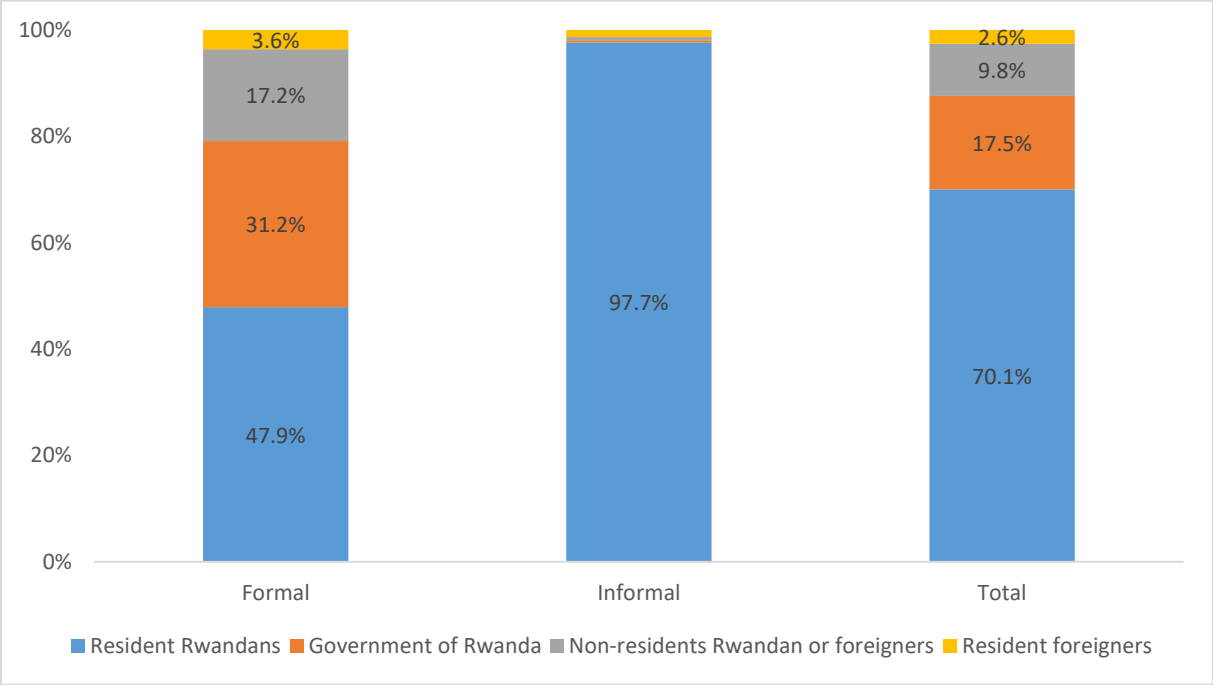
Figure 1.7: Correlation between Formality and Number of Business Enterprises, 2023



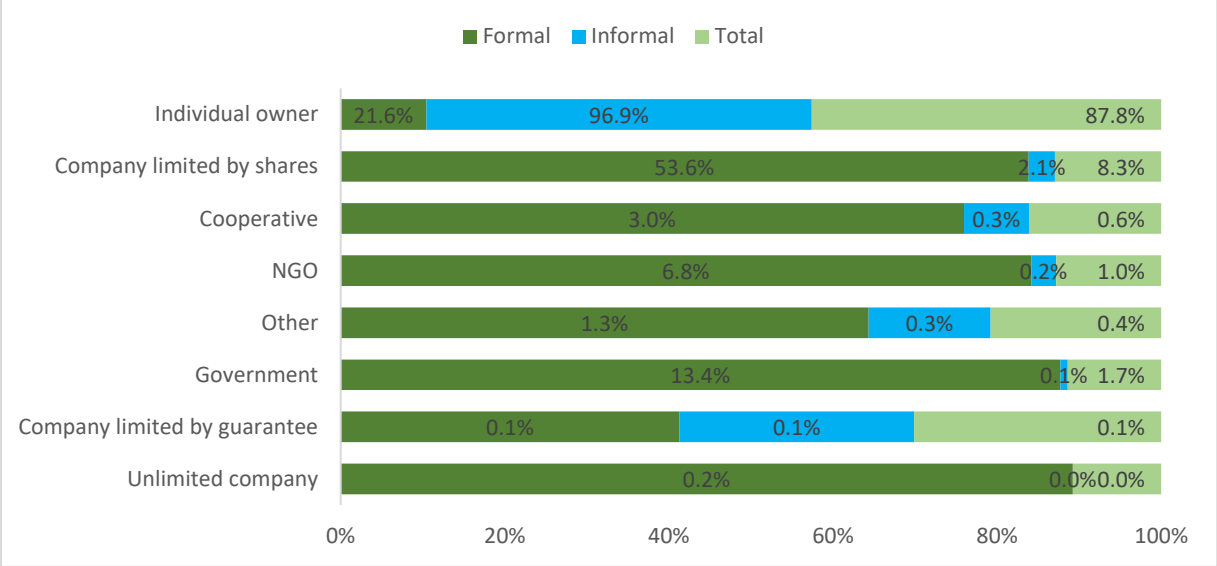
The correlation coefficient is approximately -0.30. This is the numerical value representing the strength and direction of the relationship between "Formality (%)" and the "Number of Firms". The red dashed line represents the trendline, highlighting the weak negative correlation between the two variables.

Resident Rwandans dominate the ownership of business enterprises in Rwanda, accounting for 70.1% of ownership (Graph 1.8). In the informal sector, resident Rwandans own almost all business enterprises, 97.7%; while they account for 47.9% of ownership in the formal sector. Furthermore, around 87.8% of business enterprises are sole proprietorships, that is, owned by a single individual (Graph 1.9), and largely operate as informal entities.

Graph 1.8: Business Enterprises by Ownership Characteristics, 2023

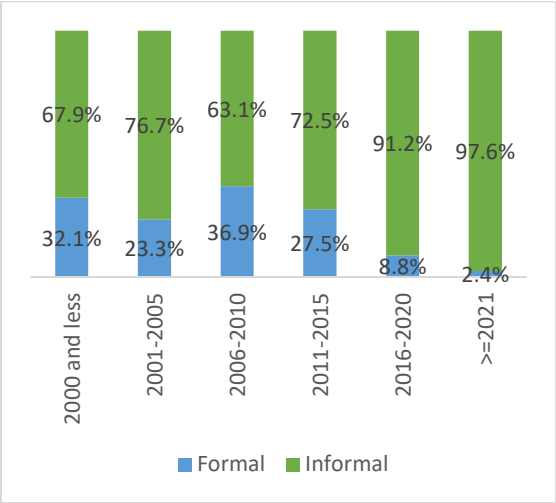


Graph 1.9: Legal Status of Business Enterprises, 2023



Business enterprises in Rwanda are young entities, 72.4% of the current operating businesses have started operations from 2016. Most of the business enterprises formed (95.0%) are informal. It is also evident that the share of new formal business enterprises has been drastically decreasing, falling from around 32.1% in 2000 to around 2.4% between 2021 and 2023.

Graph 1.10: Business Enterprises by Age of Business Enterprise, formality shares and number of enterprises



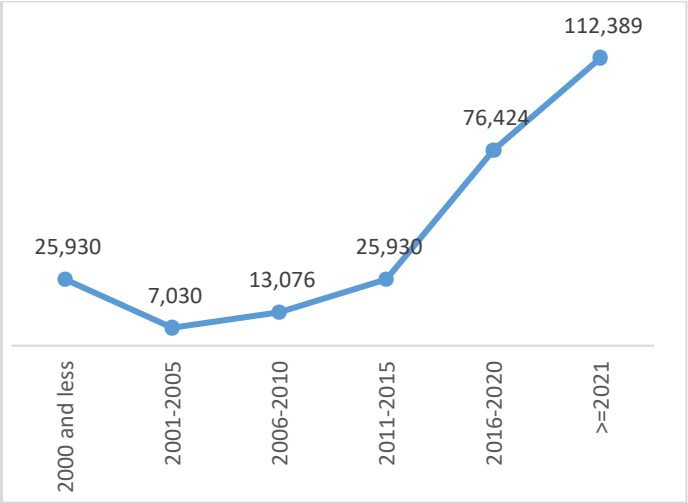


Table 1.1. Summary of Business Distribution in Rwanda

	Formal					Informal				
Descriptive	**Kigali**	**South**	**West**	**North**	**East**	**Kigali**	**South**	**West**	**North**	**East**
Main Sector/Total	20,668	2,745	2,658	2,584	2,738	39,644	118,853	21,951	24,710	24,227
Industry	1,700	176	84	108	418	3,023	7,023	2,106	2,182	2,303
Finance	376	97	97	104	104	650	650	325	325	488
Education	927	863	927	831	853	166	332	83	42	83
Health	302	231	173	167	148	82	176	47	47	59
Other services	17,364	1,378	1,377	1,374	1,217	35,723	110,673	19,391	22,115	21,295
Business Enterprise Size/Total	20,668	2,746	2,658	2,584	2,738	39,645	118,854	21,951	24,710	24,227
Micro 1-3	3,218	204	307	121	89	38,065	108,954	21,179	23,243	23,471
Small 4-30	9,536	1,398	1,206	1,155	1,324	1,579	9,900	652	1,467	756
Medium 31-100	4,438	867	935	1,000	987	-	-	-	-	-
Big 100+	3,476	277	210	307	338	-	-	121	-	-
Economic Activity/Total	20,668	2,746	2,658	2,584	2,738	39,644	118,853	21,951	24,710	24,227
Mining & quarrying	69	23	-	34	-	-	-	-	-	121
Manufacturing	1,263	153	82	71	173	3,013	6,749	1,928	2,049	2,049
Electricity & Power	14	-	3	-	3	-	-	-	-	-
Water supply & waste management	240	-	-	-	240	-	222	177	133	133
Construction	115	-	-	2	2	11	53	-	-	-
Wholesale & retail trade	12,298	491	635	751	491	17,063	79,491	7,584	14,896	8,667
Transportation & storage	312	-	6	-	-	71	143	-	-	-
Accommodation & food service	2,549	612	408	612	306	14,040	17,928	9,720	4,752	10,368
Information & communication	382	-	-	-	-	497	993	248	-	248
Finance & Insurance	376	97	97	104	104	650	650	325	325	488
Real estate	63	-	-	11	-	27	27	-	-	-
Professional, scientific & technical	503	18	-	-	-	78	1,095	-	78	-
Administrative & support	411	13	13	-	-	240	329	180	120	150
Education	927	863	927	831	853	166	332	83	42	83
Human health and social work	302	231	173	167	148	82	176	47	47	59
Arts, entertainment & recreation	75	-	-	-	-	50	100	34	34	34
Other service activities	770	245	315	-	420	3,658	10,567	1,626	2,235	1,829
Business Enterprise Formation/Total	20,668	2,746	2,658	2,584	2,738	39,645	118,853	21,951	24,710	24,227
>=2021	1,758	344	172	121	309	21,961	57,369	8,062	9,863	12,432
2016-2020	5,082	184	524	378	587	11,820	36,206	5,996	7,580	8,066
2011-2015	5,493	443	292	539	374	1,873	9,050	2,730	3,075	2,063
2006-2010	3,464	352	174	362	474	1,297	4,345	647	1,522	438
2001-2005	1,080	120	94	248	99	758	2,857	567	555	654
2000 and less	3,791	1,304	1,403	937	896	1,936	9,027	3,948	2,116	574

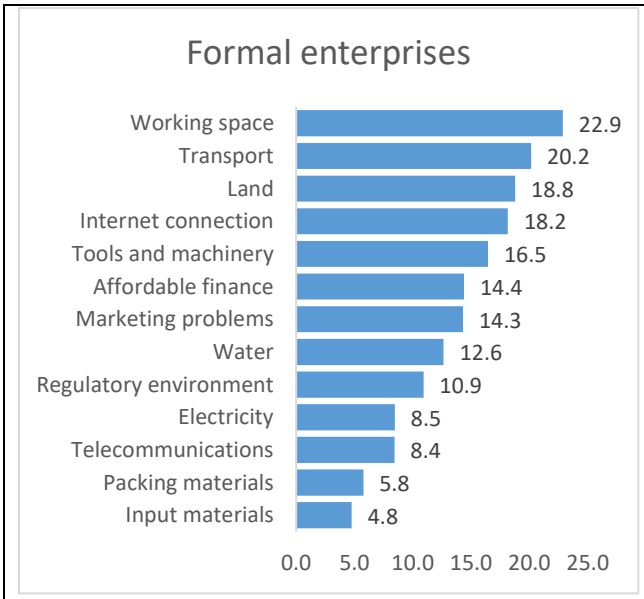
2. BUSINESS ENVIRONMENT

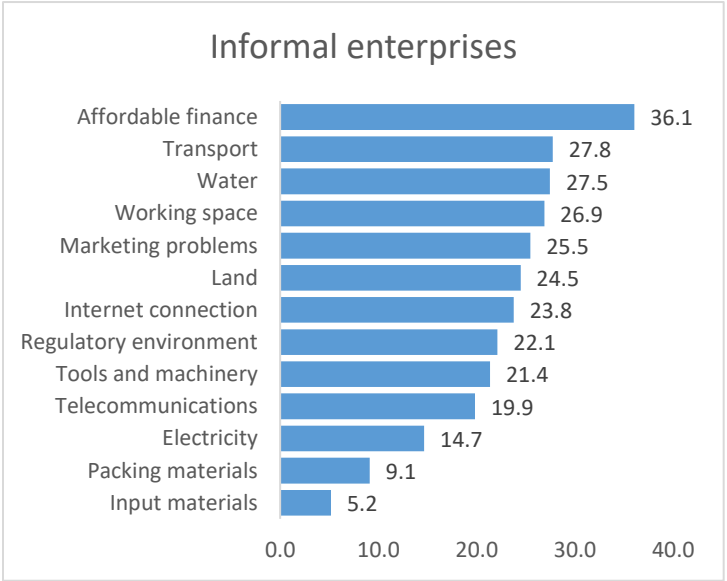
Business performance is inextricably linked to a country's business environment, which consists of a range of structural, institutional, and behavioural variables. The key variables used as indicators for the business environment include access to finance, information communication technology, trade and exports, labour market structures, energy use, environmental and infrastructural factors, among others. A favourable business environment will spur economic activity and positively affect business performance. It will further spur confidence in the markets and, thus, improve both domestic and foreign investments, capital increments, employment growth, and export-oriented activities.

A weak environment on the other hand, will not only lead to divestment but also to probable counterproductive and/or costly actions by business enterprises to cushion themselves from the weaknesses. For instance, unreliable power will result in business enterprises investing in alternative power generators; insecurity will lead to higher security and insurance costs; and a lack of credit will lead to fewer investments, just to describe a few. A weak business environment will most likely result in productivity losses and employment stagnation.

This section reports on the different aspects of the business environment (indicators as mentioned above), for both formal and informal business enterprises. Business environment factors are differentiated into three categories: the first category is made of market factors, the second category includes infrastructure and environment factors, while the third category consists of labour characteristics. Further disaggregation of the analysis will be done based on the main economic sectors and size of the business enterprises. It is worth noting that there are stark differences in the top three most pressing challenges based on formality. It is worth noting that the data presented in this section are solely for the year 2023.

Graph 2.1: Overall Ranking of Perceptions of Business Factors by Difficulty





In general, formal and informal business enterprises face different challenges regarding the nature of the business environment (Graph 2.1). Formal business enterprises rank problems in unavailable working space (22.9 %), transport cost (20.2 %), and limited land (18.8 %) as their most pressing challenges. On the other hand, informal business

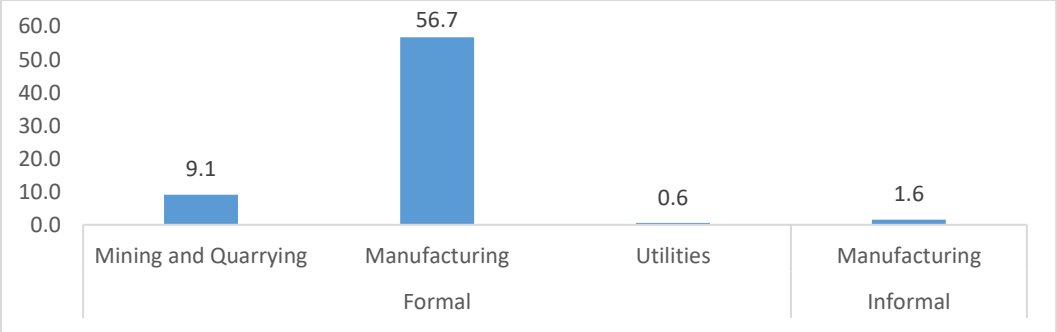
enterprises rank Affordable to finance, Transport costs and Water as their primary concerns. Almost a third (36.1 %) of informal business enterprises report difficulties in accessing loans and credit.

2.1. Market Factors

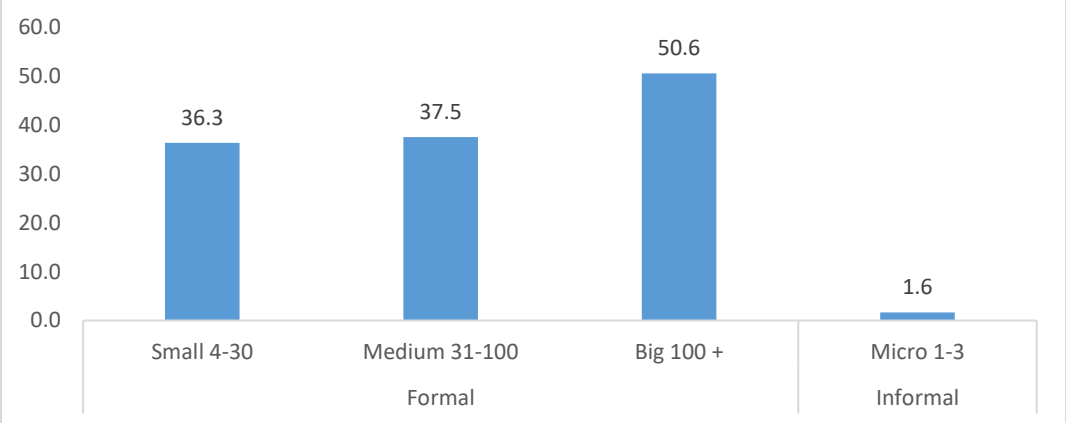
2.1.1. International Trade (Exports) for transformation enterprises

Graphs 2.2 and 2.3 below summarise exporting activities in Rwanda. The manufacturing sector exhibits the highest shares of participation in exporting activities with about 56.7% of formal business enterprises. Informal business enterprises almost do not engage in exporting activities. In addition, the report highlights that larger formal business enterprises are significantly more likely to engage in foreign trade compared to their smaller ones. The big business enterprises lead in export activities, with 50.6% of formal business enterprises engaged in international trade, as compared to 37.5% of medium and 36.3% of small business enterprises (Graph 2.3).

Graph 2.2: Business Enterprise Exporting Activities by Economic Activity



Graph 2.3: Business Enterprise Exporting Activities by Size

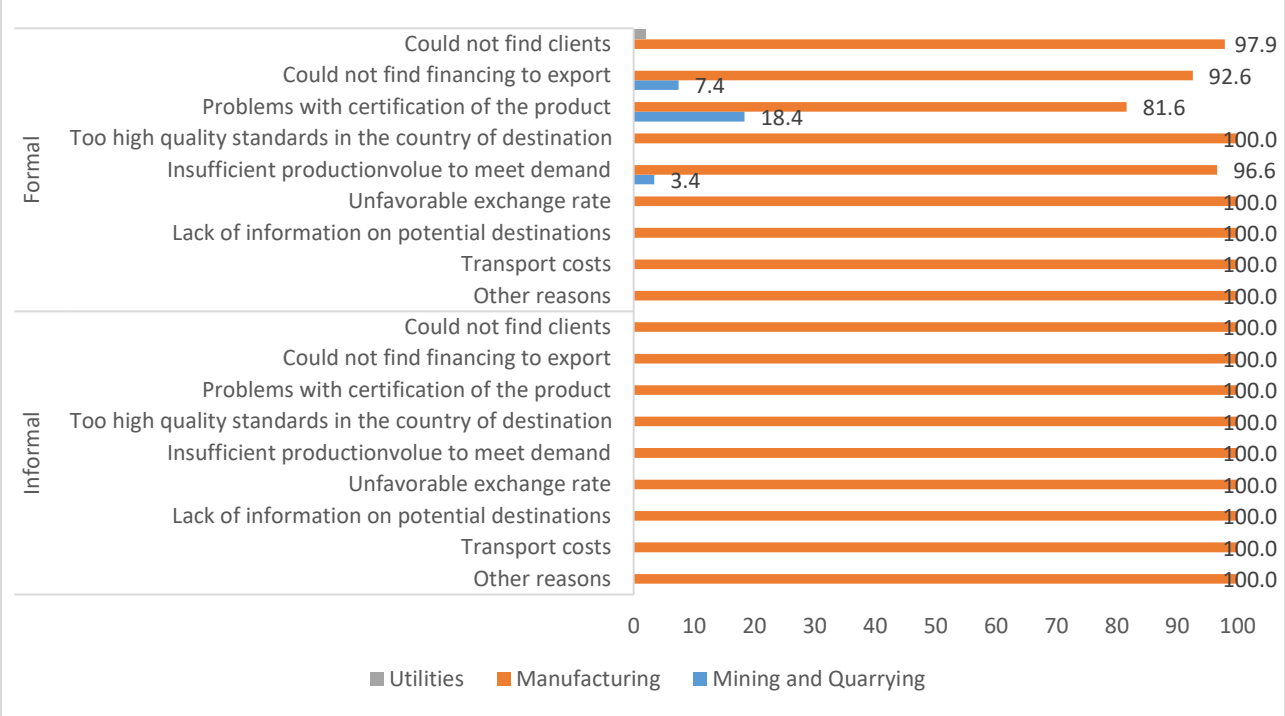


The export participation is limited by varying factors for sector and business enterprise formality as shown in the graph below. *Similarly, for formal businesses in the manufacturing sector, additional barriers to export participation include difficulties in finding clients (97.9%), lack of financing for export activities (92.6%), problems with product certification (81.6%), and insufficient production volume to meet demand (96.6%). However, some barriers contribute equally (100%) to both formal and informal sectors, including too high-quality standards in the country of destination, unfavourable exchange rates, lack of information on potential destinations, and high transport costs. In the informal sector,*

these barriers, along with difficulties in finding clients, lack of financing, product certification issues, and insufficient production volume, all contribute fully (100%) to export limitations.

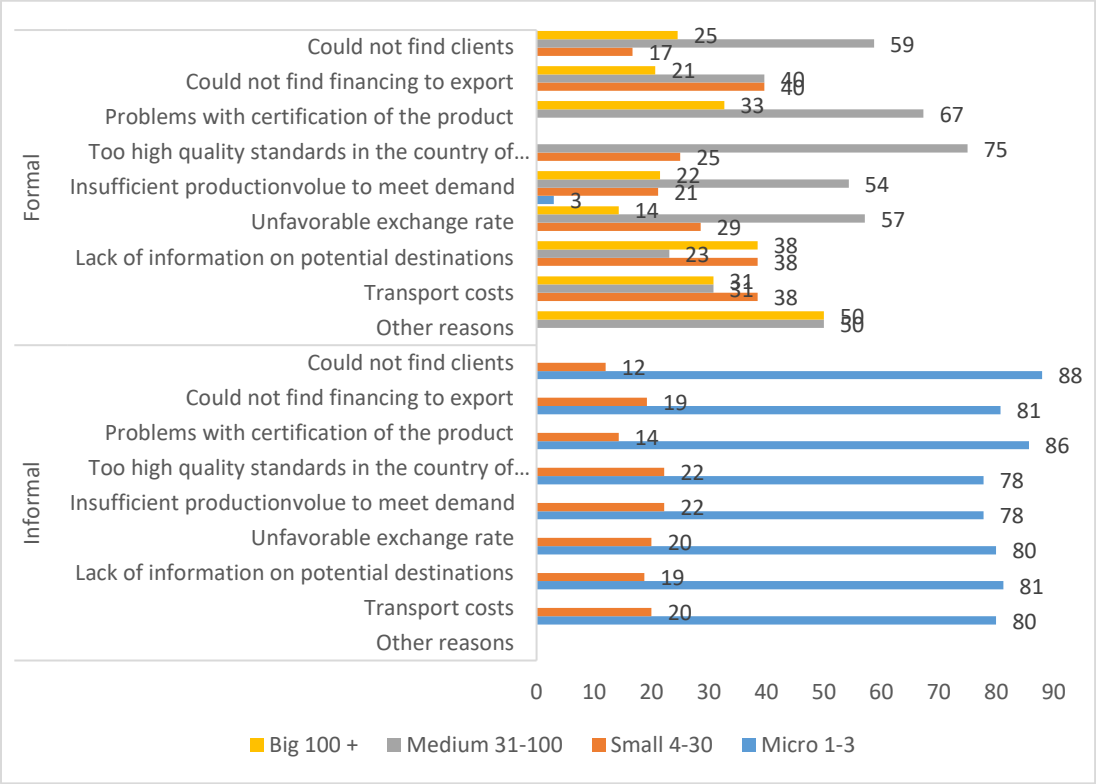
Barriers to export participation vary by subsector. In utilities, the only challenge faced is the inability to find clients, which affects only formal businesses. In mining and quarrying, also limited to the formal sector, key barriers include lack of financing for export activities (7.4%), problems with product certification (18.4%), and insufficient production volume to meet demand (3.4%).

Graph 2.4: Barriers to Business Enterprise Exportation by Sector



Also, the export participation is limited by varying factors for business enterprise formality by size as shown in the below graph. For the informal enterprises, micro businesses mainly face challenges of lack of clients (89%) and problems with certification of the product (87%). While small businesses mainly encounter a challenge of too high-quality standards in the country of destination (22%). Meanwhile for the formal enterprises, medium enterprises encounter challenges of problems with certification of the product (67%), could not find clients and insufficient production value to meet demand that has (58%) while big enterprises face challenges of mainly other reasons (50%) and lack of information on potential destinations (40%). Overall, all formal business-enterprises of all sizes suffer from insufficient production volume to meet demand.

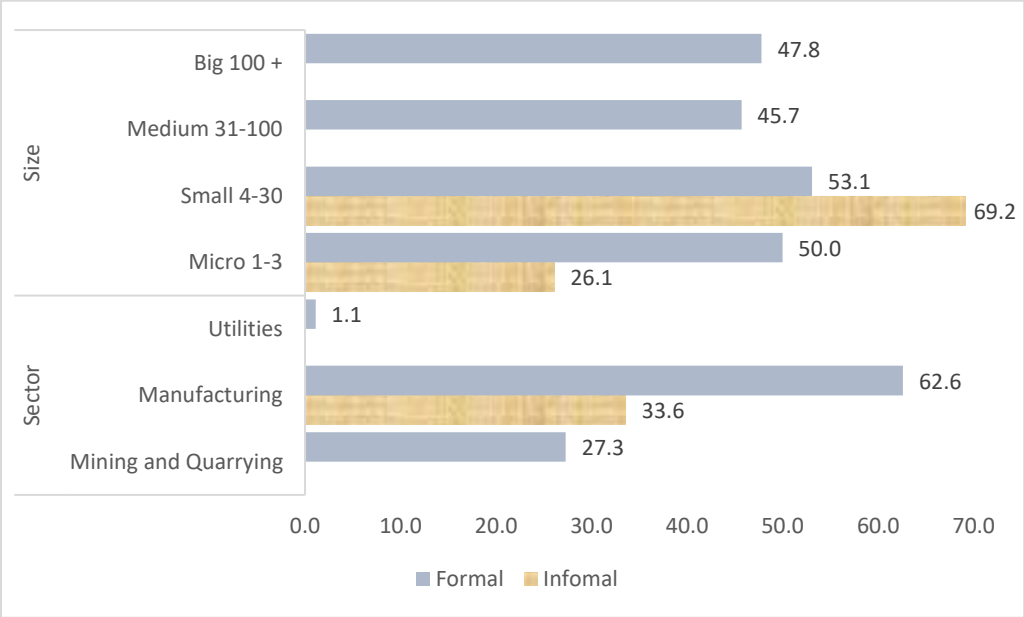
Graph 2.5: Barriers to Exportation by size, Informal Business Enterprises (%)



2.1.2. Access to Rwandan Produced Raw Materials

Raw materials and their sourcing are one of the most important supply chain management decisions for business enterprises. The quality of raw materials directly impacts the output quality and hence price points and profits. Further, decisions on whether business enterprises source their raw materials locally or from abroad influence the cost of production. There could also be differences in cost, quality, and supply depending on input sources. Raw materials sourced from abroad may incur certain costs that locally sourced products may not. Sourcing decisions are not obvious as some business enterprises just produce one product and hence require one or few raw materials, while others produce multiple products and may require inputs from different sources. Thus, sourcing decisions and constraints could have a direct effect on business enterprises' production and productivity outcomes.

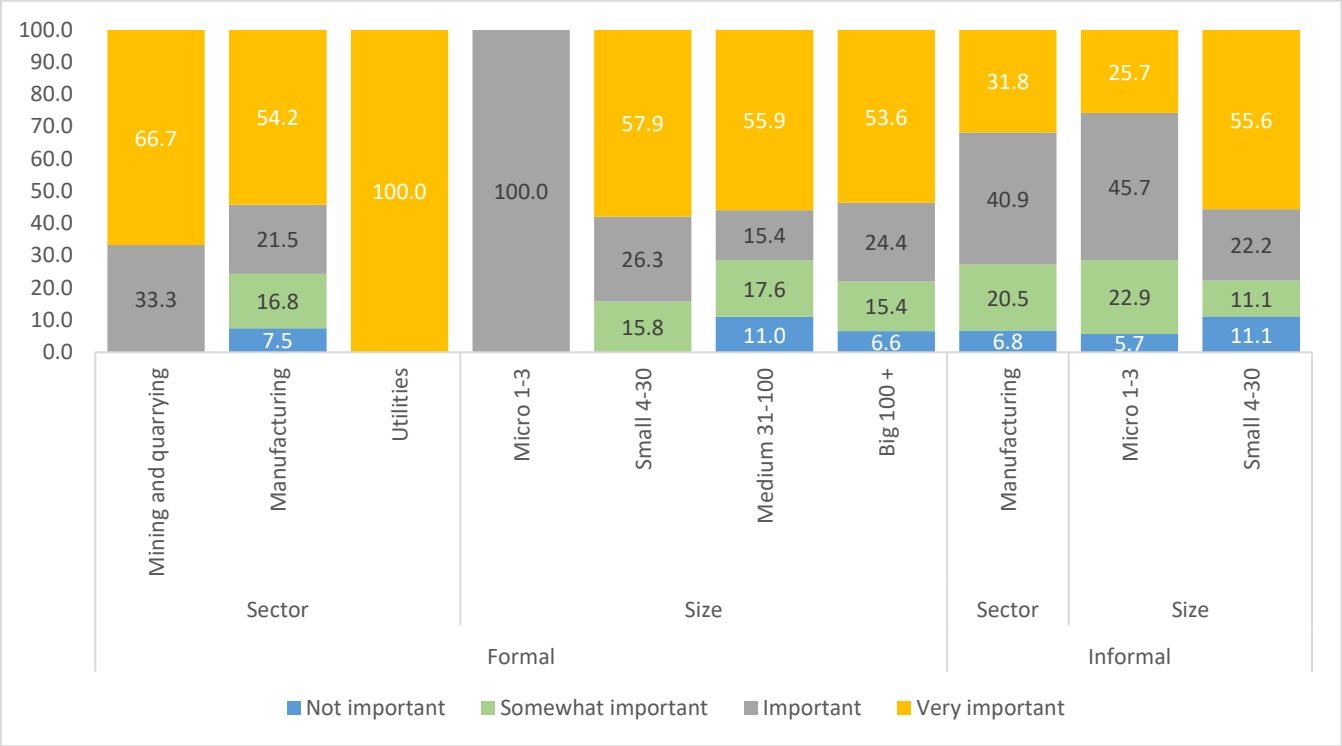
Graph 2.6: Business Enterprise Usage of Rwandan-sourced Raw Materials, % of Business Enterprises



On average, business enterprises utilise locally produced raw materials in varying levels. *Graph 2.6 above illustrates the share of business enterprises by formality and size that use Rwandan raw materials. About 62.6% of formal and 33.6% of informal business enterprises in manufacturing utilise Rwandan-produced raw materials. By size, the small enterprises utilise most raw materials by 53.1% in formal and 69.2 in informal sectors, followed by micro enterprises at 50% and 26.1% for informal sector.*

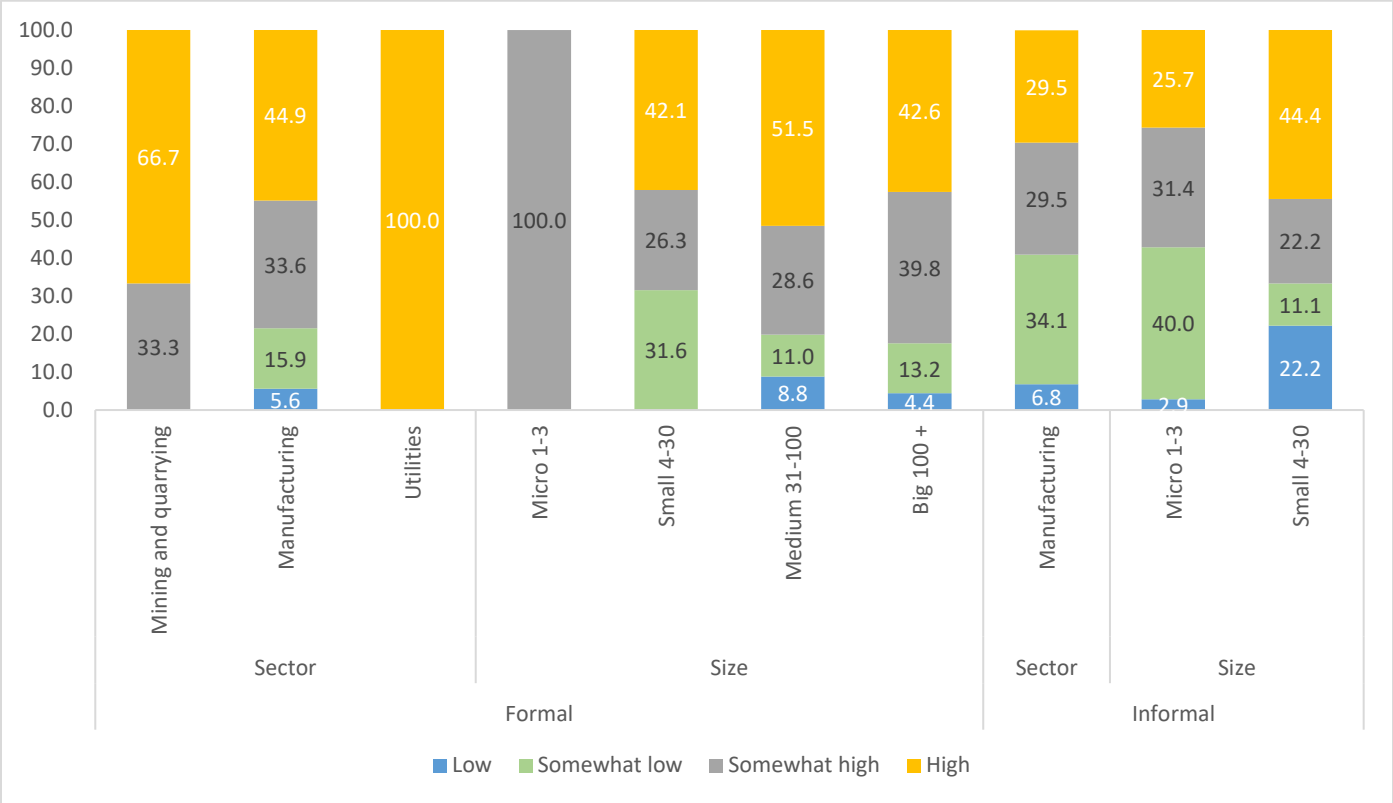
Business enterprises that use locally produced inputs (both formal and informal) on average regard Rwandan-produced raw materials as important for their activities, due to satisfactory quality (Graph 2.7 and Graph 2.8). 54.7% of formal business enterprises in the industry sector describe locally sourced inputs as very important, as do over 93.8% of business enterprises in the service sector. In the informal sector 31.8% and 19.3% of business enterprises in the industry and service sectors respectively regard local inputs as very important. Further, on average 48.1% formal SMEs and big business enterprises hold local inputs in high importance, as do informal business enterprises in all size categories at 39.0%.

Graph 2.7: Business Enterprise Perception of the Importance of Rwandan Raw Materials, % of Business Enterprises



This graph illustrates the perception of the quality of Rwandan-produced raw materials by business enterprises. Quality perception of inputs may reflect market demand of Rwandan raw materials by business enterprises. Just as Rwandan business enterprises view local inputs as important; they also perceive them to be of satisfactory quality. Over 79.5% of formal business enterprises in the industry and service sectors view Rwandan raw materials as at least of somewhat high quality. Most informal business enterprises rank Rwandan raw material mostly as somewhat high quality. Further, over 68.0% of formal SMEs using Rwandan inputs perceive them to be of satisfactory quality, as do over 66.6% of those in the informal sector. 39.8% of formal big business enterprises also rank local inputs as of high quality.

Graph 2.8: Business enterprise ranking of the Quality of Rwandan Supply/Raw, % of Business Enterprises



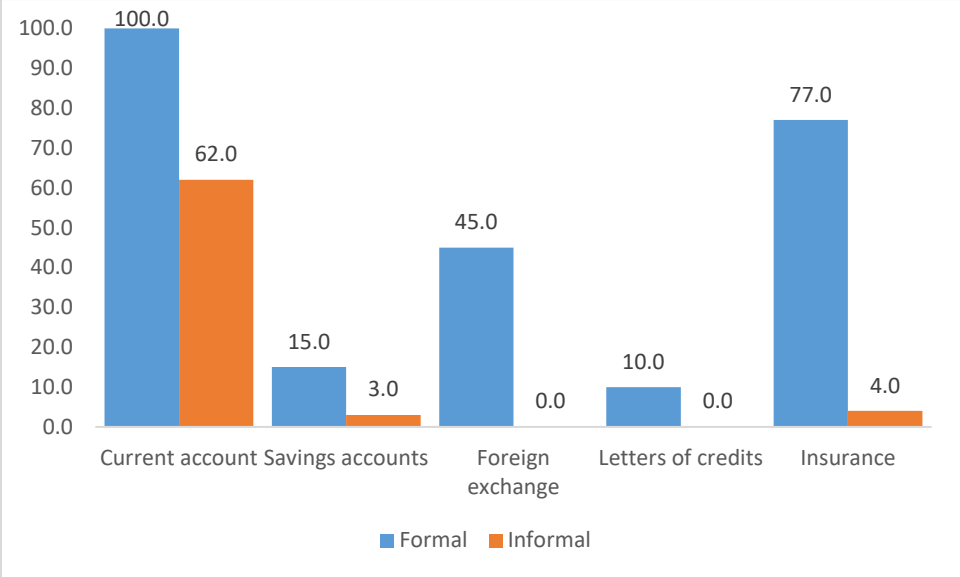
2.1.3. Access to Finance

Access to finance is a key ingredient to business enterprise growth. There are several potential links between access to financial loans and credit by business enterprises and productivity. The first is the direct availability of resources for business enterprise expansion and sustainability. Financially constrained business enterprises face increased difficulties in raising resources for both operational and investment purposes. Innovative capacity as well as research and development for new products, services, and technologies for instance is an important factor for business enterprise growth. Business enterprises require adequate financing to offset the cost of innovation activities, and those that readily access this financing are able to leverage innovation to spur business enterprise growth. Financing has also been linked to the increased survival of business enterprises during economic shocks and resilience to cope with other risks attached to the business environment. Access to finance also provides added security in the form of continued working capital.

Graph 2.9 below shows the accessibility of basic financial instruments to formal and informal business enterprises in Rwanda. The survey differentiates between three types of instruments. The first are deposit-oriented that enable business enterprises to manage their liquidity (current and savings accounts); the second are credit-oriented instruments through which business enterprises can borrow funds; and the third are other types of instruments available to business enterprises. Current accounts are used for short-term operational banking activities such as paying bills, making rent payments, and cash deposits. Letters of credit are a form of export finance given to buyers/importers and offer secure payment agreements to suppliers. A savings account allows users to deposit cash and accrue interest over time.

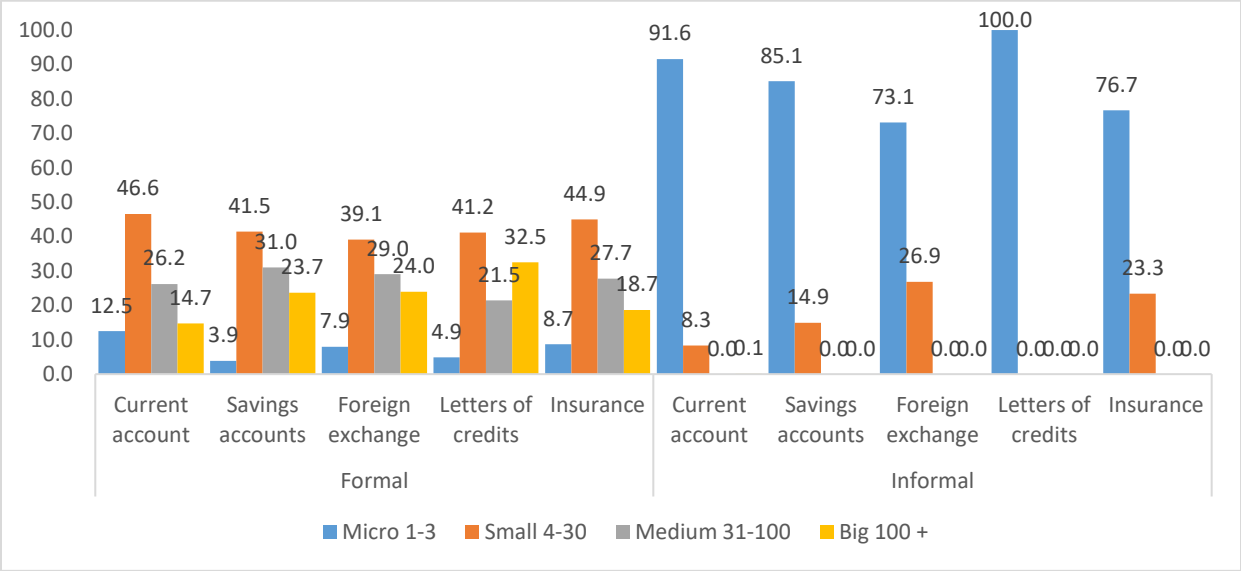
Current accounts are the most widely utilised financial instrument with 100% and 62% of formal and informal business enterprises having operational accounts respectively while 77% of formal business enterprises use various forms of insurance instruments (e.g. motor vehicle, property, medical and life insurance). Moreover, only 4% of informal business enterprises insure property or other assets. While savings accounts and letters of credit are the least utilised financial instrument, informal business enterprises are again disproportionately accounted for in their access, with less than 3% of business enterprises utilising both.

Graph 2.9: Access to Basic Formal Financing Instruments, % of Business Enterprises



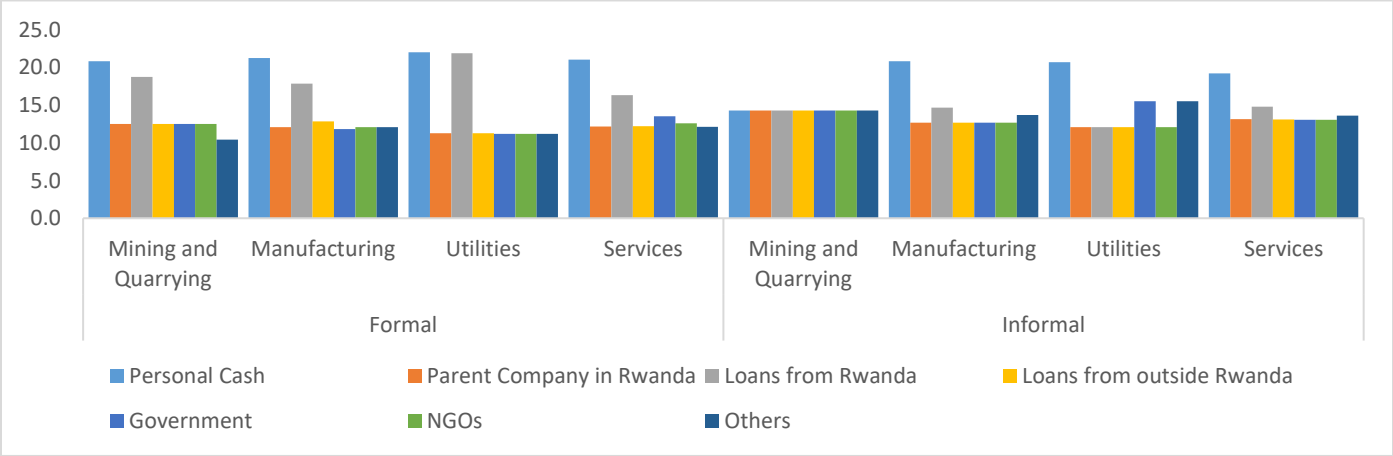
Small and medium business enterprises (SMEs) account for the largest share (69.73%) of the utilisation of financial instruments in the formal sector (Graph 2.10). On average, formal small business enterprises account for 42.64% of the utilisation of financial tools considered in 2023 while medium business enterprises account for 27.09% and big enterprises at 22.7%. The informal micro and small business-enterprises account for 85.3% and 14.7% use of financial instruments on average. For formal business, the most used instrument is the current account at 46.6% by small enterprises while the letters of credit are the most used by informal micro businesses at 100%.

Graph 2.10: Business Enterprise Use of Financial Instruments by Business Enterprise Size, % of Total Business Enterprises



The IBES 2023 considers several sources of financing including personal cash, government financing, and loans from within and outside the country, amongst others. On average for all economic activities, personal cash is the most widely used form of financing for both formal (20.2%) and informal (19.8%) business enterprises. For formal business enterprises, government and loans from within and outside Rwanda are also significant sources, accounting for 15.1% and 12.3% of their funding respectively. Loans from within Rwanda (14.6%) and NGOs (13.0%), on the other hand, represent significant funding sources for informal business enterprises.

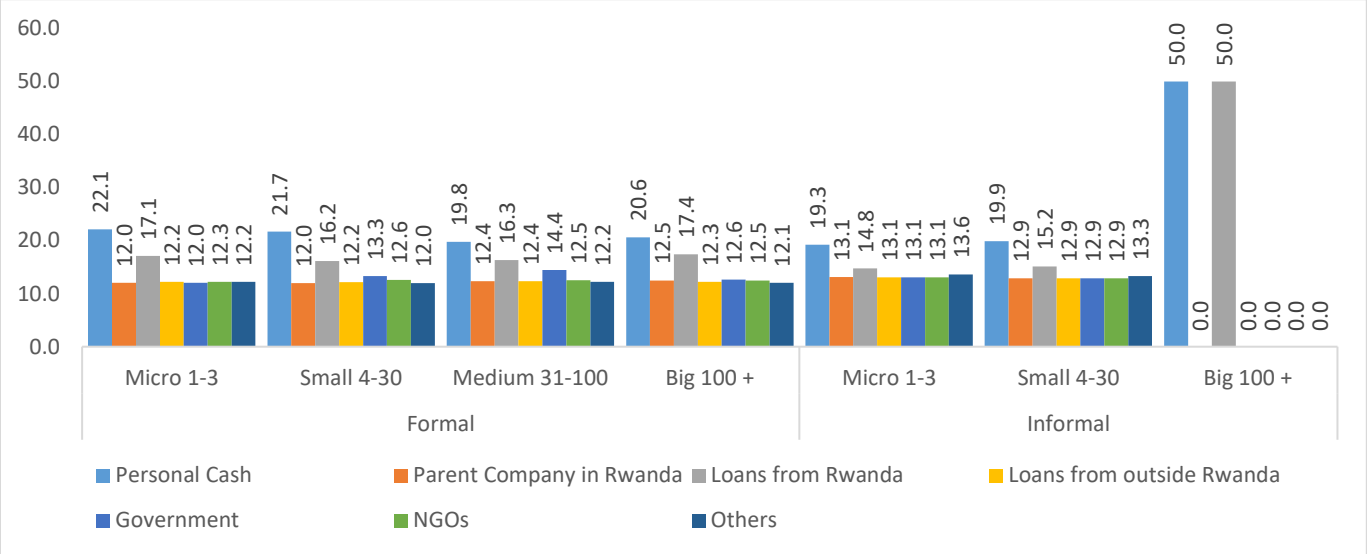
Graph 2.11: Sources of Financing for Business Enterprises by Sector, % of Business Enterprises



Analysis by sector reveals that personal cash is the most important source of financing for all sectors (Graph 2.11). For the formal enterprises, the personal cash represents the highest source of financing for Finance sector and services sector in particular, accounting for 22.2% and 21.8% respectively. This is closely followed by the industry sector with 21.3%. The informal counterparts who obtain a majority of their funding from personal sources in Finance and industry sectors with 21.1% and20.8% respectively.

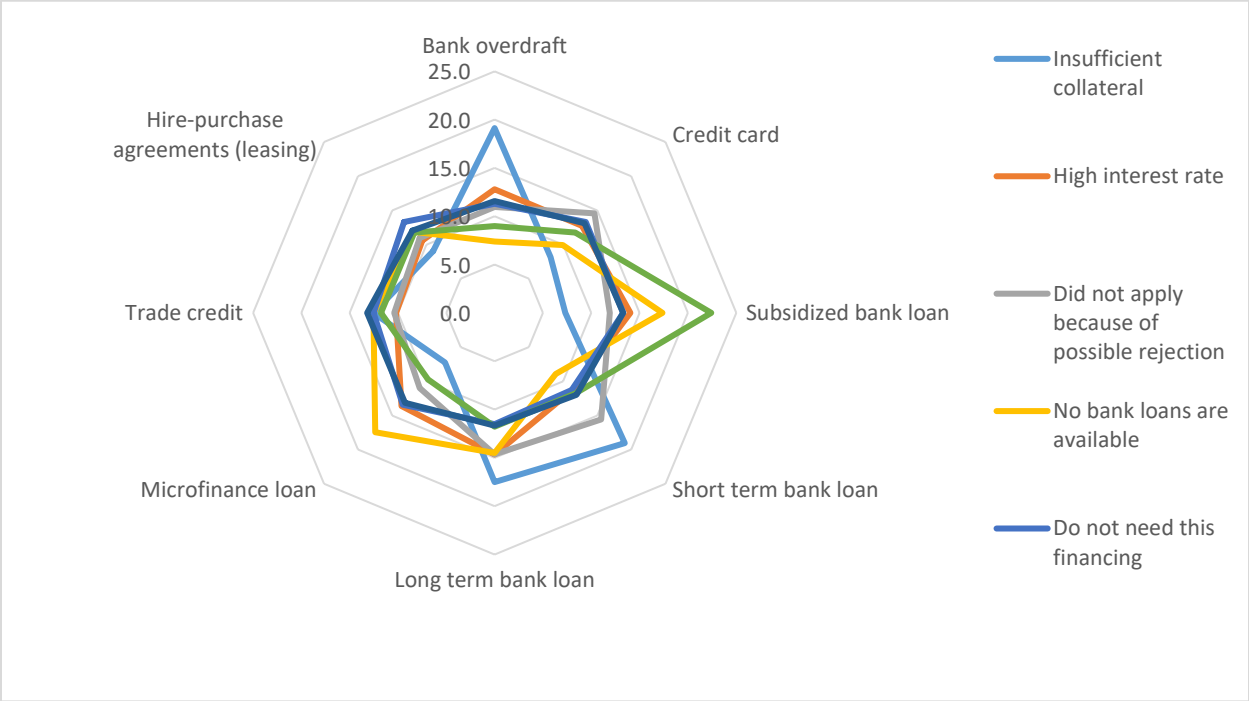
Further, Graph 2.12 below emphasises personal cash as the primary source of finance for business enterprises categorised by size. The informal Big-sized business enterprises exhibit the highest shares of usage of personal finance with nearly 50.0%. Loans from Rwanda were another important source of financing particularly for formal big, micro and medium business enterprises, accounting for 17.4%, 17.1%, and 16.3% of financing respectively.

Graph 2.12: Sources of Financing for Business Enterprises by Business Enterprise Size, % of Business Enterprises

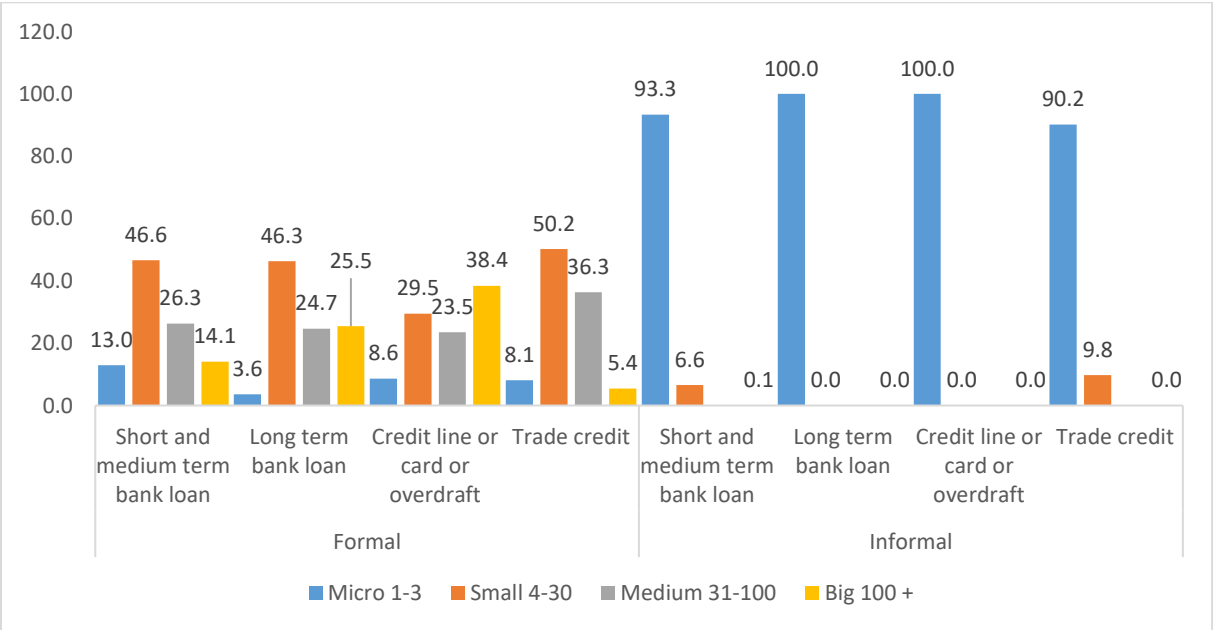


With findings illustrating difficulties in accessing finance, Rwandan business enterprises report differences in the barriers to accessing formal finance. The main barriers to financing include, fear of possible rejection, no bank loans available, high interest rate and too much paperwork involved among others. These barriers are common for accessing subsidised bank loans on an average of 14.2% followed by access to long term bank loans at 13.7% difficulties and access to short term bank loans at 12.8% difficulties (Graph 2.13).

Graph 2.13: Barriers to Accessing Formal Financing, Formal Business Enterprises (%)

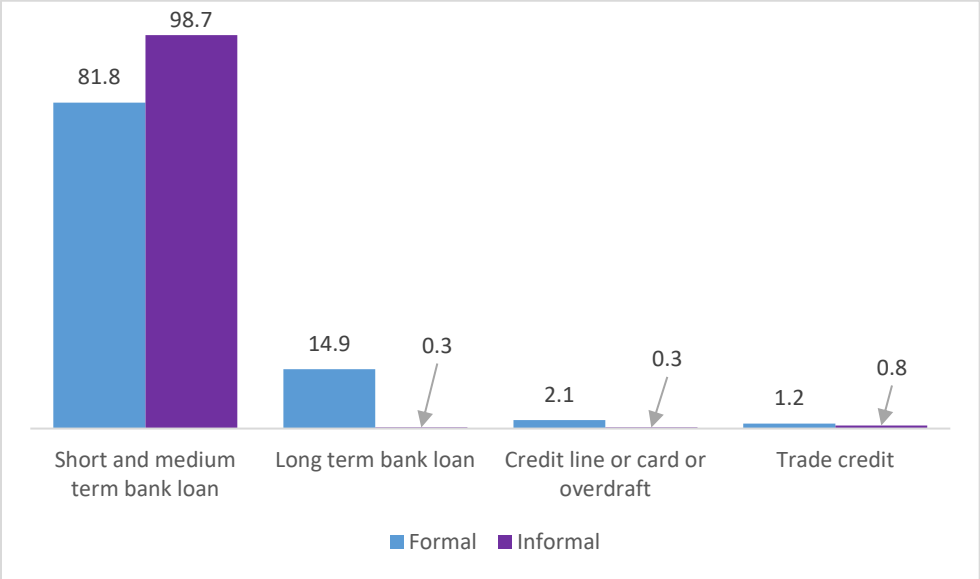


Graph 2.14: Accepted loans by type, formality and size of the business enterprise



All micro informal businesses that have applied for the long-term bank loan and the credit line or card or overdraft have been fully served against 90.2% of those which have applied for trade credit. For the formal sector, small formal business enterprises have been served positively at the rate of about 50% and applications of the big formal business enterprises have been positively replied at the rate of less than 40% and micro formal business enterprises at the rate of about 10%.

Graph 2.15: Outcome of Loan Applications, % of Business Enterprises

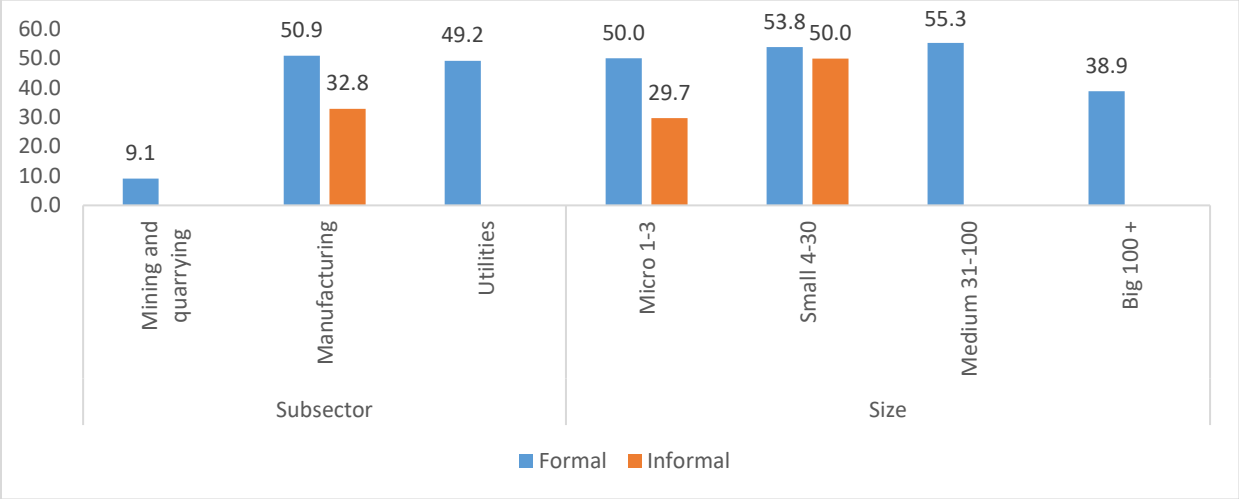


2.1.4. Capacity Utilisation

Capacity utilisation is conceptualised in this report as the extent of production capabilities being utilised by business enterprises at any one given time. It explains the difference between the output produced in a certain period, and the output that could have been produced had the elements of production been working/utilised at full capacity. It further indicates business enterprise efficiency levels by illustrating the extent to which a business enterprise can increase production at the same

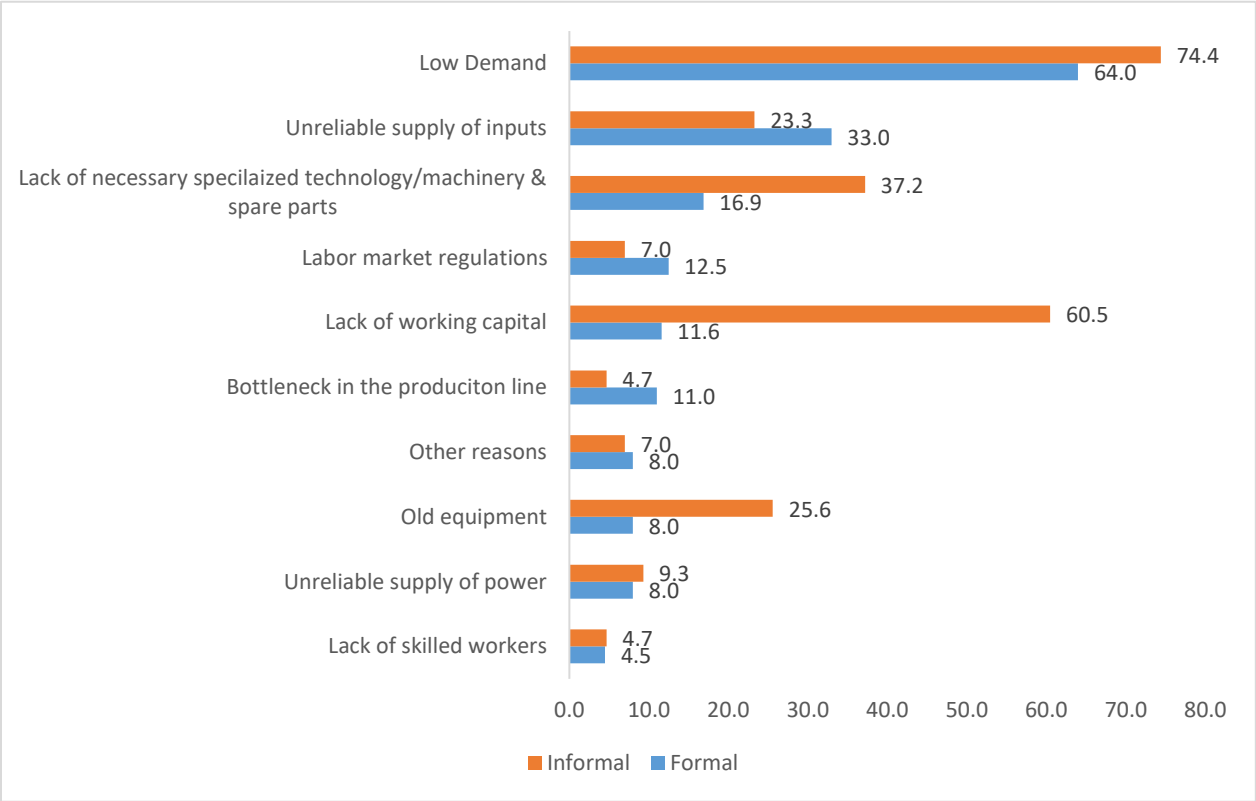
Formal business enterprises in the manufacturing sector report the highest shares of capacity underutilization at 50.9% (Graph 2.16), and 49.2% of business enterprises in utilities subsector. On the other hand, 32.8% of informal business enterprises in manufacturing have reported underutilizing their capacity. Furthermore, in the formal sector, capacity underutilization increases with the business enterprise size up to the medium enterprise size; 38.9% of big business enterprises experience capacity underutilization as compared to 55.3%, 53.8%, and 50.0% for medium, small, and micro business enterprises respectively.

Graph 2.16: Shares of Capacity Underutilization, by Formality, Sectors, and Size (% of Business Enterprises)



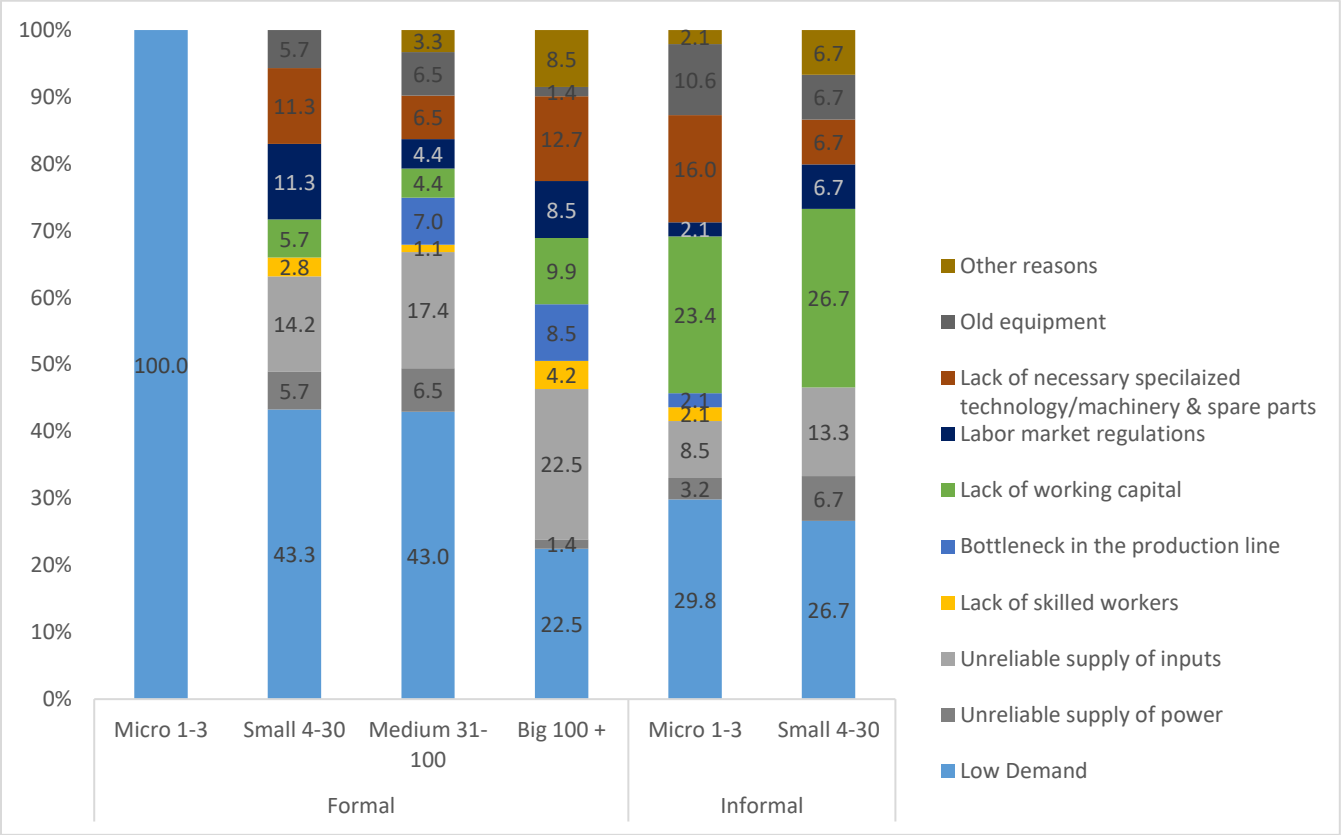
There exist differences on the causes of business enterprise underutilization by formality. For both formal and informal business enterprises, the top reason for capacity underutilization is low demand. 64.0% of formal business enterprises and 74.4% of informal business enterprises reported low demand as the major barrier for full utilisation (Graph 2.17). Lack of working capital (60.5%) and Lack of necessary specialized technology/machinery & spare parts (37.2%) complete the top two in the ranking of the reasons for capacity underutilization for informal business enterprises. For formal business enterprises, 33.0% and 16.9% of business enterprises further reported an unreliable supply of inputs and lack of necessary specialised technology/machinery & spare parts as other major concerns regarding full utilisation.

Graph 2.17: Main Reasons for Underutilization- Overall



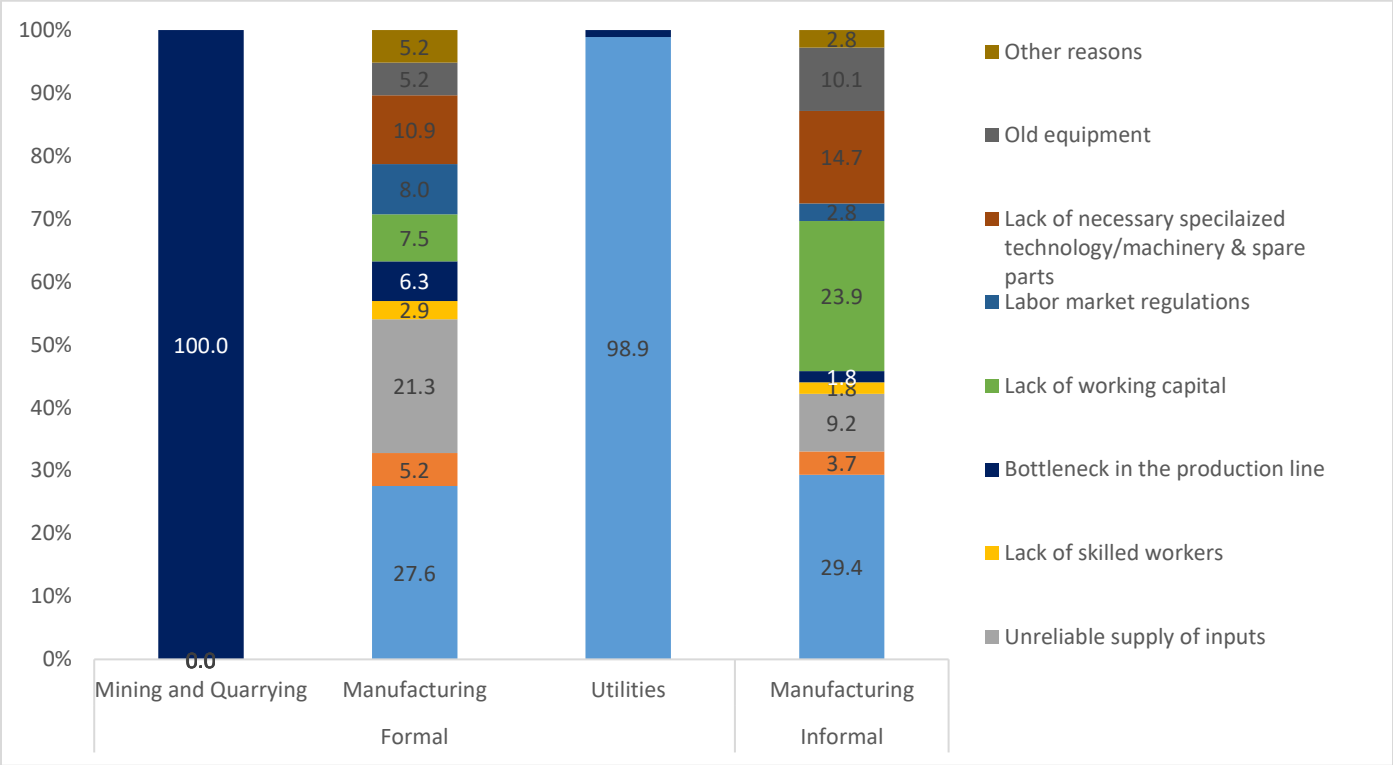
Barriers of full capacity utilisation further differ by business enterprise size and sectors. Low demand and unreliable supply of inputs account for the highest share of underutilization, at 22.5% for both reasons, as the main reason for big enterprises followed by lack of necessary specialized technology, machinery and spare parts (12.7%). Also, low demand and lack of working capital are the dominant barriers with 26.7% each for the informal sector. Other significant barriers for the informal sector include lack of necessary specialized technology/machinery & spare and old equipment (micro business enterprises).

Graph 2.18: Main Reasons for Underutilization, by Business Enterprise Size



While the formal mining and quarrying sector faces the bottleneck in the production line, the formal utilities sector struggles with the low demand in the formal sector. On the other hand, the low demand (29.4%) and lack of working capital (23.9%) were the greatest challenge for manufacturing informal business enterprises.

Graph 2.19: Main Reasons for Underutilization, by Sector

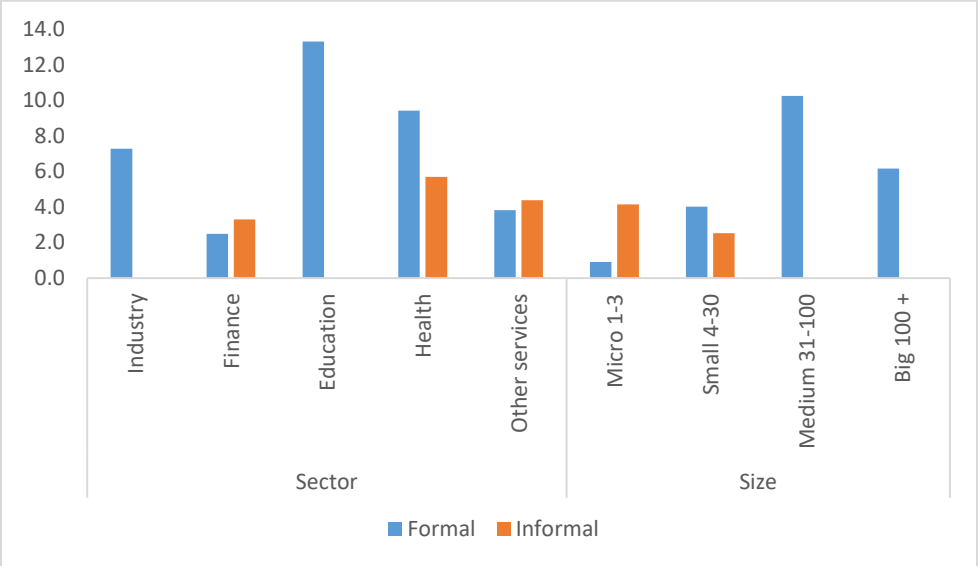


2.2. Infrastructure and the Environment

2.2.1. Energy Use and Access to Reliable Power

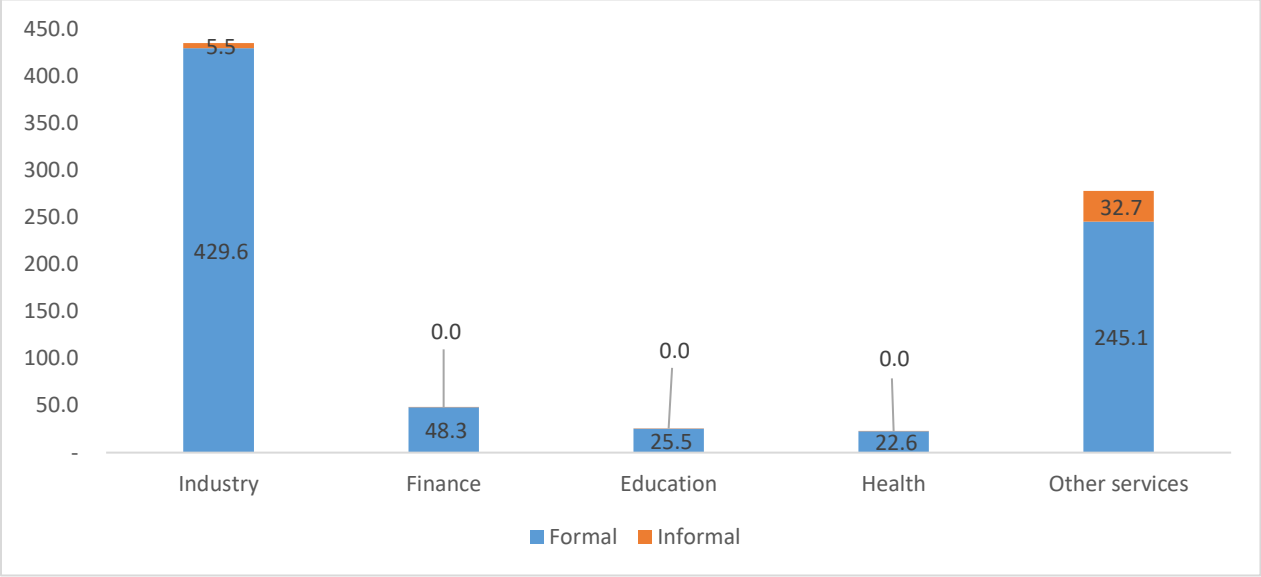
Rwandan business-enterprises exhibit a low capacity for solar energy use. In fact, on average, only about 7.3% of formal business enterprises use solar energy, with more utilisation in the education at 13.3% and health sectors at 9.4% (Graph 2.20). The formal medium business uses more solar energy at 10.3%. In the informal enterprises, on average 3.3% of informal business enterprises use solar energy and the health sector dominates at 5.7% while micro enterprises use mostly solar power at 4.2%.

Graph 2.20: Use of Solar Energy by Sector and Size, % of Business Enterprises

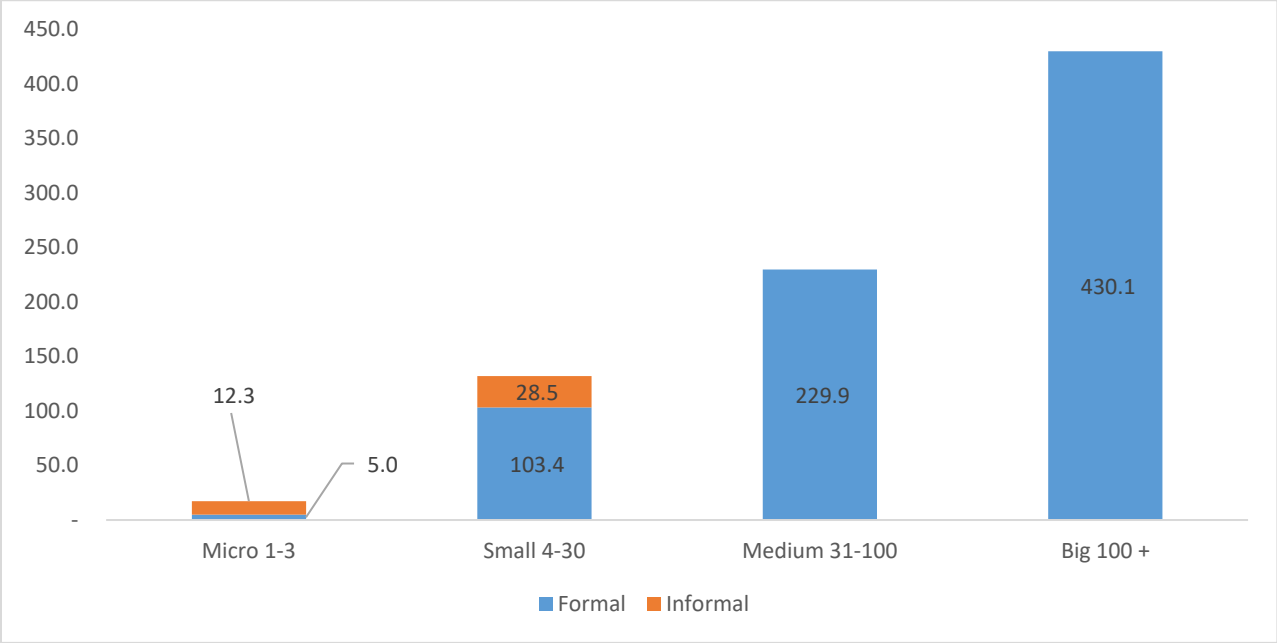


The graph 2.21 illustrates the use of electricity and power by business-enterprises. The formal industries (429.6 million Kilowatts) and other services (245.1 million Kilowatts) consume the largest share of electricity. Furthermore, the big enterprises consume more electricity, 430.1 million Kilowatts, followed by medium enterprises, 229.9 million Kilowatts. In the Graph 2.22, the micro and small informal enterprises both use electricity equivalent to 40.8 million Kilowatts of which the other services use 32.7 million Kilowatts (Graph 2.21).

Graph 2.21: Electricity Usage by Business Enterprises (Sector), in Million Kilowatts

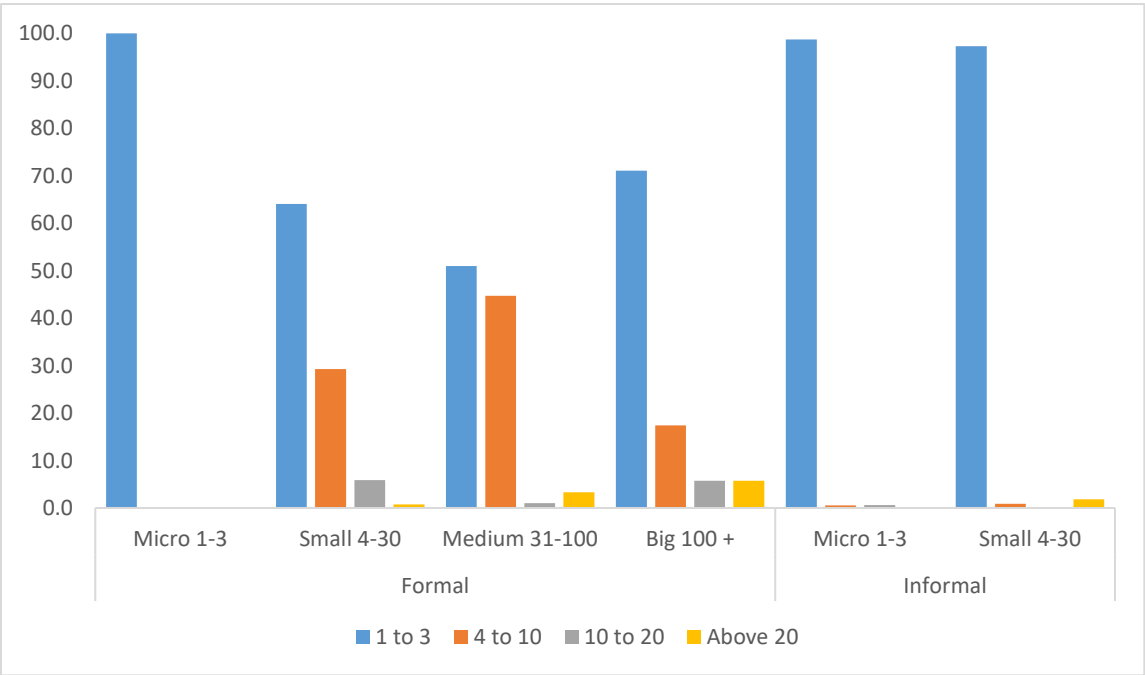


Graph 2.22: Electricity Usage by Business Enterprises (Formality and Size), in Million Kilowatts

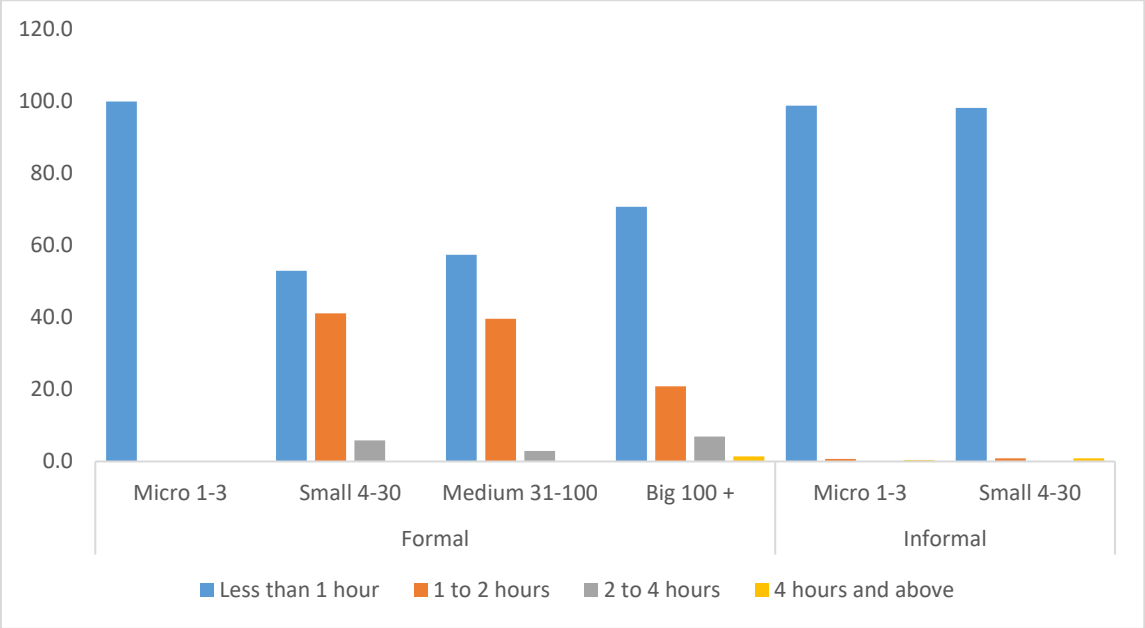


Micro and big formal business enterprises reported experiencing a greater number of power outages of one to three at the rate of 100.0% and 71.1 respectively, while 98.7% of micro informal business enterprises have reported to experience one to three power outages (Graph 2.23). Meanwhile, micro business enterprises have reported the average duration of power outages of less than one hour at the rate of 100% and 98.9% formal and informal respectively, while 39.6% of formal medium and 20.9% formal big business enterprises have reported to experience power outage duration of between one to two hours (Graph 2.24).

Graph 2.23: Business Enterprises by the number of monthly power outages (%)



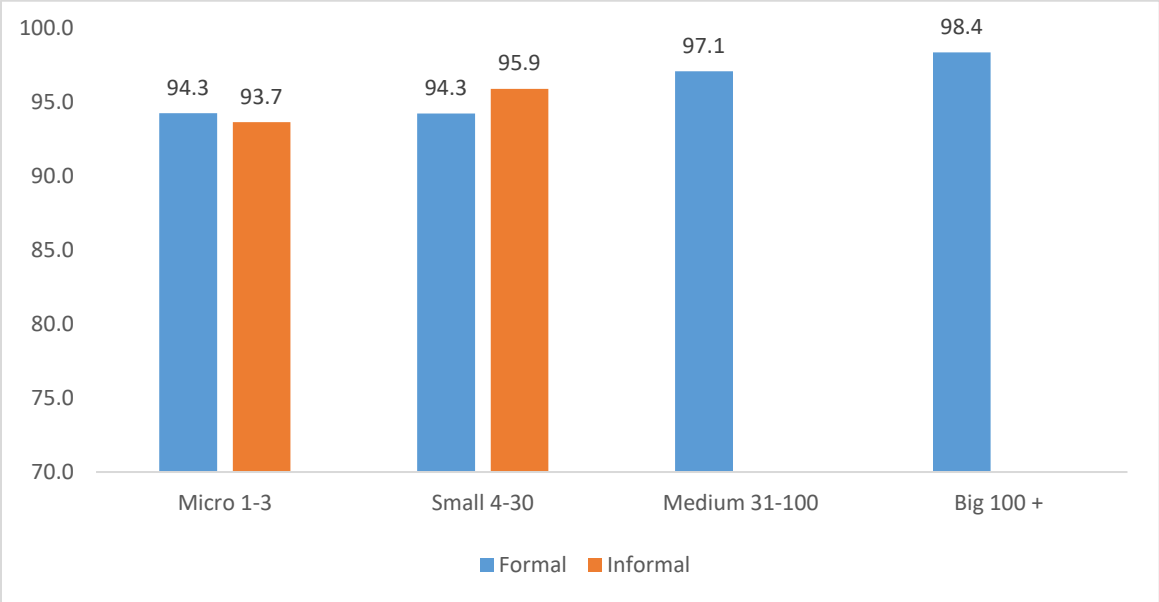
Graph 2.24: Average Duration of Power Outages (Hours), % of Business Enterprises



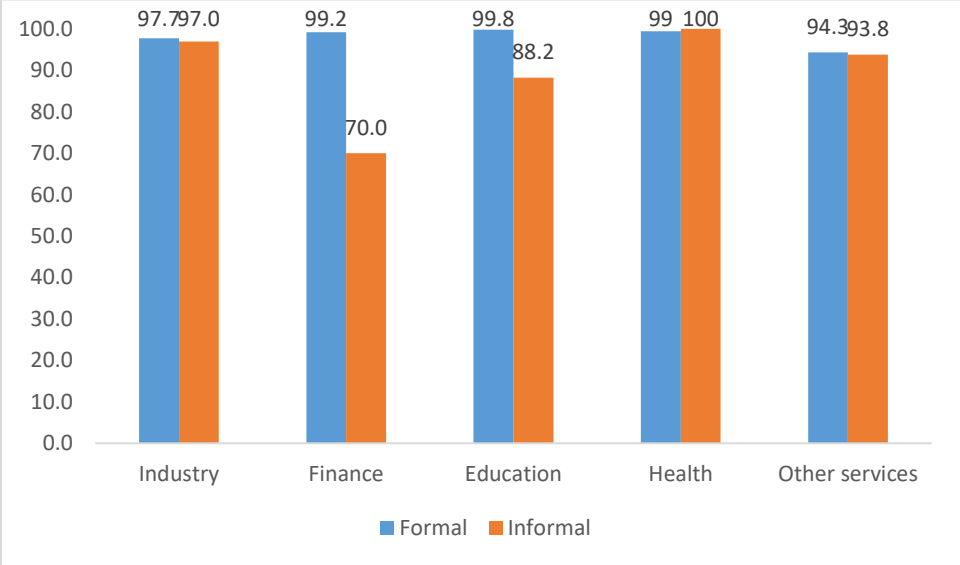
2.2.2. Environmental Protection

For businesses, environmental protection can have economic and social benefits both at micro and macro level. In Rwanda, an average of 96% of formal business enterprises and 94.8% of informal business enterprises reported producing waste. Overall, the service formal sector accounts for the highest shares of waste production in form, that is, 71.2%, 51.8%, 38.4% of solid, liquid, and gaseous waste respectively. Graph 2.25 below disaggregates waste production by business enterprise size, illustrating that formal big businesses have higher shares of waste production at 98.4% while informal small businesses have the largest share of waste production at 95.9%. The education and finance sectors also produced significant shares of waste at 99.8% and 99.2% respectively for formal businesses and the health sector dominated within the informal businesses at 100%. Furthermore, formal SMEs accounted for about an average of 45.8% of mostly solid waste produced, 41.0% of liquid by medium enterprises and 51.3% of gas by medium enterprises (Graph 2.27).

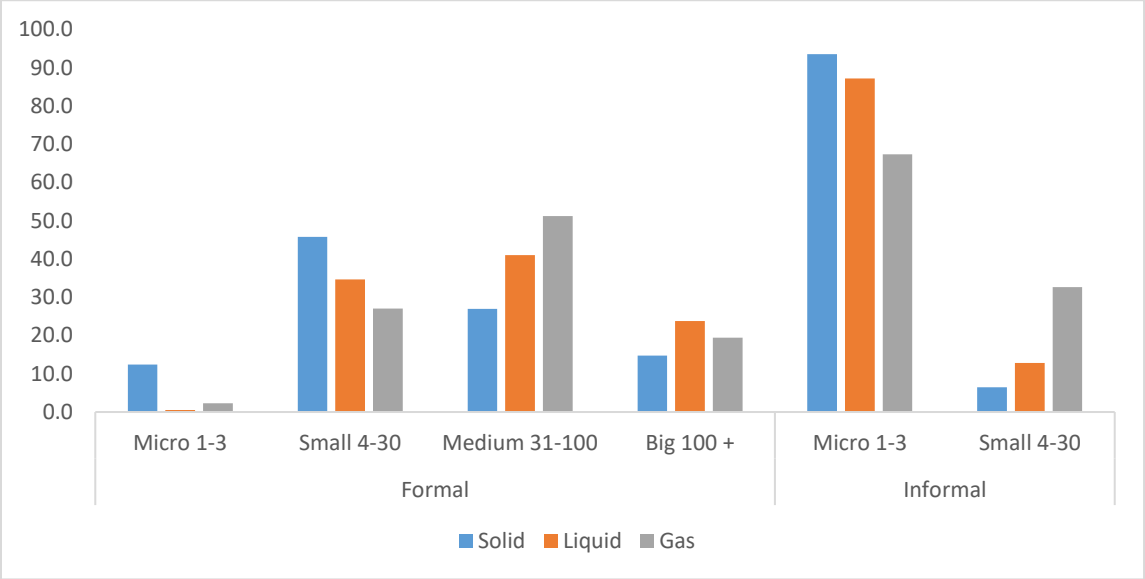
Graph 2.25: Waste Production by Business Enterprise Size, % of Business Enterprises



Graph 2.26: Waste Production by Sector, % of Business Enterprises

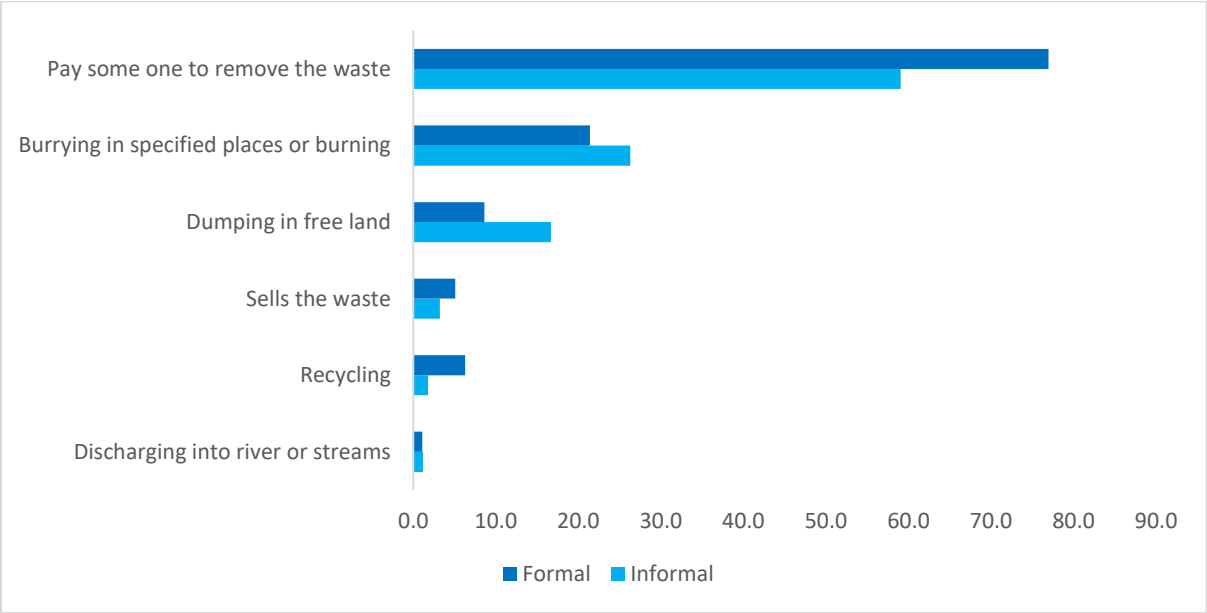


Graph 2.27: Waste Production by Type (Business Enterprise Size), % of Business Enterprises



Informal business enterprise's modes of waste disposal largely involve paying someone to remove the waste. For instance, 59.1% of informal business enterprises and 77.7% of formal business enterprises pay someone to dispose of waste from their business enterprises (Graph 2.28). Burying of waste is another common practice by business enterprises which is likely to damage soil ecosystems, with 26.3% and 21.4% practised by informal and formal business enterprises respectively.

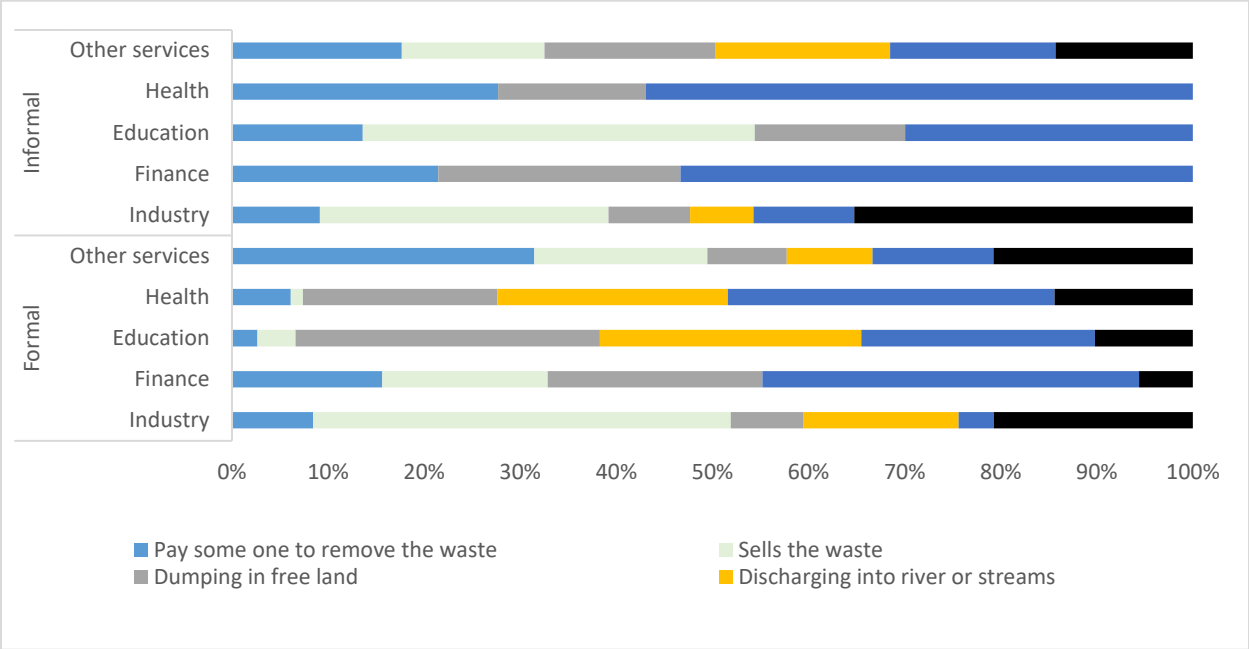
Graph 2.28: Modes of Waste Disposal, % of Business Enterprises



Across all sectors (except for formal education and health), selling waste has become a prominent mode of waste disposal (Graph 2.29). In the formal sector, 42.35% of industry businesses and 47.41% of service enterprises sell waste, while only 8.23% of formal industry businesses now pay individuals to remove waste, showing a decline from previous years. Formal education and health sectors primarily dispose of waste by dumping in free land (61.52% and 6.71%, respectively).

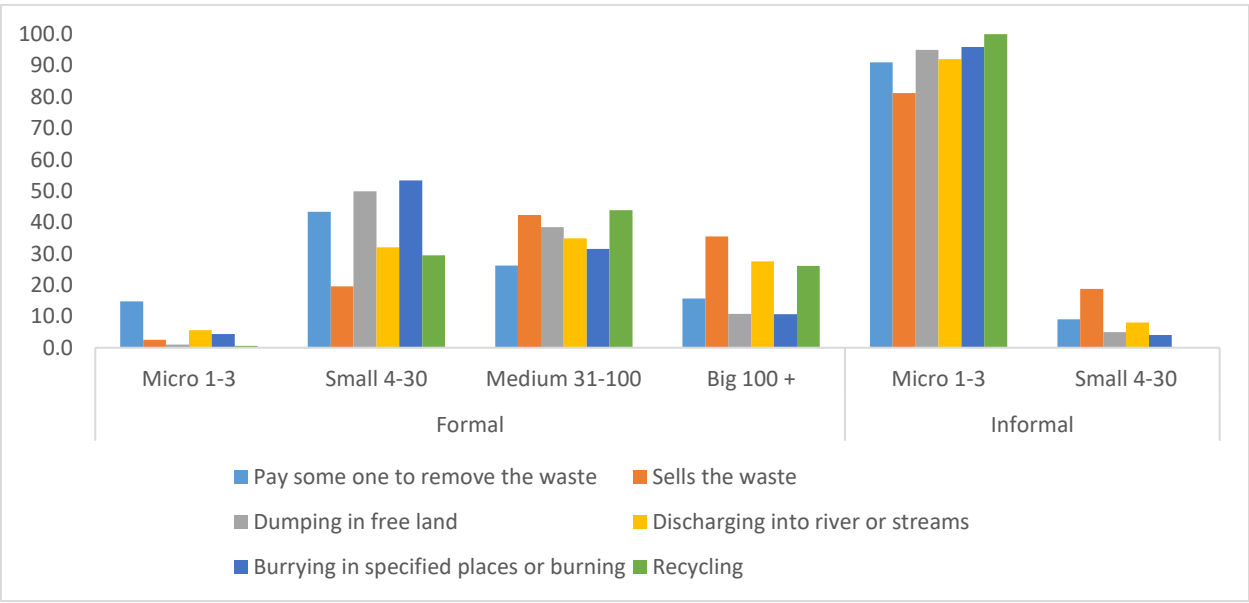
In the informal sector, paying someone to remove waste remains the most common practice across all sectors, followed closely by dumping in free land and burying or burning waste.

Graph 2.29: Modes of Waste Disposal by Sector, % of Business Enterprises



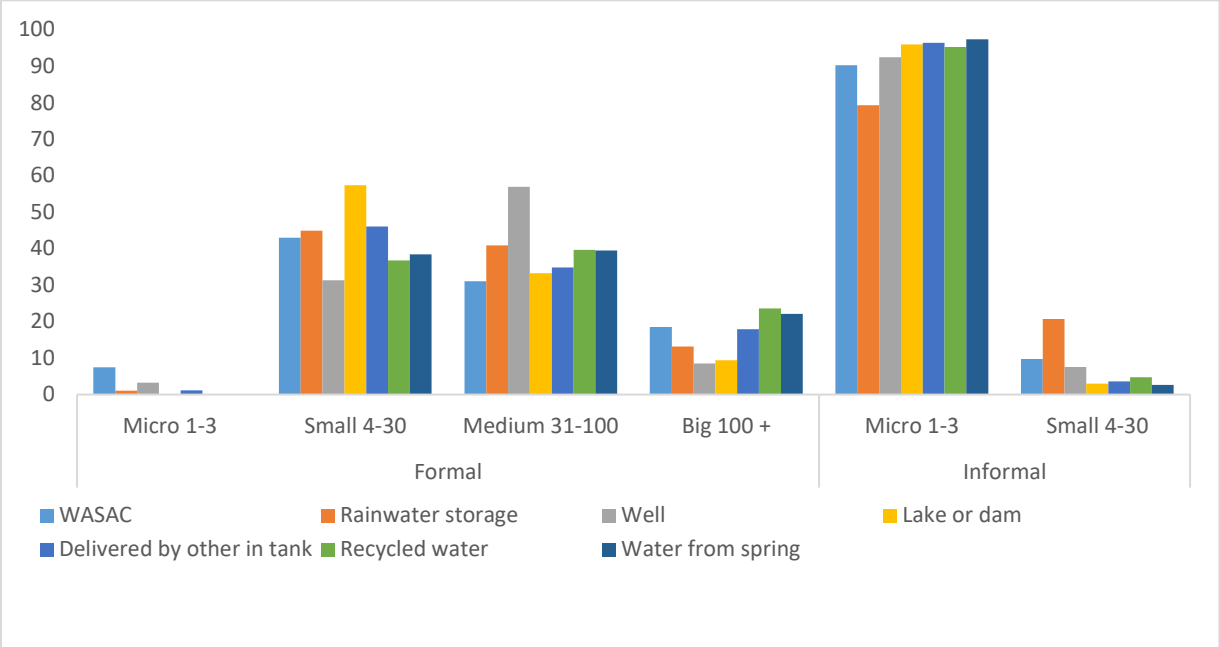
Formal small business enterprises display the highest shares of payment to external individuals for waste disposal with 43.3% while the practice of recycling is commonly used by formal medium enterprises at 43.9%. As the informal sector is more likely to recycle (100%), dump waste into free land (95%) or pay someone to remove the waste (91%) by micro businesses.

Graph 2.30: Modes of Waste Disposal by Business Enterprise Size, % of Business Enterprises



Business enterprises across all business enterprise size categories and formality obtain their water from the Water and Sanitation Corporation (WASAC), with 7.48%, 42.96%, 31.08%, and 18.49% of formal micro, small, medium, and big business enterprises respectively. Well water and lake or dam is also a significant source of formal business enterprises' water. 97.32% of informal micro-sized business enterprises use mostly water from spring and small informal business use mostly rainwater storage at 20.68%.

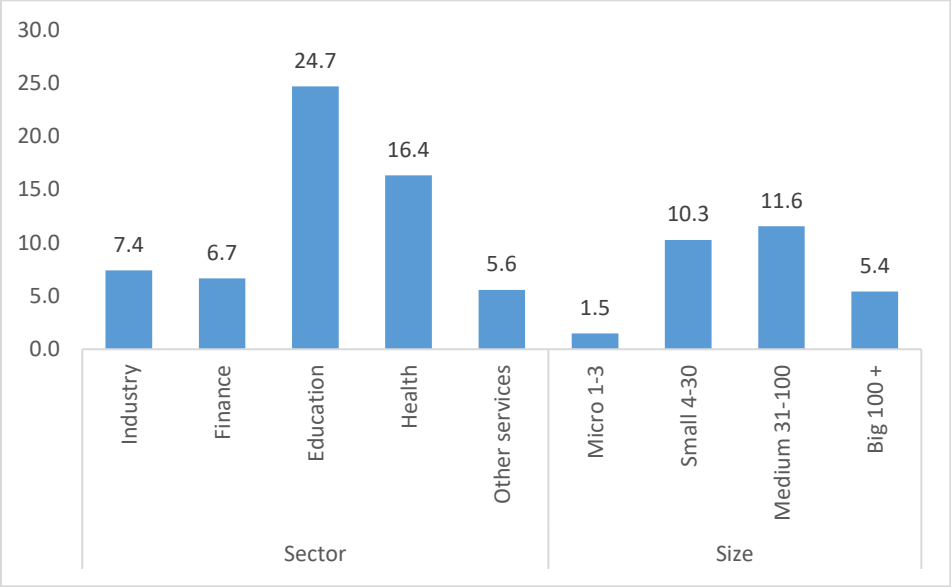
Graph 2.31: Business Enterprise Water Sources by Business Enterprise Size, % of Business Enterprises



2.3. Labor Market

Employees are an integral part of business enterprises, and their skill-level will significantly determine a business enterprise's efficiency in producing quality output. However, the highest perception of the skills gap was in the education sector, with 24.7% of managers reporting an existing gap in skills (Graph 2.32). The least skills gap is reported in the other services at 5.6%. Analysis by business enterprise size shows that 11.6% of managers in medium business-enterprises perceive a skills gap in their employees. Seemingly, the share of managers identifying skills gaps increases by size. Micro-businesses have, however, a slightly lower managerial perception of skills gap at 1.5%.

Graph 2.32: Perception of Lack of Skills by Employers, % of Business Enterprise Managers



According to managers, the largest skills gap exists in Advanced or specialized IT Skills. On average, managers in all sectors identified gaps in Advanced or specialized IT Skills at 22.2%. The education sector struggles the most with regards to advanced IT skills, with 52.1% of managers reporting a skills gap (Graph 2.34). The health sector also reported significant gaps in IT skills with 39.0 % managers identifying the gap. Thus, on average, about 30.5%of managers recognize that employees significantly lack both basic and advanced skills required to carry out their roles and also communicate in foreign languages (30.4%). Another relevant gap includes adapting to new technologies with 12.7%. On average, employees in the education sector struggle the most with gaps in technical skills, while those in the other services and finance sector exhibit the least gaps.

Similarly, when disaggregating the results by business enterprise size, the report finds that more managers from medium-sized and big business enterprises reported a lack of communication skills in foreign language is the major technical and practical skills gap than in any other size category, at 39.3% and 24.2% respectively. 23.3% of managers from small-sized business enterprises also reported mostly the same. Advanced or specialized IT skills was identified as another significant area with gaps, affecting medium-sized and small-sized business enterprises the most (29.2% and 22.2% of managers respectively).

Graph 2.33: Technical and Practical Skills Gaps by Sector, % of Business Enterprise Managers

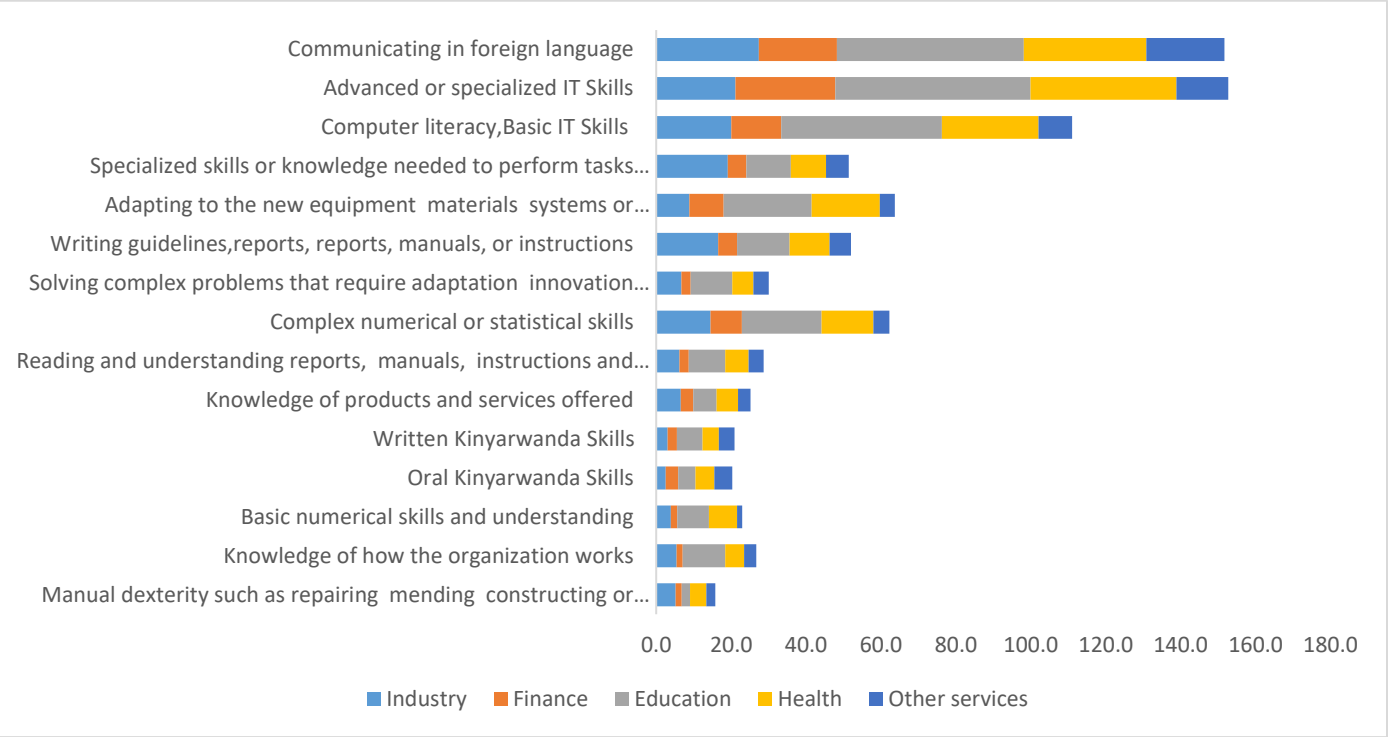
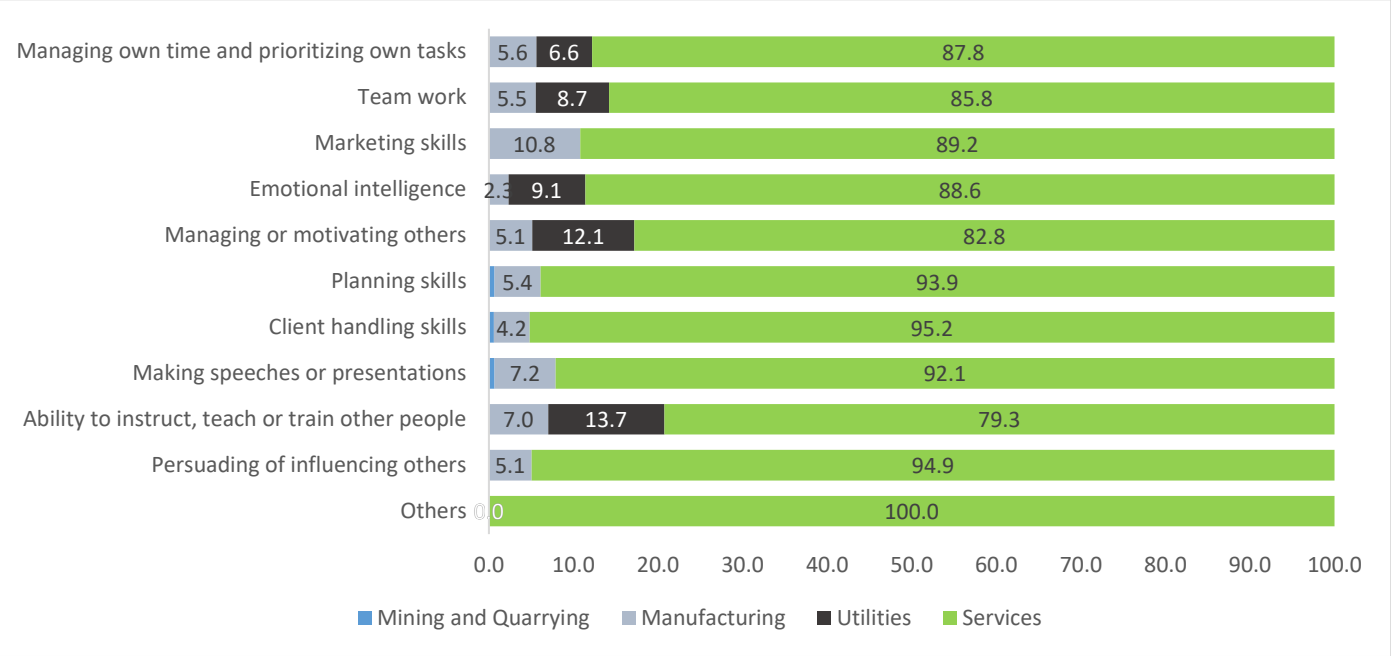


Table 2.1: Technical and Practical Skills Gaps by Business Enterprise Size, % of Business Enterprise Managers

Technical and practical skills gaps/Size	Micro 1-3	Small 4-30	Medium 31-100	Big 100 +
Complex numerical or statistical skills	4.0	7.8	11.6	4.7
Basic numerical skills and understanding	1.5	3.0	3.5	1.9
Manual dexterity such as repairing mending constructing or adjusting things	0.7	2.9	3.4	2.0
Reading and understanding reports, manuals, instructions and guidelines	3.4	5.1	6.2	4.0
Knowledge of products and services offered	0.9	4.0	4.3	5.6
Knowledge of how the organization works	0.7	4.5	4.5	5.2
Writing guidelines, reports, reports, manuals, or instructions	4.6	7.8	11.7	3.8
Oral Kinyarwanda Skills	2.4	2.9	8.4	4.7
Computer literacy, Basic IT Skills	3.4	14.8	25.7	8.4
Solving complex problems that require adaptation, innovation and creativity	2.9	6.0	6.5	3.1
Specialized skills or knowledge needed to perform tasks assembling	2.2	7.3	14.3	3.9
Written Kinyarwanda Skills	2.8	3.0	8.2	3.2
Adapting to the new equipment materials systems or technologies	0.7	7.9	11.9	5.4
Advanced or specialized IT Skills	7.1	22.2	29.2	13.8
Communicating in foreign language	8.1	23.6	39.3	24.2

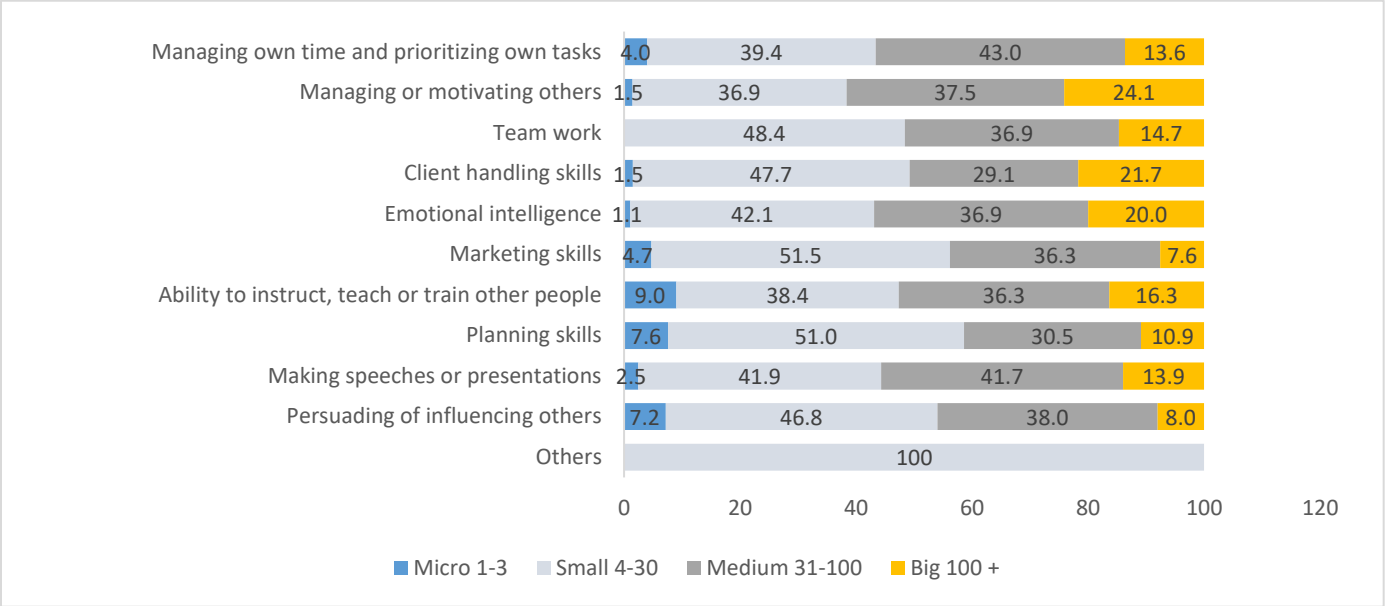
On average, the services sector faces all interpersonal and soft skills. The mining and quarrying sector faces mainly planning skills, client handling kills and making speeches or presentation while the utilities sector encounters mainly the ability to instruct, teach or train other people and managing or motivating others (Graph 2.34).

Graph 2.34: Interpersonal/Soft Skills Gaps by Sector, % of Business Enterprises



The analysed results by business enterprise size reveal that in all skill categories, concerns in managing own time and prioritising own tasks gaps increase by business enterprise size up to the medium size level. For instance, 43.0% of managers in medium business enterprises identify significant gaps in their employees' ability for time management as compared to 4.0%, 39.4%, and 13.6% in micro, small and big business enterprises respectively. The other gap is exhibited in managing or motivating others in medium business enterprises with 37.5% of managers citing it as a concern, as compared to 24.1%, 36.9%, and 1.5% of managers in big, small and micro business enterprises respectively.

Graph 2.35: Interpersonal/Soft Skills Gaps by Size, % of Business Enterprise Managers



As a result of the gaps in numerous crucial skills, business enterprise managers have identified the major impact skill gaps (Table 2.2). The analysis of the Impact of skill shortages by sector reveals that the mining and quarrying sector is impacted more on increased workload for staff (18.2%) and having difficulties to meet customer expectations, demand or service objectives; increased operating costs; delay the development of new products as well as difficulties to introduce new working practices, at the rate of 9.1% each. The manufacturing sector's major impact skill gaps are increased workload for staff (14.0%) and increased operating costs (11.7%). The utilities and services sectors' major impact skill gaps are difficulties to introduce new working practices (48.1%) and increased workload for Staff (16.7%) respectively.

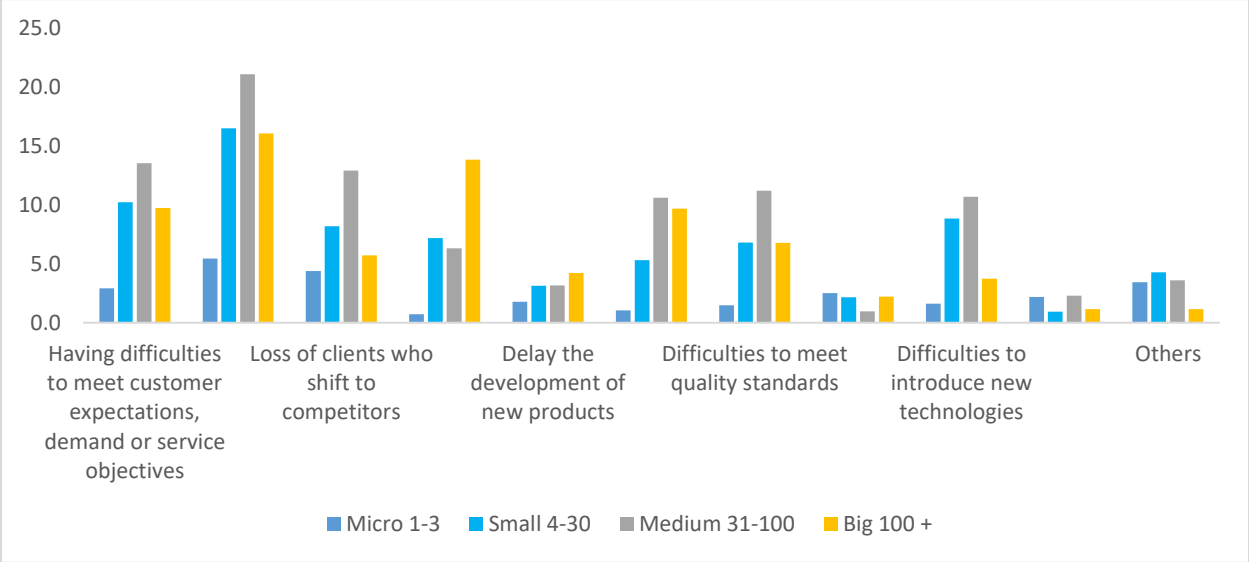
Table 2.2: Impact of Skill Shortages by Sector, % of Business Enterprise Managers

Skill shortages	Mining and Quarrying	Manufacturing	Utilities	Services
Having difficulties to meet customer expectations, demand or service objectives	9.1	9.4	0.0	10.3
Increased workload for Staff	18.2	14.0	0.6	16.7
Loss of clients who shift to competitors	0.0	9.9	0.0	8.7
Increased operating costs	9.1	11.7	0.6	7.0
Delay the development of new products	9.1	8.2	0.0	2.9
Difficulties to introduce new working practices	9.1	5.9	48.1	6.2
Difficulties to meet quality standards	0.0	6.4	0.0	7.5
Outsource some work	0.0	2.9	0.6	1.9
Difficulties to introduce new technologies	0.0	2.9	0.0	8.1
Stop offering some services or products	0.0	2.3	0.0	1.5
Others	0.0	3.5	0.0	3.6

Findings further reveal that impacts significantly vary by business enterprise size (Graph 2.36). On average, however, managers reported increased staff workload (14.8%), loss of clients (7.8%), and difficulties in meeting customer

expectations (9.1%) as the most significant impacts of skills gaps. For medium business enterprises, the largest impact concern was increased workload load (21.1%) similar to big enterprises, 16.1%.

Graph 2.36: Impact of Skill Shortages by Size, % of Business Enterprise Managers



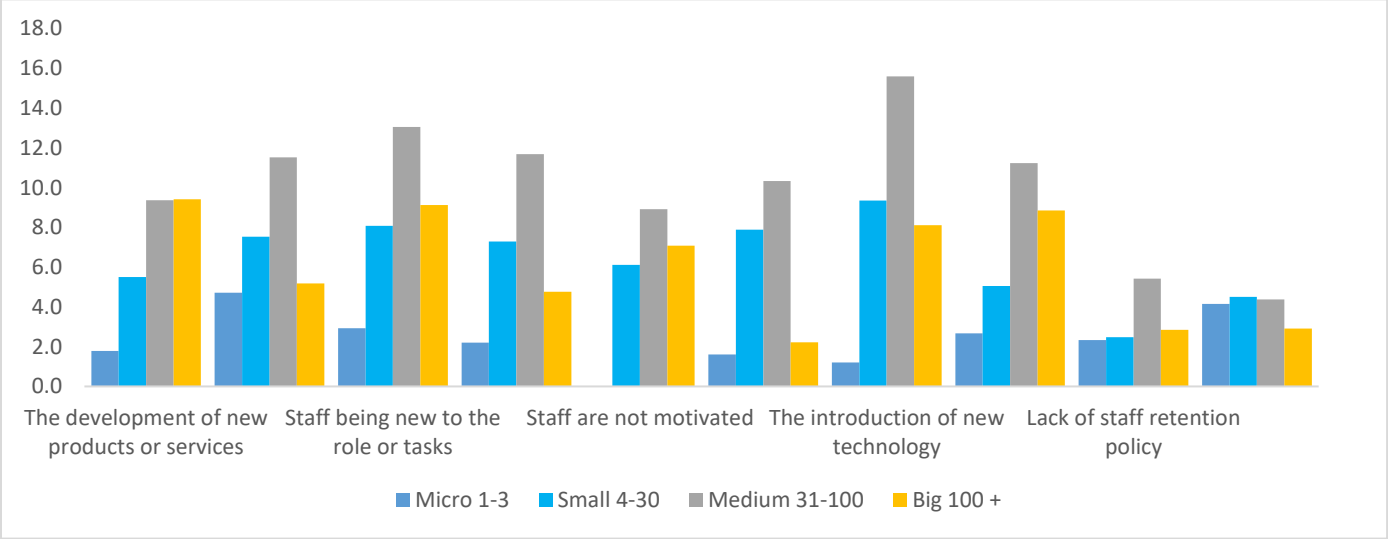
The main causes of skills gaps in Rwandan business enterprises are the development of new products or services (9.1%), Staff being new to the role or tasks services (9.1%), Staff still under training services (9.1%), inadequate prior training (9.1%), the introduction of new technology (9.1%) and lack of staff retention policy for the mining and quarrying sector. The manufacturing and services sectors face mainly the introduction of new technology at the rates 9.4% and 10.0% respectively while the utilities sector's main causes of skill gaps are Staff related plus the introduction of new working practices.

Table 2.3: Major Causes of Skill Gaps by Sector, % of Business Enterprise Managers

Major causes of skill gaps	Mining and Quarrying	Manufacturing	Utilities	Services
The development of new products or services	9.1	8.8	0.6	6.6
Unable to recruit staff with required skills and experience	0.0	8.8	0.0	8.0
Staff being new to the role or tasks	9.1	8.8	48.6	8.2
Staff were still under training	9.1	8.2	48.1	6.7
Staff are not motivated	0.0	4.1	48.1	5.7
Inadequate prior training	9.1	6.4	0.6	7.0
The introduction of new technology	9.1	9.4	0.0	10.0
The introduction of new working practices	0.0	2.3	48.1	6.5
Lack of staff retention policy	9.1	5.9	0.0	3.2
Others	0.0	5.9	0.0	4.2

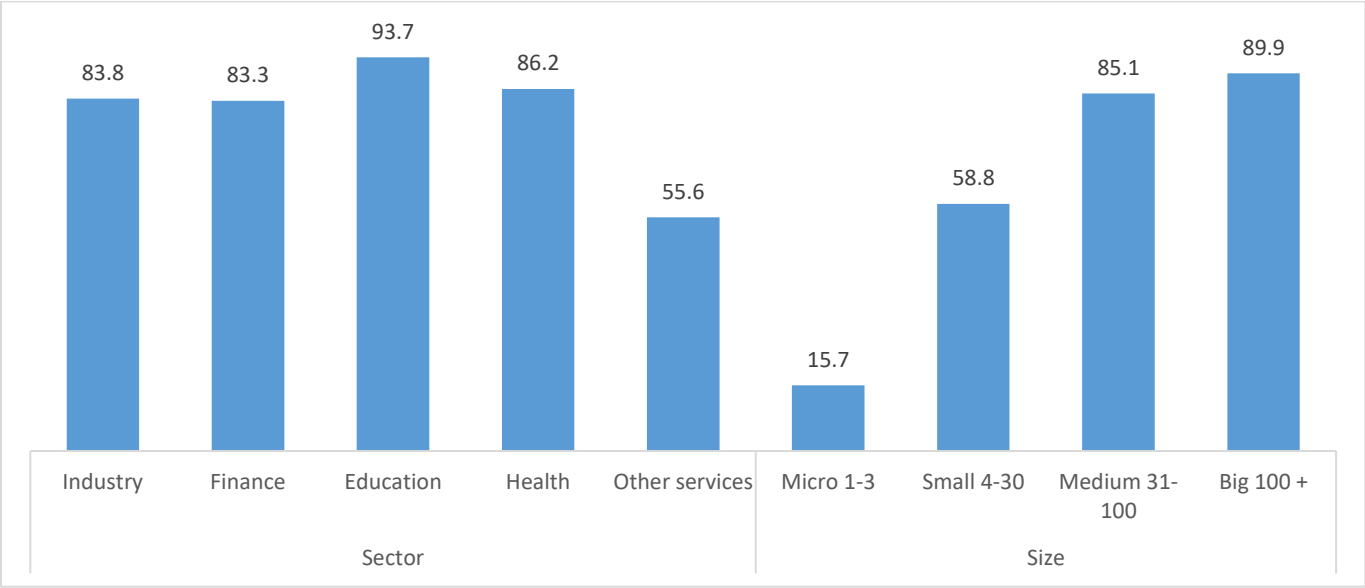
In terms of size, managers identified the introduction of new technology 8.6%, Staff being new to the role or tasks at 8.3%, Unable to recruit staff with required skills and experience, 7.2% (Graph 2.37). The Staff being new to the role or tasks in medium business enterprises (13.1%) was identified as the major cause for skills gaps.

Graph 2.37: Major Causes of Skill Gaps by Business Enterprise Size, % of Business Enterprise Managers



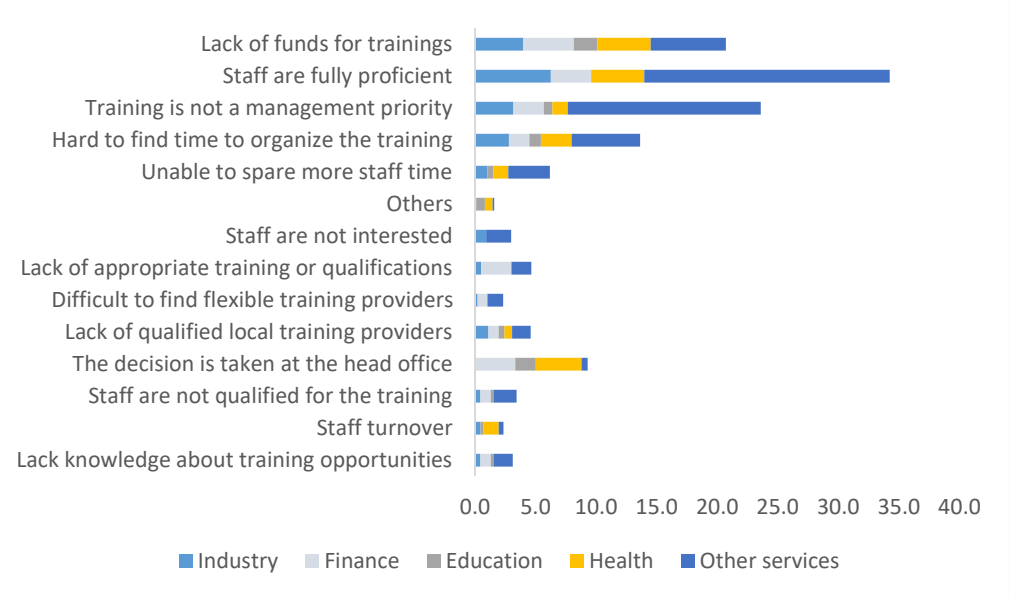
In the face of the challenges in shortage of required skills, business enterprises in Rwanda have been facilitating staff training activities. Graph 2.38 below illustrates the proportions of business enterprises investing in training for their employees. Education and health sectors exhibited the highest share of business enterprises training their staff with 93.7% and 86.2% of business enterprises respectively. The service sector conducted the least Staff training, with only 55.6% of service sector business enterprises providing any training sessions. By size, the big enterprises followed by medium enterprises provided more trainings at 89.9% and 85.1% respectively.

Graph 2.38: Business Enterprise Employee Training Activities by Sector and Size, % of Business Enterprises

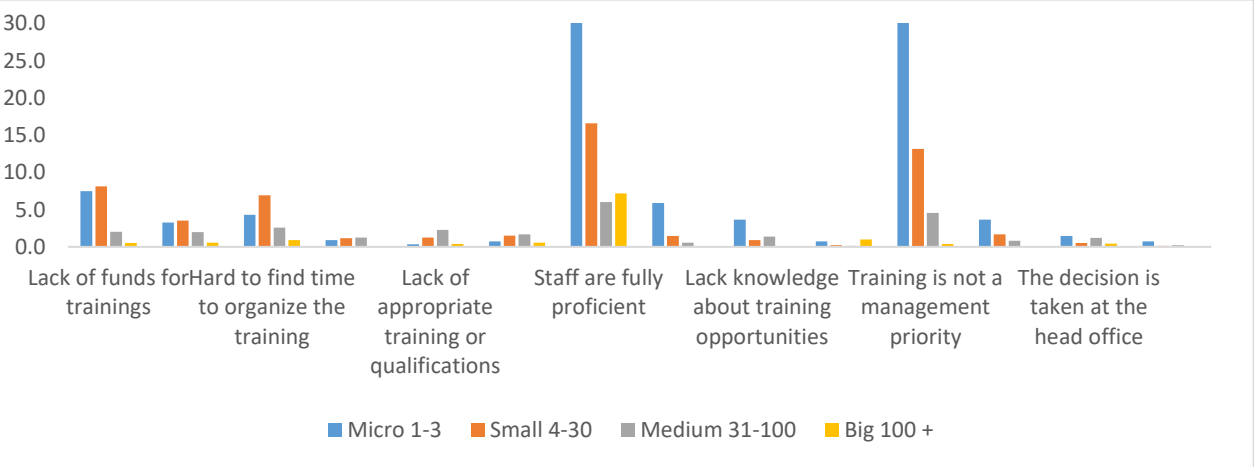


On average, the proficiency of staff was the main reason for business enterprises not conducting staff training, with 6.9% of managers reporting. 20.3% of service managers reported a fully proficient of staff as the top barrier. Other significant reasons include that training is not a management priority, and therefore, no urgent need to carry out any training. However, by size, the impact of provision of training was distributed in micro, small and medium business-enterprises, with 7.8%, 4.1%, and 1.9%.

Graph 2.39: Barriers to Providing Trainings by Sector, % of Business Enterprise Managers



Graph 2.40: Barriers to Providing Trainings by Business Enterprise Size, % of Business Enterprises



3. BUSINESS PERFORMANCE

This section will measure business performance by looking at several indicators including income, employment growth, and asset growth.

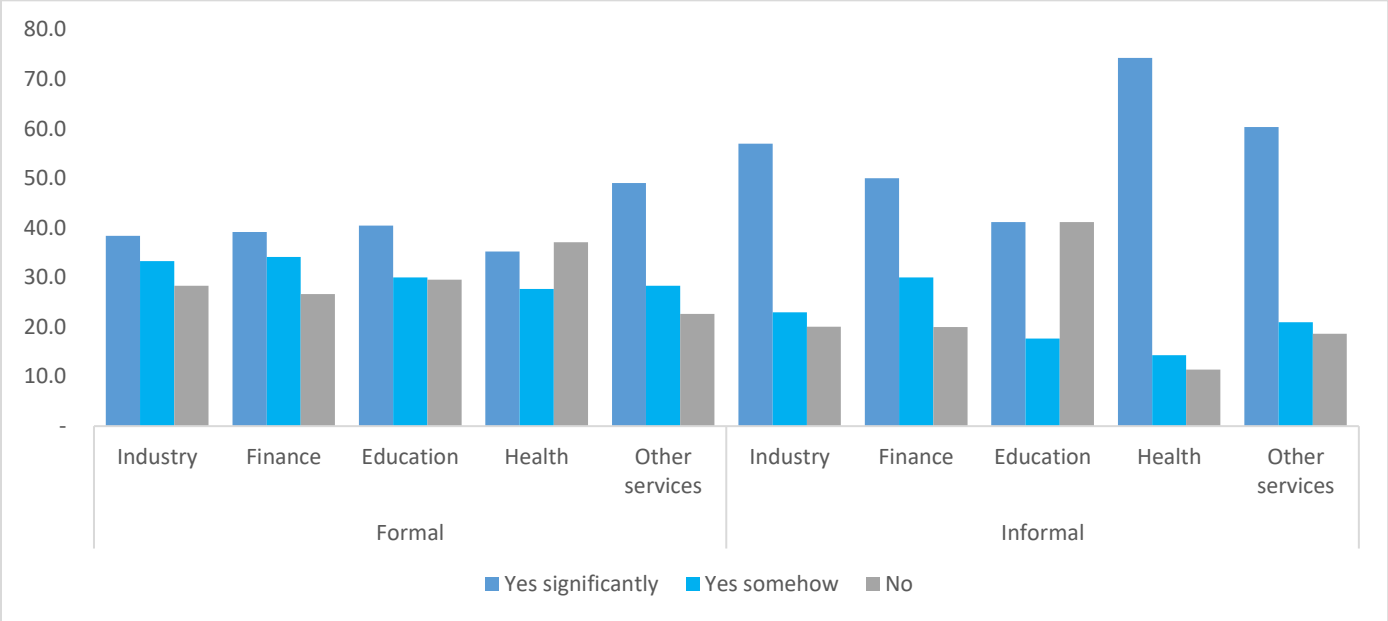
3.1. Impact of Economic Conditions on Rwandan Business Enterprises

Economic conditions refer to the state or health of a country's economy at a specific point in time. These conditions encompass a wide range of factors that collectively describe the overall economic well-being of a nation. One key component of economic conditions is the Global Economic Environment made of global factors such as international trade, geopolitical events, and global economic trends. The interconnected nature of the world economy means that events in one part of the world can have ripple effects elsewhere. Analysing these and other factors helps economists, policymakers, businesses, and individuals understand the current state of the economy and make informed decisions. Economic conditions can vary over time, and monitoring these indicators is essential for assessing the overall health and direction of an economy.

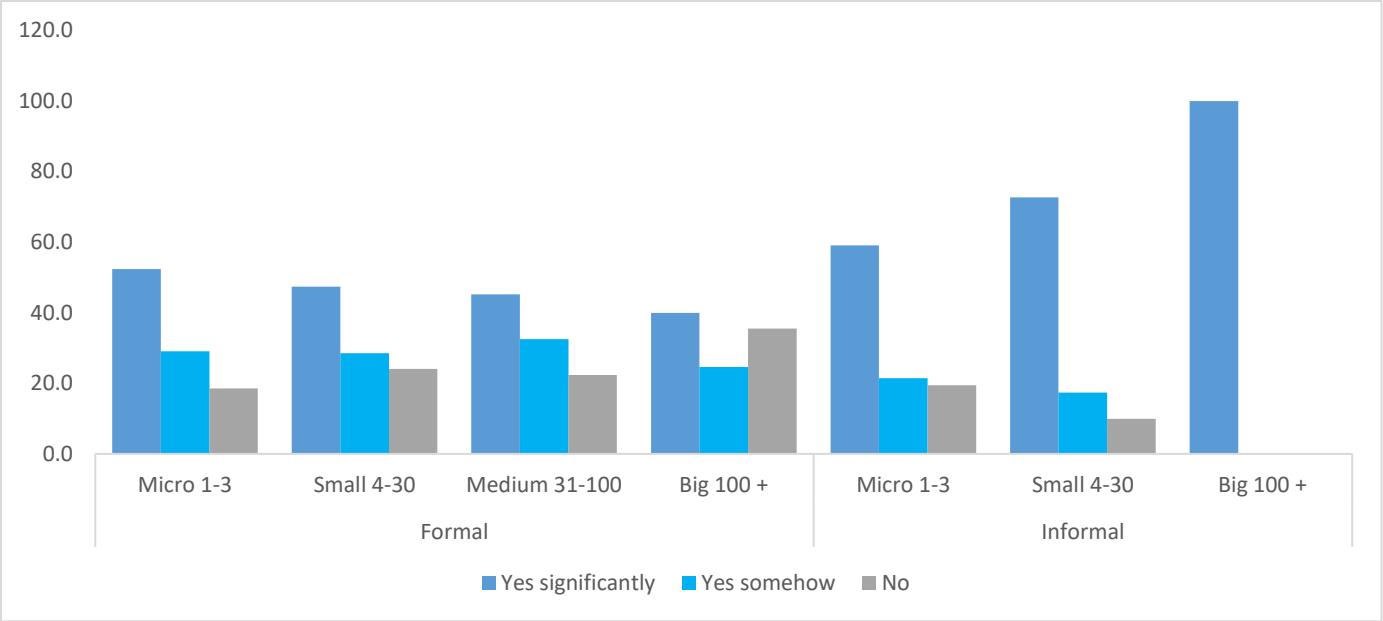
In 2023 economic conditions had disproportionate impacts on the informal sector. On average about 81.2 % of business enterprises in the informal sector experienced a decrease in income, with 60.0% and 21.2 % reporting the impacts as significant and somehow significant respectively. This is compared to the average of 50.7 % of business enterprises in the formal sector that reported a decrease impact on their income. Compared to the 60.0% in the informal sector, 29.6% of formal business enterprises described the decrease as significant. Impacts varied across sectors. In the formal sector, business enterprises in the other services sector were particularly impacted with 49.1% of business enterprises reporting significant income decrease, followed by business enterprises in the education sector with 40.4% (Graph 3.1). Business enterprises in the health sector exhibited the least financial hit, with 35.2% of business enterprises reporting significant income decreases. On the other hand, the health and other services sectors in the informal sector were the most hit, with 74.3% and 60.4% of business enterprises reporting significant income decreases respectively.

Analysis by size reveals differential impacts, with business enterprises in the informal sector being disproportionately impacted. 100.0% and 72.7% of big and small business enterprises in the informal sector reported significant income decreases respectively. Similarly, in the formal sector, micro and small business enterprises were most impacted with 52.4% and 47.4% of business enterprises reporting significant income decreases.

Graph 3.1: Impact of Economic Conditions by Decreasing Incomes by Sector, % of Business Enterprises

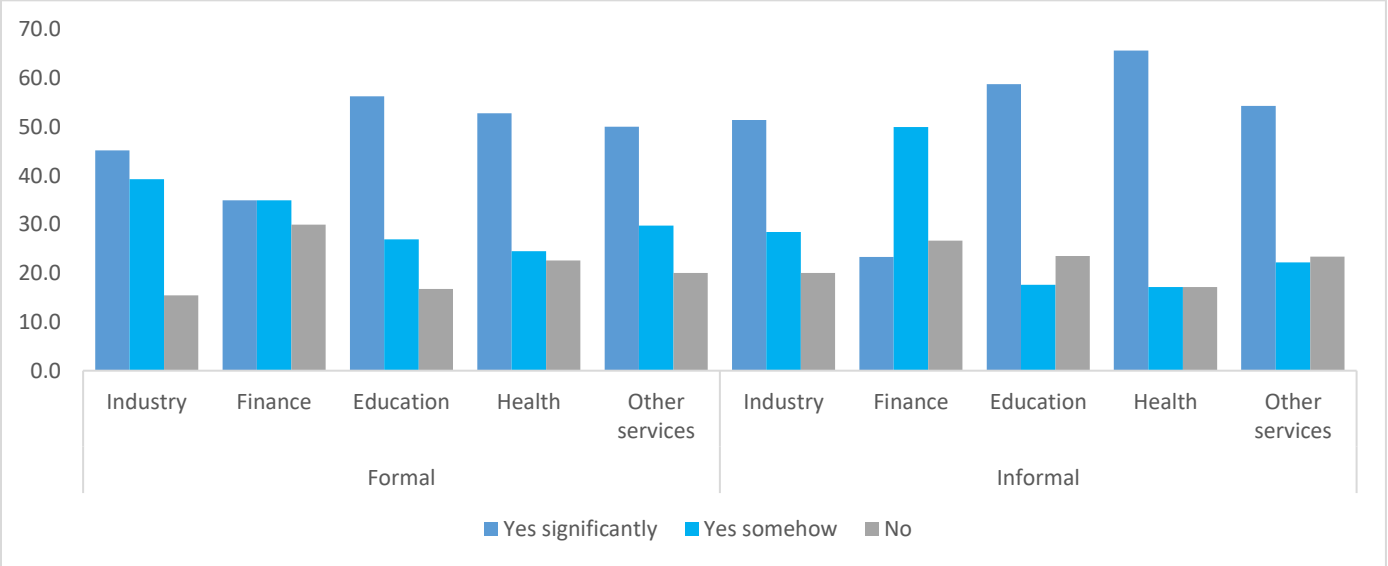


Graph 3.2: Impact of Economic Conditions by Decreasing Incomes by size, % of Business Enterprises

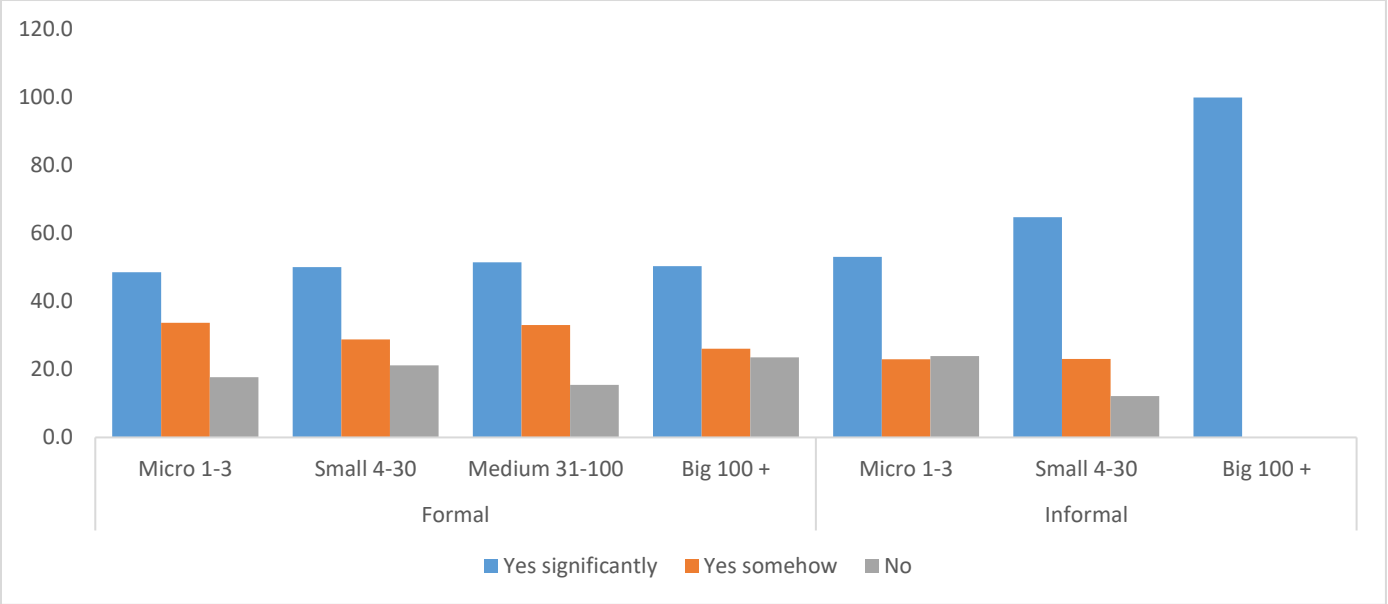


Economic conditions also resulted in expenditures increases across business enterprises. In fact, 82.9%, 80.0%, and 76.6% of informal business enterprises in health, industry, and other services respectively experienced an increase in expenditures, as are 76.5% and 73.3% of informal business enterprises in education and finance. For the formal sector, 84.5% and 83.3% of formal business enterprises in industry and education reported expenditure increases respectively. Analysis by size shows larger vulnerabilities in the informal sector with 100.0% and 87.9% of big and small business enterprises reporting significant expenditure increases. Meanwhile, in the formal sector, 84.6% and 82.3% of medium-sized and micro business enterprises respectively reported significant expenditure increases.

Graph 3.3: Impact of Economic Conditions by Increasing Expenditures by Sector, % of Business Enterprises

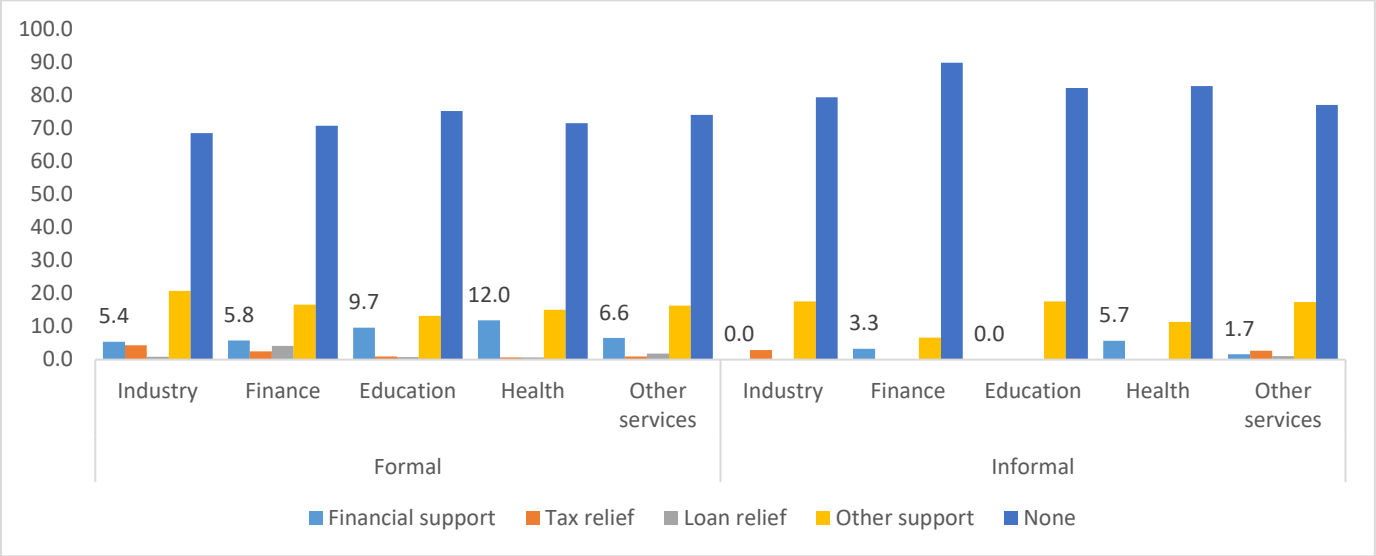


Graph 3.4: Impact of Economic Conditions by Increasing Expenditure by Size, % of Business Enterprises

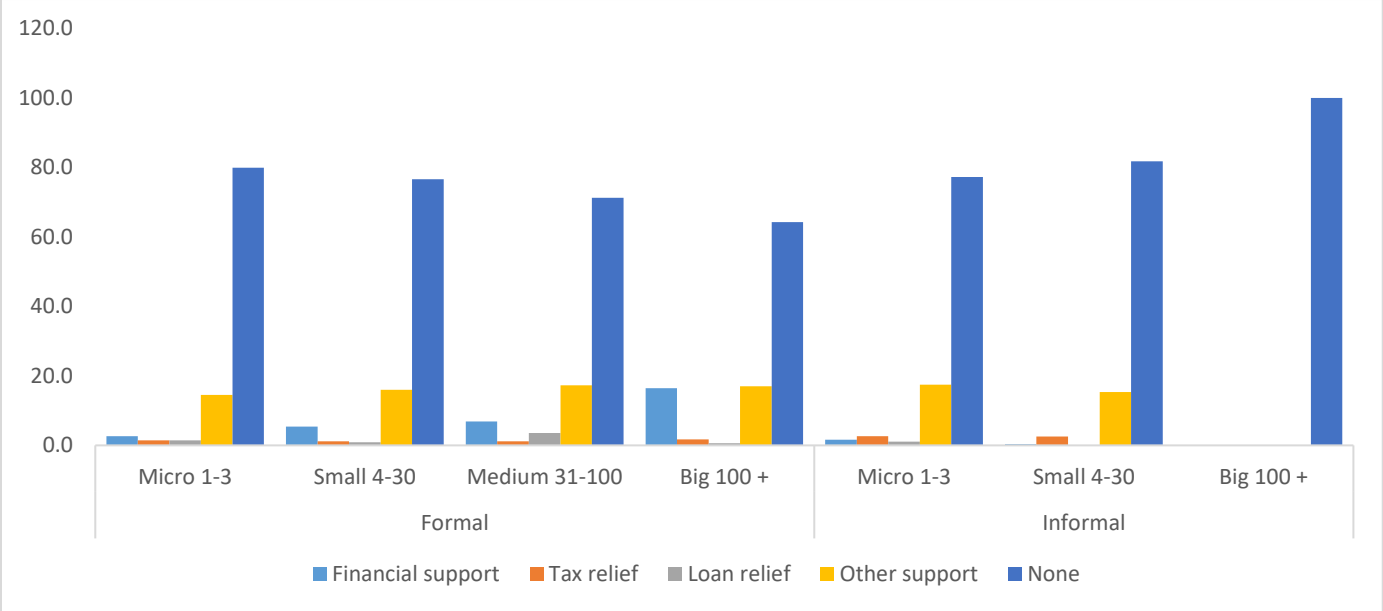


With clear vulnerabilities to the recent economic conditions, analysis reveals that many business enterprises have received relief. Figures show that 31.4% and 29.2% of formal business enterprises in industry and finance have received relief. Also, around 10% of formal business enterprises in health and education have received financial support. In the informal sector, 5.7% and 3.3% of health and finance business enterprises have received financial support. Similarly, 16.5%, 6.9% and 5.4% of formal big, medium and small business enterprises respectively have received the financial relief, while only 21.9% of medium formal business enterprises have received support in other forms apart from the financial relief against 19.3% of formal big business enterprises.

Graph 3.5: Share of Business Enterprises Receiving Support by Sector, % of Business Enterprises



Graph 3.6: Share of Business Enterprises Receiving Support by Business Enterprise Size, % of Business Enterprises

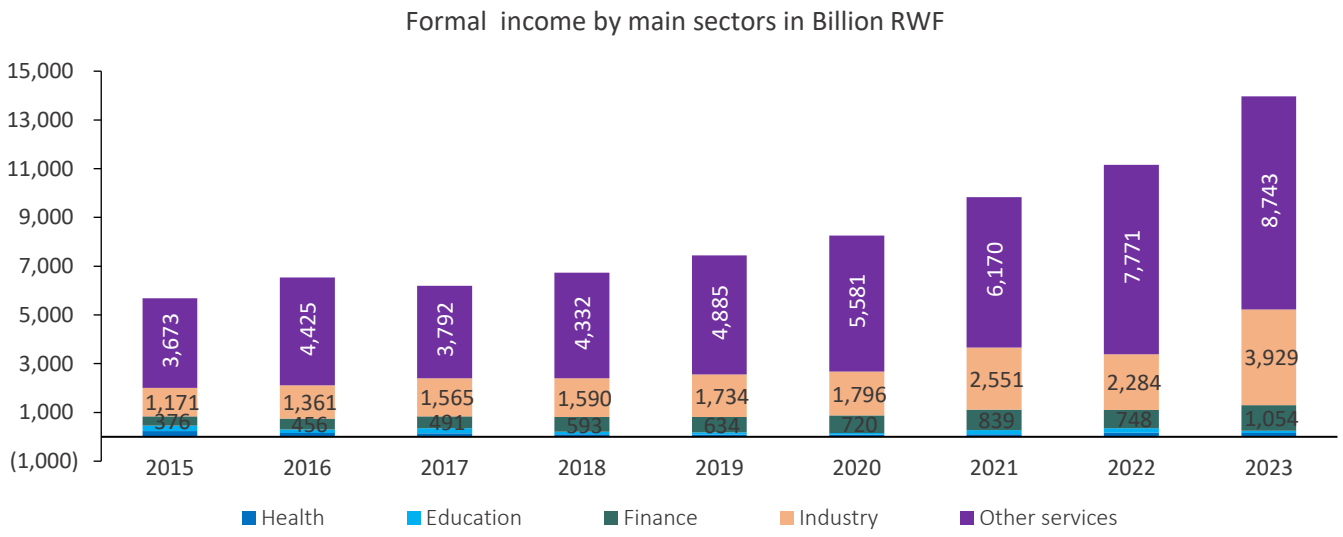


3.2. Formal Sector Performance

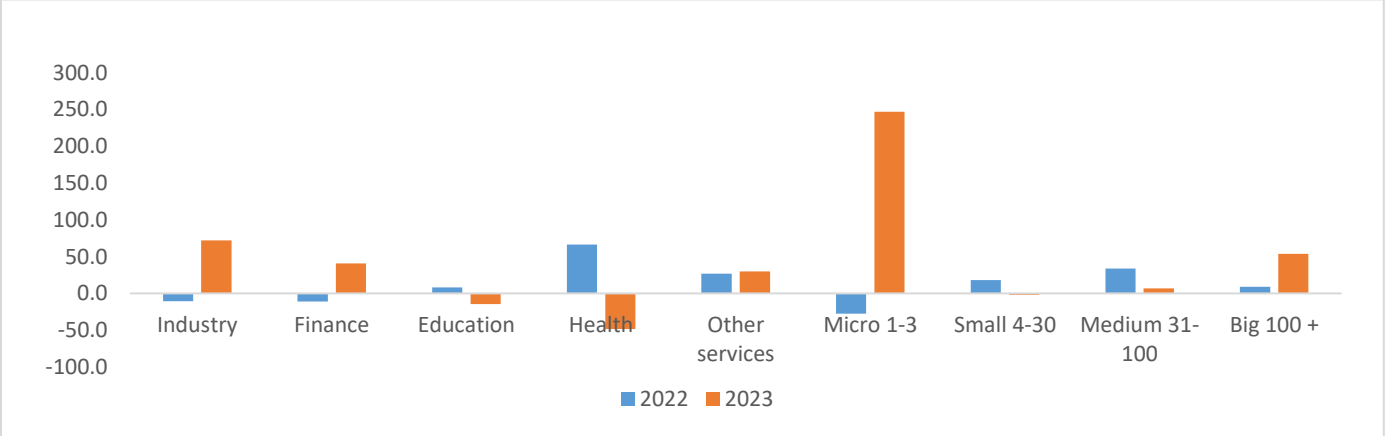
3.2.1. Business Enterprise Income

In absolute terms, incomes grew from RWF 10,117 billion in 2022 to RWF 13,973 in 2023 (Graph 3.7). However, year on year, while formal business enterprises' income grew by 13% in 2022, it grew by 38% in 2023. Furthermore, the analysis reveals that income of the industry sector has grown by 72.1% while the finance sector's income has increased by 40.9%. The other services sector's income rose by 30.0%.

Graph 3.7: Business Enterprise Income by Sector



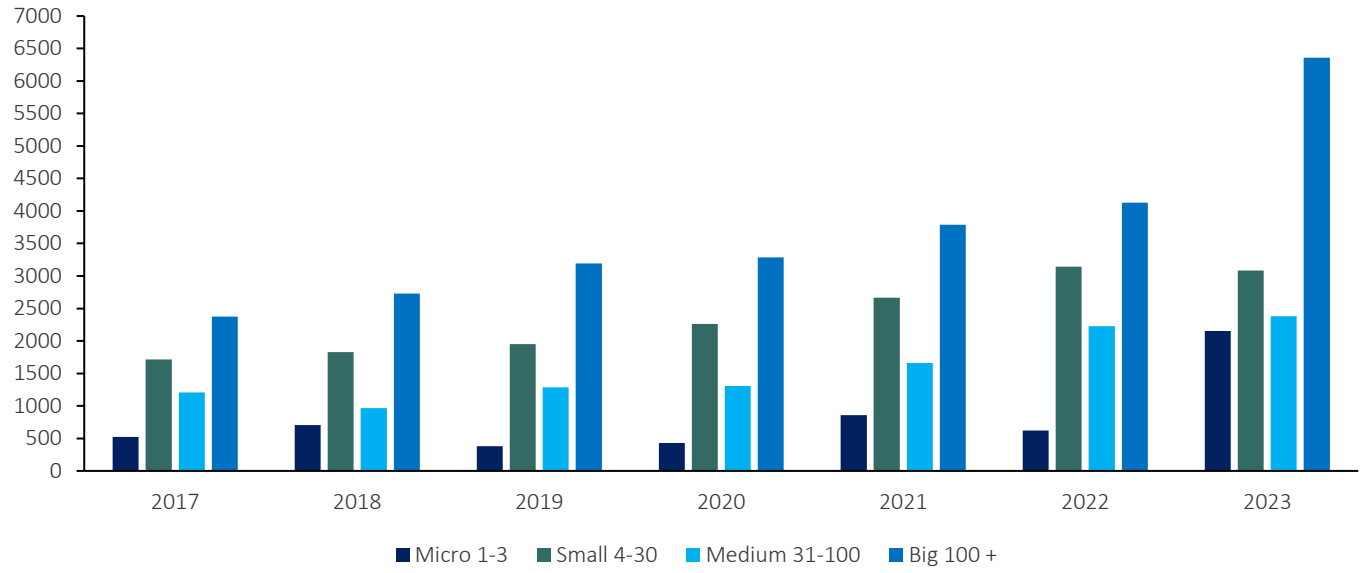
Graph 3.8: Income Growth Rates by Sector and Business Enterprise Size



Compared to the total income of all enterprises, the big enterprises have the highest share of income at 45.5% followed by small enterprises, 22.1%. Year on year, the micro business-enterprises experienced high increased income in 2023 (growing by 247.1%). In 2023, the small business enterprises registered a slight negative growth rate of -1.8% while medium business-enterprises grew by 6.9% compared to 33.9 % growth in 2022. Moreover, both economic sectors of health (-48.4%) and education (-14.7%) registered declines in 2023, with incomes decreasing sharply. The industry and

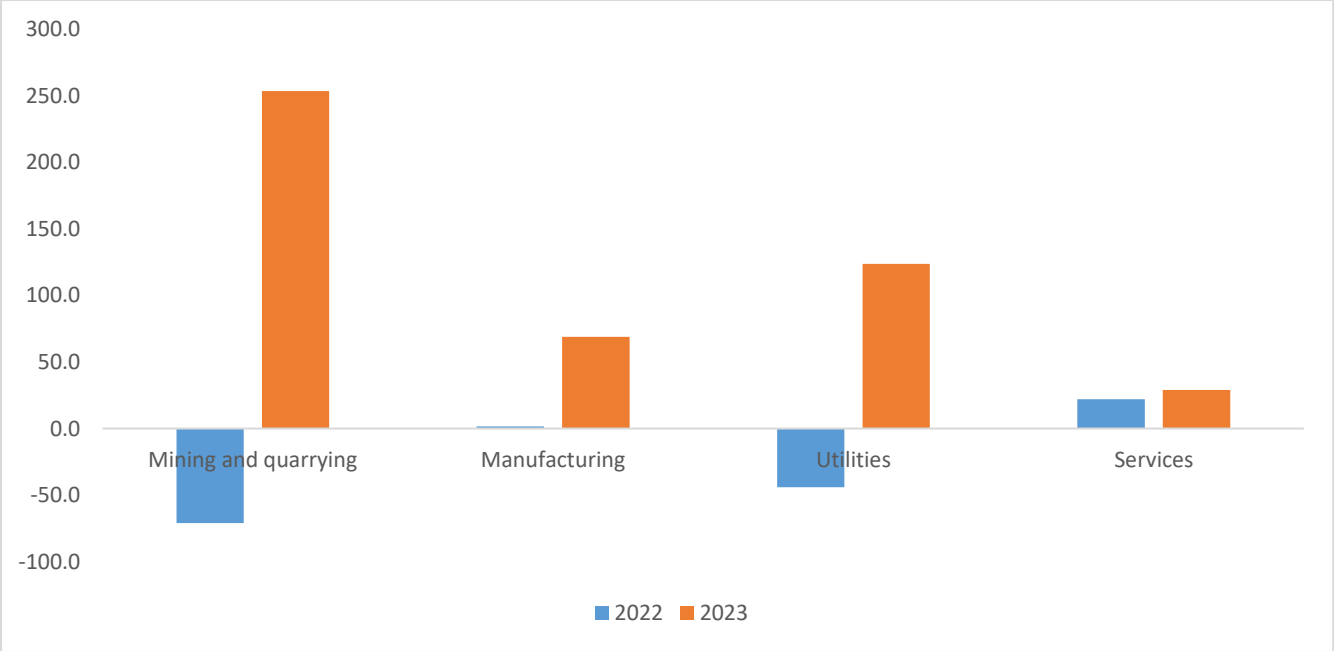
finance sectors' income rose sharply by 72.1% and 30.0% in 2023 respectively. Overall, the income of business-enterprises grew by 38.1% in 2023 as compared to the 12.7% increase in 2022.

Graph 3.9: Business Enterprise Income by Size



Overall, the total income of enterprises grew by 3,857 billion Rwf in 2023 from 2022. However, there is a sharp decline in income registered by small enterprises of -58 billion Rwf in 2023 from the level of 3,143 billion Rwf in 2022. The big business-enterprises represent the largest share of total income with 6,356 billion Rwf followed by small businesses with 3,085 billion Rwf.

Graph 3.10: Income Growth by Economic Activity



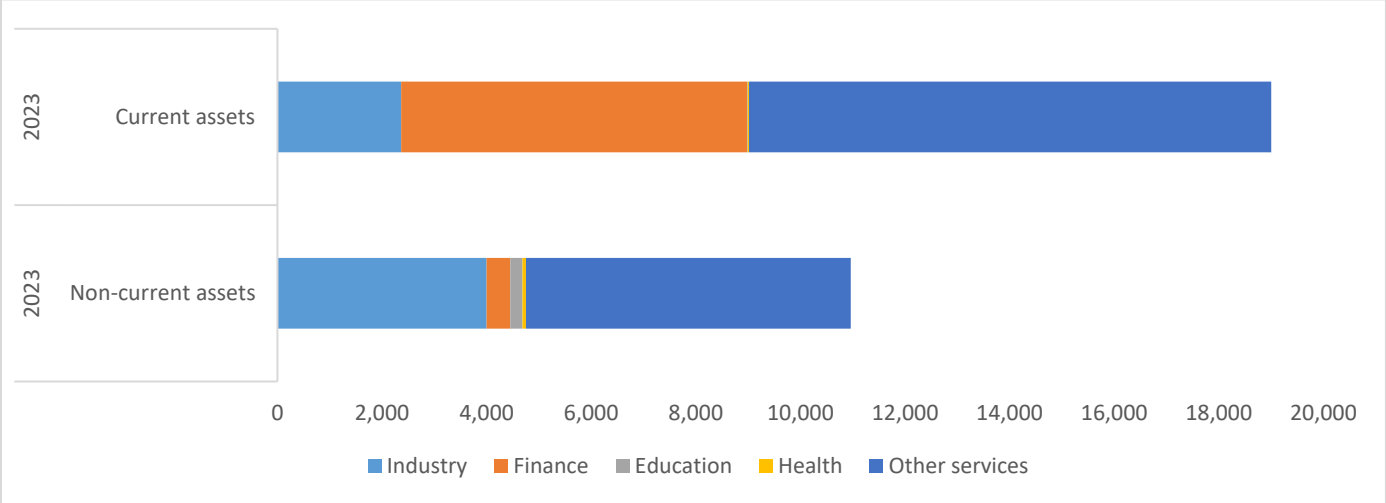
Further disaggregation reveals differences in income growth rates by economic activity. *Activities involved in mining and quarrying as well as utilities sectors have registered a big increase in income in 2023 (Graph 3.10). Year on year, in 2023, all economic activities have realised a growth in income.*

3.2.2. Balance Sheets

Financial stability, as indicated by several factors such as current and noncurrent assets, equity, liabilities, cash flow, and debt, is the most important feature of financial and economic activity. A strong balance is essential to a business enterprise's growth. In fact, the state of a business enterprise's balance sheet has been shown to influence its resilience to economic downturns and shocks as they are able to cushion against the effects of shocks for a longer period. Business enterprises with stronger balance sheets are structurally sounder than those without. For instance, business enterprises with stronger balance sheets are likely to have higher collateral and thus more likely to gain access to finance and obtain investment. Business enterprises with stronger financial capacities are more competitive and are more likely to invest in activities that spur their revenue growth, such as research and development, better skilled workers, information communication technologies, and quality equipment which in turn has effects on worker and capital productivity.

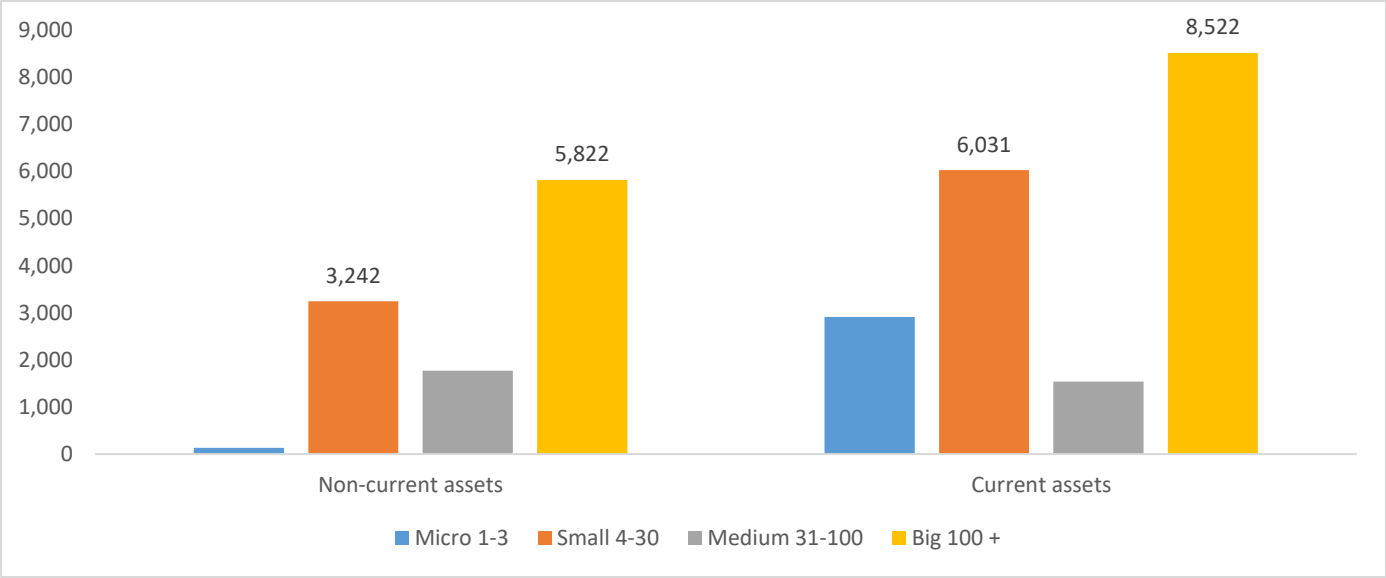
This report defines current assets as those resources held by a business enterprise that can be converted into cash streams in the short-term, usually within a year and may include account receivables, bank deposits, short-term investments and other inventory. Non-current assets are more long-term investments usually of high value for long-term revenue generation such as land, property, machinery, patents, and goodwill. Graph 3.11 illustrates the distribution and trend of current and noncurrent assets by sector. The financial sector has grown the value of its current assets from RWF 5,308.9 billion in 2022 to RWF 6,616 billion in 2023. Also, the financial sector accounted for the largest share of current assets as compared to other sectors in 2023. ***On the other hand, the services sector dominates shares and values of non-current assets in absolute terms***, accounting for RWF 6,214 billion in 2023 and followed by the industry sector with RWF 4,002 billion.

Graph 3.11: Balance Sheet by Sector



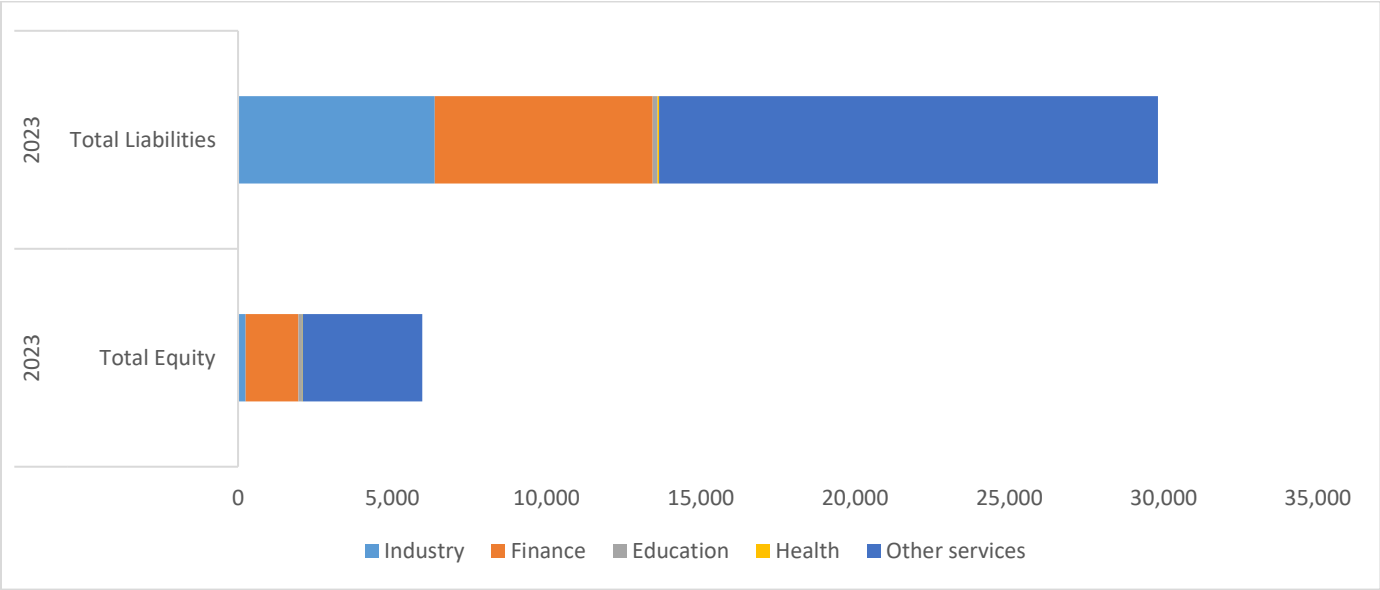
The large business enterprises (Rwf 8,522 billion) account for the largest share of current assets followed by small enterprises (Rwf 6,031 billion) in (Graph 3.12). Similarly, for the non-current assets, the big enterprises still dominate by share with RWF 5,822 billion followed by small enterprises with Rwf 3,242 billion.

Graph 3.12: Balance Sheet by Size



The other services sector has the largest total liabilities of RWF 16,177 billion followed by the finance sector with RWF 7,064 billion. The health sector has the least total liability of RWF 53 billion. Alternatively, industry sector holds the largest share of total equity of RWF 3,883 billion followed by the finance sector with RWF 1,718 billion.

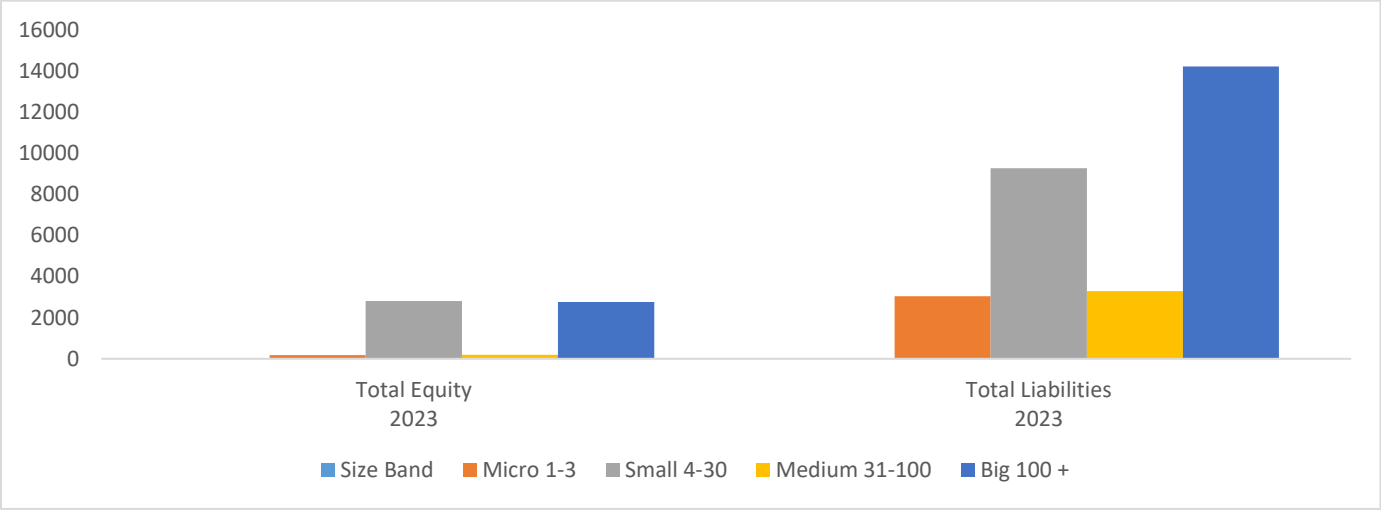
Graph 3.13: Equity and Liability by Sector



In 2023, the large business enterprises (RWF 14,225 billion) account for the largest share of total liabilities followed by small enterprises (RWF 9,267 billion) in (Graph 3.14). For the total equity, the small enterprises dominate

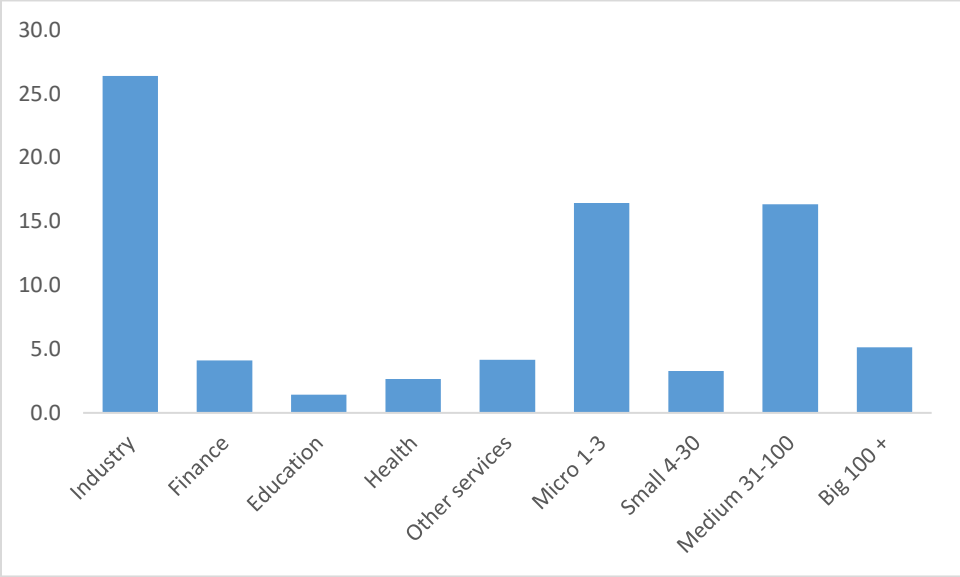
by share with RWF 2,814 billion followed by big enterprises with RWF 2,770 billion. For both equity and liability, micro enterprises hold the least share.

Graph 3.14: Equity and Liability by Size



Another important indicator is the Debt-to-Equity (D/E) ratio, which measures the extent of a business enterprise's dependence on debt (Graph 3.15). The industry sector registered the highest D/E ratio in 2023 peaking at 26.4. The other services and finance sectors follow in the D/E ratios. The micro enterprises represent the largest ratio of debt-to-equity at 16.4 while the least are the small enterprises (3.3).

Graph 3.15: Debt-to-Equity Ratio by Sector and Size



3.2.3. Employment and income by top manager's sex

Table 3.1: Distribution of employees by gender and economic activity: formal sector

Main Economic Activity	Percentage share		
	Male	Female	Total
Mining and quarrying	82.8%	17.2%	100.0%
Manufacturing	59.0%	41.0%	100.0%
Electricity, gas, steam and air conditioning supply	54.6%	45.4%	100.0%
Water supply; sewerage, waste management and remediation activities	76.8%	23.2%	100.0%
Construction	83.8%	16.2%	100.0%
Wholesale and retail trade; repair of motor vehicles and motorcycles	73.0%	27.0%	100.0%
Transportation and storage	74.4%	25.6%	100.0%
Accommodation and food service activities	58.6%	41.4%	100.0%
Information and communication	72.3%	27.7%	100.0%
Financial and insurance activities	50.2%	49.8%	100.0%
Real estate activities	71.2%	28.8%	100.0%
Professional, scientific and technical activities	63.5%	36.5%	100.0%
Administrative and support service activities	76.1%	23.9%	100.0%
Education	57.3%	42.7%	100.0%
Human health and social work activities	36.9%	63.1%	100.0%
Arts, entertainment and recreation	68.4%	31.6%	100.0%
Other service activities	62.4%	37.6%	100.0%
Total	63.2%	36.8%	100.0%

Source: NISR, IBES2023

The distribution of employees by sex and economic activity in the formal sector of Rwanda's economy is depicted in Table 3.1 while the distribution of income by enterprise size and the sex of the top manager has been presented in Table 3.2. Different patterns are observed from these two tables.

Table 3.2: Income by enterprise size and the sex of the top manager, value in Billion RWF

Enterprise size	Male	Female	Total
Micro 1-3	1197.3	956.2	2153.5
Small 4-30	2,156	929	3,085
Medium 31-100	1,925	454	2,378
Big 100 +	5,226	1,130	6,356
Total	10,504	3,469	13,973

Source: NISR, IBES2023

Table 3.3: Income by economic activity and the sex of the top manager, value in Billion RWF

Economic activity	Male	Female	Total
Mining and quarrying	475	9	484
Manufacturing	1,953	135	2,089
Electricity, gas, steam and air conditioning supply	251	-	251
Water supply; sewerage, waste management and remediation activities	33	-	33
Construction	1,013	60	1,073
Wholesale and retail trade; repair of motor vehicles and motorcycles	4,128	1,870	5,998
Transportation and storage	225	476	701
Accommodation and food service activities	306	62	368
Information and communication	131	423	555
Financial and insurance activities	809	245	1,054
Real estate activities	110	11	120
Professional, scientific and technical activities	239	39	278
Administrative and support service activities	346	100	446
Education	146	15	160
Human health and social work activities	77	12	89
Arts, entertainment and recreation	158	-	158
Other service activities	106	11	117
Total	10,504	3,469	13,973

Source: NISR, IBES2023

Income distribution by economic activity and the sex of the top manager shows that male managed formal business enterprises have a lion share of 75.2 per cent. The female managed business enterprises account for 24.8 per cent.

Table 3.4: Number of trained Staff by enterprise size and top manager's sex

Size Band	Male	Femal	Total
Micro 1-3	133	31	165
Small 4-30	20,451	8,449	28,900
Medium 31-100	51,904	17,790	69,694
Big 100 +	83,886	20,364	104,251
Total	156,375	46,635	203,009

Source: NISR, IBES2023

Table 3.4 presents the number of trained Staff by enterprise size and top manager's sex. In total 203,009 employees have had job training. Education, Human health and social work activities and Accommodation and food service activities have trained more Staff with 88,474 ; 18459 and, 16,684 respectively (Table 3.5).

Table 3.5: Number of trained Staff by economic activity and top manager's sex

Economic activity	Male	Femal	Total
Mining and quarrying	13,122	1,866	14,988
Manufacturing	10,598	1,084	11,682
Electricity, gas, steam and air conditioning supply	991	-	991
Water supply; sewerage, waste management and remediation activities	562	-	562
Construction	943	48	991
Wholesale and retail trade; repair of motor vehicles and motorcycles	10,488	5,334	15,823
Transportation and storage	2,286	396	2,683
Accommodation and food service activities	11,092	5,593	16,684
Information and communication	1,059	56	1,115
Financial and insurance activities	4,310	1,517	5,827
Real estate activities	225	-	225
Professional, scientific and technical activities	1,703	2,646	4,349
Administrative and support service activities	8,713	1,097	9,810
Education	66,231	22,243	88,474
Human health and social work activities	15,032	3,427	18,459
Arts, entertainment and recreation	685	-	685
Other service activities	8,335	1,327	9,662
Total	**156,375**	**46,635**	**203,009**

Source: NISR, IBES2023

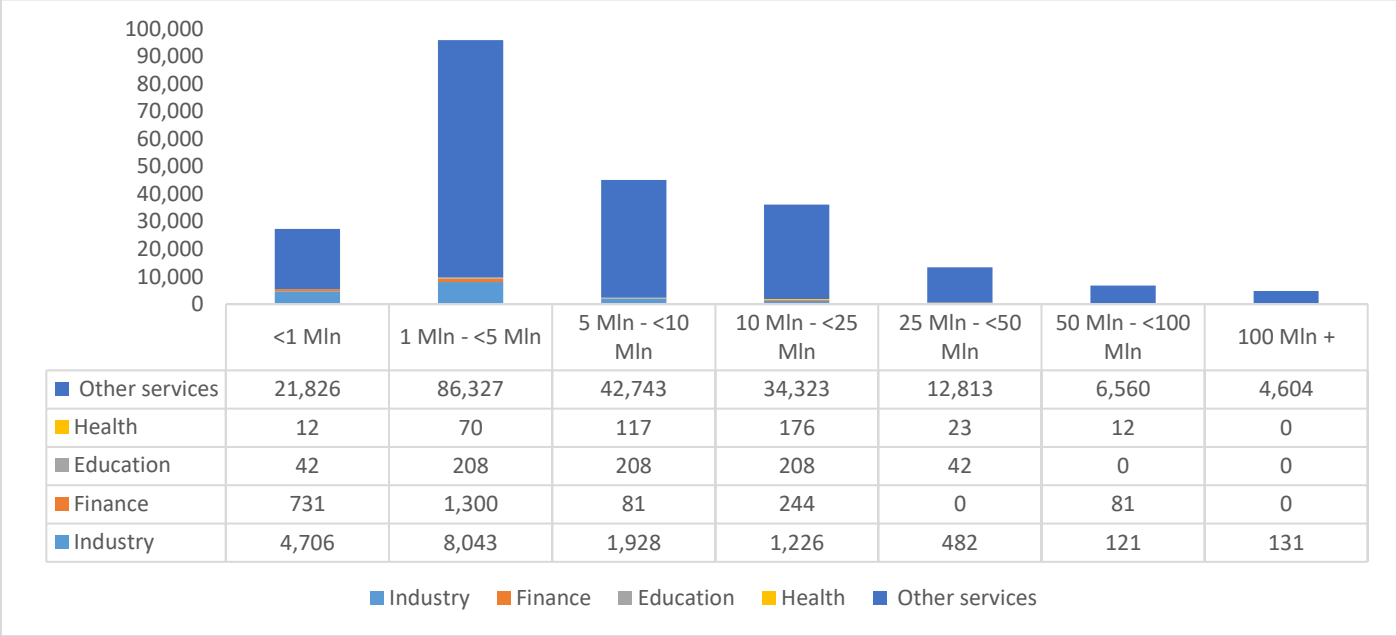
3.3. Informal Sector Performance

This subsection discusses the business performance of the informal sector. Unlike the formal sector, performance in the informal sector is measured against three metrics: income, expenditure, and addition of fixed assets. Business enterprise performance is based on absolute count/numbers under different income bands per year.

3.3.1. Income

Generally, income for Rwandan informal business enterprises lie in the income levels between RWF 1 million to RWF 5 million. For all the years analyzed, the income band between RWF 1 million and 5 million was composed of the highest number of informal business enterprises, followed by the income band of RWF 5 million to 10 million. Further, business enterprises in the other services sector dominated the composition of informal business enterprises in 2023 and income categories.

Graph 3.16: Number of Business Enterprises by Income Categories (Sector)

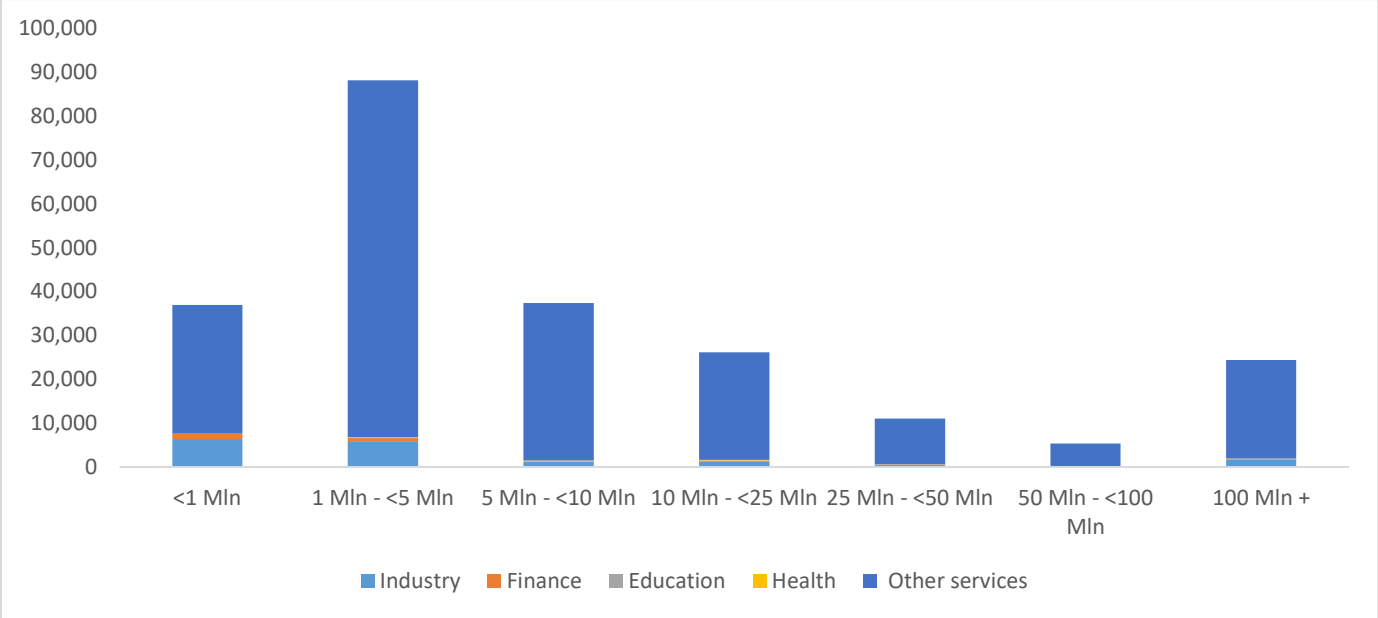


	<1 Mln	1 Mln - <5 Mln	5 Mln - <10 Mln	10 Mln - <25 Mln	25 Mln - <50 Mln	50 Mln - <100 Mln	100 Mln +
Other services	21,826	86,327	42,743	34,323	12,813	6,560	4,604
Health	12	70	117	176	23	12	0
Education	42	208	208	208	42	0	0
Finance	731	1,300	81	244	0	81	0
Industry	4,706	8,043	1,928	1,226	482	121	131

3.3.2. Expenditure

As for income, most of the Rwandan business enterprises' expenditure lay in the RWF 1 million to RWF 5 million category, followed by the expenditure category of RWF 5 million to 10 million. The informal business-enterprises in the other service sector accounted for the highest share of expenditure by categories.

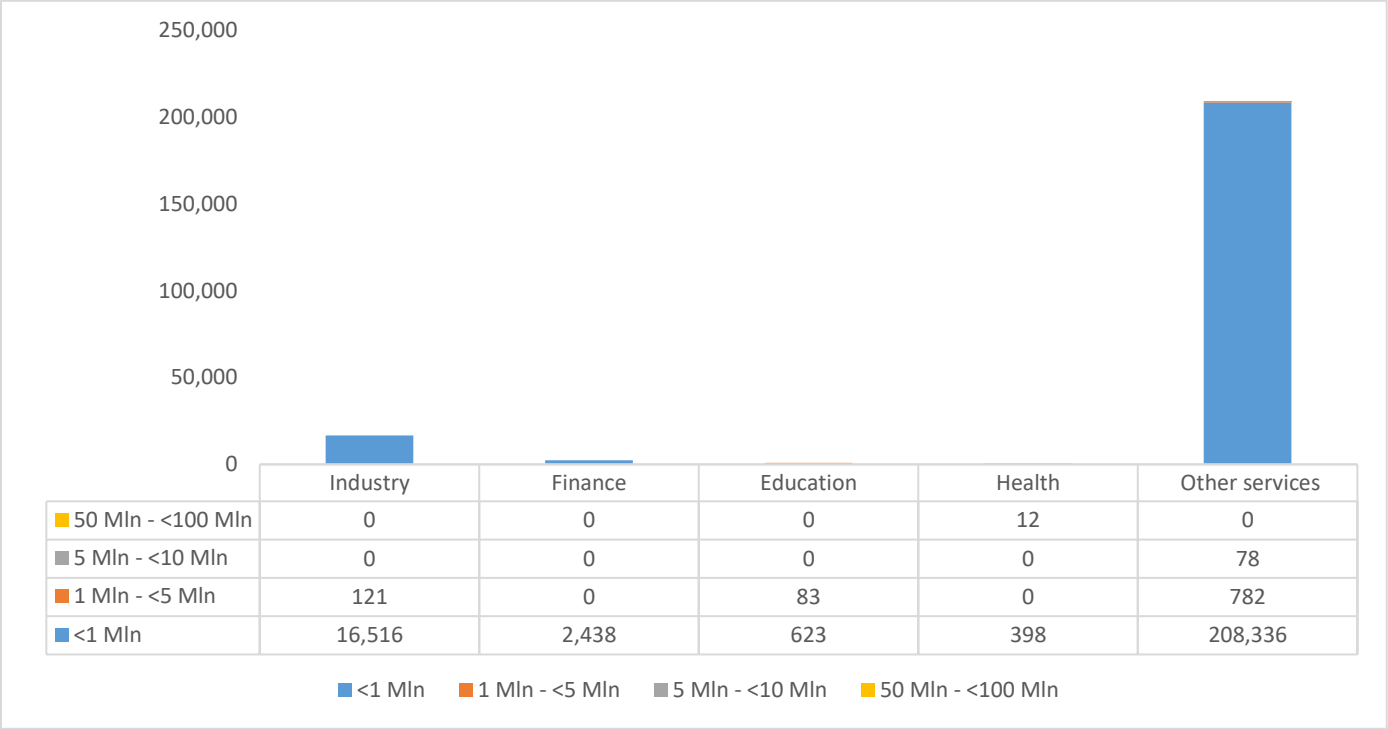
Graph 3.17: Number of Business Enterprises by Expenditure Categories (Sector)



3.3.3. Asset Accumulation

In 2023, more informal business-enterprises have added new assets for a total value of less than RWF 1 million each (Graph 3.18), with a very miniscule number of informal business-enterprises adding assets with a total value of between RWF 1 million and 5 million each. The other services sector (208,335) accounts for the largest number of informal businesses that have added the value of new fixed assets of less that RWF 1 million each followed by the industry sector (16,516).

Graph 3.18: Number of Business Enterprises by Total Value of Asset Addition Categories (Sector)



	Industry	Finance	Education	Health	Other services
50 Mln - <100 Mln	0	0	0	12	0
5 Mln - <10 Mln	0	0	0	0	78
1 Mln - <5 Mln	121	0	83	0	782
<1 Mln	16,516	2,438	623	398	208,336

3.3.4. Employment and income by top manager's sex

The distribution of employees by gender and economic activity in the informal sector shows that 56 percent are male against 44 percent are female (Table 3.6).

Table 3.6: Distribution of employees by gender and economic activity: Informal sector

Main Economic Activity	Percentage share		
	Male	Female	Total
Mining and quarrying	77%	23%	100%
Manufacturing	65%	35%	100%
Water supply; sewerage, waste management and remediation	47%	53%	100%
Construction	78%	22%	100%
Wholesale and retail trade; repair of motor vehicles and motorcycles	51%	49%	100%
Transportation and storage	96%	4%	100%
Accommodation and food service activities	53%	47%	100%
Information and communication	63%	38%	100%
Financial and insurance activities	56%	44%	100%
Real estate activities	83%	17%	100%
Professional, scientific and technical activities	77%	23%	100%
Administrative and support service activities	59%	41%	100%
Education	38%	62%	100%
Human health and social work activities	58%	42%	100%
Arts, entertainment and recreation	63%	38%	100%
Total	56%	44%	100%

Source: NISR, IBES2023

Table 3.7: Number of informal businesses by income category and top manager's sex

Income category	Male	Female	Total
<1 Mln	15,425	11,891	27,316
1 Mln - <5 Mln	51,119	44,829	95,948
5 Mln - <10 Mln	25,805	19,272	45,077
10 Mln - <25 Mln	22,136	14,040	36,177
25 Mln - <50 Mln	7,632	5,728	13,360
50 Mln - <100 Mln	3,608	3,166	6,774
100 Mln +	3,667	1,068	4,735
Total	129,391	99,995	229,386

Source: NISR, IBES2023

The analysis of the distribution of the total number of informal businesses by income category and the top manager's sex reveal that 43.6 percent are female managed informal businesses (Table 3.7).

Table 3.8: Number of trained Staff by enterprise size and top manager's sex, informal sector

Size Band	Male	Female	Total
Micro 1-3	7,481	2,629	10,110
Small 4-30	7,719	12,532	20,251
Total	15,200	15,161	30,361

Source: NISR, IBES2023

The number of trained Staff by enterprise size and top manager's sex in the informal sector is illustrated in Table 3.8 while the distribution of the total number of trained Staff by economic activity and top manager's sex in informal sector in presented in Table 3.9.

Table 3.9: Number of trained Staff by economic activity and top manager's sex, informal sector

Main Economic Activity	**Male**	**Female**	**Total**
Mining and quarrying	-	9,001	9,001
Manufacturing	434	723	1,157
Construction	15	-	15
Wholesale and retail trade; repair of motor vehicles	4,982	2,896	7,878
Accommodation and food service activities	2,635	988	3,623
Information and communication	253	-	253
Financial and insurance activities	-	99	99
Professional, scientific and technical activities	536	-	536
Administrative and support service activities	883	-	883
Education	1,949	1,004	2,953
Human health and social work activities	577	201	778
Arts, entertainment and recreation	71	-	71
Other service activities	2,867	249	3,116
Total	15,200	15,161	30,361

Source: NISR, IBES2023

4. CONCLUSIONS AND FURTHER AREAS OF RESEARCH

The Integrated Business Enterprise Survey (IBES) 2023 has unveiled critical insights into the dynamics of Rwanda's business ecosystem. The findings highlight commendable progress in fostering business growth but also underscore persistent challenges requiring coordinated action among government agencies, private sector stakeholders, and development partners. Key challenges include a continued reliance on informal financing mechanisms, significant underutilization of productive capacity, limited engagement in export activities, and enduring infrastructure constraints, such as access to reliable power.

These findings serve as a crucial foundation for informed decision-making and policy development aimed at addressing these barriers. At the same time, they raise pertinent questions and point to opportunities for deeper exploration, offering valuable pathways for further research that can guide Rwanda's journey toward sustainable economic development.

4.1. Potential Research Questions and Priority Areas

To address the challenges identified and build on the insights gained from IBES 2023, the following key areas of research are proposed:

i. Informal Financing in Rwandan Businesses

An in-depth exploration of the role of informal financing in Rwanda's business ecosystem is needed. This research would investigate:

- The sources and mechanisms of informal financial channels.
- The socio-economic and structural factors driving reliance on informal financing.
- The benefits and limitations of these informal systems in supporting business operations.
- Strategies for enhancing access to and adoption of formal financial services, thereby fostering broader financial inclusion.

ii. Capacity Utilization Challenges in Rwandan Businesses

A targeted analysis of capacity underutilization is critical to understanding and addressing this systemic issue. Such research would aim to:

- Identify the root causes behind businesses operating below their full potential.
- Assess the economic and productivity impacts of underutilized capacity across sectors.
- Develop actionable strategies for optimizing capacity utilization, including workforce development, technology adoption, and investment incentives.

iii. Enhancing Export Participation of Rwandan Businesses

Expanding Rwanda's presence in global markets is vital for long-term economic growth. Research in this area should:

- Investigate the internal (e.g., skills, production scale, and quality standards) and external (e.g., market access, regulatory barriers) factors limiting export participation.
- Examine success stories and lessons learned from Rwandan businesses that have successfully entered international markets.
- Propose evidence-based strategies and policies to incentivize and support businesses in diversifying their products and entering the export market.

Addressing these critical research areas will not only deepen our understanding of the structural challenges faced by Rwandan businesses but also pave the way for pragmatic solutions that align with Rwanda’s vision for sustainable and inclusive economic development. Through collaborative efforts, data-driven policymaking, and stakeholder engagement, Rwanda can continue to strengthen its business environment and unlock its full economic potential.

APPENDICES

APPENDIX 1: METHODOLOGY AND RATIONALISATION OF KEY CONCEPTS

1. Integrated Business Enterprise Survey

As stated in the introduction of this report, IBES is an annual data collection exercise by NISR on business enterprises operating in Rwanda. The survey aims at providing reliable statistics and data on the nature of business enterprises in Rwanda, their labour employment patterns, ownership and legal characteristics of the businesses among others. The survey and its subsequent report also provide insights on the businesses' perspective on the business environment they operate in. The survey compiles detailed statistics on business aspects as access to finance, waste management practices, energy usage, and utilisation of information communication technologies. Further, business performance by sector and size of business enterprises are analysed using income and expenditure data.

It extensively compiles business data for the year 2023 and includes insights on the impact of economic conditions on business enterprises in Rwanda. The survey data is structured as a panel, which allows for execution of further analysis that includes both spatial and temporal dimensions.

2. Coverage

The 2023 IBES report covers a sample of non-agricultural business enterprises classified under sections B to S of the International Standard Industrial Classification of all economic activities, revision 4 (ISIC-4). Further, the survey does not cover public administrative and extraterritorial organizations (organizations outside Rwanda territorial borders). This report defines "**business enterprise"** 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 business enterprise. The IBES survey contains information on Small and medium-sized business enterprises (SMEs) and big business enterprises. SMEs employ fewer than 100 people. They are further subdivided into micro business enterprises (fewer than 3 employees), small business enterprises (4 to 30 employees), and medium-sized business enterprises (31 to 100 employees). Big business enterprises employ 100 or more people. The management of a business 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.

3. Sampling Design

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 business enterprises and a number of workers by broad industry groups at the primary level of geographical units such as villages.

The Establishment Census carried out in 2023 (EC2023) served as the sampling frame for both formal and informal IBES. For informal IBES 2023, EC2023 served as the sampling frame for the first stage sample and a listing exercise for the sampled administrative sectors in the second stage. In addition, for formal IBES 2023; the EC2023 frame was supplemented using IBES panel business enterprises to ensure that all previous complying businesses were covered in the formal sector survey.

IBES 2023 is based on a sample of 2,680 formal and 2,500 informal business enterprises, selected from an estimated 31,394 formal and 229,386 informal business enterprises. Informal business 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.

3.2. Formal Sector Sample and Estimation

This report defines the formal sector as those businesses registered in the Rwanda Revenue Authority (RRA) and keeping business accounts. The formal sector IBES 2023 sample was produced from the following separate components: a panel component based on the IBES 2022 and large business enterprises from the VAT and BIT registers which were not in the IBES panel. Informal IBES 2023 sample has been drawn from the data set of the Establishment Census 2023.

The IBES panel includes all business enterprises that responded to the IBES 2022 survey. The purpose of this panel component of the IBES 2023 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 as all of the business enterprises in this component were willing and able to respond for formal IBES 2022.

In addition, the survey sample was topped up by 412 large business enterprises with turnover greater than 1 billion RWF in 2023 drawn from the Value Added Tax (VAT) and Business Income Tax (BIT) databases and which were not in the IBES panel sample. At the end, a sample of 2,680 formal business enterprises was developed and targeted. After data collection, the valid sample consisted of 2,172 formal business enterprises, with 1,754 responding, resulting in a response rate of 80.8%.

Most of the estimates included in this report have been obtained by multiplying the data for each sample business enterprise by its weight. The weight assigned to completely enumerated businesses was 1, as these businesses represent only themselves.

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 the businesses for which no response could be obtained within each stratum and to take out all non-eligible sampled businesses like businesses dealing in agriculture and public administration. 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 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 business enterprise within the stratum. More precisely, if in each sampled stratum *i*, *ni* is the number of valid businesses enumerated out of a valid population of *Ni* business enterprises in the census, then the weight for each business is *Ni/ni*. 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.

3.3. Informal Sector Sample and Estimation

The selection of business 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 EC2023. The measure of size (MoS) used was the number of business enterprises in each administrative sector, i.e.

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

Where, S_{hi} is the size of the administrative sector i, in geographic stratum h; and P(h, i, j) is the number of business enterprises in the economic activity j, within the sector i, in geographic stratum h. The data were collected during data collection of Establishment Census 2023 and fed the first stage (in 50 selected administrative sectors) with information 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 business enterprises in the sample EAs was established. At the second stage, the listed business enterprises in each sample EA were then stratified by major economic activity (ISIC Rev.4 2 digit), and a sample of business enterprises was then selected within each stratum. At the second sampling stage, all of the listed business enterprises for some strata were included in the survey with certainty in case there were 3 or less business enterprises for one ISIC 2-digit code within the sampled administrative sector. The procedure led to a total sample of 2,500 informal business enterprises being selected. At the end of data collection, the valid informal sample consisted of 2,290 informal business enterprises, with 1,718 responding, resulting in a response rate of 75.0%.

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

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

Where;

P_{hij} = probability of selection for the sample business enterprises in j-th economic activity group within the i-th sample segment (i.e., 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 business enterprises selected in the j-th economic activity group within the i-th sample area in geographic stratum h

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

In the sample strata where all the business enterprises for 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 business enterprises is calculated as the inverse of this probability of selection, as follows:

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

Finally, a non-response adjustment factor like that used for the formal IBES 2023 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.

4. 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 formal and informal activities in observable business premises. Additionally, the national accounts' estimates 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.

5. Comparison of IBES employment data with LFS employment data

Enterprise survey employment data and household labor force survey (LFS) data diverge due to differences in the populations surveyed, methods of data collection, and the scope and focus of each survey. Enterprise surveys typically target businesses and organizations, gathering data on formal employment within these entities through administrative records, such as payroll data or employment records provided by businesses. In contrast, LFS data are collected directly from households, encompassing a broader range of employment including informal sectors, self-employment, and various work arrangements.

Additionally, enterprise surveys may sample businesses based on factors like size, industry, or geographic location, while LFS surveys use household sampling methods to ensure representation of different demographic groups. These variations in sampling, coverage, and biases contribute to discrepancies between the two datasets, with enterprise surveys potentially overlooking small or informal businesses and LFS data susceptible to respondent bias and sampling errors. Thus, while both sources provide valuable insights into employment trends, understanding their inherent differences is essential for interpreting and comparing their findings accurately.

6. Key concepts and data collection methodology

6.1. Distinction between business enterprise and establishment

A business enterprise is an institutional unit as a producer of goods and services. It has 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 business enterprise. An establishment is a business enterprise or part of the business enterprise located in a single location and normally carrying out a single economic activity. In many cases, and particularly for smaller or medium-sized units, business enterprises and establishments are identical. Efforts were made to list and record details for each business enterprise, including all its branches. Information on whether the establishment was part of a business enterprise was also recorded.

6.2. Activity Coverage and Listing of Business 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 related to the processing of the primary produce of agricultural and allied activities were treated as non-agricultural. Further, 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 a business enterprise. Some are reproduced here. Manufacturing involves the transformation of raw materials into finished products. Trade is an act of purchasing 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 and other prepared food and refreshments. A restaurant (Division 56 of ISIC-4) generally provides eating and drinking services where prepared meals, food, refreshment and other snacks are sold for immediate consumption without any provision for lodging. Such business

enterprises are variously known as restaurants, cafeterias, snack bars, lunch counters, refreshment stands, milk bars, 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 business enterprises, including the public, as a business is in the storage and warehousing industry (Division 52 of ISIC-4). However, 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.

6.3. Items of Information and Related Concepts

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

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

- **Method of data collection**: this depends on whether the business enterprise has 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 business 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 business 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 business enterprises maintaining accounts. In other cases, it was the day preceding the date of the survey.

- **Background information about the business enterprise**: Certain background information about the business enterprise was collected first. These included broad activity of the business enterprise for which 12 codes were provided, main activity of the business 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 business 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 business enterprise in case of an establishment.

- **Employment and compensation of employees**: As regards the employment position, data on the average number of workers working per day during the major period of working in the last year were collected. The break-up in the 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 business 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 business enterprise and the other recording the residual operating expenses involved in the day to day running of the business 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 business enterprise directly associated with the value of goods and services produced while the other recording other receipts of the business 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 business enterprise-maintained accounts otherwise it was the market value of the asset owned or rented/hired. This apart, data on net addition to fixed assets and rent payable for hired assets were also collected.

APPENDIX 2: IBES 2023 SURVEY STAFF

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