Republic of Rwanda

Ministry of Public Service and Labour

Graduate Tracer Survey Report

SKILLS RWANDA

mastercard foundation

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Abbreviations and Acronyms

DACCUM	—	Development of Curriculum
DLI	—	Disbursement Linked Indicator
DO	—	Development Objectives
DPs	—	Development Partners
EDPRS	—	Economic Development and Poverty Reduction Strategy
GTS	—	Graduate Tracking System
IDA	—	International Development Association
IPRC	—	Integrated Polytechnic Regional College
LMIS	—	Labor Market Information System
MIS	—	Management Information System
NEP	—	National Employment Programme
NSDEPS	—	National Skills Development and Employment Promotion Strategy
OAG	—	Office of Auditor General
PAD	—	Project Appraisal Document
PDO	—	Project Development Objectives
PforR	—	Programme for Results
PSG	—	Priority Skills for Growth
RDB–CSO	—	Rwanda Development Board– Chief Skills Office
RP	—	Rwanda Polytechnic
RTB	—	Rwanda TVET Board
SDF	—	Skills Development Fund
T&L	—	Transport and Logistic

TVET	—	Technical and Vocational Educational and Training
UR	—	University of Rwanda
UR–CAVM	—	University of Rwanda–College of Agriculture, Animal Sciences and Veterinary and Medicine
UR–CBE	—	University of Rwanda–College of Business and Economics
UR–CST	—	University of Rwanda–College of Science and Technology

Executive Summary

The Tracer Survey was conducted to assess the employment outcomes of graduates from degree and TVET programmes supported by the Priority Skills for Growth Programme at the University of Rwanda (UR), Rwanda Polytechnic (RP), and Rwanda TVET Board (RTB).

The survey was initiated in order to update the Project Development Objective (PDO) Indicator, which measures the share of graduates employed or self–employed in occupations related to Energy, Transport, and Logistics (T&L), and Agro–processing sectors within 12 months after graduation. The primary research questions focused on employment status, programme employability, salary range, and graduate satisfaction with their jobs among others.

The survey had both general and specific objectives. The general objective was to provide a comprehensive assessment of the employability status of graduates after 12 months of completing degree and TVET programmes. The specific objectives included determining the employment status of graduates, identifying the most employable programmes, understanding income disparities among different groups of graduates, and measuring the overall satisfaction levels of graduates with their educational and training experiences.

The survey focused on new or updated degree and TVET programmes in the energy, transport, and agro–processing sectors. The survey was challenged by access to the internet for some graduates, especially at Levels 3, 4, and 5 of the TVET at Rwanda TVET Board.

The survey leveraged a Graduate Tracking System (GTS) to derive insightful results on the employability of graduates (post–graduation outcomes). Data collection was executed through online surveys, facilitated by the GTS, and graduates were reached through email and mobile phone communication. The target audience for this survey encompassed 2,548 graduates who successfully completed their studies between 2021 and 2023 in the programmes supported by PSG in UR, RP and RTB.

Out of the intended population, 472 graduates actively engaged in the survey. Among the respondents, male responses predominated, constituting 71.82% of the participants. RTB and RP institutions had the highest representation of males, with 63.64% and 82.82%, respectively. The graduates' qualifications exhibited a diverse landscape, with a substantial 34.53% holding Advanced Diplomas, followed by 33.26% with TVET Certificate IV and 24.15% with TVET Certificate V. Bachelor's degree holders represented 7.20% of the respondents.

Delving into the employability status of the graduates, the study disclosed that 46.5% of them had successfully secured employment where female employed are at 37.8% and male at 46.46%. RP led the way with a remarkable 59% employability rate, followed by RTB at 40%, and UR at 36.7%. The sectors employing a big number of graduates included construction materials testing technology, boasting an impressive 77.8% employability, and labour–based road maintenance with a commendable 70% employability. In contrast, fields such as electricity (9.09%) and food processing (17.86%), plant engineering (14.29%) reported lower employability rates.

The project's goal to attain a 50% employment rate through the Priority Skills Programme has encountered a setback, with the current rate standing at 46%. This shortfall can be attributed to the adverse impact of the COVID–19 pandemic, which disrupted the job market and impacted hiring activities across various industries. Furthermore, the project had also met some challenges including an economic downturn and the geographic disparities in employment opportunities. A significant number of RTB graduates are located in rural areas where job prospects are relatively limited. Nonetheless, there remains an optimistic outlook for the project's ability to reach its employment target. As the effects of the pandemic decrease and the economy stabilises, it is anticipated that more beneficiaries will secure suitable job opportunities, thereby improving the overall employment rate.

The duration taken by graduates to secure their initial job was another significant aspect scrutinized. A substantial 74% of employed graduates successfully landed their first job within 11 months, demonstrating a swift transition into the workforce. The factors contributing to employability were multifaceted, with professional qualifications (45.41%) and the reputation of educational institutions (30.1%) emerging as pivotal factors in securing employment opportunities.

The data revealed that a significant majority of graduates, comprising 81%, are currently employed by others. Notably, the statistics indicate that 20% of RP graduates are self–employed, along with 18% of RTB graduates, whereas all UR graduates are engaged as employees by other organizations, accounting for 100% of their employment status. These findings raise pertinent concerns, particularly regarding the potential impediments faced by graduates, notably the younger generation, in initiating their own enterprises. Key issues that may be associated with these outcomes include a probable lack of collateral or access to essential start–up toolkits, which can significantly hinder their entrepreneurial pursuits.

Graduates have expressed several significant challenges in their job search, including the misalignment between academia and available job opportunities, as well as salary levels falling short of their expectations.

In response to these challenges, the survey has recommended a series of strategic measures. These include:

- Fostering closer collaboration between educational institutions and employers, with a focus on aligning educational programmes with the specific needs of industries.
- The establishment of robust internship and apprenticeship programmes to bridge the gap between academic education and practical employment, promoting a smoother transition for graduates.
- Encouraging continuous learning and upskilling opportunities to enhance graduates' competitiveness in the job market.
- The implementation of career counselling and guidance services to empower students in making informed educational and career choices.
- Most importantly, developing industry endorsed curriculums after a structured functional analysis will ensure that educational programmes remain relevant to industry demands.
- Implementing dual training approaches in Transportation Engineering, Mechanical Engineering, Plant Engineering, and Electrical Power Engineering to reduce skills mismatch between skills acquired in academic settings and industry requirements.

The *Graduate Tracer Survey* has yielded valuable insights into the employment outcomes of graduates from degree and TVET programmes supported by the PSG Programme. These findings will play a pivotal role in programme review and enhancement, policy formulation, and ultimately in equipping graduates with the skills and knowledge they need to succeed in the job market and career progression.

1. Introduction

1.1 Background of Priority Skills for Growth (PSG) Programme

The International Development Association (World Bank) approved a credit number 6119–RW and a grant number D700–RW, with amount of € 69,000,000 and SDR 54,900,000 respectively, to the Government of Rwanda for the implementation of the Rwanda Priority Skills for Growth (PSG) Programme for Results (PforR). Its objective is to support the National Employment Programme (NEP) to equip the workforce with vital skills for increased productivity that are needed for the growth of the private sector.

The Development Objective (DO) for this project is to expand opportunities for the acquisition of quality, market–relevant skills in selected economic sectors. The selected economic sectors include Energy, Transport and Logistics, and Manufacturing (with a focus on 'Made in Rwanda' products).

The targeted sectors for developing skills were determined based on the following criteria: (a) priority sectors of focus under the Economic Development and Poverty Reduction Strategy (EDPRS) II; (b) sectors that employ large numbers of the population; (c) sectors with potential for value addition and improved productivity; (d) sectors where foreign direct investment is increasing and/or where significant public finances have been directed; (e) sectors that will support growth in other sectors; and (f) sectors where there is insufficient financing from government and development partners (DPs).

The PSG Programme was designed in two phases, each to last three years:

- Phase I was financed by the International Development Agency Credit (6753–RW) in the amount of US$120 million, which was approved by the World Bank Board of Directors on July 5, 2017. The effectiveness date was on October 26, 2017, and the credit closed on September 30, 2020. Financial and compliance audit plus verification of Disbursement Linked Indicator (DLI) was done by OAG.
- Phase II (Additional Financing) coincided with the development of the National Skills Development and Employment Promotion Strategy (NSDEPS, 2019–2024), which follows on the National Employment Programme (NEP, 2014–2019) and it is also financed by International Development Association (IDA) for the amount of US$ 150 million (Credit No: 6119–RW and Grant No: D700–RW) and it is scheduled to close by 30th September 2024.

The PSG Project for both phases achieved the following milestones:

- The Government of Rwanda approved and operationalized the National Skills Development and Employment Promotion Strategy (NSDEPS) as a follow–on strategy to the National Employment Programme (NEP).
- At least 33 degree and TVET programmes were developed as new or updated and accredited for occupations with industrial participation including 10–degree programmes for University of Rwanda, 8 TVET programmes for Rwanda Polytechnic and 15 TVET programmes for Rwanda TVET Board.

- At least 71 staff teaching 31 degree and TVET programmes were placed in formal industrial attachments with an aim to influence curriculum delivery and competence–based assessment.
- Over 23,000 youths (female: 11,140) including out of school youth, TVET and University graduates were trained through short–term training, internship & apprenticeship to get the relevant skills for the labour market under the Skills Development Fund (SDF).
- Student loan recovery MIS was developed and contributed to at least 15%–point increase in loan recovery from the baseline of 16% in 2017.
- Over 280 public servants were trained to enhance their capacity in 7 different areas including DACCUM Methodology, Internal quality assurance systems, conducting of tracer studies, effective student loan management, Occupational Health & Safety, Grievance Redress Mechanism and Project Management.
- Capacity of RDB–CSO was enhanced through recruitment of the expert group to improve coordination of the NSDEPS implementation and Phase 1 of Labour Market Information System (LMIS) was upgraded and operationalized.
- At least 5,365 students (female: 2,376) were enrolled in the new or updated programmes and completed at least one semester/trimester.

1.2 Survey Rationale

As stipulated in the Project Appraisal Document (PAD) of the PSG Additional Financing, a new Project Development Objective (PDO) Indicator was created and states that "Share of TVET and degree graduates, from the new and updated programmes, in occupations related to Energy, Transport and Logistics(T&L), and Agro–processing sectors employed or self–employed 12 months after graduation" where the target for this indicator is 50% (percentage of the female to be determined by the tracer survey).

From the above background, the primary purpose of this survey is to assess employment outcomes of the graduates of degree and TVET programmes supported by PSG Programme from University of Rwanda, Rwanda Polytechnic and Rwanda TVET Board after 12 months of graduation.

The following were the research questions that guided the tracer survey process:

- What is the employment status (percentage and number of females) of the graduates after 12 months of completing the degree and TVET programmes?
- What are the programmes that are highly employable than others?
- What is the salary range of the employed graduates?
- What is the level of satisfaction of the graduates during the training vis–à–vis the employability?

This tracer survey will play a pivotal role in various aspects of educational planning and development. It will serve as a means to evaluate the quality and effectiveness of educational programmes, helping UR, RP and RTB identify areas for improvement and ensuring that graduates are well–prepared for the job market. Tracer studies also shed light on the alignment between curriculum and industry needs, enabling institutions to make necessary adjustments, ultimately enhancing students' competitiveness in the workforce. Additionally, they facilitate continuous improvement by gathering valuable feedback from graduates, aiding in refining teaching

methods, faculty, facilities, and career services. Furthermore, these studies foster alumni engagement, serving as a bridge between graduates and their alma mater, creating a supportive community.

The outcomes and findings of this tracer survey will inform the programme review and improvement at the University of Rwanda, Rwanda Polytechnic and Rwanda TVET Board while the findings will be used for decision making and policy formulation.

1.3 General Objectives

To provide a comprehensive assessment on the employability status (Percentage and number of females) of the graduates after 12 months of completing the degree and TVET Programmes supported under the PSG Programme.

1.4 Specific Objectives

1. To determine the employment status (Percentage and number of females) of the graduates after 12 months of completing the degree and TVET Programmes.
2. To determine the programmes that are highly employable than others.
3. To determine the salary, range of employed graduates from various programmes and industries to understand income disparities among different groups of graduates.
4. To measure the overall satisfaction levels of graduates with their educational and training experiences.

1.5 Scope and limitations of the survey

1.5.1 Scope

The tracer survey only targeted the new or updated degree and TVET programmes developed under the support of PSG Programme in three economic sectors namely energy, transport and agro–processing. The programmes supported by PSG Programme are listed in tables 1–3.

Table 1 — Programmes supported by PSG Programme at the University of Rwanda

SN	Degree Programmes	UR College
1	Bachelor of Science with Honors in Food Science and Technology	UR–CAVM, Busogo Campus
2	Bachelor of Science with Honors in Crop Production	UR–CAVM, Busogo Campus
3	Bachelor of Science with Honors in Horticulture	UR–CAVM, Busogo Campus
4	Bachelor of Science with Honors in Agricultural Mechanization	UR–CAVM, Nyagatare Campus
5	Bachelor of Science with Honors in Transport Management	UR–CBE, Gikondo Campus
6	Bachelor of Science with Honors in Procurement, Logistics and Supply Chain Management	UR–CBE, Gikondo Campus

SN	Degree Programmes	UR College
7	Bachelor of Science with Honors in Transportation Engineering	UR–CST, Nyarugenge Campus
8	Bachelor of Science with Honors in Mechanical Engineering (Option: Plant Engineering)	UR–CST, Nyarugenge Campus
9	Bachelor of Science with Honors in Electrical Power Engineering	UR–CST, Nyarugenge Campus
10	Bachelor of Science with Honors in Energy Engineering	UR–CST, Nyarugenge Campus

Table 2 — Programmes supported by PSG Programme at RP

SN	TVET Programmes	RP Colleges
1	TVET Diploma in Crop Production	IPRC Huye
2	TVET Advanced Diploma in Crop production	
3	TVET Advanced Diploma in Animal Health	
4	TVET Advanced Diploma in Railway Infrastructure Engineering	IPRC Huye
5	TVET Advanced Diploma in Aircraft Maintenance	
6	TVET Advanced Diploma in Airline and Airport Management	IPRC Kigali
7	TVET Advanced Diploma in Logistics and Supply Chain Operations	
8	TVET Advanced Diploma in Food Processing	IPRC Musanze

Table 3 — Programmes supported by PSG Programme at RTB

SN	TVET Programmes	TVET Schools
1	TVET Certificate III in Domestic Electricity	Nyamata TVET School
2	TVET Certificate III in Food Processing	EFA Nyagahanga TVET School
3	TVET Certificate IV in Food Processing	
4	TVET Certificate V in Food Processing	
6	TVET Certificate III in Animal Health	Kinazi TVET School
7	TVET Certificate IV in Animal Health	
8	TVET Certificate V in Animal Health	
9	TVET Certificate III in Crop Production	Kibisabo TVET School
10	TVET Certificate IV in Crop Production	
11	TVET Certificate V in Crop Production	

SN	TVET Programmes	TVET Schools
12	TVET Certificate IV in Leather Works	Gakoni TVET School
13	TVET Certificate V in Leather Works	
14	TVET Certificate III in Labour–based Road maintenance	IPRC Kigali
15	TVET Certificate III in Construction Materials Testing	IPRC Huye
16	TVET Certificate III in Road Construction Plant Operation	Forever TVET School

1.5.2 Limitations of the Survey

The tracer survey was conducted on PSG supported programmes. However, the impact of COVID–19 to teaching and learning activities in Rwanda took almost one and a half years where the schools were closed at all levels from pre–primary up to university level to avoid the spread of the virus, this brought the stoppage of programmes taught under the PSG programme. This means that the students enrolled in some of the PSG programme are not yet graduated and therefore the tracer survey was conducted only on programmes that have students who graduated and completed at least 6–12 months after graduation.

Table 4 shows the list of programmes that were considered during the tracer survey. It consists of students who graduated 6–12 months ago.

Table 4 — Programmes considered during the tracer survey

S/N	Institution	Programmes	Sector
1	University of Rwanda	Bachelor of Science with Honors in Mechanical Engineering (Option: Plant Engineering)	Energy
		Bachelor of Science with Honors in Electrical Power Engineering	Energy
2	Rwanda Polytechnic	TVET Advanced Diploma in Food Processing (Agriculture & Food Processing)	Agro–processing
		TVET Advanced Diploma in Crop production	Agro–processing
		TVET Advanced Diploma in Animal Health (Veterinary Technology)	Agro–processing
3	Rwanda TVET Board	Animal Health (Level 3, 4 and 5)	Agro–processing
		Food Processing (Level 3, 4 and 5)	
		Crop Production (Level 3, 4 and 5)	
		Labour–based Road maintenance (Level 3)	Transport and Logistics
		Construction Materials Testing (Level 3)	

S/N	Institution	Programmes	Sector
		Road Construction Plant Operation (Level 3)	
		Leather Works (Level 3 and 4)	Agro–processing
		Domestic Electricity (Level 3)	Energy
		Industrial Electricity (Level 4 & 5)	

2. Methodology

2.1 Survey Approach and Tools

2.1.1 Graduate Tracking System

Graduate Tracking System (GTS) is a data collection and tracking tool to be used by educational institutions, particularly universities and colleges, to monitor the post–graduation outcomes of their alumni. The primary purpose of GTS is to gather information about the employment status, further education pursuits, and overall career trajectories of graduates after they leave the institution. Though the GTS can also be used for surveys for in–house trainees and students as per the specific needs of an institution.

The following are the key components of the GTS.

- **Alumni Database:** The GTS maintains a database of alumni, including their contact information, graduation year, academic programme, and any other relevant details, which may be pre–fed into the system. This administrative data can then be auto–filled in the survey thereby reducing the time taken by respondents to answer the questions.
- **Conduct Tracer Surveys for Employment and Career Tracking**: The system allows an institution to track the employment status and career progression of its graduates. This helps the institution gauge the effectiveness of its programmes in preparing students for the job market and identify potential areas for improvement.
- **Further Education Pursuits:** The GTS also supports tracking whether alumni pursue higher education, enrol in additional courses, or participate in other forms of continuing education after graduation.

Figure 1 — Rwanda Graduate Tracking System
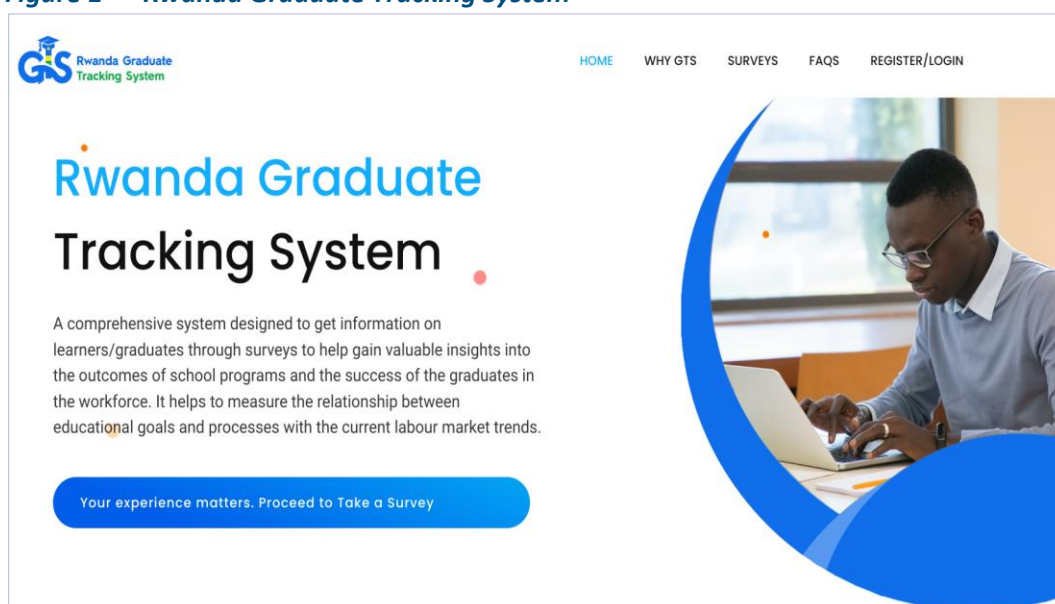
The GTS has the following functionalities:

- **Graduate Data Collection:** The system allows for the efficient collection of data from graduates by conducting surveys, capturing information about their educational experiences, skills acquired, career paths, and overall outcomes and other related aspects as per the specific needs of institutions.
- **Survey Customization:** The system offers the flexibility to create tailored surveys that can be adjusted to various fields of study, levels of education, and desired outcomes. This ensures relevant and accurate data collection.
- **Data Visualization:** The collected data is presented through interactive visualizations, graphs, and reports, making it easier for stakeholders to comprehend and derive insights from the information.
- **Data Analytics:** Advanced analytics tools can be integrated to identify correlations, trends, and patterns within the data, aiding in more accurate predictions and strategic planning.

2.1.2 Questionnaire

The *Graduate Tracer Survey* for graduates of RTB, RP, and UR under the Priority Skills for Growth Project harnessed the power of the recently launched Graduate Tracking System(GTS). This web–based system served as the backbone of our data collection process, enabling the tracking of educational and career trajectories of graduates across these three institutions. The Graduate Tracking System was instrumental in facilitating the collection of in–depth data, encompassing key variables such as employment status, industry placements, further educational pursuits, and more.

Complementing the Graduate Tracking System, a structured questionnaire played a pivotal role in our data collection efforts. The questionnaire was carefully crafted through extensive consultations with stakeholders and subject matter experts. Its purpose was to capture key information about graduates' experiences, career outcomes, and levels of satisfaction with their employment.

Data collection was executed purely through online surveys using the GTS. Graduates were contacted via email and mobile phone numbers, which were available within the Graduate Tracking System. These graduates were invited to participate in the survey and provided with links to access the online questionnaire.

2.2. Targeted Population and Sample Size (Proportional Sampling)

The target population of this tracer survey, Table 5, is made of the 2,548 students who have graduated from University of Rwanda, Rwanda Polytechnic and Rwanda TVET Board between 2021 and 2023 in the programmes supported by PSG.

Table 5 — Targeted population per institution

Institution	Male	Female	Total
Rwanda Polytechnic	242	76	318
Rwanda TVET Board	1,124	1,027	2,151

Institution	Male	Female	Total
University of Rwanda	61	18	79
Total	**1.427**	**1,121**	**2,548**

To calculate the sample size for the PSG graduate's tracer survey with a population of 2,548, an expected proportion (p) of 50% (0.5), and a confidence level of 95%, we have used the following formula (Eqn 1.) of sample size calculation for a proportion. The weighted sample by institutions is presented in Table 6.

$$n = \frac{Z^2 p(1-p)}{E^2}$$

Where:

- n is the required sample size.
- Z is the Z–score corresponding to the desired level of confidence (e.g., 1.96 for a 95% confidence level).
- p is the estimated proportion or expected effect size.
- E is the desired margin of error.

n=(1.96)2∗0.5∗(1−0.5)0.052   n=0.052(1.96)2∗0.5∗(1−0.5)
n=3.8416∗0.250.0025   n=0.00253.8416∗0.25
n=0.96040.0025n=0.00250.9604
n=384.16n=384.16

Rounded up to the nearest whole number, n=385

Table 6 — Weighted sample by institutions

Institution	Weight	Total
Rwanda Polytechnic	0.125	48
Rwanda TVET Board	0.844	325
University of Rwanda	0.031	12
Total	**1**	**385**

After carefully selecting our initial sample, we sent out the survey to all graduates via email. We made sure to conclude the survey once our target sample size was achieved. In the case of UR and RP, we not only reached our desired sample size but exceeded it significantly, with the final sample being three times the originally calculated size. This approach was taken to enhance the representativeness of our data (refer to Table 7).

However, in the case of RTB, we encountered some challenges. The response rate for this group was 85% compared to our sample size. This lower response rate was primarily attributed to the difficulty faced by graduates at Levels 3, 4, and 5 in accessing the internet and responding through the graduates tracking system (GTS).

Table 7 — Respondents by institutions

Institution	Female	Male	Total
Rwanda Polytechnic	28	135	163
Rwanda TVET Board	100	175	275
University of Rwanda	5	29	34
Total	**133**	**339**	**472**

Source: PSG Graduates Tracer Survey, October 2023

In total, 472 graduates participated in the *Graduate Tracer Survey* which is greater than the calculated sample of 385.[1]

2.3 Survey Process

To ensure the successful execution of this *Graduate Tracer Survey* in a systematic manner, we employed the following survey process.

2.3.1. Pre–Survey Preparation

The survey process commenced with meticulous pre–survey preparations, encompassing the establishment of the Graduate Tracking System as a data collection tool, questionnaire design, and the compilation of contact lists for graduates. This preparatory phase laid the groundwork for a successful data collection process. A series of meetings and workshops were conducted with UR, RP, and RTB to ensure a thorough understanding of the online survey tool (GTS) and to coordinate all necessary preparations for executing the survey.

2.3.2. Data Collection

The data collection phase was the most critical aspect of this survey, wherein we reached out to graduates through email and phone contact. The responses were provided through the Graduates Tracking System. To ensure the utmost representativeness of our sample, we diligently pursued non–respondents with multiple follow–up phone calls and trigger emails via GTS Notably, the entire survey was done online with no expenditure on human resources.

2.3.4. Data Analysis

Upon concluding the data collection phase of the tracer survey, the team proceeded to conduct a thorough analysis of the data collected via GTS. This analysis involved the utilization of statistical methods and Excel to

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[1] To achieve a response rate of 100% or more, which was exceeded except in Rwanda TVET Board where the rate was 85% due to challenges accessing the Internet.

extract valuable insights from the survey findings. The forthcoming sections of this report will provide a more in–depth exploration of the insights derived from this analysis.

2.3.5. Report Compilation

Following the completion of data analysis for the tracer survey, the final survey report was compiled. This report serves as a comprehensive repository, consolidating our findings, insights, and recommendations derived from the data analysis. It is intended to serve as a valuable resource for educational institutions, policymakers, and various other stakeholders with an interest in the outcomes of this survey.

3. Survey Findings

3.1. Demographic and Socio–Economic Information of the Graduates

This section provides demographic characteristics and profile of the respondents per institutions, gender, age and training programmes.

3.1.1 Respondents per Institutions and Gender

Figure 1 provides a clear visual representation of the distribution of respondents by gender across various institutions. It reveals that a substantial majority of the participants, amounting to 71.82%, were male, while the remaining 28.18% identified as female. Delving into the specifics of the institutions, we find that within the Rwanda TVET Board, 63.64% of the respondents were male, and 36.36% were female. In the case of Rwanda Polytechnic, the gender breakdown was even more skewed, with 82.82% male respondents and 17.18% female respondents. Similarly, the University of Rwanda's respondents were predominantly male, with 85.29%, while 14.71% identified as female.

Figure 2 — Respondents by institutions and gender (n=472)

Distribution of respondents institutions

	RP	RTB	UR	Grand Total
■ Female	17.18%	36.36%	14.71%	28.18%
■ Male	82.82%	63.64%	85.29%	71.82%
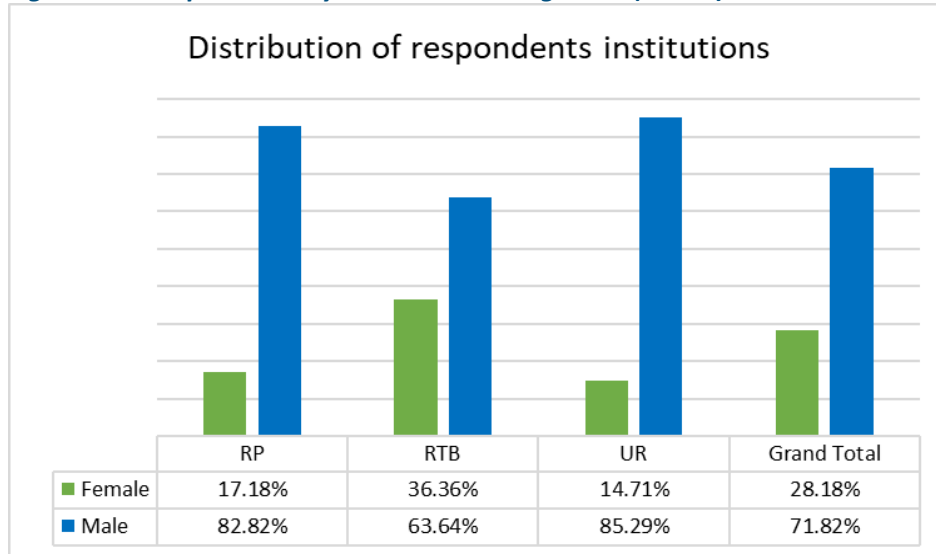
(Source: PSG Graduates Tracer Survey, October 2023)

These findings raise questions about gender disparities within different institutions. Therefore, when there is a low enrolment rate of girls and women into TVET programmes and engineering programmes compared to boys and men, it naturally leads to a smaller pool of potential female survey participants. This underrepresentation in the educational programmes can directly translate into underrepresentation in surveys related to those programmes. This can be improved through encouraging and facilitating greater female participation in TVET and engineering programmes using awareness campaigns, mentoring programme, and creating a more inclusive and welcoming learning environment.

3.1.2 Respondents per Training Programme

Figure 3 illustrates an overview of respondents' participation per institution and programme disaggregated by gender.

Figure 3 — Respondents per training programme

Repondents per training program

■ Male ■ Female

Group	Programme	Male	Female
Total		71.82%	28.18%
UR	Total	85.29%	14.71%
	Mechanical Engineering/Plant Engineering	75.00%	25.00%
	Electrical Power Engineering	88.46%	11.54%
RTB	Total	63.64%	36.36%
	Road Costruction Plant Operations	100.00%	0.00%
	Leather Works	33.33%	66.67%
	Labour-Based Road Maintenance	50.00%	50.00%
	Industrial Electricity	69.23%	30.77%
	Food Processing	36.67%	63.33%
	Electricity	78.26%	21.74%
	Domestic Electricity	75.51%	24.49%
	Crop Production	37.50%	62.50%
	Construction Materials Testing Technology	70.00%	30.00%
	Animal Health	54.05%	45.95%
RP	Total	82.82%	17.18%
	Veterinary Technology	85.48%	14.52%
	Crop Production	84.91%	15.09%
	Agriculture And Food Processing	77.08%	22.92%

(Source: PSG Graduates Tracer Survey, October 2023)

In general, the response rate from females is considerably lower, with males dominating the participation in all programmes across RP, UR, and RTB. In the field of road construction plant operations, all respondents are male, while for labour–based road maintenance, the response rate is evenly split between males and females at 50%.

Breaking it down by institution, in RP, 82.82% of respondents are male, with females accounting for 17.18%. In UR, 85.29% are male, and 14.71% are female. In RTB, 63.64% are male, and 36.36% are female.

3.1.3 Respondents by Gender

The graph in Figure 4 highlights a gender distribution among respondents, revealing a significant male majority, with females representing a smaller proportion.

Figure 4 — Respondents by gender
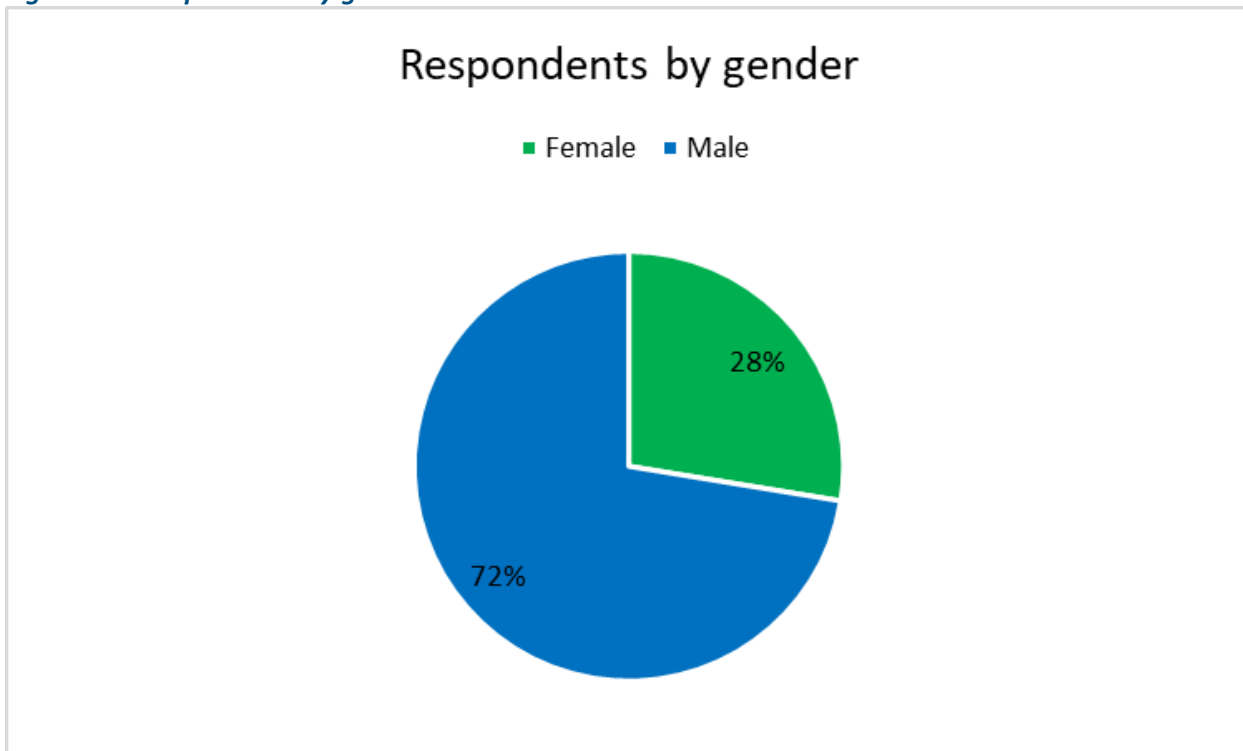
(Source: PSG Graduates Tracer Survey, October 2023)

Overall, when considering all institutions collectively, 72% of respondents are male, while females make up 28% of the total respondents.

In general, the findings align with the predominance of male participants in the programmes funded by the PSG initiative, as compared to the relatively smaller number of female participants in the same programmes.[2]

3.1.4 Respondents by Age

Figure 5 illustrates the respondents per age where in RP Male represents 72.5% and Female: 13.7%, in UR Male represents 63.7%, Female: 14.71% and in RTB represents Male:63.7%, Female:34.44%. The respondents from RTB were aged between 16 and 24, while those from UR and RP were aged between 25 and 30. A comparable trend of a high proportion of respondents, broken down by gender, is shown for each institution,

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[2] The low female response rate may be attributed to the lower representation of women in employment, particularly in comparison to men. Additionally, it's important to note that this survey was administered using GTS, where access to a smartphone or the internet was crucial for participation

with the majority of respondents being in the 16–24 age range for RTB and 25–30 for RP and UR as shown in Figure 5 below.

Figure 5 — Respondents by age

Respondents by Age

■ Male ■ Female

		Male	Female
Grand Total		72.41%	27.59%
UR	Total	85.29%	14.71%
	31-40	5.88%	0.00%
	25-30	67.65%	14.71%
	16-24	11.76%	0.00%
RTB	Total	64.07%	35.93%
	Above 40	0.37%	0.74%
	25-30	0.00%	0.74%
	16-24	63.70%	34.44%
RP	Total	83.75%	16.25%
	31-40	3.75%	1.25%
	25-30	72.50%	13.75%
	16-24	7.50%	1.25%

(Source: PSG Graduates Tracer Survey, October 2023)

15
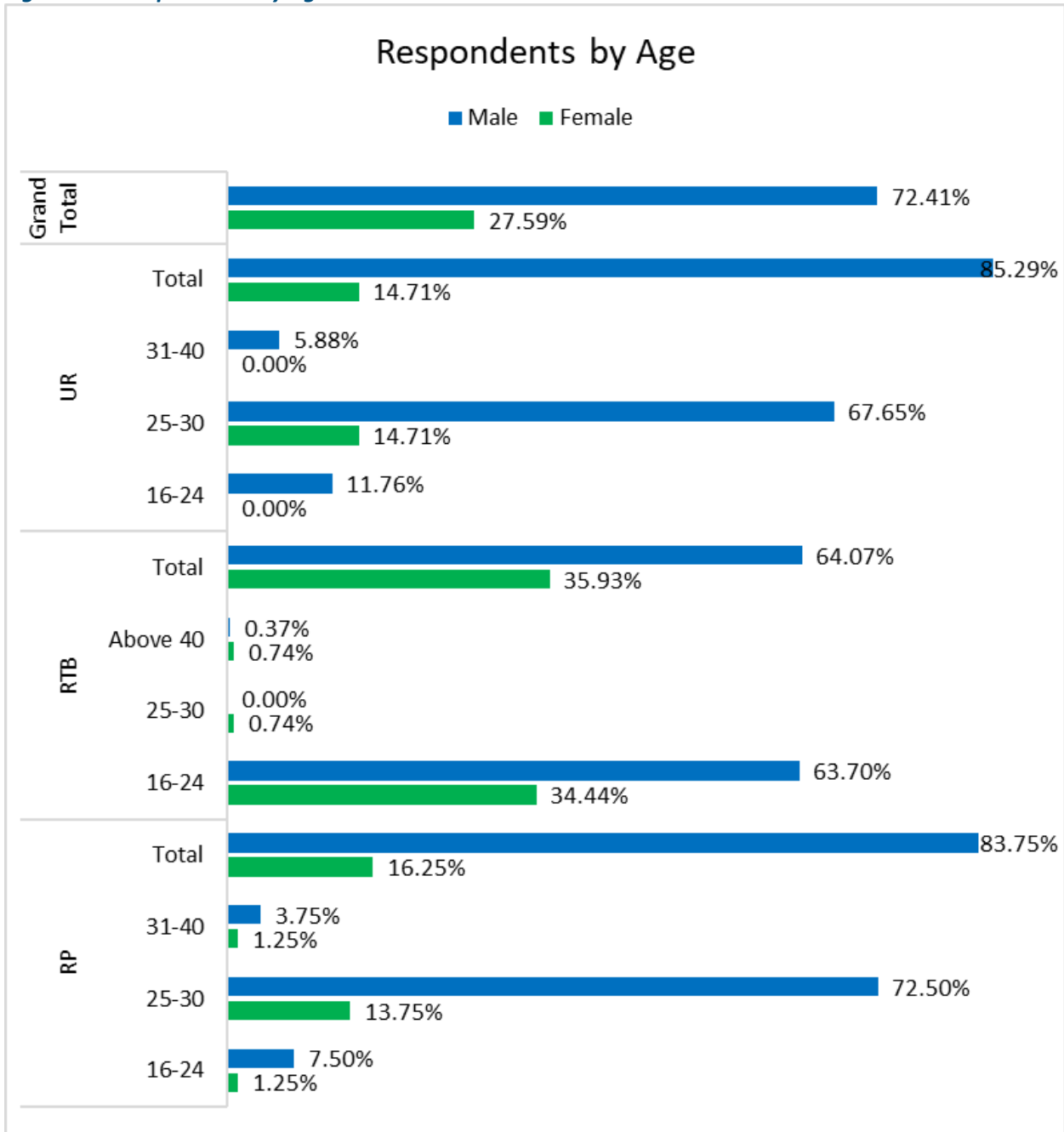
3.2. Academic Background of the Respondents

3.2.1 Respondents by Level of Qualification

The graph in Figure 6 provides insights into respondents categorized by training institution, qualifications, and gender. Notably, male respondents significantly outnumbered their female counterparts across all training institutions and qualification levels.

Figure 6 — Respondents by level of qualification
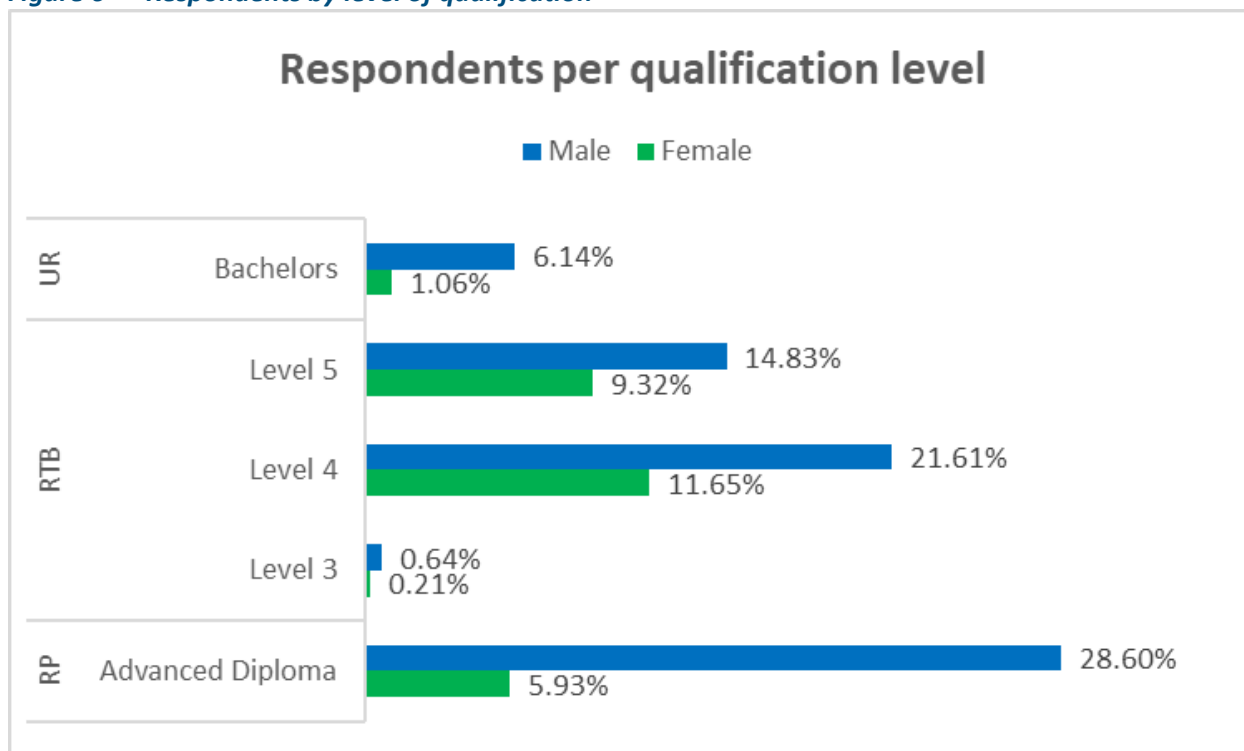
(Source: PSG Graduates Tracer Survey, October 2023)

As depicted in the graph, a substantial portion of respondents holds TVET advanced diplomas, accounting for 34% of the total, closely followed by those with a Level 4 TVET qualification at 33%. The cohort possessing a Level 5 TVET qualification comprises 25% of the respondents. A relatively smaller proportion, 7%, holds bachelor's degrees, while those with a Level 3 TVET qualification make up 1% of the sample.

3.3. Employment Status of Graduates

This section details the status of graduates' employment status, including both self–employment and work for others, in other words those working for profit/business or salary after graduation.

3.3.1. Employment Status of the Graduates

Figure 7 indicates the overall general employment per gender, taking into account whether they work for profit, for pay, or are involved in any business.

Figure 7 — Employment status of the graduates
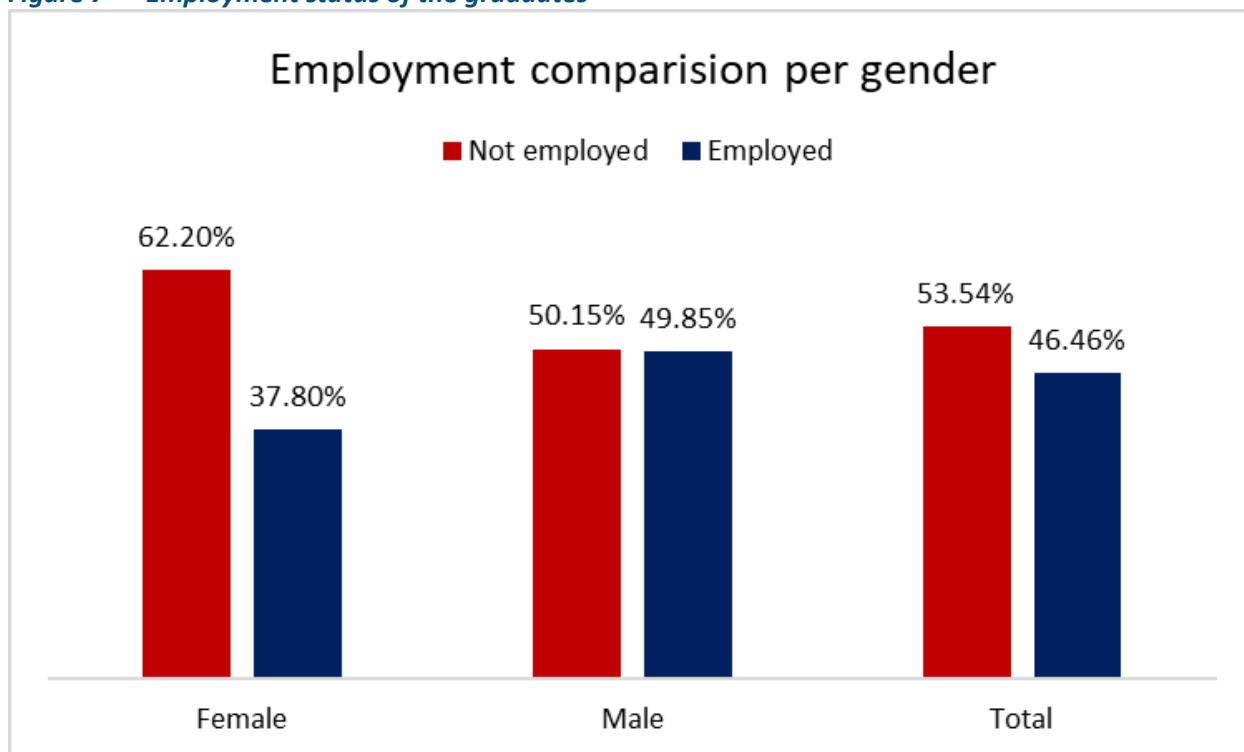
(Source: PSG Graduates Tracer Survey, October 2023)

The overall number of graduates who got employment opportunities after graduation is 46.5%, The proportion of male graduates employed is 49.85% compared to 37.8% for female graduates, which indicates that there is a considerable gender employment gap equal to 12.05%. This trend is similar to the one on national–level gender gaps, which remained significant as it was estimated at around 17.2 percentage points in August 2021 (Q3) and compared to 17 percent in August 2022 (Q3) (NISR, LFS, 2022).

3.3.2 Employment by Institutions

Figure 8 indicates the employment status per training institution.

Figure 8 — Employment by institutions

Employment of graduates per institution

■ Not employed ■ Employed

	RP	RTB	UR	Grand Total
Not employed	40.76%	60.00%	63.33%	53.54%
Employed	59.24%	40.00%	36.67%	46.46%
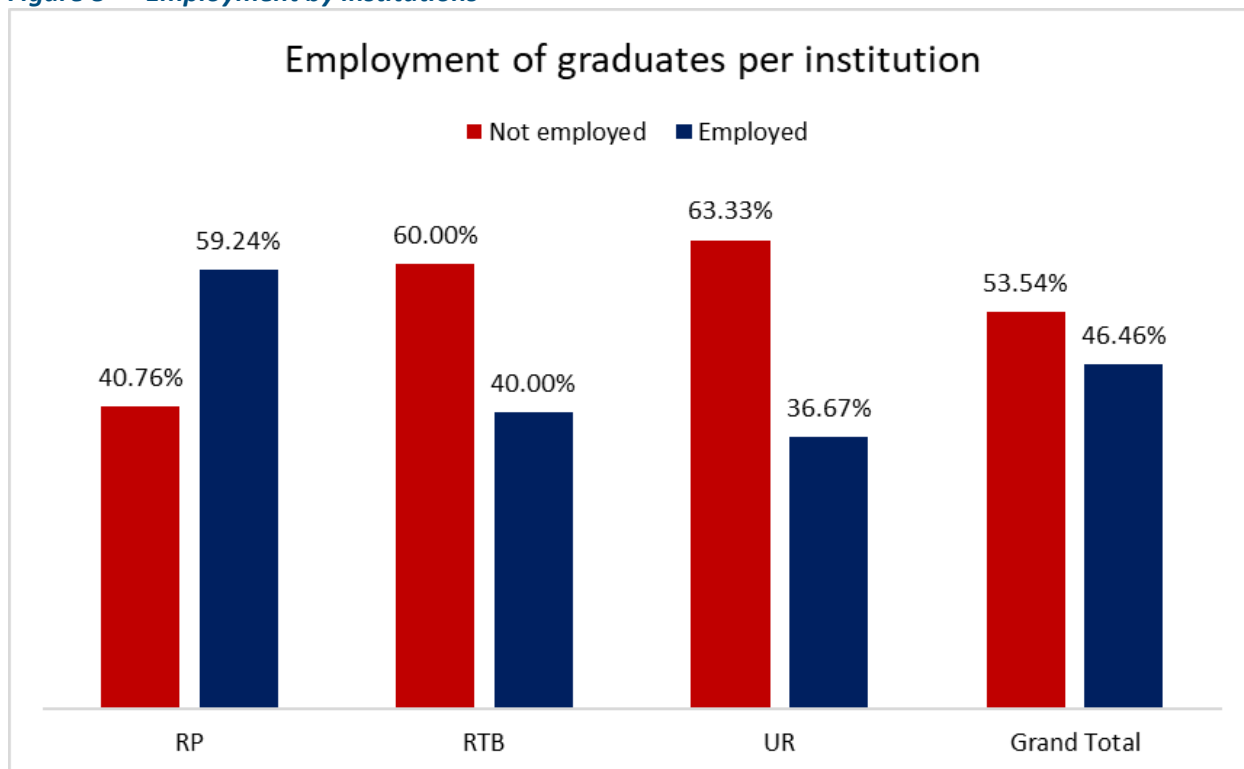
(Source: PSG Graduates Tracer Survey, October 2023)

When considering the educational institutions, it is noteworthy that RP stands out with the highest employability rate at 59%, followed by RTB at 40%, and UR at 36.7%.

For graduates of UR, who completed their studies in September 2022, there are several factors that could explain the relatively lower employment rate. These factors include:

- Private enterprises often require graduates with substantial experience in operating specialized machinery and equipment;
- The current enterprises in the area tend to be smaller in scale and exhibit a lower level of formality, which can hinder the integration of these graduates into such settings;
- The job market for this group typically demands a longer–term commitment due to the need for practical experience;
- The limited availability of modern equipment in these enterprises, coupled with apprehension about potential equipment damage, discourages employers from offering internships and hiring these graduates;
- Employers in sectors such as engineering, mechanical, and plant equipment express concerns about the financial resources that would be needed to address any damage caused by inexperienced graduates.

To address these challenges, it is imperative to prioritize the implementation of dual training approaches. Setting up training cum production centres is also an option to consider. These approaches will enable graduates to gain practical experience with both modern equipment and machinery available in the current market, ultimately improving their employability prospects.

3.3.3 Employment per Training Programmes

Figure 9 describes the employment status of graduates per programme, grouping them under respective institutions.

Figure 9 — Employment status per training programmes
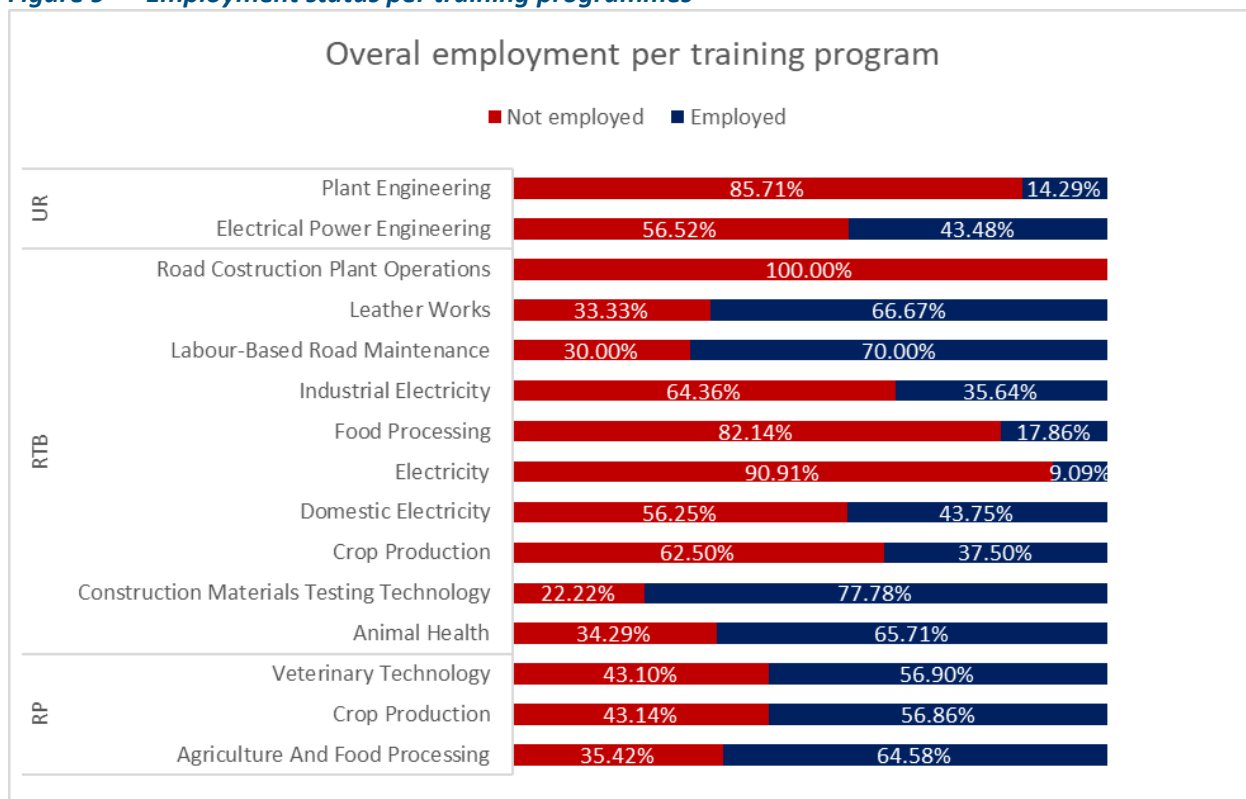
(Source: PSG Graduates Tracer Survey, October 2023)

Graduates from the Construction Materials Testing Technology (77.8%), Labour–Based Road Maintenance (70%), Leather Works (66.6%) and Agriculture and Food Processing (65.7%) programmes are more likely to find employment as more than 65% graduates of these programmes are employed.

Graduates from Road Construction Plant Operations (0%), Electricity (9.09%), Food Processing (17.9%) and Plant Engineering (14%) are likely facing significant difficulties in finding employment. Employment rates of graduates from these programmes are (0%, 9.09%, 14%, and 17.86% respectively).

Very few respondents (1 or 2) from Mechanical Engineering–Plant Engineering, Road Construction Plant Operations programmes have responded to the questionnaire and they were unemployed. This increases unemployment rates from the data.

Regarding the Electricity Programme, graduates need to get an electrical installation permit from RURA. This may explain the reason why most of the programme graduates are not yet employed or self–employed.

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Concerning food processing, there is an inconsistency between the equipment used by the graduates' attended schools and the equipment used in the industry. Besides, employers prefer low–cost manpower who have experience in using equipment available in the industry.

3.3.4 Time Taken to be Employed

Table 8 indicates the duration of the job search after graduation. As it can be observed that 49.05% of all employed graduates got their first job before 6 months; precisely 19.05% got their first job before 11 months; 18% got their respective jobs between 12 months and 24 months; 5.71% of graduates find their first job within one month, 4.76% of graduates got their first job after 3 years, and 3.33% % got their respective jobs between 2–3 years two years.

Table 8 —Time taken to be employed

Time for employment per Institution	RP	RTB	UR	Total
Less than 1 month	5.38%	5.66%	9.09%	5.71%
1–5 months	30.11%	66.98%	36.36%	49.05%
6–11 months	27.96%	7.55%	54.55%	19.05%
1–2 years	27.96%	11.32%	0.00%	18.10%
2–3 years	4.30%	2.83%	0.00%	3.33%
Above 3 years	4.30%	5.66%	0.00%	4.76%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

3.3.5 Employment by Qualification Level and Areas/Trade

Figure 10 illustrates the employment levels of graduates from the University of Rwanda, Rwanda Polytechnic, and the Rwanda TVET Board, categorized by their qualification levels.

Figure 10 — Employment by qualification level

Employment per qualification levels

■ Not employed ■ Employed

		Not employed	Employed
UR	Bachelors	63.33%	36.67%
RTB	Level 5	68.18%	31.82%
	Level 4	53.64%	46.36%
	Level 3	75.00%	25.00%
RP	Advanced Diploma	40.76%	59.24%
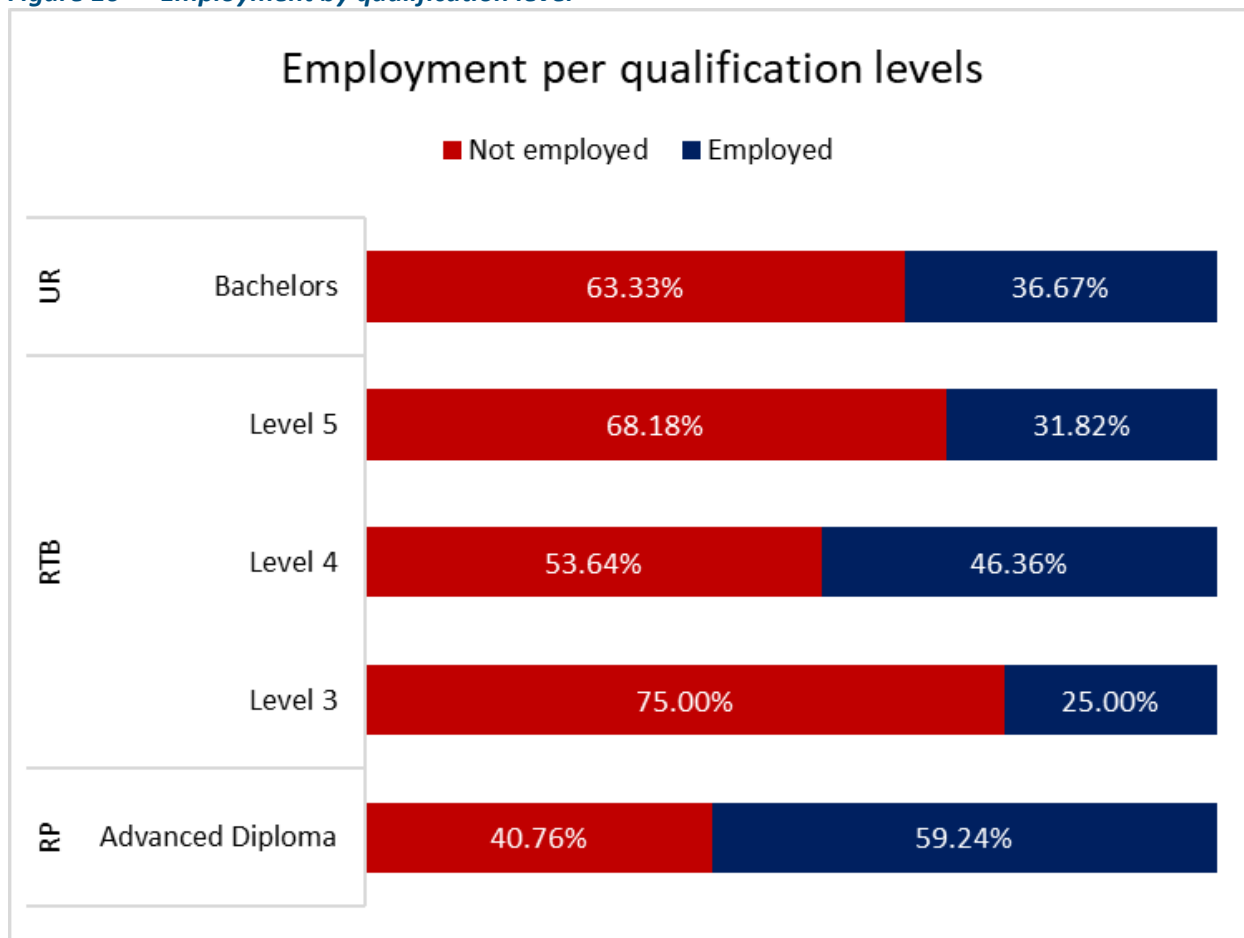
(Source: PSG Graduates Tracer Survey, October 2023)

As depicted in Figure 10, when considering employment by qualification level, TVET Advanced diploma holders account for 59.24% of graduates employed and 40.76% not employed. TVET Certificate (Level 4) follows with 46.36% of graduates employed and 53.64% not employed, while Bachelor's degree holders represent 36.6% of graduates employed and 63.6 % of graduates not employed.

3.3.6 Types of Employment

The types of employment available to graduates can vary widely depending on their field of study, level of education, skills, personal preferences and circumstances. For those graduates who found employment after graduation, the survey was interested in knowing the type of employment chosen by the surveyed groups.

Figure 11 — Type of employment among graduates

Type of employment among graduates

UR
- Casual: 36.36%
- Intern/paid apprentic: 9.09%
- Employee: 54.55%

RTB
- Member of a cooperative: 6.06%
- Self-employed: 14.14%
- Contributing to family works: 19.19%
- Employer: 5.05%
- Intern/paid apprentic: 17.17%
- Employee: 38.38%

RP
- Member of a cooperative: 3.30%
- Self-employed: 13.19%
- Contributing to family works: 7.69%
- Employer: 7.69%
- Intern/paid apprentic: 23.08%
- Employee: 45.05%
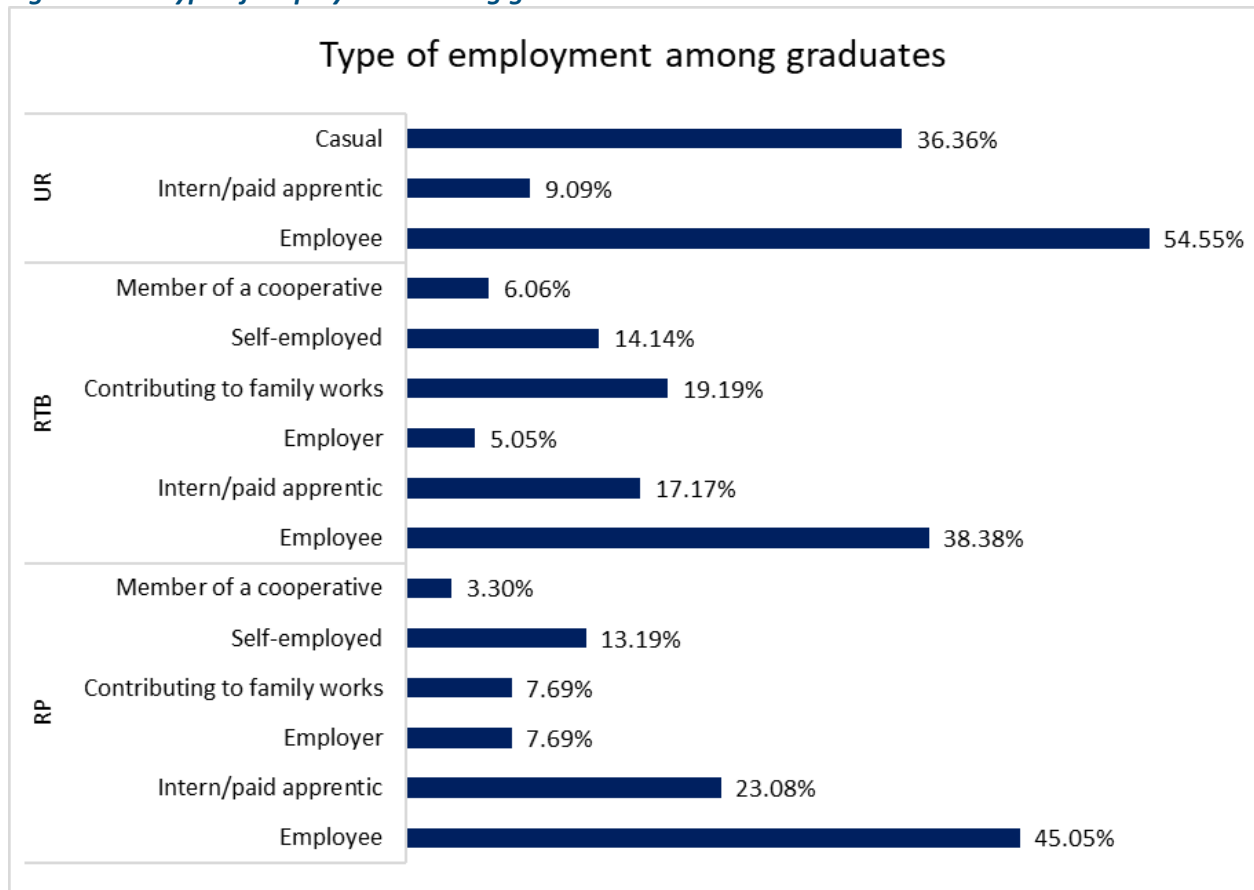
(Source: PSG Graduates Tracer Survey, October 2023)

From the evidence presented in Figure 11, it is explicit that graduates choose more than one type of employment after graduation. The results in the following figure show that the dominating type of employment available to graduates from University of Rwanda (54.55%), Rwanda TVET Board (38.38%) and Rwanda Polytechnic (45.05%) is to be "employee". Many graduates choose to become employees for various reasons. Being an employee offers certain advantages and provides a level of security and structure that can be appealing, especially when starting one's career. That choice is also used to be the first option because graduates eventually explore entrepreneurial opportunities or other forms of work after gaining experience as employees.

Another type of employment that was important for a graduate from Rwanda Polytechnic (23.08%) and Rwanda TVET Board (17.17%) to obtain employment is to be an "internee/paid apprentice". The smallest proportion (3.30%) of the graduates from Rwanda Polytechnic have chosen to be "members of cooperative".

3.3.7 Self–Employment Among Graduates

Figure 12 presents data on self–employment among graduates. As a substantial portion of these graduates are engaged in hands–on areas, an analysis of this data is imperative in order to determine the percentage of graduates possessing entrepreneurial skills or pursuing self–employment opportunities.

Figure 12 — Self–employment among graduates
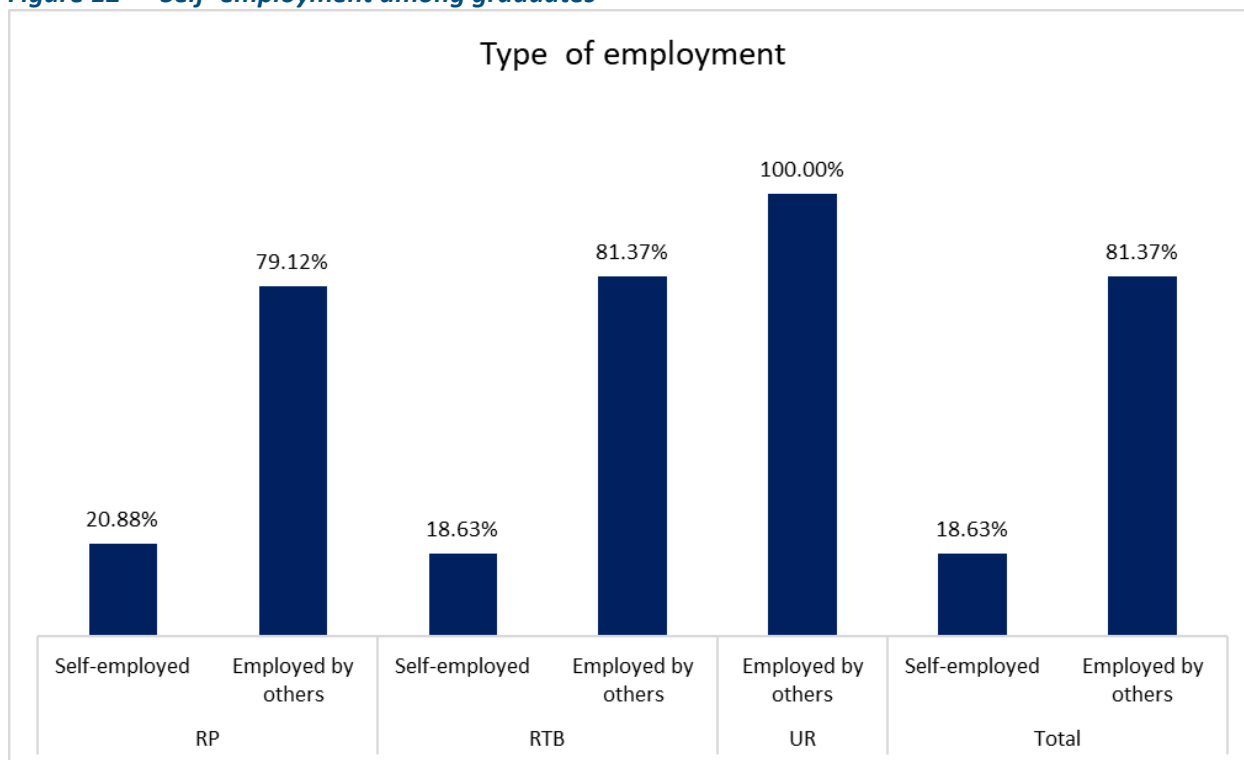
(Source: PSG Graduates Tracer Survey, October 2023)

The data depicted in Figure 12 reveals that a significant majority of graduates, comprising 81%, are currently employed by others. Notably, the statistics indicate that 20% of RP graduates are self–employed, along with 18% of RTB graduates, whereas all UR graduates are engaged as employees by other organizations, accounting for 100% of their employment status.

These findings underscore a prevailing issue among young graduates: the lack of access to collateral or start–up toolkits to establish their own businesses. This scarcity of resources hinders their entrepreneurial aspirations and limits their ability to venture into self–employment. The lack of support for young entrepreneurs creates a cycle of dependence on existing employment opportunities, restricting their potential to contribute to economic growth and innovation through their own ventures.

3.3.8 Nature of Employment

Figure 13 shows the nature of graduates' work in terms of permanent contract, temporary contract, casual (with no contract), and intern and apprentice types of contracts.

Figure 13 — Nature of employment with type of contract

Employment with types of contract

(Bar chart showing: Casual (with no contract) 32.68%; Intern & apprentice 15.12%; Permanent contract (specified duration) 26.34%; Temporary contract (specified duration) 25.85%)
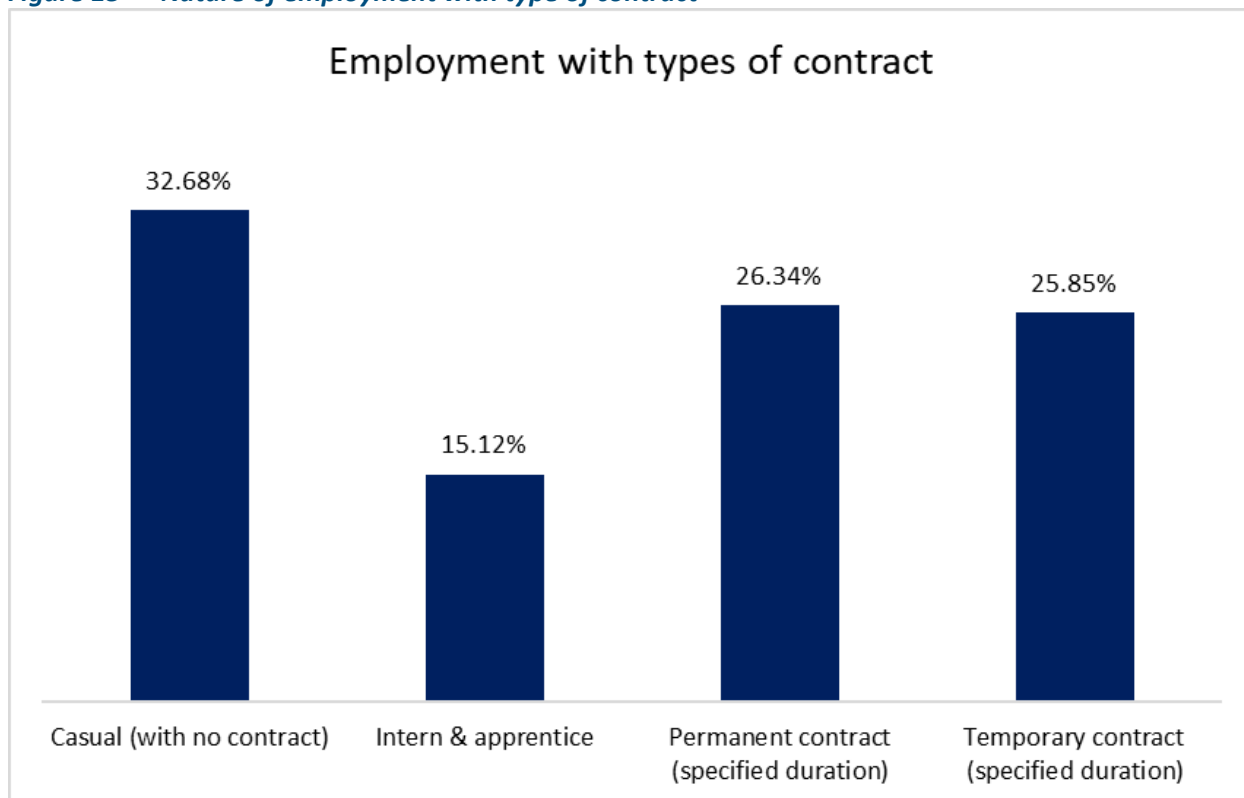
(Source: PSG Graduates Tracer Survey, October 2023)

Taking into account the nature of employment and types of contracts, casual workers with no contracts have the highest proportion, representing 32.7%, though this is very low when compared to national labour, which indicates that the casual workers have been above 85% across the last five years (NISR, LFS, 2017–2022). In fact, this implies that those with higher education levels have the capacity to negotiate the contract, even if it may be temporary (25.8%) or permanent with a specified duration (26.3%).

3.3.9 Employment by Category of Employers

Employment for graduates are categorized based on the type of employers they work for. Graduates can find job opportunities across various sectors and industries. In this report, employers are divided into 6 categories namely: Public sector, Private sector, Public–private partnership, Non–Governmental Organizations, Cooperatives and others. The choice of employer category often aligns with an individual's field of study, career aspirations, and personal preferences. Figure 14 indicates the employment status by category of employers.

Graduates per employers categories

■ RP   ■ RTB   ■ UR

Category	RP	RTB	UR
Others	5.75%	6.93%	
Public Sector	25.29%	36.63%	11.11%
Public private partnership	4.60%	7.92%	
Private sector	50.57%	24.75%	77.78%
Non-Government Organization (NGO)	8.05%	18.81%	11.11%
Cooperatives	5.75%	4.95%	

(Source: PSG Graduates Tracer Survey, October 2023)

As evident from the figure 14, the Private sector emerges as the primary employer, with a significant 77.78% of University of Rwanda graduates finding employment there. For graduates from Rwanda Polytechnic and Rwanda TVET Board, the Private sector employed 50.57% and 24.75% of them, respectively. The Public sector follows as the second–largest employer, hiring 36.63% of Rwanda TVET Board graduates, 25.29% of Rwanda Polytechnic graduates, and 11.11% of University of Rwanda graduates. Unfortunately, the categories of public–private partnership, cooperatives, and others present limited employment opportunities.

This data underscores the pivotal role played by the private sector in graduate employment. Nevertheless, there is a pressing need to explore potential job prospects within the categories of public–private partnerships, cooperatives, and other sectors.

3.3.10 Salary Range

Figure 15 reveals salary range among graduates from the University of Rwanda (UR), Rwanda TVET Board (RTB), and Rwanda Polytechnic (RP)

Figure 15 — Salary range per institutions

Salaries per institution

■ UR ■ RTB ■ RP

Prefer not to answer
- UR: 47.37%
- RTB: 29.55%
- RP: 32.26%

Less than 20,000 Rwf
- UR: 5.26%
- RTB: 16.48%
- RP: 8.06%

50,000 - 99,999 Rwf
- UR: 5.26%
- RTB: 11.36%
- RP: 18.55%

30,000 - 49,999 Rwf
- UR: 5.26%
- RTB: 7.39%
- RP: 8.06%

20,000 -29,999 Rwf
- UR: 5.26%
- RTB: 4.55%
- RP: 4.03%

100,000 Rwf and above
- UR: 31.58%
- RTB: 30.68%
- RP: 29.03%
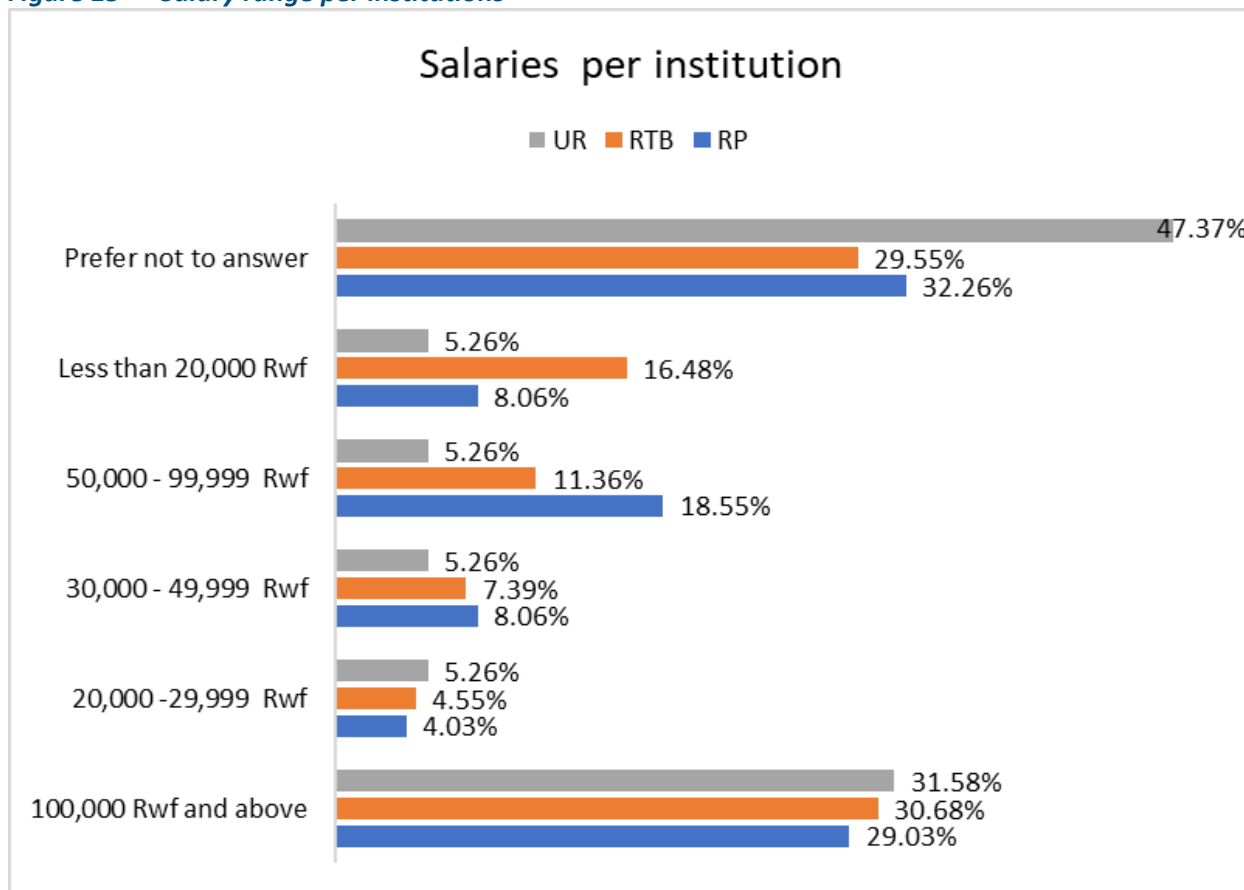
(Source: PSG Graduates Tracer Survey, October 2023)

The majority of UR graduates, as well as those from RTB and RP, fall into the income bracket of 100,000 Rwandan Francs and above, representing 31%, 30%, and 29%, respectively. Interestingly, a significant proportion of respondents chose not to disclose their salary, accounting for 47% of UR graduates, 29% of RTB graduates, and 32% of RP graduates. Maybe this can be associated with the culture of revealing salary where it is recommended to ask the question of salary to employers instead of employees.

What's particularly striking is the relatively low percentage of graduates earning less than 100,000 Rwandan Francs, with less than 25% in UR, 40% in RTB, and RP. This suggests a significant portion of graduates in these institutions are earning wages above this threshold.

3.3.11 Salary Range by Training Programme

The Figure 16 indicates the salary range by training programme.

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Figure 16 — Salary range by training programme

Salary and training program

Legend: ■ Less than 20,000 Rwf ■ 20,000 - 29,999 Rwf ■ 30,000 - 49,999 Rwf ■ 50,000 - 99,999 Rwf ■ 1,00,000 Rwf and above

Training Programme	<20,000	20,000–29,999	30,000–49,999	50,000–99,999	100,000+
Veterinary Technology	8.33%	8.33%	16.67%	25.00%	41.67%
Leather Works					100.00%
Labour-Based Road Maintenance	14.29%	14.29%	14.29%		57.14%
Industrial Electricity	31.91%	6.38%	14.89%	12.77%	34.04%
Food Processing	16.67%		16.67%	33.33%	33.33%
Electricity	50.00%			50.00%	
Domestic Electricity	29.17%	8.33%	12.50%	20.83%	29.17%
Crop Production	14.71%	2.94%	2.88%	23.53%	52.94%
Construction Materials Testing Technology		33.33%	16.67%	16.67%	33.33%
Plant Engineering	50.00%				50.00%
Electrical Power Engineering		12.50%	12.50%	12.50%	62.50%
Animal Health	13.04%			17.39%	69.57%
Agriculture And Food Processing	12.50%	6.25%	12.50%	31.25%	37.50%

(Source: PSG Graduates Tracer Survey, October 2023)

As per Figure 16, the highest paying training programmes are Leather Works (100%), indicating a payment that is above Rwf 100,000, followed by Animal Health (69.6%), Electrical Power Engineering (62.5%), Labour–based Road Maintenance (57.1%), Crop Production (52.9%), and Plant Engineering (50%), but this also has the lowest proportion of payment (50%). It should be noted that the highest payment is correlated with the level of education and training programmes.

The lowest–paying training programmes are electricity (50%), industrial electricity (32%), and domestic electricity (29.2%).

3.3.12 Methods for Searching Jobs

Figure 17 illustrates the methods used by graduates from University of Rwanda, Rwanda Polytechnic and Rwanda TVET Board to find jobs.

Figure 17 — Methods used by graduates for searching jobs
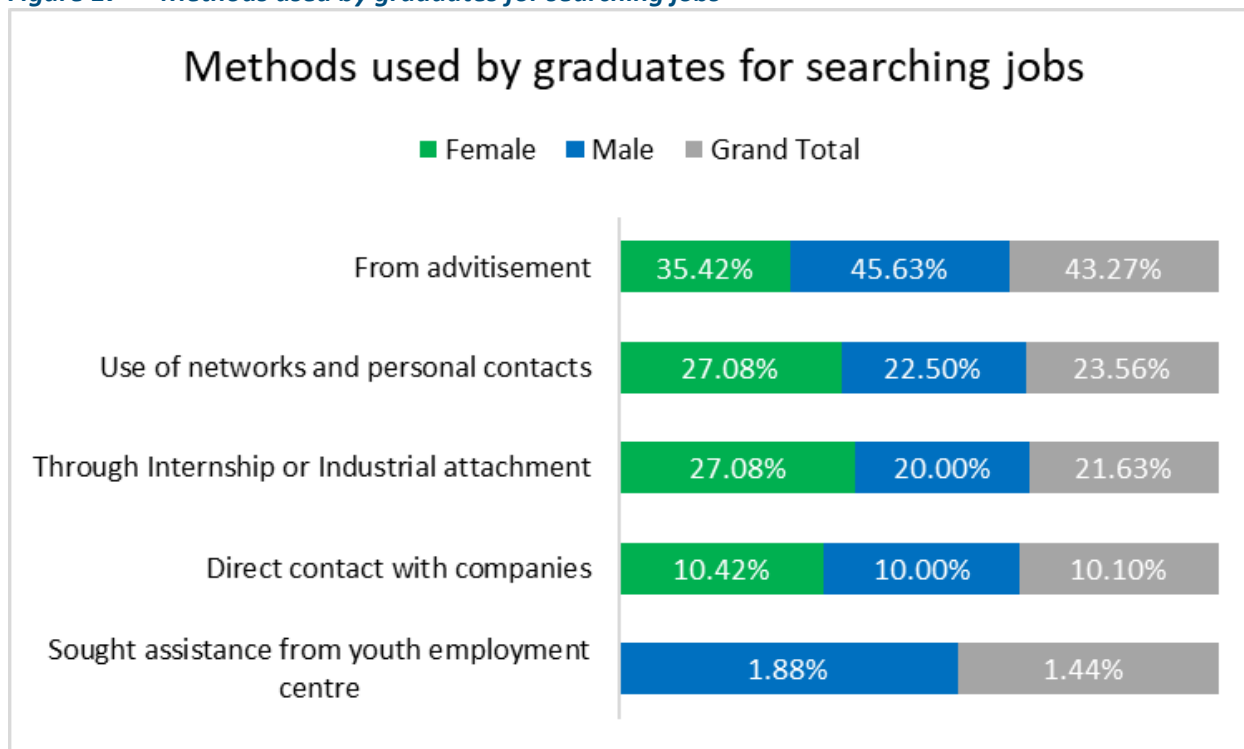
(Source: PSG Graduates Tracer Survey, October 2023)

The advertisement of job vacancies is the most used method for searching jobs as the graduates indicated that they got their jobs through advertised job vacancies (43.3%) where the female and male represent 35.4% and 45.6%, respectively. Those who used network/personal contact (23.6%) for female is 27% and male is 22.5%; through internships or industrial attachment (21.6%); contacting companies directly (10%) for both female and male; and with the assistance of an employment service centre (1.4%), which is the approach that had been used only by male graduates.

It can be observed that the employment services centre and internet usage opportunities are not being leveraged by employers, and the support of employment service centres in searching for and getting jobs is very low.

3.3.13 Aspect Helped Graduates to Get Employment

Respondent graduates, as shown in Figure 18, indicated the aspects that helped them to get current employment.

Figure 18 — Aspect which helped graduates to get employment
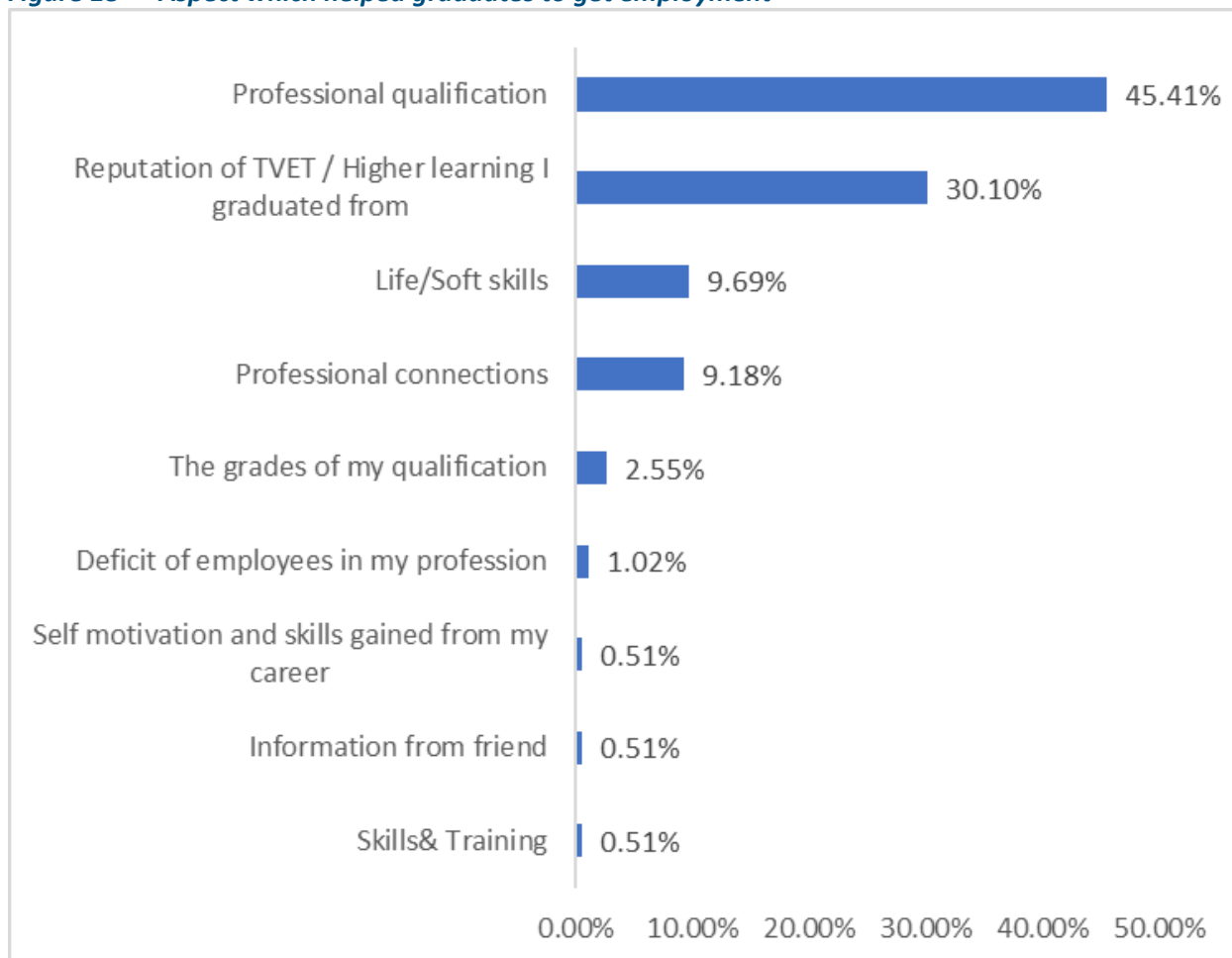
(Source: PSG Graduates Tracer Survey, October 2023)

Professional qualification played a key role as it represented 45.41%, followed by the reputation of TVET and higher learning institutions of graduates (30.1%), life/soft skills (9.7%), professional connections (9.18%), and the other aspects, all combined, representing less than 5%, and these include the grades, deficit of employees, self–motivation, and skills gained from their career and information from friends.

3.4 Employment Satisfaction

Participants were requested to assess their job satisfaction by utilizing a scale ranging from 1 (not at all) to 5 (absolutely). This evaluation encompassed various aspects, including job security, income and benefits, career prospects (such as promotion and professional development opportunities), the feasibility of pursuing further studies, social recognition and status, the potential utilization of acquired knowledge and skills, the quality of the social climate and work environment, management, and the opportunity to make a meaningful contribution to society.

Figure 19 — Employment satisfaction

Employment satisfaction

Absolutely ■ Not at all ■ Not really ■ Quite ■ Somewhat

	Absolutely	Not at all	Not really	Quite	Somewhat
Doing something useful for society	41.10%	11.66%	9.20%	20.25%	17.79%
Management	36.36%	13.37%	9.63%	26.20%	14.44%
Tasks	36.60%	12.89%	9.79%	23.20%	17.53%
Good social climate or work setting	25.91%	13.99%	13.47%	26.42%	20.21%
Using acquired knowledge and skills	40.10%	16.24%	5.58%	22.34%	15.74%
Social recognition	15.92%	16.42%	13.43%	29.35%	24.88%
Pursuing further studies	17.73%	23.15%	9.36%	27.59%	22.17%
Career prospects	18.05%	26.34%	15.61%	20.98%	19.02%
Income and benefits	11.22%	24.39%	18.05%	24.39%	21.95%
Job security	20.19%	30.77%	12.98%	19.23%	16.83%

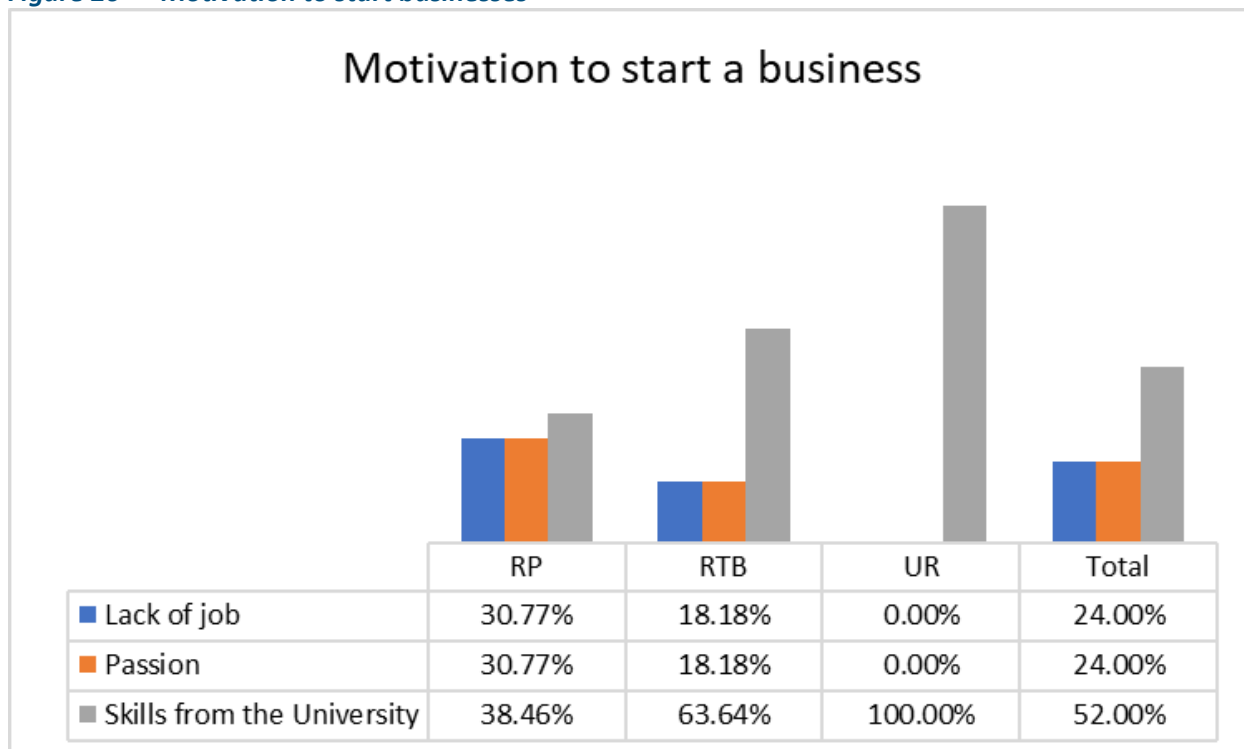*(Source: PSG Graduates Tracer Survey, October 2023)*

The data analysis presented in Figure 19 revealed that the graduates expressed notable dissatisfaction in certain critical areas. Job security ranked as the primary concern, with 30.77% of respondents expressing discontent, followed closely by apprehensions about career prospects at 26.34%. Additionally, 24.39% of graduates expressed concerns about their income and benefits. These aspects, encompassing job security, career prospects, and compensation, hold the potential to impact employee dedication and retention by employers.

On a more positive note, graduates reported a significant level of satisfaction with their perceived contribution to society, with 41.10% expressing contentment. They also highlighted their fulfilment in applying the knowledge and skills acquired during their education (40.10%) and positively perceived the management and allocation of tasks (36%). These aspects demonstrate a sense of purpose and confidence among graduates, which can have a beneficial impact on their job engagement and overall job satisfaction.

3.5 Motivation to Start Businesses

The graduate respondents were asked to identify their motivations for venturing into entrepreneurship/businesses, which included factors such as their own passion, possession of sufficient skills to initiate and manage a business, inheriting a business, and being driven by the lack of job opportunities, among other considerations.

Figure 20 — Motivation to start businesses

Motivation to start a business

	RP	RTB	UR	Total
■ Lack of job	30.77%	18.18%	0.00%	24.00%
■ Passion	30.77%	18.18%	0.00%	24.00%
■ Skills from the University	38.46%	63.64%	100.00%	52.00%

(Source: PSG Graduates Tracer Survey, October 2023)

It is evident from Figure 20 that the university or school attended by graduates played a pivotal role in their ability to become self–employed, equipping them with the necessary skills to initiate and oversee their own businesses. A significant portion of those who ventured into self–employment, a total of 52%, credited their training institutions for the skills and competencies acquired. Another 24% attributed their entrepreneurial path to their passion for their chosen field or the inability to secure traditional employment.

When we break down these results by institutions, we find that the education provided played a substantial role in fostering entrepreneurship. Specifically, the skills gained at school for managing businesses represented 38.5% at RP, 63.6% at RTB, and an impressive 100% at UR. On the other hand, the motivation of not finding job opportunities or pursuing one's passion represented equal proportions of 30.8% and 18% in RP and RTB, respectively.

3.6 Linkage Between Business and Field of Study/TVET Trade

The deviation of one's employment from their field of study refers to a situation where a person creates a job or works in a job or career that is not directly related to the academic discipline or field of study they pursued in their education.

According to the results provided in Table 9 for linkage between business creation and field of study/TVET trade deviation, deviated graduates from Rwanda Polytechnic accounted for 68.24%, University of Rwanda recorded 64% and Rwanda TVET Board recorded 59.52%, respectively. This phenomenon occurred for various factors indicated in the previous section.

Table 9 — Linkage between business and field of study/TVET trade

Business Created and Trade Deviation	Not Deviated	Deviated	Total
Rwanda Polytechnic	31.76%	68.24%	100.00%
Rwanda TVET Board	40.48%	59.52%	100.00%
University of Rwanda	36.00%	64.00%	100.00%
Total	**37.18%**	**62.82%**	**100.00%**

3.7 Challenges and Recommendations from Graduates

The 472 graduates that participated in the Tracer Survey from University of Rwanda, Rwanda Polytechnic and Rwanda TVET Board presented challenges and recommendations related to the employment as highlighted below.

3.7.1 Challenges

- Advanced diploma is not required in job opportunities from public and private institutions. This challenge was presented by TVET graduates from Rwanda Polytechnic as the main challenge that hindered them to get employment.
- Still in training to upgrade the level of education. This challenge was presented by the majority of the graduates from Rwanda TVET Board as the main reason they are not employed.
- Mismatch between education background and employment opportunities. This challenge was presented by the majority of employed and unemployed graduates from all institutions (UR, RP and RTB).
- Salary did not meet expectations. This challenge was presented by the majority of the employed graduates from UR, RP and RTB.

3.7.2. Recommendations From Graduates

- To foster collaboration between educational institutions and employers to align programmes with industry needs.
- Establishing strong internship or apprenticeship programmes that can help to bridge the gap between education and employment, making graduates job–ready.
- Implement flexible educational pathways that allow graduates to gain employment while continuing their education, possibly through part–time or online programmes. Multiple entry and exit options across various levels of education.
- Encourage graduates to pursue continuous learning and upskilling opportunities to enhance their employability.
- Promote career counselling and guidance services to help students make informed choices about their educational paths and career options.

- Establish mechanisms for employers to provide input into curriculum development to ensure it aligns with industry demands.
- Promote opportunities for career advancement and merit–based salary increases to motivate and retain employees.

4. Conclusion and Recommendations

4.1 Conclusion

The Tracer Survey, designed to assess the employment outcomes of graduates from degree and TVET programmes supported by the PSG Programme, has yielded valuable insights. The survey was guided by a comprehensive set of research questions and objectives, primarily aimed at determining the employability status of graduates, identifying highly employable programmes, exploring salary ranges, and gauging graduate satisfaction with their educational experiences.

The survey, conducted through the Graduate Tracking System (GTS) and a well–structured questionnaire, targeted graduates from the University of Rwanda, Rwanda Polytechnic, and Rwanda TVET Board within the economic sectors taught in PSG including energy, transport, and agro–processing. The sample size, calculated with a 95% confidence level, exceeded the target with 472 participants.

The findings paint a nuanced picture of graduate outcomes. Importantly, 46.5% of graduates secured employment within 12 months of graduation, with RP demonstrating the highest employability at 59%, followed by RTB (40%) and UR (36.7%). The sectors employing a big number of graduates included construction materials testing technology, boasting an impressive 77.8% employability, and labour–based road maintenance with a commendable 70% employability. In contrast, fields such as electricity (9.09%) and food processing (17.86%), plant engineering (14.29%) reported lower employability rates.

Graduates were quick to find their first job, with 74% securing employment within 11 months. Professional qualifications (45.41%) and institutional reputation (30.1%) played significant roles in helping graduates secure employment. Graduates reported their satisfaction with their training, and the insights garnered will inform policy and decision–making processes.

A significant majority of graduates, comprising 81%, are currently employed by others. Notably, the statistics indicate that 20% of RP graduates are self–employed, along with 18% of RTB graduates, whereas all UR graduates are engaged as employees by other organizations, accounting for 100% of their employment status. These findings underscore a prevailing issue among young graduates: the lack of access to collateral or start–up toolkits to establish their own businesses. This scarcity of resources hinders their entrepreneurial aspirations and limits their ability to venture into self–employment. The lack of support for young entrepreneurs creates a cycle of dependence on existing employment opportunities, restricting their potential to contribute to economic growth and innovation through their own ventures.

The project's goal to attain a 50% employment rate through the Priority Skills Programme has encountered a setback, with the current rate standing at 46%. This shortfall can be attributed to the adverse impact of the COVID–19 pandemic, which disrupted the job market and impacted hiring activities across various industries. Furthermore, the project had also met some challenges including an economic downturn and the geographic disparities in employment opportunities. A significant number of RTB graduates are located in rural areas where job prospects are relatively limited. Nonetheless, there remains an optimistic outlook for the project's

ability to reach its employment target. As the effects of the pandemic decrease and the economy stabilizes, it is anticipated that more beneficiaries will secure suitable job opportunities, thereby improving the overall employment rate.

4.2 Recommendations

The findings of this Tracer Survey present an opportunity for improving educational planning and development, ensuring that graduates are well–prepared for the job market. To capitalize on these insights and enhance graduates' employability, the following recommendations are put forth.

- **Foster Academic and Private Sector Collaboration**: Encourage closer collaboration between educational institutions and employers to align educational programmes with industry needs. This partnership will help ensure that graduates are equipped with the relevant skills and knowledge sought by the job market.
- **Internship and Apprenticeship Programmes**: Establish robust internship and apprenticeship programmes to bridge the gap between education and employment. Practical experience gained through such programmes will make graduates more job–ready.
- **Flexible Educational Pathways**: Implement flexible educational pathways that allow graduates to gain employment while continuing their education. Part–time or online programmes can offer opportunities for continuous learning and upskilling. Multiple entry and exit points through the pathway and lifelong learning options are highly desirable.
- **Supporting Entrepreneurship**: Integrate support for entrepreneurship through establishment of the incubation centres at UR, RP and RTB, researched models like mentorship, handholding, and facilitating access to finance to enhance the outcomes of skills development.
- **Career Guidance and Counselling**: Promote career counselling and guidance services within educational institutions. This support can help students make informed decisions about their educational paths and future career options.
- **Industry Input in Curriculum Development**: Engage employers in the curriculum development process to ensure that educational programmes align with industry demands. This alignment is crucial for producing job–ready graduates.
- **Opportunities for Career Advancement**: Create mechanisms for career advancement and merit–based salary increases to motivate and retain employees. A clear path for growth and financial rewards will enhance job satisfaction and retention.
- **Support Entrepreneurial Aspirations**: To foster a more entrepreneurial ecosystem, it is imperative to implement comprehensive support programmes for young graduates. These programmes should provide access to essential resources, including financial assistance, start–up toolkits, mentorship opportunities, and business training, empowering them to overcome the barriers to self–employment and pursue their entrepreneurial aspirations.

These recommendations, implemented in collaboration with stakeholders in the educational and industrial sectors have the potential to enhance the employability of graduates and contribute to the overall success of degree and TVET programmes. By taking these actions, the University of Rwanda, Rwanda Polytechnic, and Rwanda TVET Board can better prepare their graduates for the evolving job market and industry needs, thus contributing to the broader economic development of Rwanda.

5. Annexes

Table 10 — Employment by institutions

Institution	Not Employed	Employed	Total
Rwanda Polytechnic	26.45%	44.29%	34.73%
Rwanda TVET Board	65.70%	50.48%	58.63%
University of Rwanda	7.85%	5.24%	6.64%
Total	**53.54%**	**46.46%**	**100.00%**

Table 11 — Employment by qualification level and institutions

Institution	Qualification Level	Not Employed	Employed	Total
RP	Advanced Diploma	40.76%	59.24%	100.00%
RTB	Level 3	75.00%	25.00%	100.00%
	Level 4	53.64%	46.36%	100.00%
	Level 5	68.18%	31.82%	100.00%
UR	Bachelors	63.33%	36.67%	100.00%
Total		**100.00%**	**100.00%**	**100.00%**

Table 12 — Employment per programmes and by institutions

Institution	Training programme	Not Employed	Employed	Total
RP	Agriculture And Food Processing	35.42%	64.58%	100.00%
	Crop Production	43.14%	56.86%	100.00%
	Veterinary Technology	43.10%	56.90%	100.00%
RTB	Animal Health	34.29%	65.71%	100.00%
	Construction Materials Testing Technology	22.22%	77.78%	100.00%
	Crop Production	62.50%	37.50%	100.00%
	Domestic Electricity	56.25%	43.75%	100.00%
	Electricity	90.91%	9.09%	100.00%
	Food Processing	82.14%	17.86%	100.00%
	Industrial Electricity	64.36%	35.64%	100.00%
	Labour–Based Road Maintenance	30.00%	70.00%	100.00%
	Leather Works	33.33%	66.67%	100.00%
	Road Construction Plant Operations	100.00%	–	100.00%
UR	Electrical Power Engineering	56.52%	43.48%	100.00%
	Plant Engineering	85.71%	14.29%	100.00%
Total		**53.54%**	**46.46%**	**100.00%**

Table 13 — Categories of employers by institutions

Employer	RP	RTB	UR	Total
Cooperatives	5.75%	4.95%	–	5.08%
Non–Government Organization (NGO)	8.05%	18.81%	11.11%	13.71%
Private sector	50.57%	24.75%	77.78%	38.58%
Public private partnership	4.60%	7.92%	–	6.09%
Public Sector	25.29%	36.63%	11.11%	30.46%
Others	5.75%	6.93%	–	6.09%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Table 14 — Employment by nature of employment and by institutions

Types of Contract	RP	RTB	UR	Total
Casual (with no contract)	11.22%	21.46%	0.00%	32.68%
Intern & apprentice	7.32%	7.32%	0.49%	15.12%
Permanent contract (specified duration)	11.22%	12.20%	2.93%	26.34%
Temporary contract (specified duration)	14.63%	9.76%	1.46%	25.85%
Total	**44.39%**	**50.73%**	**4.88%**	**100.00%**

Table 15 — Salary range by institutions

Salary	RP	RTB	UR	Total
100,000 Rwf and above	29.03%	30.68%	31.58%	30.09%
20,000 –29,999 Rwf	4.03%	4.55%	5.26%	4.39%
30,000 – 49,999 Rwf	8.06%	7.39%	5.26%	7.52%
50,000 – 99,999 Rwf	18.55%	11.36%	5.26%	13.79%
Less than 20,000 Rwf	8.06%	16.48%	5.26%	12.54%
Prefer not to answer	32.26%	29.55%	47.37%	31.66%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Republic of Rwanda
Ministry of Public Service and Labour