



# EMPLOYMENT AND SKILLS STATUS REPORT (ESSR 2022)



## **NATIONAL PLANNING AUTHORITY**

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### **EXECUTIVE SUMMARY**

### BACKGROUND

The study was undertaken as part of performance reporting within the framework of the third National Development Plan (NDPIII). The NDPIII requires the National Planning Authority (NPA) to produce a National Employment and Skills Status Report (ESSR) to keep track of the number of jobs created/lost as well as skills developed during the plan period. The NDPIII adopted a growth and job creation strategy that primarily focuses on expanding and diversifying economic growth and job creation. The report provides an assessment of employment and skills development performance for Uganda between 2015/16 and 2021/22. This period is adequate to provide a complete picture of employment performance during NDPII and the first half of the NDPIII period. It should be noted that, the NDPIII targeted creating 2.5 million jobs throughout a 5-years, translating into an average of 512,000 jobs per year. More jobs were expected from the services sector (1.313 million) followed by Agriculture (796 411 jobs). The study exploits a rich methodology involving both qualitative and quantitative techniques using available data sets collected by the Uganda Bureau of Statistics.

### **EMPLOYMENT PERFORMANCE**

**During the NDPII period (2015/16 and 2019/20), Uganda's economy created approximately 1,600,000 jobs.** This translated into an average of 320,000 new jobs created per year. The new jobs created reached the pick in FY2017/18 during NDPII period, resulting into creation of approximately 420,000 new jobs before dropping to 392,000 in FY2018/19 and eventually to 263,000 jobs in FY2019/20. The study established that employment expanded by an average of 33% in the first three years of NDPII but dropped at an average of 20 percent per annum in the last two years of the plan on account of the covid-19 pandemic that hit the global economy and employment is yet to recover fully.

To date, the country boosts a total of 1,538,641 Pay as You Earn (PAYE) jobs, but 124,399 of them were lost between FY2019/20 and FY2020/21. Despite registering a 4.5 percent job growth between FY2018/19 and FY2019/20-the final FY of NDPII, about 8.1 percent of total PAYE jobs were lost in the first year of NDPIII. Total PAYE jobs increased from 1,314,155 in FY 2015/16 to a record high of 1,538,641 in FY2019/20 before shrinking to 1,414,242 in FY 2020/21.

On the overall, job performance peaked in the 3<sup>rd</sup> year of NDPII (FY2017/18), registered a downward trajectory and started recovery in the second year of NDPIII. Between FY2017/18, net job creation contracted from 419,536 to 258,286 in FY2020/21. However, there was a positive job recovery between the first and the second years of NDPIII. New jobs increased from 258,286 in FY2020/21 to 345,039 in FY 2021/22, but still below the NDPIII annual jobs target of 512,000. The yearly net job creation is projected to reach 399,083 if the recent growth trajectories are not revised downwards.

Although the impacts of covid-19 on the service sector jobs were instantaneous, as many people lost jobs, recovery has continued to occur with lags. Total jobs in the service sector increased from 3,694,372 in FY2020/21 to 3,833,986 in FY2021/22, but the jobs are yet to recover to the highest recorded service sector jobs of 5,368,870 in 2017/18. Thus, while there are signs of job recovery in the service and industrial sectors, full recovery is likely to take a bit more time, estimated at 2 to 3 years of uninterrupted growth and development.

**The total formal sector jobs are estimated at 2.3 million of which the private sector contributes about 83%.** To date, the public sector employs approximately 400,000 public servants, contributing about 17 percent of the total formal sector jobs. The informal sector in Uganda employs about 13.3 million people out of the 15.8 million working population representing about 85 percent of total employment. On externalization, a total of 217,258 Ugandan workers have been externalized between 2016 and 2022, to the Middle East alone, with Saudi Arabia accounting for about 77 percent of the total migrant in the last three years. On average, about 55,000 Ugandan migrant workers have been externalized on a year-to-year basis apart from 2020, mainly due to covid-19 restrictions.

### SKILLS DEVELOPMENT PERFORMANCE

**During the NDPII period (2015-2020), a total of 476,928 individuals were awarded different qualifications and certificates in Uganda.** The number of students completing Doctorate of Philosophy was the least in the category (446). Bachelor's degrees were the most produced at 19.07%, followed by certificate technicians (15.67%), certificates (9.23%), Diplomas (2.55%), Masters (1.76), Diploma Technicians (1.71%), UVQ Diploma and, Postgraduate Diplomas. At the BTVET level, about 50% of the skills developed during the NDPII period were UVQ Certificates. For the first two years of NDPIII, about 47,507 individuals were awarded different qualifications and certificates in the country at different levels. The Bachelor degrees were the most produced, with 27,014, followed by certificates (12,270), Diplomas (4,824), Masters (2,806), Postgraduate Diplomas (395) and PhDs (198). Makerere University produced the highest number of graduates, especially for Masters and PhDs over the first two years of the NDPIII period.

An assessment shows that, the country continues to produce more arts graduates than science graduates yet science and technology. A number of courses are oversubscribed whereas others are undersubscribed yet are crucial for the development of the country. Data on graduation from higher education institutions of learning and examination boards shows that the oversubscribed academic programmes include; Bachelor of Arts Education, Bachelor of Business Administration, Bachelor of Development Studies Bachelor of Accounting and Finance, Bachelor of Social Work and Social Administration among others. The graduates in these disciplines are likely not to find jobs in an already saturated market which exacerbates the level of graduate unemployment. On the other hand, academic programs in STEM disciplines are undersubscribed. This raises concern for Uganda's development agenda of becoming a middle-income country as well as a knowledge-based economy. There is therefore need for deliberate efforts to increase enrolment in science related disciplines.

**Over the NDPII period (2015-2020), approximately 82,884 technicians were awarded and certified with different qualifications.** Although the number of technicians declined from 18,794 to 18,097 in 2015 and 2016, it peaked in 2017 at 20,183 and dropped from 2018 to its lowest in 2019. This translates into an annual average of 9,470 between 2015-2018 before the sudden decline in 2019. The highest number of technicians certified and accredited implies that as more people in this category join the labour market, there should be mechanisms to absorb them on the demand side. However, the decline is attributed to the change in the education calendar in 2019 by the MoES that caused substantial changes in certification timelines, the closure of education and training institutions, and country-wide lockdowns due to the COVID-19 pandemic ravaging the world, including Uganda.

**Information from the Uganda Nurses and Midwives Examinations Board (UNMEB) shows that nurses' and midwives' cadres were the most produced cadres at both diploma and certificate levels.** Specifically, over 20,577 and 4,932 nurses completed with diplomas and certificates over the NDPII Period. These are followed by midwives at 15,356 and 3,128 at certificate and diploma levels, respectively. It is important to note that skills development for midwives at certificate is female-dominated.

### **KEY EMERGING ISSUES**

- 1. There is absence of mechanisms and systems to measure, monitor and track job creation as a key performance indicator of government. It is reported that you cannot create what you do not know! In advanced economies, there are developed systems and mechanisms that enable the government to monitor and track job creation/job losses or destruction on a more regular basis, such as daily, weekly, monthly and quarterly. However, in Uganda, even the "*annual jobs report*" is still far from reality and annual job creation is reported with a lot of caution as it mostly comes from estimations based on irregular and old statistics.
- 2. There is insufficient role of government in direct job creation. The public service can play an essential role in job creation. Creating productive and decent jobs requires government commitment to direct job creation. While downsizing the public sector is an agenda of many countries, including Uganda, it should be noted that wage and wage-related costs are not the most significant national budget consumers, yet associated with higher employment multiplier.

- **3.** The unprecedented slowdown of economic growth by all the major economic sectors has slowed job growth in the country. Economic growth is no longer high enough to create more and better jobs. A decline in real GDP growth during the COVID-19 pandemic period was primarily attributed to a contraction in output from the services and industry sectors. Output growth in the services sector dropped from 9 % in FY2018/19 to 3.5% in FY2020/21, although it slightly improved to 5.4% in FY2021/22. Similarly, industry output growth declined from 5.8% in FY2018/19 to 2.8% in FY2020/21 and slightly improved to 3.8% in FY2021/22.
- 4. Uganda's labour force has continued to grow at a faster rate than the rate of job creation. Uganda has one of the world's most youthful and fastest-growing populations. Uganda has one of the youngest and fastest-growing populations in the world and is among the top four (4) globally. Although fertility rates have fallen somewhat since the 1970s, they remain at 5.7 births per woman. Uganda's women have not experienced the dramatic reduction in fertility rates registered like in Asian middle-income countries, where fertility rates are now well below three percent.
- 5. The limited backward and forward linkages have reduced the speed of labour movement from agricultural subsistence activities and non-wage work. Uganda's economy remains poorly integrated through backwards and forward linkages. Economic growth registered in the past has not resulted in a sufficient structural transformation in employment during the NDPII period. The share of value added in agriculture fell, with industry and services increasing. Uganda has remained dependent on unprocessed raw materials for exports, and there was no change in the share of agricultural employment in this period.
- 6. The demand for wage workers in the private sector has not kept up to speed with the growth in the labour force. The low job creation in the formal private sector is a critical factor behind Uganda's lack of job transformation. Wage job opportunities depend on a dynamic private formal sector that is expanding and hiring workers. Larger firms are often, but not always, more productive and, therefore, in a position to provide more productive employment. Uganda's formal sector comprises a large share of small firms, and large firms account for very few jobs. More jobs are coming from smaller firms, and fewer jobs are coming from large firms.
- 7. The high cost of doing business has continued to hamper Uganda's economy from generating enough productive and decent jobs. Although Uganda has made a 16 percent improvement in doing business in the last five years, more still needs to be done, especially regarding easing access to construction permits, electricity access, trading across borders, registering property, paying taxes and access to affordable credit. Despite the reforms made in the financial sector, interest rates in Uganda remain high, standing at between 20 percent and 23 percent; hence, the majority of micro, small and medium enterprises, which represents about 74 percent, are constrained by access to affordable credit.
- 8. Low survival rate of businesses in Uganda despite being one of the most entrepreneurial countries in the world has also limited job growth. According to the World Bank Group jobs strategy for inclusive growth report 2019, Ugandan firms do not suffer from barriers to entry, there are signs that they may suffer from barriers to growth. Firm survival rates are declining in Uganda. Only one out of four firms remain operational after the first five years of existence. The Global Entrepreneurship Monitor survey identifies Uganda as the country with the most entrepreneurial culture in the world regarding how business opportunities are viewed and cherished.
- **9.** Slow pace of urbanization has resulted into sluggish rural-urban migration leaving a huge proportion of the labour force trapped in low-productive agriculture. The slow reduction in the agricultural labour force explains Uganda's relatively slow urbanisation process. Urban centres, towns and cities offer a collection of more wage jobs in higher value-added sectors and off-farm informal sector opportunities. The World Bank Group jobs strategy for inclusive growth report 2019 notes that the low agricultural yields are responsible for reduced opportunities for urbanization by reducing resources for diversification and migration.

- 10. The quality of jobs in Uganda remains low, with 78% of the labour force engaged in vulnerable employment. Most jobs in the country are in the informal sector with majority characterized by low pay and job insecurity which remains a strong hindrance to the country's jobs transformation agenda. The informal sector in Uganda employs about 13.3 million people out of the 15.8 million working population representing about 85 percent of total employment. Labour relations in the informal sector are primarily based on casual employment, kinship and social relations rather than contractual arrangements with formal guarantees.
- 11. Uganda has continued to experience an inverted skill triangle. This implies that the country has continued to train more graduates than technicians and technologists. This has been occasioned by the limited enrollments in TVET institutions due to among others, negative mindset, entry barriers such as tuition, prior academic attainment, and an overly supply-driven rigid training curriculum. Yet the country requires more technicians and technologists to support the managers to produce goods and services

### RECOMMENDATIONS

- 1. Design and implement a job monitoring and reporting framework/mechanism more regularly. One major employment challenge in Uganda relates to job measurement, monitoring and reporting. There are insufficient mechanisms and systems to measure, monitor and track job creation as a key performance indicator of government. In advanced economies, there are developed systems and mechanisms that enable the government to monitor and track job creation/job losses or destruction on a more regular basis, such as daily, weekly, monthly and quarterly. The MoFPED, UBOS, NPA, MoGLSD and other relevant stakeholders should work out this modality.
- 2. Uganda's labour market is demand constrained and not supply- there is need to design policies that promote demand for labour in the short term, medium and long term. The supply of labour and skills is not yet significantly affecting business performance to limit job creation. More people are working longer hours, and more, better educated young people than ever before are working. But waged earnings are static in agriculture, have fallen for adults in industry and services, and have fallen for youths in the industry.
- 3. Develop transborder infrastructure and other policies that promote trade openness in the region and beyond. The export market remains one of the main sources of industrial growth for Uganda and many other developing countries, generating higher productivity and jobs in the formal sector. Uganda must open trade and improve its transborder infrastructure to increase manufacturing exports. Regional trade provides possibilities to create jobs by reaching into regional markets with higher demand.
- 4. Design and implement policies that promote industrial parks as complete value chains with industrial clusters. There is sufficient evidence and consensus in the literature that when production, manufacturing and service industries cluster together, they generate more productivity gains and job creation by attracting new initiatives into a sparse industrial landscape. For foreign investors, no single firm is incentivised to locate in a new area without others. Governments can foster industrial clusters by concentrating quality institutions, social services, and infrastructure in particular areas as common special economic zones to boost foreign investment.
- 5. Promote mutually supportive growth and employment policies so that employment is not just an automatic outcome of economic growth. Employment growth is conventionally seen as an automatic outcome of economic growth. However, there is improved recognition of the mutually supportive roles of growth and employment promotion policies. In this view, the best way to deal with the employment issue is to focus on maximising economic growth. Yet, there is no guarantee that this will deliver adequate employment growth. This is because different patterns of growth yield different rates of employment creation.
- 6. Award government scholarships and grant students' loans under the current student's loan scheme based on qualifications and skills in shortage as identified in this plan and as contained in the national scarce skills list.

- 7. Ensure awareness of existing government support programmes for firms and workers and how to apply them to ensure adequate uptake. For example, the government implements many programs, projects and policies, yet the targeted beneficiaries are not provided with sufficient information. These include the Parish Development Model (PDM), the Uganda Agriculture Insurance Scheme (UAIS), the EMYOOGA, Business Development Services (Enterprise Uganda), Skills Development Facility (SDF), Youth Livelihood Project, etc.
- 8. Attract more Foreign Direct Investment (FDI) to Uganda while eliminating discretionary tax exemptions. Foreign investment is needed in sectors and industries with the potential to generate formal sector and export-led jobs and to foster linkages with domestic producers and service providers. Attracting foreign investment is necessary for creating more export jobs. Large firms provide better jobs in Uganda, and whereas small and medium-sized enterprises grow organically, FDI brings large-scale investment into the country.
- **9.** Designed and implement policies for simplifying and streamlining the formalization process of jobs and firms. Government should focus on both simplifying and streamlining the paying of taxes, including social security contributions, into one monthly payment and reducing taxes for micro and small firms. Evidence shows that this significantly affects formalizing businesses along many dimensions, such as licensing rates, micro-firm registration, and tax payments. In addition to lowering the direct and indirect costs to firms of formalizing, other policy approaches that can be considered include providing information about the benefits of formalization, the costs involved, and how-to formalize. Another approach is to increase enforcement measures, such as inspections.
- 10. Develop and operationalize the National Labour Market Statistics Framework for Uganda. UBOS should develop thus framework to guide the type and frequency of labour market data and information to be collected. The Framework for National Labour Market Statistics for Uganda will define which labour statistics collection tools can be strengthened and integrated into the national statistics systems for the country and provide for mechanisms on leveraging administrative data.
- 11. Produce and publish national scarce skills and occupation report to highlight critical scarce qualifications and skills needs in the country every after two years. The report should inform, inter alia: human resource planning and development; resource allocation and prioritization of development of critical skills; the development of relevant qualifications programmes and curricula review and development; and international recruitment strategies
- 12. Develop a Uganda National Talent Register (UNTR) for all professionals to capture and provide real-time information concerning the demand and supply of talent/skills/manpower at every point in time. The Uganda National Talent Register (UNTR) should align with the international standard classification of occupations and education (ISCO & ISCED). In addition, it should be integrated with the Oil and Gas Talent Register as well as other relevant information systems such as the Teacher Management System, among others.

# CHAPTER ONE INTRODUCTION AND BACKGROUND

### CHAPTER ONE INTRODUCTION AND BACKGROUND

### **1.1 INTRODUCTION**

The report was undertaken as part of performance reporting under the auspices of the third National Development Plan (NDPIII). The NDPIII requires the National Planning Authority (NPA) to produce a National Employment and Skills Status Report (ESSR) to keep track of the number of jobs created/lost as well as skills developed during the plan period. The NDPIII adopted a growth and job creation strategy that primarily focuses on expanding and diversifying economic growth and job creation. The NDPIII jobs strategy targeted creating approximately 2.5 million jobs over the entire plan period with an annual average of about 512,000 jobs in the public and private sectors. This report is thus produced to take stock of the number of jobs created/lost and the skills developed over the NDPII period and the first two years of NDPIII. The study exploits a rich methodology involving qualitative and quantitative techniques using available data sets collected by the Uganda Bureau of Statistics, a thorough literature review, and Strategic Planning Meetings.

### **1.2 BACKGROUND**

**Uganda's economy has been relatively stable over the last twenty years and is still among sub-Saharan Africa's strongest.** Indeed, the country's annualized average growth rate was 5.4 % between 2010 and 2019 (World Bank, 2020). Uganda's economic growth strategy is built on the need for rapid industrialization of the Ugandan economy linked to high productivity and production in agriculture; while nurturing the potential of the tourism, minerals, oil and gas sectors. The growth of these sectors is envisioned to provide gainful employment to the majority of Ugandans. In the past two decades, the Ugandan economy has transformed, with the services sector now being the main source of growth. From the 1990s to the 2000s, the agricultural sector's contribution to GDP declined from 45 % in the 1990s to 27 % in the 2000s. At the same time, the contribution of the manufacturing sector has increased only moderately. Instead, growth has been driven first by a boom in the services sector in the 1990s and then by a boom in the construction sector in the latter part of the 2000s.

Despite this impressive growth, there is no evidence that adequate productive and decent jobs have been created to absorb the fast-growing labour force. The population growth rate recorded at 3.1 % has consistently remained higher than the jobs creation rate per year necessary for absorbing persons joining the labour market, resulting in increasing unemployment and pervasive underemployment rates. This means that whereas the economy is growing, this growth has not been inclusive enough as it has not translated into job creation, poverty reduction and significant wealth creation for Ugandans. Further, evidence shows that around 700,000 young people reach working age annually in Uganda. This is expected to rise to an average of one million in the decade from 2030-2040, which is already creating a mismatch between labour demand and supply. The evidence reveals that Uganda's economy-wide unemployment rate reduced from 11.1 % in 2012/13 to 9.2 % in 2016/17 and then to 8.8 % in 2019/20. While the trend of Uganda's unemployment rate shows a downward trajectory, informality, underemployment, and unemployment in absolute terms persist in the country's labour market; as a result, many Ugandans are engaged in vulnerable employment, which is often characterized by inadequate earnings, low productivity, and challenging conditions of work that undermine workers' fundamental rights.

The above trends imply that sectors that have contributed most to economic growth in Uganda have not necessarily been labour-intensive. For example, communication and financial services have become more productive and less labour-intensive. Yet sectors that employ the largest proportion of the workforce in Uganda have not achieved high productivity gains, e.g., agriculture. While agriculture employs nearly 77 % of the rural population, recorded growth in the sector is still low at 2.8 %. (UBOS 2018). However, sectors providing more productive and better-paying jobs, like agro-processing and high-value-added agro-industry, have clear linkages to the agriculture sector's overall performance in the country. Therefore, weak economic growth in agriculture affects agro-industrialization, which, in turn, has implications for the employment viability of the dominant agro-industry. The above description is also exacerbated by the small and not expanding number of formal jobs, especially in Uganda's public sector.

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This lack of available "white collar jobs" is met by a significant number of youths graduating annually, either with a certificate, diploma, or degree, who aspire to find such employment. While the private sector is coming in to fill the gap in creating jobs for this population segment, there is inadequate evidence on the type and quantities of jobs created. Therefore, more opportunities for job creation need to be identified and supported. Government and non-government players have, over time, implemented several interventions. Some of these interventions have resulted in the creation of new direct jobs while others have created indirect jobs in the country.

However, there is limited or no information that demonstrates the economy's capabilities to create jobs. As a result, the country does not report on the job growth figure as one of the key indicators of labour market performance. Jobs growth is a figure that tracks how many jobs are created in the country regularly (monthly, quarterly or annual). Jobs growth in advanced economies is used as a measure of economic expansion and regarded as a litmus test for national economic robustness and is often a core part of the employment situation, which serves as a widely examined and reported economic indicator. However, there are no attempts in Uganda meant to Fastrack this. Although it is reasonable that the data requirements may be vigorous and not readily available to undertake this obligation, some attempts must be undertaken now. This report will thus provide estimates of the total number of jobs created during the first two years of NDPIII implementation, skills developed and provide appropriate recommendations in terms of the data requirements and regularity as well as the policy and institutional frameworks required to produce the employment and skills status report on an annual basis.

### **1.3 PURPOSE OF THE REPORT**

This report aims to provide status on job creation and skills development for the first two years of **NDPIII implementation in the country and provide an estimate of the number of jobs created over the NDPII period**. The report will also provide skills development status as a basis for appropriate policy and/or institutional recommendations for maximizing employment and skills development potential in the country. In addition, the report shall outline the critical facts about the job challenges facing the country, the number and type of jobs created and provide recommendations on how to meet these challenges to enhance the country's job creation capacity.

### **1.4 OBJECTIVES OF THE REPORT**

The objectives of this report are majorly twofold; that is:

- i) To provide status and estimate the total number of jobs created during the first two years of NDPIII implementation in the country and estimate the number of jobs created over the NDPII period. The specific objectives include:
  - a) Provide status and estimation of the total number of jobs created during the first two years of NDPIII implementation, as well as providing estimates of jobs created over the NDPII period;
  - b) Identify and detail constraints that hamper Uganda's economy from generating enough productive and decent jobs out of previous growth performance;
  - c) Examining and analyzing employment comparison and opportunities in Public, Private and informal sectors and the opportunities thereof, and thereafter providing policy options and interventions for tapping them;
  - d) Examining and analyzing external employment opportunities and implications, and thereafter provide policy options and interventions for tapping them,
  - e) Generating/developing high-impact growth and employment policy options to address unemployment inclusively and sustainably.
- **ii)** To provide status and estimate of skills development during the first two years of NDPIII implementation and provide an estimate of skills development over the NDPII period. The specific objectives include the following:

- a) Provide status and estimate of skills development during the first two years of NDPIII implementation, as well as providing an estimate of skills development over the NDPII period;
- b) Undertake an assessment of skills need to identify the next-generation skills requirement in new, emerging and existing sub-sectors and provide policy options and interventions for producing the same;
- c) Assess and identify the existing challenges that hamper Uganda's education sector from addressing the labour market skills needs,
- d) Generating/developing high-impact education and skills development policy options and interventions to address Uganda's human capital development challenges in an inclusive and sustainable manner.

### **1.5 METHODOLOGY, DATA AND ANALYSIS**

The study exploits a rich methodology involving both qualitative and quantitative techniques. The analysis was based on data collected by the Uganda Bureau of Statistics, especially the National Labour force survey 2020/21, the Manpower survey and the Uganda National Housing Survey. This was complemented by information and data from the stakeholders relevant to this assignment. To take stock of job creation, the report majorly utilises estimates from Uganda Macro Model for Human Resource Projections updated with the latest National House-hold survey data for 2019/20. This was augmented by data on PAYE jobs and PAYE enterprises obtained from the Uganda Revenue Authority (URA), data on labour externalization from the Ministry of Gender, Labour and Social Development (MoGLSD), as well as data on total employees in the public service obtained from the Ministry of Public Service (MoPS). Data from URA, MoGLSD, and MoPS provided a proxy for formal government jobs.

To take stock of the skills<sup>1</sup> development status, the report utilises data on graduation from higher education institutions of learning and examination boards established under the BTVET Act. The Directorate of Industrial Training (DIT), the Uganda Nurses and Midwives Examinations Board (UNMEB), and the Uganda Business and Technical Examinations Board (UBTEB). Specifically, the study utilized graduation data from five (5) Higher Education, Science and Technology (HEST) institutions (four public and one private). The universities include Makerere, Kyambogo, Gulu, Mbarara University of Science and Technology (MUST) and Uganda Christian University (UCU). Unfortunately, given the data scarcity and the stakeholders' non-responsiveness, data gaps exist for some institutions in/for selected years. The report uses qualifications awarded as a proxy for skills development in Uganda. Cognizant of the difference between qualifications awarded translate into skills, the report refers to programmes completed or qualification at completion as a proxy for skills developed. Future reports will endeavour to transform qualifications into skills by analyzing the tasks and competencies of the people with qualifications

### **1.6 STRUCTURE OF THE REPORT**

The rest of the report is structured as follows: Chapter two presents an overview of Uganda's Economic Performance. Chapter three presents the employment performance of the economy in terms of the key labour market indicators, the number of jobs created over the NDP II and the first two years of the NDP III. Finally, chapter four presents the overview of the skills development performance in terms of status and estimate of skills development over the NDPIII and NDP III periods, assessment of skills needs to identify the following generation skills requirement in new, emerging and existing sub-sectors, challenges that hamper Uganda's education sector from addressing the labour market skills needs.

<sup>&</sup>lt;sup>1</sup> 1 Skills are defined as the innate or learned ability to apply the knowledge acquired through experience, study, practice or instruction and to perform tasks and duties required by a given job. Skills can be categories into; Job-specific/technical skills, Basic skills and Transferable skills (Source: 20th International Conference of Labour Statisticians).

 $<sup>^{2}</sup>$  Qualification is the official confirmation, usually in the form of a document, obtained through: i) successful completion of a full education programme; ii) successful completion of a stage of an education programme (intermediate qualifications); or iii) validation of acquired knowledge, skills and competencies, independent of participation in an education programme (acquired through non-formal education or informal learning).

# CHAPTER TWO UGANDA'S ECONOMIC PERFORMANCE

### CHAPTER TWO UGANDA'S ECONOMIC PERFORMANCE

### 2.1 OVERALL PERFORMANCE OF THE UGANDA'S ECONOMY

### 2.1.1 Real Sector Developments

The size of the Ugandan economy expanded from UShs 139,686 billion in FY2019/20 to UShs 147,962 billion in FY2020/21, registering a real GDP growth rate of 3.4 %. This performance though modest, represents a better recovery from 3.0% growth in the previous financial year. Moreover, this recovery was reinforced with fiscal measures to mitigate the impact of the pandemic on businesses and households. COVID-19 and its lagged effects have dragged planned growth targets in the first two and half years of implementing NDPIII. The country witnessed two Covid-19 lock-downs, in March 2020 and June 2021, as ways of controlling the spread of the pandemic. These lock-down measures had far-reaching consequences on the economy since they disrupted production, distribution of supplies, investment decisions and, in some ways, national and household consumption spending. Despite the realized real GDP growth being lower than the planned targets during the two years of NDPIII implementation, it is on an upward trend. In F.Y. 2020/21, the country registered 3.5% growth compared to 3.0% in FY2019/20. Furthermore, the economy continued on an upward growth trajectory in FY2021/22 as it grew at 4.6%. However, all these growth outturns have been below the planned targets.

### 2.1.2 Key GDP growth drivers in FY2020/21

**Broadly, there was decline in real GDP growth during the COVID-19 pandemic period was primarily attributed to a contraction in output from the services and industry sectors**. Output growth in the services sector dropped from 9 % in FY2018/19 to 3.5% in FY2020/21, although it slightly improved to 5.4% in FY2021/22. Similarly, industry output growth declined from 5.8 % in FY2018/19 to 2.8 % in FY2020/21 and slightly improved to 3.8% in FY2021/22. While agriculture output growth suffered some slumps, this was insignificant since it declined from 5.3% in FY2018/19 to 4.3% in FY2020/21 and FY2021/22 (Figure 1).



Figure 1: Real GDP and Sectoral output growth rates FY2018/19-FY2021/22

Source: UBOS Database

All economic sectors registered positive growth rates during FY2020/21, with a modest recovery in the industry and services sectors. In contrast, growth in agriculture slowed compared to the previous financial year (See Table 1).

	2016/17	2017/18	2018/19	2019/20	2020/21
GDP at Market Prices	3.1	6.3	6.4	3.0	3.4
Agriculture, Forestry and Fishing	2.8	4.4	5.3	4.8	3.8
Cash Crops	9.4	5.9	4.7	7.8	7.7
Food Crops	2.2	8.6	1.6	4.6	4.1
Livestock	7.0	7.1	7.3	7.9	7.8
Fishing	-7.8	-25.2	39.2	0.3	-8.8
Industry	6.8	4.8	9.0	3.2	3.4
Mining and Quarrying	32.7	-4.0	17.5	16.5	6.0
Manufacturing	3.6	4.6	7.7	1.3	2.2
Electricity	9.8	5.4	2.5	10.9	11.3
Construction	11.7	7.6	14.2	3.8	3.3
Services	0.1	8.5	5.8	2.5	2.7
Trade and Repairs	-1.3	7.5	4.9	-1.3	-0.7
Transportation and Storage	2.3	11.3	0.8	-1.7	-0.3
Accommodation and Food services	19.7	10.7	0.5	-8.6	-0.6
Information and Communication	19.0	10.4	-6.8	19.6	11.8
Financial and Insurance Activities	-4.1	2.3	11.1	9.6	8.0
Real Estate Activities	1.6	11.6	10.1	5.1	3.9
Public Administration	18.6	9.6	4.2	16.2	12.6
Education	-10.3	6.9	9.2	-20.0	-4.2
Human Health and Social Work	0.0	16.8	5.3	1.0	7.1
Arts, Entertainment, Recreation	29.7	65.7	22.1	-8.1	-13.7
Taxes on Products	10.9	4.4	4.4	-1.6	6.2

Table 1: Breakdown of Economic Performance by Sector (% change)

The services sector continued to be the most significant contributor to the GDP, although it registered a decline in FY2021/22, with its share contribution falling to 41.5 % from 42.8 % in 2019/20. On the other hand, trade and repairs, which contributes 20 % of output in services and arts, entertainment and recreation, registered negative growth rates in 5 consecutive quarters starting in Q3 FY2019/20 (Table 2). With over 90% of the private sector constituting micro, small and medium enterprises and 49% operating in the services sector, of which over 33% are in commerce and trade, a significant proportion of firm enterprises were affected.

**Trade and repairs, which contributes 20 % of output in services and arts, entertainment and recreation, registered negative growth rates in 5 consecutive quarters starting in Q3 FY2019/20 (Table 2).** With over 90% of the private sector constituting micro, small and medium enterprises and 49% operating in the services sector, of which over 33% are in commerce and trade, a significant proportion of firm enterprises were affected. The inability to cope with containment measures instituted by the government, such as providing on-site accommodation for employees, social distancing, and using digital technologies, explains the increase in operating costs and losses incurred by small businesses in trade and other services over the COVID-19 times.

Table 2: Trends in	<b>Ouarterly Services out</b>	put FY2019/20 O1 to FY2021/22	<b>O2</b>
			•

	2019/20				2020/21				2021/22	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Services	6.8	7.5	1.4	-5.7	-4.4	-2.4	5.4	13.8	7.0	8.9
Trade & Repairs	4.2	5.1	-3.2	-11.9	-2.2	-6.8	-3.1	11.2	-8.2	-1.7
Transportation & Storage	4.3	2.1	-2.3	-10.7	-8.2	-3.5	1.5	10.4	-4.4	0.2
Accommodation & Food Service	5.6	9.6	-2.9	-46.0	-25.9	-19.8	2.8	82.8	9.0	27.4
Information & Communication	21.4	31.1	20.1	6.3	-2.4	-1.9	16.5	39.1	34.9	36.8
Financial & Insurance	19.4	18.1	9.6	-7.1	3.2	-1.0	10.1	21.7	-3.7	-1.2
Real Estate Activities	4.1	0.9	6.1	9.5	5.7	8.0	1.4	0.8	-0.8	-0.7

	2019/20			2020/21				2021/22		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Professional,	32.5	29.4	-26.4	-21.9	-35.1	-12.0	60.1	33.6	63.8	36.9
Scientific &										
Technical										
Administrative	15.7	15.6	1.7	-1.9	-2.2	-2.8	8.0	6.9	7.3	6.8
& Support										
Service										
Public	14.1	18.1	15.0	17.8	8.3	13.0	25.5	3.5	15.9	9.5
Administration										
Education	-6.1	-4.1	0.8	1.5	-18.0	-12.9	-1.8	15.6	50.2	43.8
Human Health	1.1	6.1	2.8	-5.9	13.1	9.6	0.8	4.2	-12.1	2.0
& Social Work										
Arts,	-0.9	2.1	-7.9	-27.2	-27.6	-23.4	-19.2	30.1	36.7	34.9
Entertainment										
& Recreation										
Other Service	2.5	1.5	0.9	0.8	1.0	2.2	3.7	4.9	5.3	-14.4
Activities										
Activities of	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.8	2.8	2.8
Households										

The industry sector currently contributes 26.8% of GDP and suffered the negative effect of COVID-19 as its output growth fell from 9% in FY2018/19 to 3.2% in FY2019/20. Quarterly data on industry output and its subcomponents indicates a sharp decline in total industrial production starting in Q2 FY2019, coinciding with the lock-downs in China, a significant source of intermediate inputs to Ugandan manufacturing. By the end of Q4 FY2019/20, industrial output had registered *minus* 10.1% growth, mainly owing to significant mining and quarrying, manufacturing, electricity and construction contractions.

Despite a brief recovery of industrial output growth for the more significant part of FY2020/21, the gains were reversed in the final quarter and Q1 in FY2021/22. This is mainly attributed to the second wave of COVID-19 that was occasioned by a second lock-down. Both mining and quarrying and manufacturing were the most hit subsectors. While manufacturing was exempted from total lock-downs, it experienced increased operating costs from enforcement of covid-19 standard operating procedures and input costs following global and domestic supply chain disruption. Therefore, to revamp the economy to the pre-covid-19 growth trajectory, there is a need to build a sustainable industrial base in manufacturing, given that (manufacturing) contributes 61% of the output in the industry.

The agricultural subsectors that registered a slump over the two lock-down periods included fishing, food crop and forestry activities. The fishing subsector's poor performance is attributed to the COVID-19 restrictions on the movement of people, the failure to import modern fishing equipment, and the low global demand for fish in Hong Kong, China, and Europe following the border closures. The decline in food subsector activities could be attributed to low food demand, especially in urban areas, because of reduced incomes, regulated transportation modalities, and disruptions in input distributions from seed to commercial and smallholder farmers. Since the food crop subsector contributes over 50% of agricultural output, and agroprocessing is a significant driver of NDPIII growth, boosting food production and fishing will be critical in bringing the economy back to the pre-covid 19 growth trajectories.

### 2.2 FISCAL DEVELOPMENTS

The government applied an expansionary fiscal policy, with the fiscal deficit rising to 9.1 % of GDP, above the NDPIII target of 7.8 %. This was mainly driven by the rise in government expenditure to 23.3 % of GDP compared to the planned spending of 20.8 % in F.Y. 2020/21. The higher spending was due to the unforeseen need for more government spending to mitigate the spread of COVID-19, provide adequate support to the health sector to manage a large number of infections, provide social and economic assistance to the masses and support economic recovery. Consequently, the debt ratios increased from 41% of GDP in F.Y. 2019/20 to 47 % of GDP, which is much higher than the NDPIII target of 45.7 % of GDP and close to the debt benchmark of 50 %.

Furthermore, the ratio of interest payments to domestic revenue increased from 16.96 % in F.Y. 2019/20 to 20.55 in F.Y. 2020/21, rising further above the 15 % benchmark. The higher ratio implies that more of the country's meagre resource envelope will be spent on financing debt repayment, leaving fewer resources for development spending.

However, revenue mobilization increased during this period from a 1.6 % decline during the peak of the lock-down in F.Y. 2019/20 to a 15.2 % growth in 2020/21 after easing lockdown restrictions. The tax revenue amounted to 12.4 % of GDP in F.Y. 2020/21 compared to the budget target of 13.3% due to the COVID-19 lockdown and restrictions on movements across borders as well as the general disruption of the global economy. Nonetheless, the revenue collections were higher than the NDPIII target of 11.96 %, resulting in a 1 % age point increase above the fiscal policy target of a 0.5 % age point increase annually.

In the Financial year 2021/22, government continued with the expansionary fiscal policy to fund economic recovery, with the fiscal deficit amounting to 7.3 % of GDP as compared to the NDPIII target of 6.2 % of GDP. The higher deficit was driven by higher-than-planned spending, estimated at 21.5 % of GDP, compared to the NDPIII target of 20.2 %. However, the expenditure contracted from 23.7 % of GDP to 21.51 % of GDP, in line with the need to ensure fiscal and debt sustainability amidst a limited resource envelope. This was implemented through a budget cut of 40 % and reprioritization of government expenditure towards the health sector and priority activities.

**Consequently, Uganda's debt to GDP increased to 51.6 %, surpassing the 47.8 % target in the NDPIII, the 50 % target in the charter of fiscal responsibility and EAC monetary convergence criteria.** The higher debt has also led to higher interest payments, given the increased debt sourcing from non-concessional sources. The interest payments to revenue ratio have therefore risen from 16.96% in F.Y. 2019/20 to 23.3 % in F.Y. 2021/22, which is an indication of increased risk to fiscal sustainability as a large proportion of debt repayment takes up in the resource envelope, leaving only 77 % of the resources for undertaking governments development initiatives.

**Domestic revenues increased from 12.4 % of GDP in F.Y. 2019/20 to 13.3 % in F.Y. 2021/22, surpassing the NDPIII target of 12.2 %.** The revenue performance was driven by tax revenue collections that rose above the NDPIII targets in the first 2 years of the NDPIII. The non-tax revenues (NTR) also contributed to the excellent revenue performance against the NDPIII targets, particularly in F.Y. 2021/22, where the NTR was estimated at 0.95 % of GDP compared to the NDPIII target of 0,93 % of GDP. The excellent revenue performance against the NDPIII is likely a result of lower NDPIII targets in anticipation of a much worse impact of COVID-19 on revenue collections.

**However, the revenue collections fell short of the budget projections during this period**. In FY 2021/22, the budget targeted revenues worth UGX 22,425 billion against an outturn of UGX 21,485.7 billion. In contrast, the F.Y. 2020/21 budget targeted revenues amounting to UGX 21,809.7 billion, but the revenue outturn was estimated at UGX 19838.7 billion. Lower revenue collections drove the shortfall in revenues from both tax and non-tax revenues due to; the lock-down caused by the pandemic that led to reduced aggregate demand causing declines in sales and production volumes of goods; closure of borders which affected international trade and non-tax revenue for services such as tourism and visas; domestic arrears partly due to delayed payment of some taxes by the government; as well as the inadequate performance of revenue enhancements measures

Uganda's nominal debt stock increased from US\$ 15.34 billion in F.Y. 2019/20 to US\$ 19.54 billion in F.Y. 2020/21 and is projected to rise to US\$ 22.7 billion by the end of F.Y. 2021/22. As a % of GDP, the debt levels increased from 41 % of GDP in F.Y. 2019/20 to 47 % of GDP in F.Y. 2020/21 and is projected to rise to 51.6 % by the end of F.Y. 2021/22.

### 2.3 MONETARY SECTOR DEVELOPMENT

**Monetary policy has been underpinned by the desire to maintain macroeconomic stability**. Accordingly, the Bank of Uganda (BOU) has been implementing monetary policy under an Inflation Targeting Lite (ITL) monetary policy framework since July 2011. In this framework, the BOU uses the policy rate to influence the interbank money market rates so that they move in tandem with the movement in the central bank rate (CBR), which in turn should affect other retail interest rates (both short-term and long-term) in the economy.

### 2.3.1 Private Sector Credit

**During the year, the stock of private sector credit rose by 7.1 % to UShs 18.2 trillion compared to a growth of 12.5 % the previous year**. The slowdown in the growth of personal sector credit was driven mainly by a combination of subdued demand for credit and increased risk aversion by the major lenders. In addition, there was heightened uncertainty related to the impact of the Covid-19 pandemic on businesses and households. The value of loan requests to lenders, which proxies demand for loans, reduced from UShs 24.2 trillion in FY2019/20 to UShs 17.9 trillion in F.Y. 2020/21. In the same way, the value of loan approvals decreased from UShs 14.1 trillion in the previous F.Y. to UShs 9.98 trillion. FY2020/21. The increased credit risks mainly explain this performance. Figure 8 shows the trend in the stock of private sector credit.

### 2.3.2 Exchange Rate

The Ugandan Shilling strengthened by 1.4 % against the U.S. dollar from an average mid-rate of UShs 3,714.6 per US\$ in FY2019/20 to UShs 3,661 per US\$ in FY2020/21. This development was mainly driven by higher inflows from portfolio investments in the securities market and export earnings, especially from coffee and mineral products. In addition, the global weakening of the U.S. dollar, subdued private sector foreign exchange demand and increased inflows from development partners tagged to the fight against Covid-19 contributed to the strengthening of the Shilling during the financial year. Figure 11 shows the trend in the monthly rates of the Shilling against the U.S. dollar between July 2020 and June 2021.

### 2.3.3 Inflation

**During FY2020/21, annual headline inflation remained subdued and averaged 2.5 % compared to 2.3 %** in FY2019/20. The slight increase in the general price level was attributed mainly to the significant rise in transport fares on other goods and services. Transport costs rose sharply following pandemic-related restrictions on public service vehicle capacities. The increase in transport costs mostly affected goods and services in the core inflation basket, increasing the core inflation measure. Core inflation increased to an average of 3.5 % during FY2020/21, up from 2.3 % in the year but remained within the Central Bank's 5 % target. The increase in core inflation was primarily a result of increased transport fares across the country as transport operators significantly hiked transport charges to minimize anticipated losses arising from the reduction in vehicle capacity as part of the pandemic-related operating guidelines.

On the other hand, average prices of food crops and solid fuels declined due to the low consumer demand in the economy because of the negative impact of the Covid-19 pandemic on businesses and household incomes. Consequently, inflation of food, energy, fuels and utilities (EFU) declined by 4.2 and 0.9 %, respectively (see figure 3). However, the combined decline was not enough to counter the increase in core inflation, leading to a general rise in the overall price level (headline inflation). In addition, Uganda's inflation outlook continues to be uncertain owing to the following factors: (i) global inflationary pressures owing to high world food and energy prices; (ii) tight monetary policy being pursued by advanced countries, which could intensify portfolio outflows from frontier markets such as Uganda; (iii) high prices in global markets which could further weaken the Uganda shilling, and; disruptions in global supply chains. These risks have further dampened the prospects for higher economic growth, weakened consumer confidence and led to higher exchange rate volatility. To address these challenges of worsening economic outlook, the monetary authorities tightened monetary policy by raising the CBR to 7.5 % and maintaining the band at +/- 2 % age points. Further increases in the CBR are also expected until inflation is kept in check.

### 2.4 EXTERNAL SECTOR DEVELOPMENTS

The financial year 2020/21 showed improved trade activity, as global trade conditions improved after easing pandemic-related lock-down measures in many countries. The rebound in global demand contributed to a recovery in Uganda's exports, which rose by 38.8 % compared to last financial year. Coffee performed particularly strongly, recording 6.08 million 60-kg bags exported. This represents the highest exports and results from the various government strategic interventions in the sector. During the financial year, Uganda's imports grew by 34.2 % compared to the previous year, as private sector demand for imports rebounded and supply chains improved. As a result, the value of imports exceeded earnings from the export sector and contributed to the widening of the trade deficit.

### 2.4.1 The current account/GDP

**Uganda's external position worsened in F.Y. 2020/21, with the current account deficit to GDP increasing drastically from 6.7 % in F.Y. 2019/20 to 9.5 % in F.Y. 2020/21**. However, this was lower than the NDPIII target of 9.7 % due to an anticipated worse impact of the pandemic on the external position (Figure xxx). In real terms, this was approximately a 52 % increase to US\$ 3,839.1 million. However, there was a slight improvement in the current account in F.Y. 2021/22, marked by a slight fall of 1 % age point compared to the NDPIII envisaged improvement in the external position by 3 % age points. Therefore, the current account balance was estimated at 8.5 % of GDP, above the NDPIII target of 6.5 % for this period.

### 2.4.2 Trade balance

**Uganda is a net importer and has maintained a trade deficit for many years.** During the first year of the NDPIII, the trade deficit widened significantly from 6.4 % of GDP in F.Y. 2019/20 to 7.5 % of GDP in F.Y. 2020/21 due to a higher increase in imports to GDP estimated at 4.1 %age points as compared to the rise in exports to GDP which was estimated at 2.9 %. The imports to GDP were recorded at 20.6 % compared to the exports to GDP, which were recorded at 13.1 %. However, the trade deficit was reduced in F.Y. 2021/22 as the imports to GDP more than offset the decline in exports. To reverse the chronic trade deficit, the government has to put effort into value addition and export promotion to increase the value of inflows from exports.

### 2.4.3 Export Growth

In the first year of NDPIII, there was a drastic increase in export receipts recorded at 38.6 %, with exports rising to US\$5,275 million from US\$ 3,807.1 million in F.Y. 2019/20. The rise in export receipts was driven by the surge in Gold export receipts, which increased by 101 %, as well as Beans (117%), flowers (22.5%) and tea (20.4%). However, the export receipts declined by 23.5 % to US\$ 4,034.9 million in F.Y. 2021/22. The lower export receipts were mainly due to the halt in gold exports by exporters due to a levy of five % on every kilogram of refined gold and 10 % on unprocessed gold for export imposed by the government in 2021. In addition, the decline in tobacco and simsim exports contributed to the lower export receipts in F.Y. 2021/22 and maize exports which were reduced partly due to the restrictions imposed on maize importation in Kenya.

### 2.4.4 Imports Growth

**Imports increased by 34 % in F.Y. 2020/21, to US\$ 8324.3 million, from a decline of 9 % in F.Y. 2019/20.** The higher growth in the import bill was driven by private sector imports that increased by 35 %, mainly resulting from an increased import bill from Arms & Ammunition & Accessories (363%), Mineral Products (excluding Petroleum products) (98%), Vegetable Products, Animal, Beverages, Fats & Oil (49%), and Base Metals & their Products (38%). In addition, the rise in the import bill was also due to a 26 % increase in government imports for projects during the same period. Uganda's international reserves increased from 4.75 months of imports of goods and services in F.Y. 2019/20 to 4.82 months of imports of goods and services in F.Y. 2020/21. The higher reserve stock resulted from a surplus on the balance of payments arising from increased inflows in the financial account. However, reserves were reduced in F.Y. 2021/22 to 3.92 months of imports as there was a draw down on reserves to fund the deficit on the balance of payments during this period. The reserves remained within the NDPIII target of 3.53 months of imports.

# CHAPTER THREE EMPLOYMENT PERFORMANCE

### CHAPTER THREE EMPLOYMENT PERFORMANCE

### 3.1 OVERVIEW OF EMPLOYMENT PERFORMANCE IN UGANDA

The drop in Uganda's economic growth between 2020 and 2021 due to the global Covid-19 pandemic that hit all sectors altered the job creation target of the country. This negatively affected household income, especially as firms closed and economic activities contracted. Worse still, the pandemic is disrupting labour markets in Uganda, regionally and globally, and employment is yet to recover fully. Nevertheless, the creation of decent work and productive employment opportunities remains at the core of Uganda's Vision 2040, which aims to guide the country towards a competitive and upper-middle-income country by 2040. Therefore, the government has prioritised decent and productive employment for inclusive and sustained economic development.

The study provides an assessment of employment performance for Uganda between 2015/16 and 2021/22. This period is adequate to provide a complete picture of employment performance during NDPII and the first half of the NDPIII period. The NDPII prioritized investments and interventions in five economic sectors that were perceived as sectors with strong employment potential. These included agriculture, tourism, minerals/oil and gas, infrastructure, and human capital development. The NDPIII, on the hand, was premised on employment creation for rapid socioeconomic transformation and focused more on expanding and diversifying economic activities to create demand for labour. The NDPIII targeted creating 2.5 million jobs throughout a 5-years, translating into an annual average of about 512,000 jobs. More jobs were expected from the services sector (1.313 million). Agriculture was expected to be the second-highest contributor to jobs (796 411 jobs), followed by industry, whose largest share of jobs was expected to arise primarily from manufacturing.

### 3.2 JOB CREATION STATUS OVER THE NDPII PERIOD

**During the NDPII period (2015/16 and 2019/20), Uganda's economy created approximately 1,600,000 jobs.** This translated into an average of 320,000 new jobs created per year. The new jobs created reached the highest climax in FY2017/18, resulting in the creation of approximately 420,000 new jobs before dropping to 392,000 in FY2018/19 and eventually to 263,000 jobs in FY2019/20 *(see figure 2).* The analysis shows that employment expanded by an average of 33% in the first three years of NDPII but dropped at an average of 20 percent per annum in the last two years of the plan on account of the covid-19 pandemic that hit the global economy and employment is yet to recover fully.





Source: UNHS Various years, NPA Macro Model

The growth in employment in the last two years of NDPII was sharply curtailed by the COVID-19 crisis, which reduced economic activities and overall demand for labour. Policy efforts have been undertaken to tackle the crisis by the government and development partners and workers' and employers' organizations. However, such measures are still insufficient due to continued budgetary constraints. *Figure 3* shows that employment contracted by approximately 7 percent in FY2018/19 before registering an all-time record decline of 33 percent in FY 2019/20.



Figure 3: Jobs Growth/loss over NDPII Period

Source: UNHS Various years, NPA Macro Model

Although most jobs have continued to come from agriculture, followed by services and industry, the net growth of agricultural and industrial jobs was negative for the first four years of NDPII, with a rebound in the year 2019/20 (see table 1). The above situation was, however, the exact opposite for the service sector, which registered positive job growth for the first four years of NDPII and a reversal (job destruction) in FY2019/20 of approximately 30 percent. As a result, the agriculture sector currently employs approximately 10.85 million Ugandans, followed by the service sector at 3.8 million and industry at about 1.15 million Ugandans (see figure 4).

The covid-19 pandemic containment measures primarily explain the identified sectoral job creation reversals. The government of Uganda issued several covid containment measures, including suspension of all forms of public gatherings, school closures, restriction of cross-border movement of non-residents, suspension of public transport means, including buses, taxis, coasters, passenger trains, and all Boda Boda and the sale of non-food items in markets was also suspended. These covid-19 containment measures impacted the production of goods and services (supply) and consumption and investment (demand). As a result, all businesses, regardless of size, faced severe challenges, especially those in the aviation, tourism and hospitality industries, with significant declines in revenue, insolvencies and job losses. This explains the sharp decline (negative job growth) of 29.2 percent in the service sector for FY2019/20 (*see table 3*).



Figure 4: Employment Performance by Sector

Source: UNHS Various years, NPA Macro Model0700316383

The unprecedented job losses/decline in the service sector can be attributed to the covid-19 pandemic that continued to frustrate government measures of reducing unemployment. However, Uganda's government has implemented several interventions and measures to curb the unemployment problem, especially among young people, over the years. These interventions and measures include; the Youth Livelihood Program (YLP), Skilling Uganda, Students Loan Scheme, Youth Venture Capital Funds (YVCF), Uganda Women Entrepreneurship programme (UWEP), Youth Entrepreneurship Scheme (YES), Micro Finance Support Programme (MFSP), PRDP, NAADS, NUSAF I and II, UPE, USE, CDD and externalization of labour.

However, with the outbreak of COVID-19, some of these strategies were suspended. For example, the externalization of labour to countries like the United Arab Emirates, Qatar, Jordan, Kuwait, Bahrain, Afghanistan and Iraq was suspended. This prompted recruitment agencies to suspend all activities concerning externalization. People working in the aviation, tourism and hotel business were terminated because their employers were not making any profits and thus unable to pay salary obligations during the pandemic. The entertainment industry, including musicians, comedians, and bar owners, among other sections of workers, were not working and thus unable to sustain their employees. The COVID-19 pandemic heavily affected the horticulture industry, and many farms exporting flowers laid off their workforce due to the inability to sustain salary payments.

FY	Agriculture	Industry	Services							
2015/16	(0.0019)	(0.0545)	0.0635							
2016/17	(0.0014)	(0.0488)	0.0706							
2017/18	(0.0009)	(0.0426)	0.0799							
2018/19	(0.0003)	(0.0359)	0.0922							
2019/20	0.1689	0.0511	(0.2922)							

### Table 3: Sectoral employment growth

Source: UNHS Various years, NPA Macro Model. \*in parenthesis are negative values

The country boosts a total of 1,538,641 Pay as You Earn (PAYE) jobs, but 124,399 of them were lost between FY2019/20 and FY2020/21. Despite registering a 4.5 percent job growth between FY2018/19 and FY2019/20-the final FY of NDPII, about 8.1 percent of total PAYE jobs were lost in the first year of NDPIII. The trend of PAYE jobs in Uganda indicates that PAYE jobs increased from 1,314,155 in FY 2015/16 to a record high of 1,538,641 in FY2019/20 before shrinking to 1,414,242 in FY 2020/21(*see figure 5*). FY2017/18 registered the highest PAYE job growth of approximately 15 percent, which increased PAYE jobs from

1,297,541 to 1,487,584. However, a critical analysis indicates that the country has registered fluctuations in total PAYE jobs on a year-to-year basis, which illustrates the instability of the country's labour market.



Figure 5: Total PAYE jobs trend and growth

Many firms closed down due to the Covid-19 pandemic and the resultant lockdown but have since reopened, although they still operate below their installed capacities. The country currently boosts over 56,000 PAYE-paying business enterprises, although this dropped from over 61,000 businesses in 2019/20. As illustrated in figure 6, PAYE paying employer base registered persistent growth over the NDPII period but dropped by 8 percent in the first year of NDPIII. The decline in total PAYE-paying businesses corresponds to the performance of the PAYE-paying jobs over the same period. Many business enterprises have experienced a significant drop in demand, revenue, and profits, which explains the contraction in employment.



Figure 6: Payee Employer Base and Payee Employers growth

Source: URA

The contraction in PAYE-paying enterprises is linked to a lack of liquidity and difficulties accessing customers, inputs, and suppliers, especially during the lockdown days. In the EPRC, micro and small businesses experienced a larger decline in business activity compared to medium and large firms. These Covid-19 preventive measures resulted in an increase in operating expenses for businesses that continued to stay open. Consequently, most micro and small businesses closed within one to three months of the pandemic, particularly in the service sector. It should be noted that agriculture and manufacturing enterprises showed slightly higher resilience compared to service sector firms. The overall business expansion over the NDPII period peaked in 2017/18, registering a year-on-year annual growth rate of 15 percent but contracted between 2017/18 and 2018/19 before a rebound in 2019/20 and the subsequent worst contraction by 2020/21 *(see figure 6).* 

### **3.3 JOBS PERFORMANCE UNDER THE NDPIII PERIOD**

### 3.3.1 Overall, Job performance during the first two years of the NDPIII period

The job performance peaked in the 3<sup>rd</sup> year of NDPII (FY2017/18), registered a downward trajectory until the first year of NDPIII, and started recovery in the second year (see figure 7). Between FY2017/18, net job creation contracted from 419536 to 258286 in FY2020/21. However, there was a positive job recovery between the first and the second years of NDPIII. As a result, the new jobs increased from 258,286 in FY2020/21 to 345,039 in FY 2021/22, but still below the NDPIII annual jobs target of 512,000. Therefore, the yearly net job created is projected to reach 399,083 if the recent growth trajectories are not revised downwards.



Figure 7: Net Jobs created under NDPIII

Source: NPA HR Macro Model 2022

Although the impacts of covid-19 on the service sector jobs were instantaneous, as many people lost jobs, recovery is likely to occur with lags. While covid-19 restrictions have been relaxed and or almost removed, the total number of jobs in the service sector is yet to return to the pre-covid-19 peak. Sectoral analysis shows that total jobs in the service sector increased from 3,694,372 in FY2020/21 to 3,833,986 in FY2021/22, but the jobs are yet to recover to the highest recorded service sector jobs of 5,368,870 in 2017/18 (*see figure 8*). The implication is that there are signs of job recovery in the service and industrial sectors. However, full recovery is likely to take a bit more time, estimated at 2 to 3 years of uninterrupted growth and development.



### Figure 8: Sectoral Jobs Performance under NDPIII

Source: NPA HR Macro Model 2022

The total number of agricultural jobs dropped in the 2<sup>nd</sup> year of NDPIII despite an earlier increase in the past 5 years. Although the agriculture sector remained the biggest employer, nearly 70,000 agricultural-related jobs were lost in FY2021/22. This can be accounted for by the continued recovery of the service and industrial sectors after the second year of easing the covid-19 containment measures, and this thus explains the labour switching or the transitory movement of labour between sectors. It should be noted that the service sector alone lost approximately 1.5 million jobs in FY2019/20 due to covid-19 containment measures, including the total lock down and the restriction on travel in and out of the country. Although this hit all sectors of the economy in one way or another, the service sector was hit most challenging, and a rebound to its pre-covid-19 job numbers is yet to happen even with positive growth in the first two years of NDPIII. Similarly, industrial sector-related jobs have continued to register positive growth in the first two years of NDPIII. However, the job increase has decreased from 5.11%, 4.53% and 1.57% between 2019, 2020 and 2021, respectively.

### 3.3.2 Private Sector Employment

The private sector contributes about 83 percent of the total formal sector jobs, currently estimated at 2.3 million (NPA 2022). The private sector is estimated to contribute approximately 80% to Uganda's GDP (National Private Sector Development Strategy (FY 2017/18-2021/22)). There is a recorded concentration of private sector employment in agriculture and fishing, accounting for about 69.4 percent of the total private sector jobs, manufacturing at 5.6 percent, trade and repairs at 8.9 percent, hotels and restaurants at 2.0 percent, transport and communication at 2.3 percent, construction at 2.0 percent as well as education at 3.0 percent. Other critical sectors where recorded employment opportunities exist include mining and quarrying, utilities, posts and telecommunications, financial intermediation, insurance, business services, health and social works, and community and personal services. These sectors employ approximately 1.9 million people, representing 12% of the working population.

### 3.3.3 Public Sector Employment

The public sector employs approximately 400,000 public servants, contributing about 17 percent of the total formal sector jobs (NPA 2022). Employment in the public sector comprises persons employed in the traditional civil service, teaching service at all levels, the Police, Prisons, the Public and the staff in Local Governments. To-date, the Public sector is no longer the most significant source of recorded formal wage employment. The civil service reforms and the privatization process of the 1990s led to a decline in employment in the public sector from 300,000 in 1990 to 150,000 by 1998, although employment rose to 259,650 by 2009 and to about 400,000 in 2022. Employment opportunities in the public sector are limited, especially for women, who account for only about 37 percent of the total public sector employment.

The annual average growth rate of government formal wage employment over the period 1992 to 2022 was negative (-0.165 percent). The above scenario indicates that employment in the public sector is limited and unlikely to grow. Therefore, emphasis should be put on promoting an enabling environment to create more jobs in the private sector to meet the growing numbers of new labour market entrants into the job market on an annual basis.

### 3.3.4 Informal Sector Employment

The informal sector in Uganda employs about 13.3 million people out of the 15.8 million working population representing about 85 percent of total employment. The International Labour Organization (ILO) defines the Informal Sector as one that consists of units engaged in producing goods or services with the primary objective of generating employment and income for the persons concerned. The units are typically run at a low level of organization, with little or no division between labour and capital as factors of production and operate on a small scale. Labour relations in the sector are primarily based on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees. In addition, the Sector is characterized by the absence of final accounts and is typically unregistered entities without permanent addresses. The informal sector in Uganda generates more wage employment than paid-employment opportunities, as seen in table 4, but largely operates small and micro enterprises.

Background Characteristics	Self Employed	Paid	Contributing	Uganda's Total
		Employed	Family Workers	-
Sex of Employee				
Male	50.5	53.6	40	52.1
Female	49.5	46.4	60	47.9
Education				
Bachelors	5.8	0.2	4.1	2.4
Diploma Level	2.8	0.8	1.4	1.6
Certificate Level (TVET)	12.2	6.6	1	7.4
Secondary-A Level	3.7	3.7	6.5	3.8
Secondary-O Level	24.7	31.6	31.3	28.4
Primary	40.5	47.6	47.8	46.6
None	7.1	7.2	4.1	7.3
Other	3.2	2.2	3.8	2.4
Region				
Central	30.2	23.5	27.8	29.3
Eastern	23.3	17.1	25.1	19.1
Northern	27.6	47.3	28.4	35.8
Western	18.9	12.1	18.7	15.7
Age				
<18	0.9	5.3	19.5	18.6
18-30	46.3	79.5	66.8	57.1
31-59	48.6	14.9	13.4	22.9
60+	4.2	0.3	0.3	1.4
Total	100	100	100	100

Table 4: Informal sector employment characteristics

Source: UBOS

About 82.3 percent of the total employees in the informal sector have only completed ordinary secondary education and below, which has implications for the formalization strategies by government. While majority of employees in the informal sector are males (52%) and with primary education (46.6%), there is a rising number of graduates with bachelor's and above (2.4%) that are wedged in this sector. Uncensored information indicates that the continued engaging of part-time and casual workers by registered formal enterprises seems to encourage the expansion of the informal sector. However, many enterprises in this sector are still characterized by low labour productivity, limited training, the use of basic technology, limited access to credit and finance, difficulties obtaining raw materials and other inputs, and inadequate markets for semi-processed products (UBOS, 2020).

### 3.3.5 External employment opportunities and implications

There is growing interest in the externalization of employment as the number of labour emigrants and remittances from Ugandans in the diaspora has increased over the years. The Middle East continues to provide the largest opportunities for Ugandans in several categories, including drivers, domestic workers, factory workers, and security. The Uganda Association of External Recruitment Agencies report (UAERA 2020) indicates that, to date, at least 165,000 Ugandans work in these categories in the Middle East. About 98 percent of migrant workers are employed as casual Labourers, with only 0.2 percent holding professional jobs and 1.8 percent working in semi-professional placements. According to the MoGLSD, between 2018 and 2020, more than 70 percent of migrant workers travelled predominantly to Saudi Arabia and UAE, respectively.

Between 2016 and 2022, a total of 217,258 Ugandan workers have been externalized to the Middle East alone, with Saudi Arabia accounting for about 77 percent of the total migrant in the last three years. Table 5 shows that, on average, about 55,000 Ugandan migrant workers have been externalized on a year-to-year basis apart from 2020, mainly due to covid-19 restrictions. Consequently, remittances into the country from Ugandans in the diaspora have increased over the same period to approximately \$1 billion every year. This is a drop of \$300million, from close to \$1.4 billion, generated before the COVID-19 pandemic hit the world and Uganda's economy in particular. According to the International Labour Organisation (ILO) reports, the demand for migrant workers in the Middle East increased by 5.2 percent between 2015 and 2020. This is mainly attributed to the need for workers in the construction and services sectors. Labour externalization is becoming an important agenda for the Government of Uganda and thus needs to be streamlined to make it safer for Ugandan migrant workers. External employment in the Middle East has been largely a success for Ugandans, notwithstanding some individual challenges.

Over the years, government and private recruitment agencies have endeavoured to streamline this sector, and many engagements have taken place. Policies have been put in place, procedures laid down and ministerial statements issued, among others. In addition, the government has involved Middle Eastern governments to ensure fair, equitable trade among the major stakeholders. As part of deliberate government efforts to streamline external employment, the Prime Minister's office recently organized a retreat for major players in this sector. More than 200 employment agency owners and senior employees attended the retreat, creating an external deployment desk in the Ministry of Foreign Affairs.

Destination	2016	2017	2018	2019	2020	2021	2022
IRAQ	646	217	2,189	485	36	677	576
Afghanistan	342	416	228	414	50	0	0
Saudi Arabia	175	1,621	12,366	13,537	4,538	79,742	58,920
Qatar	487	520	923	256	1148	4,136	3,282
UAE	383	303	2,556	10,182	2,585	3,110	1,584
Bahrain	410	451	23	6	183	24	4
Somalia	96	162	745	139	172	832	582
Kuwait	0	0	0	38	109	21	89
Jordan	0	1,427	2,582	306	205	0	0
Poland	0	0	0	0	0	11	7
Romania	0	0	0	0	0	0	4
Total	2,539	5,117	21,612	25,363	9,026	88,553	65,048

### Table 5: Number of Ugandan Migrant Workers Deployed by Year and Country of Destination

Source: MoGLSD

The Ministry of Gender, Labour and Social Development continues to implement systems that guarantee decent, safe and secure jobs for Ugandans abroad. For example, the Employment (Recruitment of Ugandan Migrant Workers) Regulations, 2021 Statutory Instrument No. 47 of 2021, came into effect on 13 August 2021. The Regulations, among others, provide for the Verification of all job orders by Uganda's Missions abroad; Accreditation of all foreign recruitment Agencies by Uganda's Missions abroad; Prohibits non-Ugandans from owning external recruitment agencies; A penalty of imprisonment not exceeding five years or a fine not exceeding one thousand currency points, or both for persons found guilty of illegal recruitment activities. The 2005 Regulations provided for imprisonment for only three months.

Further, the East African Common Market Protocol on the free movement of labour has increased the demand for migrant workers in the region. With the diversification of East African economies, such as the Kenyan and Rwandan economies, the demand for workers has increased (for example, in the services industry) and has drawn migrant workers from other East African countries, including Uganda. The East African Common Market Protocol, allowing for the free movement of labour, has assisted in facilitating labour migration within the East African subregion. Several countries have ratified the Protocol, and some have already abolished work permits for East African citizens, making it easier for people to work across the subregion.

### 3.4 CONSTRAINTS TO THE GENERATION OF PRODUCTIVE AND DECENT JOBS IN UGANDA

Several pieces of literature have identified several constraints that hamper Uganda's economy from generating productive and decent jobs. According to the World Bank Group jobs strategy for inclusive growth report 2019 and the analysis, the constraints to Employment creation in Uganda relate primarily to two factors: the worsening labour market situation in the country and the slow pace of job creation and transition to productive jobs. These constraints, among others, are enumerated as follows:

- 1. Insufficient mechanisms and systems to measure, monitor and track job creation as a key performance indicator of government. It is reported that you cannot create what you do not know! In advanced economies, there are developed systems and mechanisms that enable the government to monitor and track job creation/job losses or destruction on a more regular basis, such as daily, weekly, monthly and quarterly. However, in Uganda, even the "*annual jobs report*" is still far from reality and annual job creation is reported with a lot of caution as it mostly comes from estimations based on irregular and old statistics.
- 2. Insufficient role of government in direct job creation. The public service can play an essential role in job creation. Creating productive and decent jobs requires government commitment to direct job creation. While downsizing the public sector is an agenda of many countries, including Uganda, it should be noted that wage and wage-related costs are not the most significant national budget consumers, yet associated with higher employment multiplier. On average, industrialized countries have higher proportions of their labour force employed in public service (about 17 per cent) (Rodrik 2000). Uganda's wage expenditure as a proportion of GDP is estimated at 5.3% compared to about 15.2 percent for Nigeria and 7.8 percent for Kenya. Regarding revenue, Uganda spends about 30% of total revenue collection on wages compared to about 40 percent of Nigeria and 37 percent of Kenya.
- **3.** The unprecedented slowdown of economic growth by all the major economic sectors that have to drive job growth. Economic growth is no longer high enough to create more and better jobs. A decline in real GDP growth during the COVID-19 pandemic period was primarily attributed to a contraction in output from the services and industry sectors. Output growth in the services sector dropped from 9 % in FY2018/19 to 3.5% in FY2020/21, although it slightly improved to 5.4% in FY2021/22. Similarly, industry output growth declined from 5.8 % in FY2018/19 to 2.8 % in FY2020/21 and slightly improved to 3.8% in FY2021/22. At the same time, agriculture output growth suffered some slumps. The slowdown is across main economic sectors and in all former growth drivers. Aid-inflows, which contributed enormously to economic growth until the mid-2000s, have declined, and in parallel, public-sector consumption has fallen as a share of GDP. This has continued to slow down the pace of job creation.
- 4. Uganda's labour force growth has been growing at a faster rate than the rate of job creation. Uganda has one of the world's most youthful and fastest-growing populations. Uganda has one of the youngest and fastest-growing populations in the world and is among the top four (4) globally. Although fertility rates have fallen somewhat since the 1970s, they remain at 5.7 births per woman. Uganda's women have not experienced the dramatic reduction in fertility rates registered like in Asian middle-income countries, where fertility rates are now well below three percent. The average age of Ugandans has reached a standstill at around 16 years since 1995 due to high fertility rates compounded by adult mortality. Significant population growth implies a high strain on access and quality of social services, such as health and education, necessary to increase productivity and growth. And high population density translates into unsustainable pressures on land—high past population growth results in high and accelerating labour force entrants per year.

- 5. The limited backward and forward linkages have reduced the speed of labour movement from agricultural subsistence activities and non-wage work. Uganda's economy remains poorly integrated through backwards and forward linkages. Economic growth registered in the past has not resulted in a sufficient structural transformation in employment during the NDPII period. The share of value added in agriculture fell, with industry and services increasing. Uganda has remained dependent on unprocessed raw materials for exports, and there was no change in the share of agricultural employment in this period. Labour productivity can improve when workers move to more productive sectors, or productivity improves within different sectors. Non-agricultural productivity is several times higher in Uganda than agricultural productivity when measured using GDP and employment per sector. At first glance, there was no structural change in employment by aggregate sectors, even though the share of agriculture in value added fell. The share of workers in agriculture remained at over 70 percent; and in absolute numbers, agricultural employment increased more in that period than employment in other sectors.
- 6. The demand for wage workers in the private sector has not kept up to speed with the growth in the labour force. The low job creation in the formal private sector is a critical factor behind Uganda's lack of job transformation. Wage job opportunities depend on a dynamic private formal sector that is expanding and hiring workers. Larger firms are often, but not always, more productive and, therefore, in a position to provide more productive employment. Uganda's formal sector comprises a large share of small firms, and large firms account for very few jobs. More jobs are coming from smaller firms, and fewer jobs are coming from large firms. One in five jobs in Uganda is created by entrant firms which are more vulnerable as many firms close down at a young age. While Ugandan firms do not suffer from barriers to entry, there are signs that they may suffer from barriers to growth. The Global Entrepreneurship Monitor survey identifies Uganda as the country with the most entrepreneurial culture in the world regarding how business opportunities are viewed and cherished. Uganda also has provided strong evidence of how even impoverished and marginalized groups can profit from business opportunities when given a chance.
- 7. The changing nature of work and employment landscape vis-à-vis the country's preparedness. Using digital technologies, entrepreneurs are creating a global platform-based businesses that differ from the traditional production process in which inputs are provided at one end and output delivered at the other. For example, Alibaba-the Chinese conglomerate, has an accumulation of more than 903 million active consumers on its online shopping properties only in China by the first quarter of 2022 and more than 9 million online merchants. In the fiscal year ending March 31, 2022, the Alibaba Group recorded a revenue of 592.71 billion yuan, which translates to approximately 93.5 billion U.S. dollars. In addition, platform-based businesses are rising in every country, such as Flipkart in India and Jumia in Africa. Secondly, technology is reshaping the skills needed for work. As a result, the demand for less advanced skills that technology can replace is declining. At the same time, the demand for advanced cognitive skills, socio-behavioural skills, and skill combinations associated with greater adaptability is rising. These changes show up not just through new jobs replacing old jobs but also through the changing skills profiles of existing jobs.
- The high cost of doing business also hampers Uganda's economy from generating enough 8. productive and decent jobs. Although Uganda has made a 16 percent improvement in doing business in the last five years, more still needs to be done, especially regarding easing access to construction permits, electricity access, trading across borders, registering property, paying taxes and access to affordable credit. Despite the reforms made in the financial sector, interest rates in Uganda remain high, standing at between 20 percent and 23 percent; hence, the majority of micro, small and medium enterprises, which represents about 74 percent, are constrained by access to affordable credit. Furthermore, access to finance is limited due to stringent financial requirements, particularly land collateral. This limits growth because small businesses cannot acquire or absorb new technologies, nor can they expand to compete in global markets or even strike business linkages with larger firms. In addition, Uganda lacks a solid base for long-term financing due to weak retirement benefits and insurance sectors, which are a foundation for long-term investments. Long-term financing also faces challenges due to an underdeveloped capital markets space, which means that provision of equity and debt financing is only available to a small number of large companies. Besides, small and medium enterprise businesses spend nearly a month undertaking 13 procedures to set up a new company. Such challenges have constrained the expansion of medium, small and medium enterprises yet are vital in providing employment.

- **9.** Low survival rate of businesses in Uganda despite being one of the most entrepreneurial countries in the world in terms. According to the World Bank Group jobs strategy for inclusive growth report 2019, Ugandan firms do not suffer from barriers to entry, there are signs that they may suffer from barriers to growth. Firm survival rates are declining in Uganda. Only one out of four firms remain operational after the first five years of existence. The Global Entrepreneurship Monitor survey identifies Uganda as the country with the most entrepreneurial culture in the world regarding how business opportunities are viewed and cherished. Uganda also has provided strong evidence of how even very poor and marginalized groups can profit from business opportunities when given a chance. However, many entrepreneurs are in business by necessity rather than an opportunity. They have low growth expectations, and few diversify their businesses. Ugandan youth are encouraged by their community, including family, friends, and religious leaders, to enter into commerce, yet, youths lack knowledge about support schemes, have low levels of education, and lack business skills, all of which limit their capacity to transition from own-account work into employing more people and grow their businesses.
- 10. Slow pace of urbanization resulted in sluggish rural-urban migration leaving a huge proportion of the labour force trapped in low-productive agriculture. The slow reduction in the agricultural labour force explains Uganda's relatively slow urbanisation process. Urban centres, towns and cities offer a collection of more wage jobs in higher value-added sectors and off-farm informal sector opportunities. The World Bank Group jobs strategy for inclusive growth report 2019 notes that the low agricultural yields are responsible for reduced opportunities for urbanization by reducing resources for diversification and migration. Three-quarters of Ugandans live in rural areas with limited job options outside of farming and high exposure to climate-induced hazards. In the absence of sustainable soil and water management practices, high rural population growth has led to increasing rural population density on arable land, unsustainable pressures on land use, and water degradation. Rural migrants experience the most significant welfare gains by moving to cities, where job opportunities are significantly more diverse than elsewhere. Attracting investment by larger firms and facilitating productivity growth among smaller ones with the provision of targeted infrastructure investment, market facilities, land policy, and support services can help foster a process of managed urbanization.

### 3.5 POLICY OPTIONS TO ADDRESS THE EMPLOYMENT CHALLENGES IN UGANDA

- 1. Design and implement a job monitoring and reporting framework/mechanism more regularly. One major employment challenge in Uganda relates to job measurement, monitoring and reporting. There are insufficient mechanisms and systems to measure, monitor and track job creation as a key performance indicator of government. In advanced economies, there are developed systems and mechanisms that enable the government to monitor and track job creation/job losses or destruction on a more regular basis, such as daily, weekly, monthly and quarterly. Countries like the United States produce a monthly Jobs report on the first Friday of every month, influencing Wall Street and decisions for the entire economy. The jobs report is among the most critical and comprehensive economic releases and the earliest to provide data for the immediately prior month. Its numbers are hotly anticipated and closely analysed as a result. Therefore, the government, through NPA, UBOS, and MoGLSD with relevant stakeholders, should study and recommend what it takes to report job creation regularly and suggest the appropriate system for monitoring and reporting on job creation.
- 2. Uganda's labour market is demand constrained and not supply- there is need to design policies that promote demand for labour in the short term, medium and long term. The supply of labour and skills is not yet significantly affecting business performance to limit job creation. More people are working longer hours, and more, better educated young people than ever are working. But waged earnings are static in agriculture, have fallen for adults in industry and services, and have fallen for youth in the industry. The demand for wage workers in the private sector has not kept up to speed with the growth in the labour force. The low job creation in the formal private sector and the limited role of government in direct job creation are the critical factors behind the lack of job transformation in Uganda.

- 3. Uganda's effective demand is low, yet it would be a source of growth and job creation- there is a need for targeted policies that boost domestic consumption. In addition, policies need to sustain effective demand as the country wiggles the aftermaths of the covid-19 pandemic and the general global economic decline. There is also the fact that from the covid-19 pandemic lessons, developing countries, Uganda inclusive, should lessen their scope for relying on external demand, especially from the advanced countries, given the slow recovery in these countries. Uganda, therefore, needs to look more towards boosting domestic demand as a source of growth and job creation.
- 4. Related to the above, the Government should design and implement Income support programmes to stimulate demand and maintain welfare for some time, given the slow recovery of wages and revenues. Under this recommendation, the government should look for possible feasible options, such as providing modest cash transfers to workers who were permanently laid off as a consequence of COVID-19 and are still unemployed. To avoid fraud, the government can work with LC1s to compile the list of potential beneficiaries and supplement this information with employment and income tax records from the Federation of Uganda Employers (FUE), Uganda Revenue Authority (URA) and National Social Security Fund, where possible. Further, the government may consider revising the eligibility condition for the SAGE grant to include vulnerable groups such as unemployed persons, persons with disabilities and household heads above working age (64 years and above). Also, the government may consider Urban cashfor-work programmes to employ unemployed youths. The work programmes may include the restoration of wetlands, clearing blocked drainage channels, and road repairs. These programmes must also be time-bound and have sunset clauses to effectively manage the government budget deficit.
- 5. Design and implement policies that promote industrial parks as complete value chains with industrial clusters. There is sufficient evidence and consensus in the literature that when production, manufacturing and service industries cluster together, they generate more productivity gains and job creation by attracting new initiatives into a sparse industrial landscape. For foreign investors, no single firm is incentivised to locate in a new area without others. Governments can foster industrial clusters by concentrating quality institutions, social services, and infrastructure in particular areas as common special economic zones to boost foreign investment. Linking such zones to local supply chains is vital to create added value and jobs. The agri-food industry has the potential to do this. Value chain development, open markets and trade could increase productivity and create more productive jobs. Such industrial clusters and value chains (like livestock, cotton, fish, rice, maize, and vegetables) rely on effective linkages with a modern service sector. Creating an industrial cluster that adds more value must be competitive in the international market and depends on public and private investment in infrastructure and capacity building.
- 6. Develop transborder infrastructure and other policies that promote trade openness in the region and beyond. The export market remains one of the main sources of industrial growth for Uganda and many other developing countries, generating higher productivity and jobs in the formal sector. Uganda must open trade and improve its transborder infrastructure to increase manufacturing exports. Regional trade provides possibilities to create jobs by reaching into regional markets with higher demand. Not only with other East African countries, like Kenya, Rwanda, Tanzania, DRC Congo, Burundi and South Sudan, but also by looking at West African, South and North Africa. Poor infrastructure, inefficient customs and other issues hamper trade flows within the region, despite the positive impact of the proximity of countries. Trade facilitation measures should particularly target the aspects which cause the higher trade costs in the EAC region. Therefore, there is need to expand the country's net exports and encourage trade integration.
- 7. Ensure awareness of existing government support programmes for firms and workers and how to apply them to ensure adequate uptake. For example, the government implements many programs, projects and policies, yet the targeted beneficiaries are not provided with sufficient information. These include the Parish Development Model (PDM), the Uganda Agriculture Insurance Scheme (UAIS), the EMYOOGA, Business Development Services (Enterprise Uganda), Skills Development Facility (SDF), Youth Livelihood Project, Uganda Women Entrepreneurship Programme (UWEP), BTVET programmes among others.

- 8. Linking entrepreneurship, innovation and skills to markets. Entrepreneurship is the engine of economic growth and catalyses the country's expansion and promotion of productive employment. Creation of better and more formal job creation requires higher capability firms and enterprises. Value-chain relationships between firms need to be promoted and specific skills for entrepreneurs and employees are required. Better entrepreneurship skills can increase productivity and upscale small enterprises with a better chance of growing out of the informal sector. There is a need to promote entrepreneurship as an opportunity for poverty alleviation and job creation for the unemployed, especially youths and women. Entrepreneurship boosts economic growth by introducing innovative technologies, products, and services—increased competition from entrepreneurs challenges existing firms to become more competitive. There is also need to roll out a massive provision of Business Development Services (BDS) to boost their internal management capacities to access government interventions such as soft loans from UDB. This will also help reduce informality, which impedes structured government interventions.
- **9.** Promote mutually supportive growth and employment policies so that employment is not just an automatic outcome of economic growth. Employment growth is conventionally seen as an automatic outcome of economic growth. However, there is improved recognition of the mutually supportive roles of growth and employment promotion policies. In this view, the best way to deal with the employment issue is to focus on maximising economic growth. Yet, there is no guarantee that this will deliver adequate employment growth. This is because different patterns of growth yield different rates of employment creation. Thus, to the extent that policies can choose alternative growth paths, there should be a bias towards a more employment-intensive growth path. But the conventional policy has been wary of exploring this dimension of choice since there is a widely held supposition that there is a substantial conflict between the maximization of employment and output growth. In contrast, the new thinking emphasises that there are significant synergies between a higher level of employment growth and the attainment of higher output growth. A higher level of employment supports growth by generating more effective demand. This effective demand effect is vital for sustaining a high level of investment since it raises the inducement to invest.
- 10. Attract more Foreign Direct Investment (FDI) to Uganda while eliminating discretionary tax exemptions. Foreign investment is needed in sectors and industries with the potential to generate formal sector and export-led jobs and to foster linkages with domestic producers and service providers. Attracting foreign investment is necessary for creating more export jobs. Large firms provide better jobs in Uganda, and whereas small and medium-sized enterprises grow organically, FDI brings large-scale investment into the country. Well-targeted, these investments trickle down to Ugandan producers and service providers through backwards and forwards linkages and help diffuse technology and skills development. Multinational companies entering the agricultural sector have improved the quality and volume of supply along the value chain. Currently, the importance of FDI flows is lower in the Ugandan economy than, for example, in Ethiopia and Rwanda (2.7 percent of GDP versus 4.5 and 3.2 percent, respectively). Moreover, most FDI into Uganda is in mining, with few linkages into the local economy and tiny job-creating effects. The share of FDI in manufacturing is only 20 percent of that in mining.
- 11. Implement policies that address liquidity shortages of firms to ensure their survival and contribute to employment creation. Uganda also lacks a solid development finance sector, which is critical in providing long-term capital for large, medium and small-sized enterprises. Through this, the government should consider negotiations for extensions of the Bank of Uganda credit relief programme where necessary and; the provision of partial interest rate subsidies for loans, among others. Notably, there is a need to Increase access to affordable capital through the Microfinance Support Centre, Agricultural Credit Facility, Uganda Development Bank, UDC. In addition, these government programmes/ institutions need to design low-cost financial products for promising SMEs and informal sector businesses. Further, there is need to tackle the underlying causes of high-interest rates for businesses to de-risk lending, e.g. strengthening financial literacy training for borrowers and leveraging new systems for borrower identification and the URSB system of tracking immovable property to extend credit based on transferable securities.

- 12. Design and implement policies for simplifying and streamlining the formalization process of jobs and firms. Government should focus on both simplifying and streamlining the paying of taxes, including social security contributions, into one monthly payment and reducing taxes for micro and small firms. Evidence shows that this significantly affects formalizing businesses along many dimensions, such as licensing rates, micro-firm registration, and tax payments. In addition to lowering the direct and indirect costs to firms of formalizing, other policy approaches that can be considered include providing information about the benefits of formalization, the costs involved, and how-to formalize. Another approach is to increase enforcement measures, such as inspections.
- **13.** In view of the changing nature of the work and employment landscape, Governments should continue prioritising investment for human capital development. While there were fears that robots (AIs) would take away people's jobs, evidence shows that this was based on unfounded realities. Instead, technology is bringing opportunity, paving the way for creating new jobs, increasing productivity, and improving public service delivery. As the nature of work is changing, Firms can rapidly expand operations which blurs their boundaries and challenges traditional production patterns. This is because, with the rise of the digital platform, firms can reach more people faster than ever. In addition, technology is changing the skills that employers seek. For example, workers need to be good at complex problem-solving, teamwork and adaptability. Also, technology is changing how people work and the terms on which they work. Therefore, the government should invest in human capital to develop the new skills that are increasingly in demand in the labour market, such as high-order cognitive and socio-behavioural skills.

S/N	RECOMMEND	ACTIONS	LEAD	OTHER
		URGENT TO SHORT-TERM	ACTOR	ACTORS
01	Design and implement a job monitoring and reporting framework/mecha nism more regularly.	<ul> <li>(i) Set employment creation as a key performance indicator of government at all levels and report on job creation performance on a year to year basis.</li> <li>(ii) Study the countries that have successfully managed to track and monitor job creation and develop a job creation monitoring framework/mechanism for Uganda.</li> <li>(iii) Enhance the collection of regular data including administrative statistics on labour and employment.</li> <li>(iv) Establish &amp; operationalise national job crentres.</li> <li>(v) Empower and facilitate the National Employment Council (NEC) to produce regular reports on employment performance.</li> <li>(vi) Mainstreaming employment creation in the National work plans and budgets</li> <li>(vii)Fastrack the operationalization of a webbased Labour Market Information System (LMIS)</li> </ul>	MoGLSD, MoFPED, UBOS, NPA	MoGLSD, MoFPED, UBOS, NPA, OPM, OP, Private Sector CSOs
02	Design and implement policies that promote industrial parks as complete value chains with industrial clusters.	<ul> <li>(i) Rally the local private sector to seize the opportunities in industrial parks.</li> <li>(ii) Support the cluster value chain development initiatives and networking between MSMEs, research and development institutions and academia.</li> <li>(iii) Facilitate the operationalization of Industrial and Innovation fund to spur industrialization.</li> </ul>	UIA	MTIC, UMA, PSFU, MoFPED, UFZA, Private Sector

### 3.6 SEQUENCING OF INTERVENTIONS
		(iv)	Undertake a cost-benefit analysis for the local private sector to operate in industrial parks		
03	Design and implement Income support programmes to stimulate demand and maintain welfare for some time, given the slow recovery of wages and revenues.	(i) (ii) (iii) (iv)	Develop programs targeting youth involvement in public works particularly targeting labor-based contracts for community and district feeder roads and other related areas. Streamline and reform youth and women employment programs to help young Ugandans find employment. Capitalize parish-based SACCOs under the Presidential Initiative for wealth creation and jobs (EMYOOGA) Establish and capitalize the Parish Revolving Fund	MoGLSD	MoFPED, MoLG, OPM, MoES, Private Sector
04	Promote mutually supportive growth and employment policies so that employment is not just an automatic outcome of economic growth.	(i) (ii)	Support existing or new labor-intensive enterprises and investments with high and sustainable employment generation potential. Develop and operationalize a National Strategy for Employment	MoGLSD	MoFPED, MoLG, OPM, Private Sector
05	Linking entrepreneurship, innovation and skills to markets.	(i) (ii)	Provide tax incentives to entrepreneurs in strategic sectors, using a robust screening process to identify them. Streamline programs on self-employment and link with existing safety net programs	UIA	URA, MTIC, MoGLSD, UMA, PSFU, Private Sector
06	Attract more Foreign Direct Investment (FDI) to Uganda while eliminating discretionary tax exemptions.	(i) (ii) (iii) (iv) (v)	Introduce investment tax credits for investments with a big job creation potential. Adopt and implement an investment policy regime that applies a jobs-lens to attracting FDI into new productive sectors and activities. Strengthen investment promotion efforts. Streamline the approval process for incentives and study the cost benefit analysis of tax waivers and incentives to FDIs with a focus on the employment creation Build capacity of institutions charged with inspection and sanitary standards and international quality certification.	UIA	URA, MTIC, MoGLSD, UMA, PSFU
07	Implement policies that address liquidity shortages of firms to ensure their survival and contribute to employment creation.	(i) (ii)	Free up more cash for businesses by offering tax rate reduction, reducing taxable income, offering tax credits, and offering tax refunds. Support and build capacity of MSMEs and TSIs/MDAs in aspects of digitization and adoption of E-commerce	UIA	URA, MTIC, UEPB, UMA, PSFU, Private Sector
08	Ensure awareness of existing government	(i)	Conduct awareness raising on safe labour migration to increase uptake of decent employment abroad.	MoGLSD	MoICT&NG, MoFA,

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	support programmes for firms and workers and how to apply them to ensure adequate uptake.	<ul> <li>(ii) Negotiate, sign &amp; implement BLAs &amp; MoUs with destination countries for expansion of external decent employment opportunities</li> </ul>		MoIA, Private Sector
	MEDUIM TO LO	NG-TERM		1
09	Design policies that promote demand for labour in the short term, medium and long term.	<ul> <li>(i) Provide technical assistance and funding to incubators.</li> <li>(ii) Develop targeted policies that boost domestic consumption.</li> <li>(iii) Support research centers to foster innovation.</li> <li>(iv) Build the base for heavy industry development. For example, exploit the energy potential, industry inputs (e.g. iron) and transport infrastructure.</li> </ul>	MoGLSD	MoFPED, MoLG, OPM, UIA, UIRI, MEMD, MTIC
10	Develop transborder infrastructure and other policies that promote trade openness in the region and beyond.	<ul> <li>(i) Develop market support infrastructure (soft and hard) including warehouses in key strategic markets, cold storage facilities and border export zones among others.</li> <li>(ii) Introduction of export guarantee scheme.</li> <li>(iii) Development and enforcement of standards.</li> <li>(iv) Deploying trade/commercial attaches in key export markets.</li> <li>(v) Linking local producers/manufacturers to external markets, and support negotiation of joint ventures between local producers/ manufacturers and foreign suppliers.</li> <li>(vi) Provide adequate funding for national trade negotiations team, and stakeholder consultations on trade negotiations positions</li> <li>(vii) Development and implementation of a national response plan (Strategy) for the AfCFTA market.</li> <li>(viii) Collaborate with the EAC/ COMESA /ACFTA countries to streamline the Policy environment for Free Zones</li> </ul>	UIA	PSFU, UMA, MoTIC, UFZA, MoFPED
11	Design and implement policies for simplifying and streamlining the formalization process of jobs and firms	<ul> <li>(i) Formulate a National Policy on business formalization</li> <li>(ii) Implement a single registration form to ease formalization</li> <li>(iii) Develop mechanisms to incentivize businesses that have been formalized and have complied with conditions precedent</li> <li>(iv) Increase innovation and automation of business processes to simplify registration services</li> <li>(v) Establish Agency registration points to increase access to formalization</li> </ul>	URSB	URA, MTIC, UEPB, UMA, PSFU, UIA
12	Governments should continue prioritizing investment for	<ul> <li>(1) Develop and operationalize employment planning framework</li> <li>(ii) Establish additional STEM/STEI incubation centres in public universities</li> </ul>	MOES	MoFPED, MoGLSD, MTIC, MoH, Private Sector

human capital	(iii) Construct lecture theatres/teaching
development.	facilities in TVET institutions to conform to
	NCHE standards.
	(iv) Operationalise the Skills Development
	Fund as provided for by the TVET Policy
	and incentivise the private sector to offer
	training of their employees in the scare
	skills areas.
	(v) Develop and implement an apprenticeship
	and job placement policy and programme
	(vi) Promote optimal Maternal, Infant, Young
	Child and Adolescent Nutrition practices

# **3.7 CONCLUSION**

In responding to the employment challenges ahead, the government must keep an open mind on the scope and combination of policies that may be required to achieve this. Against this background, it is essential to reinstate employment as a significant objective of macroeconomic policies. This will set a new agenda that will evoke creative responses from academics and policymakers on the best policy packages and institutional arrangements. Similarly, with employment as a major policy objective structural policy will be pushed to adapt creatively to this new reality.

# EDUCATION AND SKILLS DEVELOPMENT PERFORMANCE **CHAPTER FOUR**

# CHAPTER FOUR EDUCATION AND SKILLS DEVELOPMENT PERFORMANCE

# **4.1 INTRODUCTION**

The global focus on knowledge-based economies represents a paradigm shift in how countries should reposition their human resources. In that regard, the Uganda Vision 2040 and the NDPII & NDPIII prioritised human capital development as a fundamental need to be strengthened to accelerate the country's transformation and harness the demographic dividend. Human capital is considered one of the most distinctive features of the economic system. Empirical work has proved that it increases economic growth by affecting total factor productivity. Education is a critical component of a country's human capital as it increases the efficiency of each worker and boosts a country's capacity to create new knowledge, products, and technologies. Building the required human capital base that is healthy, educated and adequately skilled requires a concerted effort from all the stakeholders. The NDPII human capital development remains a significant concern despite investments in health, education and skills development skills. Consequently, the skills development component in the NDPII has focused on: reforming the curriculum at all levels to produce skills that are relevant to the market; expanding skills development to include formal and informal through strengthening coordination, regulation and certification of both formal and non-formal training; and establishing skill development centres of excellence in prioritised areas. Furthermore, the Government also aimed to have a clear education policy that underpins why skills development is essential under the NDPII, what skills need to be developed and how the state will support skills development.

The Government planned several milestones to fast-track skills development to plug the current skills gap under the NDPII. For example, establish five centres of excellence to rapidly build the necessary skills required in the key priority areas and partner with the private sector to identify and train specialised expertise, especially in the mineral, oil and gas, energy and transport infrastructure areas in the short run. Furthermore, in the medium to long term, the government partnered with relevant non-state actors to enact education and training curricula reforms to bridge the gap between the skills acquired at school and those required in the labour market. Specifically, the sub-sector focused on massive skills training programmes; reviewing, redesigning and aligning the education curricula in the formal education system and the vocational training institutions; matching the demand and supply to build convergence between the skills acquired in school and those required in the market; strengthen science and technology education; and increase participation in tertiary and higher education. Before delving into the numbers, the following is a summary of key achievements of the NDPII under skills development by objective. Having finalised the implementation of NDPII and the first two years of NDPIII, it is imperative to take stock of the progress registered on education qualifications and skills development for 2015.

### 4.2 STATUS OF EDUCATION AND SKILLS DEVELOPMENT OVER THE NDPII PERIOD

Information obtained indicates that, during the NDPII period (2015-2020), 476,928 individuals were awarded different qualifications and certificates in Uganda. The number of students pursuing a Doctorate of Philosophy was the least in the category of education levels which could partly be explained by a number of factors such as time, financial resources, and the level of commitment needed to pursue one. On the other hand, the bachelor's degrees were the most produced at 19.07%, followed by certificate technicians (15.67%), certificates (9.23%), Diplomas (2.55%), Masters (1.76), Diploma Technicians (1.71%), UVQ Diploma and, Postgraduate Diplomas (see table 6). At the BTVET level, about 50% of the skills developed during the NDPII period were UVQ Certificates. These registered a positive trend per year except for 2016, which is a general trend for all other forms of qualifications.

Relatedly, nearly 70% of education qualifications attainment and awards between 2015-2020 were in BTVET institutions. This implies that the creation of employment targeting should mirror the existing skills as churned out of the education and training institutions in the medium term. Also, since most certificates are UVQ (236,761) and technicians (74,7193) out of the entire skills developed, certification increased as envisaged under the NDPII presents an opportunity for business start-ups in the presence of an enabling macroeconomic environment. However, we note that the number of bachelors also increased over the period under review.

Yet, according to the previous manpower survey report (2016/17), employers are more interested in technicians and craftsmen with hands-on skills, which are usually lacking among first-degree graduates. The further underscored the need to align education and training programmes to the new and emerging needs of the labour market.

Award / Qualification	2015	2016	2017	2018	2019	2020	Total	Percentage (%)
PhD.	61	72	93	90	63	67	446	0.09
Masters	1,475	1,367	1,547	1,292	1,404	1,306	8,391	1.76
Postgraduate Diplomas	247	280	158	191	291	247	1,414	0.30
Bachelor's Degrees	15,223	15,913	16,262	15,413	13,700	14,153	90,664	19.01
Diplomas	1,845	2,072	2,672	2,173	2,686	723	12,171	2.55
Certificates	5,076	6,496	8,521	8,576	7,727	7,640	44,036	9.23
Diploma Technicians	1,656	1,722	1,617	1,622	1,548	-	8,165	1.71
Certificate Technicians	17,138	16,375	18,566	17,066	-	5,574	74,719	15.67
UVQ Certificates	23,463	17,057	22,526	45,891	62,756	65,068	236,761	49.64
UVQ Diploma	79	-	-	66	16	-	161	0.03
Grand Total	66,263	61,354	71,962	92,380	90,191	94,774	476,928	100
Percentage (%)	14	13	15	19	19	20	100	

Table 0, Status of Education quanteations attained and Skills Developed over the NDT in tenov
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Source: Author's calculations based on graduation/awards data from selected HEST and Training Institutions

Of the 446 PhDs and 90,664 Bachelors graduates over the NDPII, Makerere university produced the most significant proportion of 86% and 82%, respectively. The DIT, on the other hand, produced the highest number of certificates (236,761), followed by the Uganda Nurses and Wives Examinations Board (UNMEB) had the highest share of diplomas and certificates, implying that a more considerable number of nurses and wives were produced over the period under review (see Table 7).

Makerere University should be transformed into a research-led institution by increasing the proportion of graduate students and supporting a curriculum that leverages research and innovation. Due to the increasing commercialization of higher education, courses have been fragmented, leading to very early specialization, yet students get attracted to courses by name and not content. For instance, at the undergraduate level, Psychology was previously fragmented into guidance and counselling, community psychology, and organizational psychology. In contrast, the Bachelor of commerce was fragmented into accounting and finance, procurement and logistics, business studies, international business, business administration, banking, and entrepreneurship. The University has undertaken deliberate efforts to address this challenge. In 2021, the Makerere University Council approved restructuring 20 undergraduate programmes to reduce 82 courses to 62, starting in August 2021. The University intends to concentrate on courses that most universities do not offer and graduate students to increase the number of PhD graduates to spur research and innovation.

Similarly, Kyambogo University is undertaking this approach by gradually phasing out certificate programmes and concentrating on bachelor's, master's and doctorate courses. Certificate and diploma programmes in adult and community education, science laboratory technology, and deaf-blindness, among others, are highly demanded programmes and very central to skilling the youth but are also run in other vocational training institutions; hence have been phased out and emphasis has been placed on graduate and undergraduate programmes as part of the process to expedite reforms needed to create knowledge through research and innovation.

Institution	Award / Qualification	2015	2016	2017	2018	2019	2020	Total
Gulu	PhD	2	2	6	5	1	1	17
	Masters	25	1	70	23	69	54	242
	Post-graduate Diplomas	66	83	69	85	81	117	501
	Bachelor's Degrees	1222	1253	1298	1007	1097	1101	6,978
	Diplomas	108	92	97	113	128	139	677
Mbarara	PhD	2	6	10	12	7	4	41
	Masters	23	63	84	123	83	79	455
	Post-graduate Diplomas	0	8	0	6	8	11	33
	Bachelor's Degrees	1020	794	774	794	774	927	5,083
	Diplomas	40	27	64	27	64	138	360
UCU	PhD				3			3
	Masters	71	73	112	147			403
	Post-graduate Diplomas	0	17	12	4			33
	Bachelor's Degrees	1079	1369	957	837			4,242
	Diplomas	157	121	102	111			491
Makerere	PhD	57	64	77	70	55	62	385
	Masters	1356	1230	1281	999	1252	1173	7,291
	Post-graduate Diplomas	181	172	77	96	202	119	847
	Bachelor's Degrees	11902	12497	13233	12775	11829	12125	74,361
	Diplomas	266	230	188	145	117	33	979
UNMEB	Diplomas	1274	1602	2221	1777	2377	413	9,664
	Certificates	5076	6496	8521	8576	7727	7640	44,036
UBTEB	Diploma Technicians	1,656	1,722	1,617	1,622	1,548	-	8,165
	Certificate technicians	17,138	16,375	18,566	17,066	-	5,574	74,719
DIT	UVQ Certificates	23,463	17,057	22,526	45,891	62,756	65,068	236,761
	UVQ Diploma	79	0	0	66	16	0	161

Table 7. Status of Education of	multifications attained and Skills Developing over the NDPIII Period by Institution
Tuble 7. Status of Education e	additions accurica and skins beveloping over the ribi in reriod by institution

Source: Author's calculations based on graduation/awards data from selected HEST and Training Institutions

**Over the NDPII period, approximately 82,884 technicians were awarded and certified between 2015-2020.** Although the number of technicians declined from 18,794 to 18,097 in 2015 and 2016, it peaked in 2017 at 20,183 and dropped from 2018 to its lowest in 2019. This translates into an annual average of 9,470 between 2015-2018 before the sudden decline in 2019. The highest number of technicians certified and accredited implies that as more people in this category join the labour market, there should be mechanisms to absorb them on the demand side. However, the decline is attributed to the change in the education calendar in 2019 by the MoES that caused substantial changes in certification timelines, the closure of education and training institutions, and country-wide lockdowns due to the COVID-19 pandemic ravaging the world, including Uganda.

Specifically, 82,866 and 18 persons were skilled and awarded certificates in technical and businessrelated programmes, respectively, with the highest at the national certificate level. The highest technicians are in Automotive Mechanics, Building Construction, Electrical Installation Systems and Maintenance, and National Certificate in Agriculture. Under the advanced crafts, more certifications are observed in Motor Vehicle Technician Course Part II, Block Laying & Concrete Practice Part II, Plumbing in East African Countries Craft Part II and Electrical Installation Craft Course Part III. Under the UCPC category, more certifications are observed in Motor Vehicle Mechanics, Block laying and Concrete Practice, Carpentry and Joinery and Garment Design and Construction. From Table 8, it is clear that the number of people certified under the different technical programmes is increasing, which poses pressure on the demand side of the labour market to create jobs and provide an enabling environment for these people to start enterprises or businesses in line with their areas of expertise.

Programmes	2015	2016	2017	2018	2019	2020	Total
Technicians							
Higher Diploma in Mechanical Engineering	12	5	11	10	8	0	46
Higher National Diploma in Electrical Engineering	35	17	15	37	13	0	117
Higher Diploma in Construction (Building & Civil Engineering)	114	42	82	103	77	0	418
National Diploma in Refrigeration & Air Conditioning	9	14	10	18	7	0	58
National Diploma in Mechanical Engineering	231	257	201	264	215	0	1,168
National Diploma in Electrical Engineering	285	375	285	299	331	0	1,575
National Diploma in Civil Engineering	645	697	702	617	655	0	3,316
National Diploma in Architecture	165	120	122	99	115	0	621
National Diploma in Water Engineering	156	171	176	160	122	0	785
National Diploma in Ceramics Engineering	0	0	2	2	0	0	4
National Diploma in Information & Communication Technology	4	24	11	13	5	0	57
Diploma in Telecommunication Engineering	0	0	0	0	0	0	-
Motor Vehicle Technician Course Part II (Advanced Craft)	503	480	623	227	0	25	1,858
Carpentry & Joinery Craft Part II (Advanced Craft)	155	125	107	48	0	1	436
Block Laying & Concrete Practice Part II (Advanced Craft)	959	619	947	234	0	8	2,767
Plumbing in East African Countries Craft Part II (Advanced Craft)	586	631	762	253	0	21	2,253
Tailoring & Cutting Garments Craft Part II (Advanced Craft)	222	191	233	219	0	8	873
Electrical Installation Craft Course Part III (Advanced Craft)	859	916	1123	360	0	50	3,308
Radio, Television & Electronics Technician Course Part II (Advanced Craft)	18	18	15	7	0	0	58
Painters & Decorators Craft Course Part II (Advanced Craft)	6	8	13	13	0	0	40
National Certificate in Woodwork Technology (Technical)	252	694	97	187	0	63	1,293
National Certificate in Welding and Fabrication (Technical)	0	0	108	233	0	28	369
National Certificate in Plumbing (Technical)	1250	1216	1060	1776	0	752	6,054
National Certificate in Automotive Mechanics (Technical)	1976	1354	2224	2728	0	756	9,038
National Certificate in Building Construction (Technical)	1733	1965	2151	2545	0	488	8,882
National Certificate in Electronics Technology (Technical)	98	0	0	75	0	33	206
National Certificate in Electrical Installation Systems and Maintenance (Technical)	2179	1899	2012	2424	0	1113	9,627
National Certificate in Machining and Fitting (Technical)	144	0	101	139	0	39	423
National Certificate in Painting and Decorating (Technical)	28	32	31	26	0	4	121
National Certificate in Fashion and Garment Design (Technical)	468	449	1273	742	0	542	3,474
National Certificate in Refrigeration and Air Conditioning (Technical)	0	0	0	20	0	16	36
National Certificate in Hotel Management and Institutional Catering	0	0	34	205	0	0	239

 Table 8: Status of Business and Technician Awards and Certifications 2015-2020

# EMPLOYMENT AND SKILLS STATUS REPORT ESSR 2022

Programmes	2015	2016	2017	2018	2019	2020	Total
National Certificate in Cosmetology &Body therapy (Technical)	0	0	0	0	0	0	-
National Certificate in Agriculture (Technical)	2146	2137	1335	1248	0	1619	8,485
Leather Tanning & Shoe Making Craft Part I (Technical)	27	21	24	0	0	8	80
Pottery & Ceramics Craft Part I (Technical)	0	1	1	0	0	0	2
Agricultural Engineering Mechanics II (Technical)	8	8	9	0	0	0	25
Certificate in Electrical and Electronics (Technical)	0	78	0	0	0	0	78
UCPC in Welding and Metal Fabrication	14	12	24	40	0	0	90
UCPC in Motor Vehicle Mechanics	420	554	788	593	0	0	2,355
UCPC in Block laying and Concrete Practice	2186	1726	2134	1553	0	0	7,599
UCPC in Electrical Installation Practice	66	89	155	172	0	0	482
UCPC in Plumbing and Pipe fitting	0	536	44	0	0	0	580
UCPC in Carpentry and Joinery	361	19	471	348	0	0	1,199
UCPC in Community Polytechnic Certificate in Agriculture	31	15	26	16	0	0	88
UCPC in Garment Design and Construction	419	545	597	596	0	0	2,157
UCPC in Fabric and Interior Design	0	0	0	0	0	0	-
UCPC in Food Preparation and Processing	16	27	35	33	0	0	111
UCPC in Leather Work & Shoemaking	3	8	2	2	0	0	15
Sub-Total	18,789	18,095	20,176	18,684	1,548	5,574	82,866
Business							
UCPC in Business Studies (Accounting)	1	0	3	4	0	0	8
UCPC in Business studies (Computer studies)	1	0	0	0	0	0	1
UCPC in Business studies (Secretarial studies)	3	2	3	0	0	0	8
UCPC in Business studies (Store Keeping)	0	0	1	0	0	0	1
Sub-Total	5	2	7	4	0	0	18
Grand Total	18,794	18,097	20,183	18,688	1,548	5,574	82,884

Source: UBTEB

**There was an increase in the certification of informal skills over the NDPII period.** Table 9 presents DIT statistics, indicating that the number of certifications has increased since the NDPII started, except in 2016. Modular (Private), Worker's PAS, UVQF Level II, and Modular (BTVET Programme) were the highest certified personnel. This implies that as certification in the informal sector is increasing, identifying more NEETs should be targeted and prioritised as a solution to improving their employability. Annex 1 provides details about Uganda Vocational Qualifications (UVQ) summary of generic level descriptors to understand the qualifications better.

Table 9: Statistics of Candidates for UVQ Assessments From 2015 TO 2020

Year	2015	2016	2017	2018	2019	2020	Total
Modular (BTVET Programme)	13,796	4,641	7404	0	0	0	25,841
Modular (Private)	2,340	4,946	7186	35584	50082	0	100,138
Worker's PAS	0	250	29	491	1253	50914	52,937
UVQF Level I	3,002	3,027	3602	4947	6015	4350	24,943
UVQF Level II	4,224	4,178	4268	4810	5210	3158	25,848
UVQF Level III	8	15	37	59	179	6578	6,876
UVQF IV (Diploma)	0	0	0	0	17	36	53
Road Works	50	0	0	0	0	32	82
CVTI (Instructor Level III)	43	0	0	0	0	0	43
DVTI (Instructor level IV-Diploma)	35	0	0	24	16	0	75
DTIM (Institution Manager level V - Diploma)	44	0	0	42	0	0	86
Sub Total	23,542	17,057	22,526	45,957	62,772	65,068	236.922

Source: Author's calculations based on graduation/awards data from DIT

A further breakdown of the nurses' and midwives' cadres reveal that nurses were the most produced cadres at both diploma and certificate levels. Specifically, over 20,577 and 4,932 nurses were awarded diplomas and certificates. These are followed by midwives at 15,356 and 3,128 at certificate and diploma levels, respectively. It is important to note that skills development for midwives at certificate is female-dominated (see table 10), and this is attributed to the reasoning that since students are usually still young, males fear working with women due to their fear of interacting with blood that is associated the process of giving birth.

Discipline	2015		2016		2017		2018		2019		2020		Total
Diplomas	F	М	F	М	F	М	F	М	F	М	F	М	
Advanced Diploma in Palliative Care Nursing (ADPCN)					2				6		0	2	10
Diploma in Paediatrics and Child Health Nursing (DPCHN)	2	1			1		2	2	10	0	9	4	31
Diploma in Public Health Nursing (DPHN)			14	2	14	3	9	5	1	1	1	0	50
Diploma In Mental Health Nursing (DMHN)	45	27	20	27	38	31	22	27	34	27	7	12	317
Diploma in Comprehensive Nursing (DCN)	87	74	95	115	139	165	104	118	126	157	4	12	1196
Diploma in Nursing (D.N.)	422	248	482	285	689	473	494	329	842	443	133	92	4932
Diploma in Midwifery (D.M.)	329	39	562		666		665		730		137		3128
Sub-Total		1274		1602		2221		1777		2377		413	9664
Certificates			•	•	•	•	•	•	•	•	•		•
Certificate in Mental Health Nursing (CMHN)	52	39	46	36	44	54	43	36	63	21	95	74	603
Certificate in Comprehensive Nursing (CCN)	1104	705	974	540	616	445	501	489	515	471	714	426	7500
Certificate in Nursing (C.N.)	1049	629	1603	1043	2366	1907	2054	2025	2004	2112	1802	1983	20577
Certificate in Midwifery (CM)	1498		2254		3089		3428		2541		2546		15356
TOTAL	3703	1373	4877	1619	6115	2406	6026	2550	5123	2604	5157	2483	44036

Table 10:Nurses and Midwives Cadres developed under the NDPII Period (2015-20)

Source: Author's calculations based on graduation/awards data from selected HEST and Training Institution

### 4.3 STATUS OF SKILLS DEVELOPMENT IN THE FIRST TWO YEARS OF NDPIII

Skills development under the first two years of NDPIII was lower than the annual average over the NDPII. The first two years witnessed over 47,507 skills developed under the PhDs, Masters, Post-graduate Diplomas, Undergraduate Degrees and Certificates categories. Like it was observed during the NDPII period, the Bachelor degrees were the most produced, with 27,014, followed by certificates (12,270), Diplomas (4,824), Masters (2,806), Postgraduate Diplomas (395) and PhDs (198), shown in *table 9*. However, those totals notwithstanding, there is a noticeable and significant drop in the number of skills developed in 2022 (lowest over the first two years being assessed), with only 20,325. This is attributed to the impacts of COVID-19 and related restrictions that resulted in the closure of all education and training institutions for more than a year, which made enrollment, assessments and certification difficult, especially for new entrants in 2020 and 2021. However, these numbers are projected to reverse the trend as we advance in the post-pandemic period.

Qualification	2021	2022	<b>GRAND TOTAL</b>
PhD	63	135	198
Masters	1,313	1,493	2,806
Post-graduate Diplomas	207	188	395
Bachelor's Degrees	13,070	13,944	27,014
Diplomas	2,488	2,336	4,824
Certificates	10,041	2,229	12,270
TOTAL	27,182	20,325	47,507

Table 11: Status of Skills Developing over the NDPIII Period (2021-22)

Source: Author's calculations based on graduation/awards data from selected HEST and Training Institutions

**Consistent with the NDPII period, Makerere University developed the highest number of skills, especially for specialisations (Masters), over the first two years of the NDPIII period.** The UNMEB produced the largest share of the certificates and diplomas in the fields of Nursing and Midwifery. Table 10 provides high-level summaries on the status of skills development disaggregated by year, qualification awards and awarding institutions. We, however, present in the appendices detailed skills development per institution and programme over the first two years of the NDPIII.

An assessment of the number of graduates shows that there are more arts graduates than science graduates yet science and technology are believed to catalyze economic development. A number of courses are oversubscribed whereas others are undersubscribed yet are crucial for the development of the country. Data on graduation from higher education institutions of learning and examination boards shows that the oversubscribed academic programmes include; Bachelor of Arts Education, Bachelor of Business Administration, Bachelor of Development Studies Bachelor of Accounting and Finance, Bachelor of Social Work and Social Administration among others. The graduates in these disciplines are likely not to find jobs in an already saturated market which exacerbates the level of graduate unemployment. On the other hand, academic programs in STEM disciplines are undersubscribed. This raises concern for Uganda's development agenda of becoming a middle-income country as well as a knowledge-based economy. There is therefore need for deliberate efforts to increase enrolment in science related disciplines.

Table 12. Status of L	ducation quanneation attained and Skin	s beveloped over the	The first eriod by the	stitution
Institutions	Awards / Qualification	2021	2022	Total
	PhDs	50	100	150
	Masters	1,160	1,236	2,396
Makerere	Post-graduate Diplomas	115	122	237
	Undergraduate Diplomas	16	18	34
	Undergraduate Degrees	11,151	10,998	22,149
	PhDs	5	6	11
	Masters	70	64	134
~ 1	Post-graduate Diplomas	84	61	145
Gulu	Undergraduate Degrees	42	13	55
	Diplomas	891	1,092	1,983
	Certificates	1	3	4
INMED	Diplomas	2,373	5,048	7,421
UNMEB	Certificates	10,040	13,006	23,046
	PhDs	37	-	37
	Masters	276	-	276
Mbarara	Post-graduate Diplomas	13	-	13
	Undergraduate Degrees	2,066	-	2,066
	Diplomas	110	-	110
	Masters	20	-	20
UCU	Post-graduate Diplomas	4	-	4
	Undergraduate Degrees	816	-	816
	Diplomas	111	-	111
DIT	Modular (BTVET Programme)	(	)	0

Table 12: Status of Education qualification attained and Skills Developed over the NDPIII Period by Institution

# EMPLOYMENT AND SKILLS STATUS REPORT ESSR 2022

Modular (Private)	51050	51,050
Worker's PAS	2676	2,676
UVQF Level I (Certificate)	2224	2,224
UVQF Level II (Certificate)	1493	1,493
UVQF Level III (Certificate)	202	202
UVQF IV (Diploma)	122	122
Road Works	0	0
CVTI (Instructor Level III)	0	0
DTIM (Institution Manager level		
V - Diploma)	0	0

Source: Author's calculations based on graduation/awards data from selected HEST and Training Institutions

Similar to the NDPII period, the number of nurses and midwives' cadres developed under the first two years of NDPIII are highest for nurses both at the diploma and certificate level. These are followed by cadres in Diploma in Midwifery, Certificate in Comprehensive Nursing, and Certificate in Midwifery, respectively *(see table 11).* 

The number of nurses and midwives' cadres are not sufficient to meet the increasing demand. The population of women of reproductive age (15-49 years) is projected to grow to 12.101 million by 2025 and up to 14.071 million by 2030 up from 10.224 million in 2020. This population category requires adequate attention on the supply of skilled health workers especially nurses and midwives. Therefore, the manpower demands will rise for nurses in the following disciplines; gynecologists and obstetricians; Anaesthetists; ophthalmologists; Paediatricians; and general medicine among others.

Discipline	2021		2022	TOTAL	
Diplomas	Female	Male	Female	Male	
Advanced Diploma in Palliative Care Nursing (ADPCN)	4	1	3		8
Diploma in Paediatrics and Child Health Nursing (DPCHN)	3	1			4
Diploma in Public Health Nursing (DPHN)			2	4	6
Diploma In Mental Health Nursing (DMHN)	38	33	29	19	119
Diploma in Comprehensive Nursing (DCN)	74	112	57	52	295
Diploma in Nursing (D.N.)	829	492	790	459	2570
Diploma in Midwifery (D.M.)	786		726		1512
Certificates					
Certificate in Mental Health Nursing (CMHN)	106	57			163
Certificate in Comprehensive Nursing (CCN)	766	488	167	82	1503
Certificate in Nursing (C.N.)	2669	2372	634	658	6333
Certificate in Midwifery (CM)	3582		685		4267
TOTAL	8,857	3,556	3,093	1,274	16,780

 Table 13: Nurses and Midwives Cadres developed under the NDPIII Period (2021-22)

Source: Author's calculations based on graduation/awards data from selected HEST and Training Institutions

## 4.4 NEXT-GENERATION SKILLS NEEDS IN NEW, EMERGING AND EXISTING SUB-SECTORS

The world of work is undergoing rapid and profound changes brought about by technological development, demographics, globalisation and climate change. These trends affect the composition of employment, the nature of the tasks carried out at work and the skills required in the labour market. They also put enormous pressure on traditional education and training systems, calling for improved quality and new approaches to lifelong learning. Although past fears that technological change would lead to massive job destruction failed to materialize, new technologies such as learning robotics, the Internet of things and 3D printing that build upon and combine information technology and automation could lead to job losses of an "unprecedented" scale (ILO, 2017; Nubler, 2016). At the same time, however, the complementarity of technology and employment, technological spillover effects, price and income effects and other mechanisms may result in job creation for both producers and users of technology (Acemoglu and Restrepo, 2016; Autor, 2015; Vivarelli, 2007).

**Fundamental changes in technologies and production systems and the emergence of new industries are significant drivers of growth and development.** They have the power to transform the world of work by destroying jobs, generating new ones and transforming the nature of jobs. Two key building blocks characterise the contemporary/modern labour market: automation on machines and the creation of new complex tasks on the side of man. While automation is an ongoing process that, all else equal, takes jobs away from labour, creating new complex tasks is also an ongoing process that adds new jobs for labour. If the first force outpaces the second, there will be a declining share of labour in national income and technological non-employment. Conversely, if the second force outpaces the first, the reverse will happen –a more significant share of labour in national income and rising employment. In addition, Uganda has a smaller manufacturing base, so automation will not likely displace many workers in the coming years. However, adoption in other countries could slow down local job growth or foreclose some new job opportunities.

**Future jobs will require hard skills in Science, Technology, Engineering Mathematics (STEM) and TVET.** STEM knowledge is projected to be associated with 75 per cent of the fastest-growing occupations, innovations and wage premiums in the future world of work<sup>3</sup>. This is against the backdrop of the continued and expected growth of the knowledge economy<sup>4</sup>. The future of work in Uganda will require the following education and skills qualifications; Specialist Medical Practitioners; Nursing and Allied Health Professionals; Agri-chemists; Agricultural Entomology specialists; Food microbiologists; Food Technology and Processing specialists; Soil Science specialists; Software Developers; Systems Analysts; Scientific researchers; Clinical research specialists; Animal Geneticists; Immigration Law specialists; Intellectual Property Law specialists; Geologists and geophysicists; Renewable Energy specialists; Chemical Plant and System Operators; Airline management specialists; System auditors; Spatial Planning Specialists; Vocational Education Teachers; Secondary School Science Teachers, Primary School Mathematics and English Teachers among others. Therefore, the education system should produce a labour force with the above qualifications and skills.

Beyond hard skills, Uganda's educational system needs to place a greater emphasis on soft skills. Developing soft skills enhances employability and is crucial for the development and success of entrepreneurship and global workmanship (Holmberg-Wright, 2016). In addition, soft skills in critical thinking, questioning, problem-solving, negotiation, people management, collaboration and communication are essential for increasing employment outcomes. For instance, the services sector jobs require human interaction, organisation, and task interaction skills, among others. Therefore, soft skills will largely influence future work, including critical analysis, problem-solving, communication, networking, teamwork, and empathy.

The weaknesses surrounding soft skills in Uganda's education system are due to an old curriculum with content that does not serve the purpose of today's needs. Therefore, relevant actors in the education system need to continuously review the curriculum with emphasis on core soft skills like critical thinking, questioning, problem-solving, negotiation, people management, collaboration and communication – and their application

<sup>3</sup> Australia, P. (2015). A smart move: Future-proofing Australia's workforce by growing skills in science, technology, engineering and maths (STEM).

<sup>4</sup> https://www.oecd.org/education/50495363.pdf

in the local context. There is need also to change the teacher-training model to enhance the use of practical, participatory, learner-centred teaching methods that boost the development of soft skills. There is a need to make Uganda's education system more forward-looking and capable of preparing the workforce for future opportunities. This requires the implementation of a flexible curriculum that equips students with skills that are simultaneously generic and transferable, implementing regular assessments of the labour market to gauge the needs for new and different skills and ensuring closer cooperation with employers at all levels. In addition, teaching practices must adapt to foster the following types of learning experiences: personalized and self-paced learning, accessible and inclusive learning, problem-based and collaborative learning and lastly, lifelong and student-driven learning.





In general terms, jobs are expected to become more interdisciplinary, skills- and information-intensive, innovation-oriented and short-cycled. The Future of Work in Uganda will register an increased demand for technical skills that can facilitate problem-solving and innovation, particularly in occupations related to science, technology, engineering and mathematics (STEM), as shown in Figure 9. In addition to technical skills, specific vocational skills will be required to deploy, operate and maintain new technologies. The appropriate combination of these technical, vocational and core work skills will be rewarded at a premium. It will provide workers with sound future employment prospects, as they can move quickly between jobs, occupations and sectors, leading to high employability outcomes.

# 4.5 CHALLENGES LIMITING UGANDA'S EDUCATION AND TRAINING FROM ADDRESSING THE LABOUR MARKET SKILLS NEEDS

- 1. Uganda has continued to experience an inverted skill triangle. This implies that the country has continued to train more graduates than technicians and technologists. This has been occasioned by the limited enrollments in TVET institutions due to among others, negative mindset, entry barriers such as tuition, prior academic attainment, and an overly supply-driven rigid training curriculum. Yet the country requires more technicians and technologists to support the managers to produce goods and services.
- 2. The provision and usage of online learning materials in e-learning system posed a challenge for many education and skills development institutions during COVID-19 pandemic. Educators at all levels have had to adjust the way they teach. In the past two years, the swift adoption of digital technologies by educational institutions has blurred the lines between traditional and distance education. The ubiquitous use of synchronous online conferencing systems such as Zoom, Microsoft Teams, and Google Meet has allowed students and teachers to reimagine how education can be delivered. However, most universities and other tertiary institutions were not prepared for this major shift as evidenced by the provision of crash trainings in online teaching. On the other hand, with lockdown measures, many such students were not able to go to alternative locations to access better and faster Wi-Fi, and yet digital access is no longer a luxury; it is now essential to life. Therefore, the transition to online learning impacted vulnerable communities in a disproportionate way.
- 3. Following the sudden closure of tertiary and higher education institutions due to the Covid-19 pandemic, learning and skills development was interrupted for almost 2 years. Some of the impacts of the pandemic on the skills development institutions include; disruption in the transition from secondary to tertiary education; drop in enrolment rates at tertiary level, especially for women; connectivity issues between urban and rural; high cost of connectivity and data, the psychological impact of adaptation by students and parents among others. The pandemic, besides getting students off-campus, caused universities and other tertiary institutions to suffer significant revenue losses in form of tuition, accommodation, conferences, and other event related activities.
- 4. There is non-alignment between curriculum, teaching and assessment. It has been found that curriculum reforms, have not been accompanied by teacher training reforms, nor have proportionate reforms in the assessment accompanied them. For example, whereas the TVET sub-sector is gradually adopting the Competence-based Education and Training (CBET) framework as opposed to the syllabus-or examination-based curriculum the assessment remains highly staked, theoretical and pen to paper. Even where some institutions and teachers/instructors try to follow the competency-based curriculum, the old regime of inspection, which puts pressure on teachers/instructors to teach to the test and on students to pass examinations in disregard of the competencies achieved, persists, leading to teachers bowing to such pressures.
- 5. No adequate budgetary resources are allocated to the increasing demand for education services. The Government has undertaken vital policy reforms, including UPE, USE, primary school per parish, secondary school per sub-county, and TVET institution per constituency, all of which bear significant financial resource requirements. However, these reforms have not been adequately provided for in terms of financial resources; for example, the share of the Education and Sports Sector budget as a proportion of the National budget has continued to decline despite increasing demand for education services. This has continued to impact the implementation of various education policies and reforms critically.
- 6. Limited alignment between university admissions and the national skills gaps. According to the State of Higher Education report (2017/18), 63% of total university enrollment was in the already saturated humanities amidst an inelastic formal sector, while only 37% enrolled in STEM disciplines. This, therefore, implies that young people graduating with academic degrees, particularly in social sciences and humanities, are likely to become more irrelevant in the labour market. This contradicts the Government's strategy for increasing enrollment and graduation in STEM disciplines.

- 7. There is inadequate funding for Research and Development. Research and development distinguish universities from other learning institutions; however, this component has continued to be neglected. For example, about 62.4% and 60.7% of lecturers in private and public universities do not publish articles in international peer-reviewed journals and peer-reviewed local journals, respectively. Moreover, universities and departments do not receive grants to undertake research. This indicates that the production of new knowledge in higher learning institutions, especially private universities, is deficient. Thus, these higher learning institutions hardly produce innovations that tackle societal challenges.
- 8. Low quality of the teaching workforce leads to poor learning outcomes. Curriculum reform and a new curriculum have not, however, been accompanied by recruitment of the requisite tutors in government TVET institutions. Rather, tutors who understand the new courses are typically expected to be instructors. This limits the uniform implementation of the new curriculum. As if that were not enough, even where tutors take refresher courses, typically only one tutor goes from each government institution, who is then expected to train their colleagues. This cascading method is inefficient as there is no monitoring mechanism to examine whether the re-trained tutors actually trained their colleagues, and if so whether they achieved success. Furthermore, the re-training of tutors in new curriculum is restricted to only those in government institutions, ignoring those in private institutions, which benefit only when they employ a re-trained tutor from a government TVET institution. This compromises the uniform implementation of the new curriculum or curriculum reforms leading to uneven skills among graduates, exacerbated by weak monitoring.
- **9. BTVET in Uganda is overshadowed in both popularity and esteem and has been condemned to the second class, inferior and a last resort educational path.** Although this negative perception is slowly changing, many people, including parents and learners, still find TVET unattractive; and it is considered secondary to academic tertiary education programmes. This is particularly so where TVET programmes are perceived as leading to less prestigious career paths, lower prospects for high earnings once employed, or poor prospects for further education and training. Furthermore, whereas low enrolment in TVET is partly explained by the negative attitudes of students and their parents, the subsector is poorly funded yet is more expensive compared to other subsectors. Other barriers to entry into TVET include tuition fees, yet the sector mainly serves the poorest segment of the population and the insistence on restrictive academic entry requirements for basic certificate TVET courses.
- **10.** The education system is more aligned around expanding enrolment and grade attainment than the quality of learning. Currently, the Ugandan education system, just like the case is for many of the African education systems, is majorly aligned around expanding enrolment and grade attainment and less around learning objectives. This incoherence is explained by how the government assesses the performance of education sector actors, emphasising success in enrolment and grade attainment. However, the increase in enrolment has led to a deterioration in quality due to pressure on educational infrastructures such as classrooms, textbooks and teachers. The Government of Uganda has concerted efforts to widen access to schools for learners. Unfortunately, appropriate and quality school education is overlooked in the pledge to get every child to school.

# 4.6 POLICY OPTIONS TO ADDRESS UGANDA'S HUMAN CAPITAL DEVELOPMENT CHALLENGES

- 1. To increase the impact of skills development initiatives, the private sector should be involved to understand and cater for their needs. The needs of the private sector are diverse. Regardless of the categorization of firms in the sector, whether they are small, medium or somewhere in-between, it's safe to say that there is no "one-size-fits-all". Therefore, collaborating with the private sector to determine their skills needs is critical. The success of labour absorption in the sector depends on how well the skilled labour force is aligned with the current requirements. In this regard, Formal assessments such as GIZ's capacity needs assessment of the oil and gas sector can be a useful source of information not just for designing 'appropriate' skills development initiatives but also as a selling point to leverage investment from both the private and public sector.
- 2. Create policies and procedures to guide education program renewal at Universities. Procedures for introducing new programs are currently supply; driven. However, public training institutions have a right to select their program offerings in practice; providers' choices are restricted to curricula already recognised by National Curriculum Development Centre (NCDC). As a result, the range of courses offered in public institutions tends to remain static. Decisions for adjusting or closing programs lack consistent standards and procedures. Key measures such as industry consultations, availability of qualified staff and equipment, and labour market analyses would help to inform decision-making and promote more relevant program offerings.
- **3.** Continued support to the establishment of the Skills Development Fund and the introduction of a training levy. The BTVET Act (2008) proposed charging an industrial training levy to generate additional resources and ensure equitable training costs among employers and users of trainees or budgetary allocations. However, this has not yet been operationalised. In addition, to ensure that skills development systems are maximised, financial resources are critical, and an essential step in setting up such a system is a dedicated skills development fund (SDF).
- 4. A change of mindset from theoretical to practical vocational skills. During these times when the demand for practical skills is rising exponentially, Uganda needs practical, transformational to drive us into middle-income status. Achieving this, however, will require changing mindsets so that people become more willing to help their children pursue practical skills in growing sectors such as construction.
- 5. The Covid-19 pandemic dramatically underlined the need for better infrastructure and easier access to the internet and digital devices in education and skills development institutions. In addition, the pandemic obliged most education systems to adopt alternatives to face-to-face teaching and learning, forcing many education systems to move activities online to allow instruction to continue despite school closures. Therefore, Uganda's government and individual institutions should invest heavily in ICT systems that support online and blended learning integration to improve access to quality education at all levels.
- 6. Strengthen the standardisation and certification programme to make Uganda's labour force employable and competitive. The Directorate of Industrial Training (DIT) should develop, popularise, and implement the Uganda Vocational Qualifications Framework (UVQF) to assess and award certification and accreditation to Uganda's labour force to be employed in targeted sectors and projects. Where necessary, DIT should twin with internationally accredited Institutions to certify Ugandan workers to meet international standards.
- 7. Reform the career guidance system to deliver well-informed guidance to all levels. In that regard, rather than a school careers teacher having no clue about TVET, hiring fully qualified advisers could help enhance students' flow into TVET as a competitive alternative to university education. Better still, career guidance ought to have a structure determined from the centre, which should act as a guide for all schools and colleges and ensure uniformity in the career information students receive across the country. Fix lead responsibility for career information and guidance in a single governmental agency. In the longer run, consider structural reform of the dual system to facilitate effective career choice.

- 8. Integrate soft skills especially social and emotional skills, at all education and training levels. Previous research and surveys have observed that young employees' lack of social and emotional skills is among the top 3 issues faced by Small and Medium Enterprises. Therefore, integrating social and emotional skills into skills development programs so that the youth can relate at work promotes learning and building of professional relationships and marketing their skills when job hunting. In addition, these skills will enable skilled youth to negotiate contracts, market their skills, and build professional relationships. This can be done by promoting a work-based learning approach through internship, workplace training and industrial attachments.
- **9.** Articulate a clear funding strategy towards BTVET. Although key stakeholders inform budget allocation, the principles and rules underpinning the funding strategy are not subject to systematic evaluation. In addition, public spending in BTVET remains low relative to other countries in Sub-Saharan Africa, and training institutions are severely underfunded. Public expenditure on BTVET remains modest but is expected to rise in the coming years. According to official data, more than 40% of revenues of public training institutions are fees collected from private households. The heavy reliance on household contributions may limit disadvantaged populations from accessing public training. Although providers have considerable freedom to engage in income-generating activities, revenue generated through this mechanism remains low. However, the flexibility embedded in the current system creates an opportunity to take advantage of previously untapped funding sources, such as the training levy and a competitive training fund outlined in the BTVET Act of 2008.
- **10.** Enhance the credibility of accreditation and skills certification. Lax enforcement means that many private institutions bypass licensing/registration even though it is a mandatory condition for operation under the Education Act. The Universal Post Primary Education and Training (UPPET) program, which makes licensing/registration a pre-condition for government subsidies, incentivise providers to seek registration; however, only 16 private institutions participated in this scheme in 2010. The licensing/registration process is prohibitively costly and bureaucratic since it requires providers to make several visits to the MoES in Kampala. Successful applicants have few incentives to maintain and improve quality standards. Once granted, registration is not subject to renewal requirements; inspections for quality oversight do not effectively target private providers. Both the UVQF and the UNEB promulgate skills testing standards. However, the scope of the UVQF is still being clarified, and even though the rules and procedures of the external testing system appear transparent, they have yet to be implemented.
- **11. Link training, industry, and research institutions.** While industrial attachments provide contact between training institutions and industry, the scope of cooperation between these parties is limited. Skills Development Networks seek to strengthen collaboration between the world of work and training institutions, but the Networks are small, donor-funded projects whose sustainability is uncertain. The BTVET Strategic Plan envisions sector-specific centres of excellence that could help strengthen linkages between training providers and research institutions, thus improving the quality of training and ensuring that the content keeps pace with technological advances.
- **12. Promote diversity in training provision**. The field of private providers is relatively large, comprising some 1,000 providers with enrollment exceeding 100,000. The range of courses offered is likely more comprehensive than in public institutions. Due to the high presence of faith-based organisations and NGOs, the private provider segment, unlike in many other countries, also offers a considerable range of technical occupations. The large diversity of training providers stems mainly from the ease of entry into the training market rather than from an established incentive system for training provision (and the lack of quality assurance). Under current arrangements, few non-state providers benefit from government training grants, and many locations, such as rural and conflict-affected areas, are under-served. In addition, the system of incentives has not been reviewed for effectiveness.

- **13. Improve the competence of instructors or tutors in education and training institutions**. A system to improve instructors' skills and qualifications is developing. Systematic capacity-building programs for instructors and heads of training institutions were launched in 2012, and competency-based qualifications were designed. Initiatives are still limited in scope and are fully financed by development partners. However, the new BTVET policy 2019 draws considerable attention to the need to increase the capacity for training instructors based on updated and relevant technical teachers and instructors' qualifications. While instructors and principals in training institutions must meet minimum academic qualifications, more can be done to increase their practical industry experience. Mechanisms of recruitment and retention based on performance are mainly absent. Many technical instructors often do not meet the specified formal entry requirements and are thus hired on temporary contracts.
- 14. To bring about sustainable change, though, Uganda needs to invest in skills development at scale for impact. Employers across formal and informal sectors in Uganda say the lack of practical, digital, entrepreneurial, and soft skills such as managerial, communication, and socio-emotional—are limiting productivity improvements. Uganda also needs to position its workforce for the emergence of green and digital economies, which are opening up new opportunities for the development of skills to them. Finally, and most importantly, improving Uganda's human capital, particularly for women who completed their primary education, is crucial to achieving more inclusive growth that accelerates poverty reduction.
- **15.** There is a need for a change of mindset from theoretical to practical vocational skills. Uganda needs practical and transformational skills to drive us into middle-income status. This will require changing mindsets so that people become more willing to help their children pursue practical skills in growing sectors such as tourism and construction. In addition, there is a need for a mind shift to practical vocational skills, especially for youths that are largely deterred from pursuing these practical skills.
- 16. Undertake periodic and regular review of the curriculum in line with the new and emerging skills of the labour market. Specifically, there is a need to identify, develop and implement further education and training programmes and curriculum to meet the qualification and skills shortages with no training available in the country in line with the National Human Resource Development Plan (NHRDP) / Scarce Skills Report.
- 17. Open access to tertiary education further and address transition barriers perceived by students. Design adequate guidance, induction and financial support measures for less academically trained people wanting to attend university. Promote dual universities and dual programmes at regular universities and encourage more flexibility the part-time university offers and the recognition of prior learning and experience.

# 4.7 SEQUENCING OF INTERVENTIONS

S/N	RECOMMENDATIONS	ACTION	LEAD ACTOR	OTHER ACTORS
URG	ENT-SHORT-TERM			
1.	Strengthen the standardisation and certification programme to make Uganda's labour force employable and competitive	Develop, popularize, and implement the Uganda Vocational Qualifications Framework (UVQF) in order to assess and award certification and accreditation to Uganda's labor force for employment in specific sectors and projects.	DIT	MoES, Private Sector
2.	Articulate a clear funding strategy towards BTVET	Develop a framework linking financing for education and training to scarce qualifications and skills needs	MoES	Universities, MoFPED
3.	Open access to tertiary education further and address transition barriers perceived by students	Design adequate guidance, induction and financial support measures and programs for less academically trained people wanting to attend university.	MoES	NPA, Universities
4.	Under periodic and regular review of the curriculum in line with the new and emerging skills of the labour market.	Identify, develop and implement new education and training programmes and curriculum to meet the qualification and skills shortages with no training available	Universities	NCHE, MoES
		Promote regular reviews of curricula to accommodate the needs of the private sector and industrial dynamics	NCDC	MoES
5.	Involve the private sector to understand and cater for their needs.	Develop strategies and guidelines to incentivise skills development in the private sector	MoES	Private Sector, NCHE,
		Establish a Public-private partnership to offer relevant and high-quality BTVET programmes.	MoES	
6.	Set policies and procedures to guide the renewal of programs	Revise the framework/criteria for the development and approval of new courses offered by education and training institutions	MoES	Universities, the Private Sector and
7.	Improve the infrastructure and access to the internet and digital devices in education and skills development institutions	Provide the required physical infrastructure, instruction materials and human resources at all levels of Education and Training	MoES	MoFPED, NITA-U, MoICT&NG
8.	Reform the career guidance system to deliver well- informed guidance to all	Create guidelines to encourage partnerships between primary and secondary schools, tertiary institutions, and employers for early career guidance.	MoES	MoGLSD, NPA
9.	Link training, industry, and research institutions	Support partnerships/twinning between international and local universities and other institutions of higher learning, especially in the areas of research, by signing MOUs	NCHE, Universities	

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10.	Integrate soft skills that	Integrate social and emotional	MoES	NCDC,
	support modern work in	skills at all education and training		Universities,
	training programmes	levels		
MED	IUM-LONG-TERM			
1.	Improve the infrastructure	Provide the required physical	MoES	MoFPED,
	and access to the internet	infrastructure, instruction materials		NITA-U,
	and digital devices in	and human resources at all levels of		MoICT&NG
	education and skills	Education and Training		
	development institutions			
2.	Reform the career guidance	Structurally reform the dual system	MoES	MoGLSD
	system to deliver well-	to facilitate effective career choice		
	informed guidance to all			
3.	Set policies and procedures	Develop a policy to guide the	MoES	Universities,
	to guide the renewal of	development and approval of new		the Private
	programs	courses offered by education and		Sector and
		training institutions		

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# ANNEXES

# Annex 1: Uganda Vocational Qualifications Framework (UVQF) Summary of Generic Level Descriptors

Competence	Description	Assessment Eligibility Criteria	Award	Comparable
UVQF Levels V	Ability to manage and administer a vocational training institution	<ul> <li>Qualified and in possession of recognized technical and pedagogical qualifications and appointed to head a BTVET institution or unit</li> <li>UVQF Level 4 and above</li> <li>A private sector enterprise training manager</li> </ul>	Diploma and Transcript	Higher Diploma (HD)
UVQF Levels IV	Described as ability to acquire varied range of specialized knowledge and skills to interpret technical information, modify and perform complex technical operations within broad scope of work and varied structured contexts, undertake activities with substantial degree of autonomy checked on results by superiors, with substantial degree of resources control and managerial performance.	<ul> <li>BTVET instructor with a minimum of Diploma technical qualification and having accomplished at least 9 months of in-service instructor training programme at approved centre.</li> <li>BTVET instructor upgrading from CVTI to DVTI through in service instructor training programme at approved centre.</li> <li>Upgrading from UVQF level III award</li> </ul>	Diploma and Transcript	Ordinary Diploma (OD)
UVQF Levels III	D escribed as ability to apply broad range of knowledge and skills to perform complex and broad scope of work within unpredictable and varied structured contexts, undertake activities as a 'working supervisor' with substantial degree of autonomy checked on results by superiors, ability to find technical solutions and may make proposals to modify technical operations, with moderate degree of resources control and managerial performance.	<ul> <li>Upgrading from UVQF level II award.</li> <li>Graduates of higher education with direct S.VI entry and whose practical skills are to be validated for the job market.</li> <li>An entrepreneur of SME's recognized by UMA, PSFU and USSIA.</li> <li>BTVET instructor having accomplished at least 9 months of in-service instructor training programme at approved centre</li> </ul>	Certificate and Transcript Certificate in Vocational Training Instruction (CVTI)	Certificate III
UVQF Levels II	Described as ability to apply moderate range of knowledge and skills to perform less complex and moderate scope of work	<ul> <li>Accomplished 2 years of post S.IV full time Technical/Vocational institute training in the</li> </ul>	Certificate and Transcript	Certificate II

	within a non-routine and occasionally varied structured contexts, undertake directed activities with some degree of autonomy while working in a team, with limited degree of resources control and able to find simple technical solutions.	0	occupation evidenced by coverage of Assessment and Training Package (ATP). On Job apprenticeship training programme from registered enterprises or training centres evidenced by coverage of Assessment and Training Package (ATP). Upgrading from UVQF level I award	Worker's PAS		
UVQF Levels 1	Described as ability to apply basic range of knowledge and skills to perform simple and narrow scope of work within routine and uniform structured contexts, including working with others under direct supervision, usually with no degree of resources control and/or requirement to find technical solutions (for formal employment) or limited if self employed	0 0 0 0	Accomplished 3 years of post P.7 full time Technical/Vocational schooling in the occupation evidenced by coverage of Assessment and Training Package (ATP). On Job apprenticeship training programme from registered enterprises or training centres (coverage of Assessment and Training Package-ATP). Accumulated industrial experience and routine practice of specific tasks of the occupation under the guidance of a skilled supervisor/master. Upgrading through accumulated modular assessments and certification. Entrepreneurs practicing in the informal sector with vast occupational experience	Certificate and Transcript Worker's PAS (All Modules covered from Assessment and Training Package- ATP)	Certificate I	
UVQF Basic	Ability to apply limited range of knowledge and skills to perform specific and simple work tasks within routine and uniform structured contexts, including working with others under direct supervision, usually with no degree of resources control and/or requirement to find technical solutions (for formal employment) or limited if self-employed.	0	Regardless of educational background. Occupational experience acquired through on job training in either formal or informal sector	Modular Transcript Worker's PAS Partial Modules covered from Assessment and Training Package- ATP)	Worker's Uganda	PAS

Source: DIT Website

Discipline	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	TOTAL
Diplomas	F	М	F	М	F	М	F	Μ	F	Μ	F	М	F	М	F	М	
Advance Diploma in Palliative Care Nursing (ADPCN)					2				6		0	2	4	1	3		16
Diploma in Peadiatrics and Child Health Nursing (DPCHN)	2	1			1		2	2	10	0	9	4	3	1			31
Diploma in Public Health Nursing (DPHN)			14	2	14	3	9	5	1	1	1	0			2	4	23
Diploma In Mental Health Nursing (DMHN)	45	27	20	27	38	31	22	27	34	27	7	12	38	33	29	19	248
Diploma in Comprehensive Nursing (DCN)	87	74	95	115	139	165	104	118	126	157	4	12	74	112	57	52	816
Diploma in Nursing (D.N.)	422	248	482	285	689	473	494	329	842	443	133	92	829	492	790	459	4903
Diploma in Midwifery (D.M.)	329	39	562		666		665		730		137		786		726		3044
Certificates																	
Certificate in Mental Health Nursing (CMHN)	52	39	46	36	44	54	43	36	63	21	95	74	106	57			495
Certificate in Comprehensive Nursing (CCN)	1104	705	974	540	616	445	501	489	515	471	714	426	766	488	167	82	4619
Certificate in Nursing (C.N.)	1049	629	1603	1043	2366	1907	2054	2025	2004	2112	1802	1983	2669	2372	634	658	18313
Certificate in Midwifery (CM)	1498		2254		3089		3428		2541		2546		3582		685		12782
TOTAL	4588	1762	6050	2048	7664	3078	7322	3031	6872	3232	5448	2605	8857	3556	3093	1274	45290

# Annex 2: Uganda Nurses and Midwifery Examinations Board (UNMEB) Cadre Output 2015-2022

Source: Author's calculations based on graduation / awards data from UNMEB (2015-22)

Award /	20	15	20	16	20	17	20	18	20	19	20	20	202	21	202	22	Total
Qualification	М	F	М	F	М	F	М	F	М	F	М	F	М	F	Μ	F	
Doctor of Philosophy															1	1	2
Doctor of Philosophy	1	1	1	1	2	2	5	-	1	0	0	1	2	1			18
Doctor of Philosophy													2	0			2
in Agricultural and																	
Applied Biosciences																	
Doctor of Philosophy	-	-	-	-	2	-	-	-	0	0							2
(honori causa)																	
Doctor of Philosophy															1		1
Master of Medical									2	1			2	0			5
Anthropology																	
Master of Medical in											1	0					1
Surgery																	
Master of Public											1	3			2	2	8
Health																	
Master of Science in											0	1	0	1		1	3
Environmental																	
Science and Natural																	
Resources																	
Management																	
Master of Science in											1	0			2		3
Animal Production																	
and Marketing																	
Master of Science in	-	-	-	-	2	2	3	3	0	1	11	6	5	7	1		41
Agri-Enterprises																	
Development																	
Master of Science in	-	-	-	-	3	1	5	1	1	1	7	1	12	7	1		40
Food Security and																	

# Annex 3: Gulu University Graduation Statistics for the Period 2015-2022

Community																	
Nutrition																	
Master of Education															3		3
in Education																	
Management																	
Master of Arts in																4	4
Literature and																	
English Linguistics																	
Master of Education		2	-	-	14	5	1	-	4	0	2	1	2	5	1	2	45
(Administration,	6																
Management and																	
Planning)																	
Master of Science in															2		2
Information																	
Technologies for																	
Development																	
Master of Science in	3	1	1	-	4	-	1	-	3	1	1	0	4	0	11	1	31
Applied Tropical																	
Entomology and																	
Parasitology																	
Master of Arts in	6	-	-	-	11	6	3	-	6	3	1	3	5	3	5	5	57
Public																	
Administration and																	
Management																	
Master of Business	3	1	-	-	14	6	3	1	24	16	12	3	13	2	15	2	115
Administration																	
Master of Arts in	2	1	-	-	2	-	1	1	2	3	1	2					15
Conflict																	
Transformation																	
Studies																	

Master of Arts in Governance and Ethics									3	1	3	0	1	1	2	2	13
Postgraduate Diploma in Education	2	-	-	-	-	1	-	-	6	3	2	1	4	1	4		24
Postgraduate Diploma in Financial Management	11	2	17	4	7	3	22	6	14	7	27	10	14	9	4	2	159
Postgraduate Diploma in Procurement and Supply chains Management	17	3	21	5	12	5	7	2	6	4	6	3	8	0	4	4	107
Postgraduate Diploma in Project Planning and Management	24	7	26	10	27	14	29	19	26	15	45	23	33	27	21	8	354
Postgraduate Diploma in Community Development															1		1
Postgraduate Diploma in Human Resource Management															1	1	2
Post Graduate Diploma in Monitoring and Evaluation															7	4	11
Postgraduate Diploma in	-	-	-	-	-	-	-	-	0	0	5	0					5

Entrepreneurship Development																	
Postgraduate Diploma in Conflict Management and Peace Studies	-	-	-	-	-	-	-	-	0	0							-
Bachelor of Medicine and Bachelor of Surgery	-	-	-	-	-	-	-	-	37	3	44	11	34	12	55	12	208
Bachelor of Science in Midwifery									12	27	15	39	1	1			95
Bachelor of Science in Public Health	58	78	77	93	114	106			14	6	6	5	6	4	6	4	577
Bachelor of Agriculture	61	12	44	17	3	-	26	7	28	11	46	12	26	15	18	10	336
Bachelor of Science in Food and Agribusiness											4	5	7	4	11	7	38
Bachelor of Science in Biosystems Engineering	15	2	7	4	8	1	15	3	11	2	17	1	13	1	9	1	110
Bachelor of Science in Entrepreneurship and Communication Management													5	6	16	12	39
Bachelor of Arts Education	96	91	102	129	98	104	76	113	91	98	97	135	81	123	177	77	1,688
Bachelor of Education (Primary)													18	5	49	23	95
Bachelor of Business Education	27	14	22	13	18	9	19	6	23	10	10	16	24	8	18	9	246

Bachelor of Science Education (Biological)	13	1	15	-	23	5	16	4	26	5	21	6	28	5	30	7	205
Bachelor of Science Education (Economics)	21	8	17	-	19	3	18	7	21	10	32	5	18	13	21	6	219
Bachelor of Science Education (Physical)	25	-	22	3	36	5	33	6	39	3	46	5	32	2	42	3	302
Bachelor of Science Education (Sports Science)	5	1	4	4	11	-	4	-	2	0	13	0			1		45
Bachelor of Science Education (Sport and Exercise Science)													4	1	3	3	11
Bachelor of Science Education (Technological Education)	1	-	-	-	-	-	-	-	0	0							1
Bachelor of Science Education (Agriculture)	13	1	15	-	23	5	16	4	25	11	38	14	28	9	38	9	249
Bachelor of Information and Communications Technology	44	32	66	21	33	12	20	10	27	14	16	14	8	6	1	1	325
Bachelor of Information and Communication Technology													15	13	25	5	58
Bachelor of Science (Computer Science)	14	2	9	3	14	4	14	1	19	5	14	4	4	0	1		108

Bachelor of Science in Computer Science Bachelor of Applied Sciences Chemistry         Image: Science Schemistry																		
In Computer Science       Image: Science Schemistry       Image: Science S	Bachelor of Science													6	4	8	2	20
Bachelor of Applied Sciences Chemistry         Image: Science Science (Gaming and Animation Technology)         Image: Science (Gaming and Animation Technolo	in Computer Science																	
Sciences Chemistry         I	Bachelor of Applied															4	4	8
Bachelor of Computer Science (Gaming and Naminotod Nethology)         Image: Sine Science Administration         Image: Sine Administ	Sciences Chemistry																	
Computer Science (Gaming and Animation Technology)       Iss	Bachelor of															2	1	3
(Gaming and Animation Technology)       Image: Simple Si	Computer Science																	
Animation Technology)       Image in the second s	(Gaming and																	
Administration       93       75       142       67       127       98       124       84       107       77       82       74       61       60       68       56       1,395         Bachelor of Business Administration       99       107       63       67       127       98       124       84       107       77       82       74       61       60       68       56       1,395         Bachelor of Business Development Studies       99       107       63       68       78       76       83       63       44       42       58       34       37       33       84       990         Bachelor of Public       58       78       77       93       114       106       75       78       76       89       46       66       40       41       36       62       1,135         Bachelor of Public       58       78       79       9       124       13       25       78       76       89       46       66       40       41       36       61       135         Bachelor of Cause       99       9       26       4       12       13       25       7       2	Animation																	
Including (1)       1       <	Technology)																	
Bachelor of Business       93       75       12       67       127       98       124       84       107       77       82       74       61       60       68       58       1,359         Bachelor of Development Studies       99       107       63       68       78       76       83       63       44       42       58       34       37       33       38       990         Development Studies       78       78       76       83       63       44       42       58       34       37       33       38       990         Bachelor of Public       58       78       77       93       114       106       75       78       76       89       46       66       40       41       36       62       1,155         Bachelor of Public       39       9       26       4       22       13       25       76       87       76       89       46       66       40       41       36       62       46       66       40       41       36       62       47       81       22       13       22       4       22       41       22       41       23      <	Decholor of Ducinoss	02	75	140	67	107	0.0	124	0.4	107	77	0.2	74	61	60	69	ГС	1 205
Administration       I	Advance of Business	93	75	142	07	127	98	124	84	107	//	82	74	01	60	08	50	1,395
Bachelor of bubic studies       99       107       63       68       78       67       76       83       63       44       42       58       34       37       33       38       990         Development studies       100       <	Administration																	
Development Studies       Image: State S	Bachelor of	99	107	63	68	78	67	76	83	63	44	42	58	34	37	33	38	990
Studies       ice       <	Development																	
Bachelor of Public Administration       58       78       77       93       114       106       75       78       76       89       46       66       40       41       36       62       1,135         Bachelor of Quantitative Economics       39       99       26       4       22       13       25       6       17       8       22       13       22       4       22       4       256         Bachelor of Science (Economics)       22       7       9       4       5       7       22       17       6       2       5       1       1       2       1       25         Bachelor of Science (Economics)       22       7       9       4       5       7       22       17       6       2       5       1       1       2       1       25         Bachelor of Science (Economics)       12       7       1       2       1       1       2       1       2       1       1       2       1       2       1       2       1       2       1       1       2       1       2       1       2       1       2       1       1       2 <td< td=""><td>Studies</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Studies																	
Administration       Image: sector of Quantitative Economics       39       9       26       4       22       13       25       6       17       8       22       13       22       4       22       4       256         Bachelor of Quantitative Economics       22       7       9       4       14       5       7       22       17       6       2       5       1       1       2       1       12       12         Bachelor of Science (Economics)       22       7       9       4       14       5       7       22       17       6       2       5       1       1       2       1       12       12         Bachelor of Science (Economics)       15       7       9       4       12       2       14       2       17       6       2       5       1       1       2       1       12 <td>Bachelor of Public</td> <td>58</td> <td>78</td> <td>77</td> <td>93</td> <td>114</td> <td>106</td> <td>75</td> <td>78</td> <td>76</td> <td>89</td> <td>46</td> <td>66</td> <td>40</td> <td>41</td> <td>36</td> <td>62</td> <td>1,135</td>	Bachelor of Public	58	78	77	93	114	106	75	78	76	89	46	66	40	41	36	62	1,135
Bachelor of Quantitative Economics       39       9       26       4       22       13       25       6       17       8       22       13       22       4       22       4       22       4       22       4       22       4       22       4       22       4       22       4       22       4       22       4       22       4       22       4       22       4       25       5       5       1       1       2       4       22       4       25         Bachelor of Science (Economics)       22       7       9       4       14       5       7       22       17       6       2       5       1       1       2       1       125         Bachelor of Laws       -       9       4       -       -       2       7       7       6       2       5       1       15       24       74         Diploma in Computer Science       15       7       12       3       8       5       16       7       50       16       61       39       18       8       6       3       252         Diploma in Development Studies       19 <td>Administration</td> <td></td>	Administration																	
Quantitative Economics       Image: Second Science (Economics)       Second Science Paramacy       Second Science       Second Scienc	Bachelor of	39	9	26	4	22	13	25	6	17	8	22	13	22	4	22	4	256
Economics       Image: Second Science Economics       Second Science Science       Second Science	Quantitative		-	-			_	_	-		-		-					
Bachelor of Science (Economics)       22       7       9       4       14       5       7       22       17       6       2       5       1       1       2       1       125         Bachelor of Science (Economics)       22       7       9       4       14       5       7       22       17       6       2       5       1       1       2       1       125         Bachelor of Laws       -       9       4       -       -       2       7       7       6       2       5       1       1       2       1       125         Diploma in Computer Science       15       7       15       4       12       2       14       2       11       2       7       2       3       0       2       1       99         Diploma in Pharmacy       -       -       12       3       8       5       16       7       50       16       61       39       18       8       6       3       252         Diploma in Development Studies       19       25       13       10       25       16       17       27       11       15       8       9 <th< td=""><td>Economics</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	Economics																	
Distribution of solution       22       7       50       21       51       11       12       13       10       11       11       12       13       10       12       11       11       12       13       13       14       14       15       13       10       13       14       15       13       13       14       14       15       14       15       14       15       15       15       15	Bachelor of Science	22	7	٩	Δ	1/	5	7	22	17	6	2	5	1	1	2	1	125
Bachelor of Laws       -       9       4       -       -       2       7       7       6       .       .       .       15       24       74         Diploma in Computer Science       15       7       15       4       12       2       14       2       11       2       7       2       3       0       2       1       99         Diploma in Computer Science       15       7       15       4       12       2       14       2       11       2       7       2       3       0       2       1       99         Diploma in Pharmacy       15       7       12       3       8       5       16       7       50       16       61       39       18       8       6       3       252         Diploma in Studies       19       25       13       10       25       16       17       27       11       15       8       9       3       2       1       4       200         Diploma in Secretarial and       6       36       7       28       6       23       5       25       3       20       2       11       0       8 <th< td=""><td>(Economics)</td><td>22</td><td>,</td><td>5</td><td>-</td><td>14</td><td>5</td><td>,</td><td>22</td><td>17</td><td>0</td><td>2</td><td>5</td><td>-</td><td>-</td><td>2</td><td>-</td><td>125</td></th<>	(Economics)	22	,	5	-	14	5	,	22	17	0	2	5	-	-	2	-	125
Bachelof of Laws       -       12       3       8       5       16       7       50       16       61       39       18       8       6       3       252       -<	(Leonomics)			0	Λ			2	7	7	c					10	24	74
Diploma in Computer Science       15       7       15       4       12       2       14       2       11       2       7       2       3       0       2       1       99         Diploma in Pharmacy       -       -       12       3       8       5       16       7       50       16       61       39       18       8       6       3       252         Diploma in Pharmacy       19       25       13       10       25       16       17       27       11       15       8       9       3       2         200         Diploma in Studies       19       25       13       10       25       16       17       27       11       15       8       9       3       2	Bachelor of Laws	-	-	9	4	-	-	2	/	/	Ь					15	24	74
Computer ScienceImage: science scienc	Diploma in	15	7	15	4	12	2	14	2	11	2	7	2	3	0	2	1	99
Diploma in pharmacy       -       -       12       3       8       5       16       7       50       16       61       39       18       8       6       3       252         Diploma in Development Studies       19       25       13       10       25       16       17       27       11       15       8       9       3       2         200         Diploma in Studies       6       36       7       28       6       23       26       27       11       15       8       9       3       2         200          Diploma in Studies       6       36       7       28       6       23       5       25       3       20       2       11       0       8       9       3       2        200          Diploma in Secretarial and       6       36       7       28       6       23       5       25       3       20       2       11       0       8       0       1       181	Computer Science																	
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Diploma in Development Studies       19       25       13       10       25       16       17       27       11       15       8       9       3       2        200         Development Studies       6       36       7       28       6       23       5       25       3       20       2       11       0       8       0       1       181         Secretarial and  <	Pharmacy																	
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StudiesImage: Studie	Development																	
Diploma in Secretarial and         6         36         7         28         6         23         5         25         3         20         2         11         0         8         0         1         181	Studies																	
Secretarial and	Diploma in	6	36	7	28	6	23	5	25	3	20	2	11	0	8	0	1	181
	Secretarial and																	

Information																	
Management																	
Certificate in	1	23	3	11	1	22	4	14	1	13	2	1					96
Secretarial and																	
Information																	
Management																	
Certificate in	-	-	-	-	-	-	-	-	0	0							-
Computer Science																	
Certificate in	11	4	13	11	26	20	24	43	102	32	45	26	1	0	2	1	361
Pharmaceutical and																	
Health Supplies																	
Management																	
TOTAL BY GENDER	1,500	1,19	1,56	1,16	1,63	1,22	1,26	1,06	1,54	1,01	1,38	1,11	1,04	774	1,38	761	19,63
		9	2	6	9	0	4	1	0	8	5	4	7		5		5
GRAND TOTAL PER	2,6	99	2,7	'28	2,8	59	2,3	25	2,5	58	2,4	199	1,8	21	2,1	46	
GRAD.																	
RATIO (Male:	55.6	44.4	57.3	42.7	57.3	42.7	54.4	45.6	60.2	39.8	55.4	44.6	57.5	42.	64.5	35.	
Female)														5		5	

Source: Author's calculations based on graduation / awards data from Mbarara University (2015-22)

# Annex 4: Mbarara University Graduation Statistics for the Period 2015-2022

Programme	2015	2016	2017	2018	2019	2020	2021	2022	Total
PHD (SCIENCE)	1	6	4	11	5	4	7	9	47
PHD IN COMPUTER SCIENCE	-		1	1	2	-	1	3	8
PHD (INTERDISCIPLINARY STUDIES)	1		1					1	3
PHD IN APPLIED SCIENCES AND TECHNOLOGY								1	1
PHD (BUSINESS AND MANAGEMENT SCIENCES)								5	5
PHD (SCIENCE)	-	-	4	-	-	-	-	10	14
MASTER OF MEDICAL LABOURATORY SCIENCE	-	2	2	5	5	4	3	7	28
MASTER OF NURSING	-	-	4	9	5	6	4	3	31

	1	1		1		1	1		
MASTER OF MEDICINE		22		32	20	15	11	61	161
MASTER OF SCIENCE	23	14	12	21	13	16	14	28	141
MASTER OF EDUCATION		7	10	3	4	5	6	6	41
MASTER OF SCIENCE IN INFORMATION SYSTEMS	-	-	15	3	5	7	5	9	44
MASTER OF PUBLIC HEALTH	-	2	2	9	5	4	7	9	38
MASTER OF BUSINESS ADMINISTRATION	-	7	37	24	11	9	15	25	128
MASTER OF ARTS	-	9	2	4	4	3	6	7	35
MASTER OF SCIENCE IN PHARMACOLOGY	-	-	-	2	2	2	1	24	31
MASTER OF HEALTH INFORMATION TECHNOLOGY	-	-	-	11	9	5	7	6	38
MASTERS IN BUSINESS INFORMATICS	-	-	-	-	-	3	4	2	9
MASTER OF NURSING IN CRITICAL CARE NURSING	-	-	-	-	-	-	-	6	6
BACHELOR OF MEDICINE AND BACHELOR OF SURGERY	81	76	74	76	74	83	83	81	628
BACHELOR OF PHARMACY	63	39	30	39	30	25	54	37	317
BACHELOR OF MEDICAL LABOURATORY SCIENCE	22	12	17	36	17	54	48	42	248
BACHELOR OF MEDICAL LABOURATORY SCIENCE-COMPLETION	3	28	30	7	30	66	75	69	308
BACHELOR OF MEDICAL LABOURATORY SCIENCE C-COMPLETION	40	36	39	46	39	48	0	0	248
BACHELOR OF NURSING SCIENCE	21	7	2	12	2	75	25	17	161
BACHELOR OF NURSING SCIENCE- COMPLETION		46	25	28	25	22	66	70	282
BACHELOR OF SCIENCE IN PHARMACEUTICAL SCIENCES	18	10	12	10	12	17	22	34	135
BACHELOR OF SCIENCE IN PHYSIOTHERAPY	32	11	20	11	20	6	17	18	135
BSC IN GENDER AND APPLIED WOMEN HEALTH	140	65	50	14	50	61	16	34	430
BSC IN PLANNING AND COMMUNITY DEVELOPMENT	29	1	1	66	1	1	59	13	171
BSC IN AGRICULTURAL LIVELIHOODS AND FARM PRODUCTION	2	14	14	0	14	16	18	21	99
BACHELOR OF PLANNING AND COMMUNITY DEVELOPMENT	0	0	15		15	18	1	0	49

BACHELOR OF COMPUTER SCIENCE	28	39	20	39	20	20	17	25	208
BACHELOR OF INFORMATION TECHNOLOGY	47	26	27	26	27	15	18	42	228
BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING	124	56	45	56	45	80	83	0	489
BACHELOR OF BIOMEDICAL ENGINEERING							14	6	20
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING								21	21
B. ENGINEERING IN ELECTRICAL AND ELECTRONICS ENGINEERING								24	24
B. PETROLEUM ENGINEERING AND ENVIRONMENTAL MANAGEMENT								37	37
BACHELOR OF BUSINESS ADMINISTRATION	137	87	96	87	96	60	64	83	710
BSC IN ACCOUNTING AND FINANCE	119	109	111	109	111	105	101	108	873
BSC IN PROCUREMENT AND SUPPLY CHAIN MANAGEMENT	0	36	44	36	44	110	112	100	482
BSC. IN ECONOMICS	0	0	0	0	0	0	0	19	19
BACHELOR OF SCIENCE WITH EDUCATION	114	96	102	96	102	45	135	137	827
POSTGRADUATE DIPLOMA IN DEVELOPMENT STUDIES	-	5		2	5	6	5	3	26
POST-GRADUATE DIPLOMA IN CRIMINOLOGY		3		4	3	5	3	2	20
DIPLOMA IN COUNSELLING	4	0	0	0	0	0	0	0	4
DIPLOMA IN EMERGENCY MEDICINE	6	0	7	0	7	6	6	3	35
ADVANCED DIPLOMA IN CHILD AND ADOLESCENT MENTAL HEALTH	5	0	3	0	3	0	6	6	23
DIPLOMA IN COMMUNITY HIV AND AIDS CARE		0	14		14	0			28
DIPLOMA IN SCIENCE LABOURATORY TECHNOLOGY	25	27	40	27	40	132	45	44	380
GRAND TOTAL	1085	890	932	956	928	1148	1176	1313	

Source: Author's calculations based on graduation / awards data from Mbarara University (2015-2022)

	20	015	20	)16	20	)17	20	018	2019		2020		<b>T</b> • 1
Programmes	F	Μ	F	Μ	F	М	F	Μ	F	Μ	F	М	Total
Higher Diploma in Mechanical Engineering	1	11	0	5	0	11	0	10	0	8			46
Higher National Diploma in Electrical Engineering	0	35	0	17	0	15	0	37	0	13			117
Higher Diploma in Construction (Building & Civil Engineering)	11	103	3	39	2	80	9	94	4	73			418
National Diploma in Refrigeration & Air Conditioning	0	9	2	12	0	10	2	16	0	7			58
National Diploma in Mechanical Engineering	9	222	7	250	8	193	14	250	7	208			1168
National Diploma in Electrical Engineering	37	248	55	320	34	251	43	256	31	300			1575
National Diploma in Civil Engineering	61	584	91	606	78	624	94	523	98	557			3316
National Diploma in Architecture	22	143	17	103	14	108	14	85	14	101			621
National Diploma in Water Engineering	34	122	44	127	46	130	30	130	19	103			785
National Diploma in Ceramics Engineering					0	2	0	2					4
National Diploma in Information & Communication Technology	0	4	4	20	0	11	2	11	2	3			57
Diploma in Telecommunication Engineering													0
Motor Vehicle Technician Course Part II (Advanced Craft)	9	494	4	476	4	619	1	226			0	25	1858
Carpentry & Joinery Craft Part II (Advanced Craft)	4	151	3	122	1	106	0	48			0	1	436
Block Laying & Concrete Practice Part II (Advanced Craft)	20	939	13	606	19	928	5	229			0	8	2767
Plumbing in East African Countries Craft Part II (Advanced Craft)	109	477	123	508	136	626	48	205			2	19	2253

Annex 5: Uganda Business and Technical Examination Board (UBTEB) Awards and Certifications 2015-2020
Drogrommos	20	)15	20	)16	20	)17	20	)18	2	019	20	20	Total
Programmes	F	М	F	М	F	М	F	М	F	Μ	F	Μ	Total
Tailoring & Cutting Garments Craft Part II (Advanced Craft)	183	39	154	37	191	42	181	38			6	2	873
Electrical Installation Craft Course Part III (Advanced Craft)	95	764	104	812	115	1008	20	340			2	48	3308
Radio, Television & Electronics Technician Course Part II (Advanced Craft)	0	18	2	16	3	12	1	6					58
Painters & Decorators Craft Course Part II (Advanced Craft)	2	4	2	6	3	10	6	7					40
National Certificate in Woodwork Technology (Technical)	6	246	5	689	3	94	1	186			2	61	1293
National Certificate in Welding and Fabrication (Technical)					4	104	12	221			0	28	369
National Certificate in Plumbing (Technical)	160	1090	229	987	233	827	306	1470			244	508	6054
National Certificate in Automotive Mechanics (Technical)	10	1966	17	1337	22	2202	34	2694			18	738	9038
National Certificate in Building Construction (Technical)	32	1701	51	1914	34	2117	73	2472			27	461	8882
National Certificate in Electronics Technology (Technical)	7	91					1	74			3	30	206
National Certificate in Electrical Installation Systems and Maintenance (Technical)	169	2010	207	1692	166	1846	243	2181			134	979	9627
National Certificate in Machining and Fitting (Technical)	5	139			0	101	4	135			4	35	423
National Certificate in Painting and Decorating (Technical)	3	25	15	17	6	25	9	17			3	1	121

Drogrammas	20	)15	20	)16	20	017	20	018	2	019	20	20	Total
Programmes	F	М	F	М	F	М	F	М	F	М	F	М	Total
National Certificate in Fashion and Garment Design (Technical)	397	71	400	49	1155	118	686	56			490	52	3474
National Certificate in Refrigeration and Air Conditioning (Technical)							8	12			5	11	36
National Certificate in Hotel Management And Institutional Catering (Technical)					27	7	170	35					239
National Certificate in Cosmetology &Body therapy (Technical)													0
National Certificate in Agriculture (Technical)	842	1304	719	1418	472	863	349	899			618	1001	8485
Leather Tanning & Shoe Making Craft Part I (Technical)	9	18	13	8	10	14					3	5	80
Pottery & Ceramics Craft Part I (Technical)			0	1	0	1							2
Agricultural Engineering Mechanics II (Technical)	5	3	0	8	0	9							25
Certificate in Electrical and Electronics (Technical)			9	69									78
UCPC in Welding and Metal Fabrication	1	13	0	12	0	24	1	39					90
UCPC in Motor Vehicle Mechanics	0	420	2	552	8	780	8	585					2355
UCPC in Block laying and Concrete Practice	49	2137	22	1704	29	2105	18	1535					7599
UCPC in Electrical Installation Practice	9	57	10	79	13	142	29	143					482
UCPC in Plumbing and Pipe fitting			1	535	2	42							580
UCPC in Carpentry and Joinery	3	358	3	16	0	471	2	346					1199
UCPC in Community Polytechnic Certificate in Agriculture	10	21	5	10	8	18	6	10					88
UCPC in Garment Design and Construction	369	50	513	32	571	26	553	43					2157

Drogrammas	20	015	20	016	20	017	20	018	2	019	20	20	Total
Programmes	F	М	F	М	F	М	F	М	F	М	F	М	Total
UCPC in Fabric and Interior Design													0
UCPC in Food preparation and Processing	15	1	23	4	27	8	29	4					111
UCPC in Leather Work & Shoe making	1	2	2	6	0	2	0	2					15
UCPC in Business studies (Accounting)	0	1			0	3	1	3					8
UCPC in Business studies (Computer studies)	0	1											1
UCPC in Business studies (Secretarial studies)	3	0	2	0	3	0							8
UCPC in Business studies (Store keeping)					0	1							1
GRAND TOTAL	2,702	16,092	2,876	15,221	3,447	16,736	3,013	15,675	175	1,373	1,561	4,013	82,884

## Annex 6: Makerere University Graduation Statistics 2015-2022

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	I
Diploma in Civil Engineering Surveying	4	12	0	6	0	6	0	0	0	0	0	0	0	1	0	1	29
Diploma in Library and Information Studies	7	6	17	7	13	3	13	5	4	0	1	0	1	0			77
Diploma in Palliative Care	4	7	11	4	7	7	3	0	4	1	0	0	3	0	0	1	51
Diploma in Records and Archives Management	11	12	26	23	37	13	23	21	10	3	12	4	4	2	1	0	202
Diploma in Strategy and Warfare	0	0	0	0	0	0	0	0	0	0	0	0	1	6	1	6	8
Higher Diploma in Clinical Instruction	0	0	2	7	3	2	0	0	1	6	0	0	1	1			23
Ordinary Diploma in Dairy Industry and Business	0	0	0	5	3	5	3	2	1	8	0	3	0	1	1	1	32
Ordinary Diploma in Feed Industry and Business	0	0	0	0	0	0	0	5	3	1	0	1	0	1	1	1	12
Ordinary Diploma in Laboratory Science Education and																	
Industry	0	0	1	3	2	2	4	5	3	2	1	1	0	1	1	2	26
	13		16		18		11										131
Bachelor of Adult and Community Education	0	87	7	82	2	81	8	58	92	46	81	30	61	45	59	32	9
Bachelor of Agribusiness Management	26	43	23	29	16	31	22	52	33	39	28	33	26	36	22	24	459
Bachelor of Agricultural and Rural Innovation	24	33	23	32	8	39	40	46	28	72	35	70	28	87	19	72	584
Bachelor of Animal Production Technology and Management	0	6	4	14	2	19	6	23	14	19	7	8	8	23	7	19	160
Bachelor of Architecture	6	9	10	19	4	17	9	13	3	15	7	17	9	23	2	13	163
	19	12	10		11												120
Bachelor of Arts	8	2	1	79	6	91	0	0	87	74	87	57	82	57	57	57	8
Bachelor of Arts in Drama and Film	3	10	7	10	11	13	10	10	15	17	14	16	8	7	18	14	169
	14		11		11								10				131
Bachelor of Arts in Development Economics	7	84	0	74	3	69	97	67	81	68	98	65	5	46	91	63	5
	13	14	10	10		11	15	14	12	13	14	15	18	15	14	11	202
Bachelor of Arts in Economics	1	9	0	1	95	3	2	4	2	7	1	3	6	5	1	2	0
Bachelor of Arts in Environmental Management	3	4	1	2	2	2	0	1	0	0	1	0	1	0			17
					11		13		17								1
Bachelor of Arts in Ethics and Human Rights	31	15	10	2	8	72	8	85	6	75	86	54	45	30	10	6	947
Bachelor of Arts in Music	13	2	0	2	12	12	9	10	18	15	9	11	7	12	8	12	140
					12												1
Bachelor of Arts in Social Development	65	41	94	61	3	77	47	39	57	28	35	33	35	24	2	3	761
	48	28	57	33	64	31	67	36	55	32	54	25	49	24	40	22	648
Bachelor of Arts in Social Sciences	4	2	6	0	5	0	0	4	0	5	6	3	4	7	4	6	0
	22	15	29	23	34	24	37	22	39	22	42	25	49	23	48	22	460
Bachelor of Arts with Education	1	7	7	2	2	2	4	4	2	5	5	5	4	8	6	0	4

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	1
																10	
Bachelor of Biomedical Laboratory Technology	39	57	52	75	57	82	48	77	41	65	61	90	64	94	47	1	949
	70	57	56	47	65	53	58	43	57	42	76	45	70	45	85	35	876
Bachelor of Business Administration	0	8	9	0	9	5	8	6	5	9	4	2	1	1	3	8	0
	14	12	13		18	14	15	13	15	11	15	15	16	12	18	16	217
Bachelor of Business Computing	4	2	1	99	3	9	5	4	1	2	9	3	0	9	9	2	0
Bachelor of Business Statistics	51	71	53	56	0	0	60	63	49	37	55	67	48	39	57	54	706
Bachelor of Catering & Hotel Management	6	5	0	0	0	0	0	0	4	7	13	9	9	7	24	8	84
	42	57	32	44	47	58	49	55	37	42	51	54	41	46	43	40	705
Bachelor of Commerce	7	9	1	8	2	6	0	8	2	6	9	2	4	7	6	4	7
Bachelor of Community Forestry	0	0	0	0	0	0	0	0	0	0	0	0			0	1	0
	12		12				12		10				12		11	1	129
Bachelor of Community Psychology	7	58	6	65	94	47	1	69	3	57	97	54	5	42	3	45	8
Bachelor of Conservation Forestry and Product Technology	0	0	0	0	0	0	0	0	8	25	10	26	4	17	2	3	92
Bachelor of Cytotechnology	1	5	0	6	6	11	2	12	4	9	4	8	3	8	7	18	86
Bachelor of Dental Surgery	7	3	2	6	6	7	0	0	6	10	7	15	7	18	7	24	101
	21	15	28	19	24	15	24	14	19	10	13		16		13	10	255
Bachelor of Development Studies	7	5	1	6	6	3	0	1	8	7	4	97	1	91	3	6	0
Bachelor of Diary Industry and Business	0	0	0	0	0	0	2	1	9	15	14	21	0	3	0	2	65
		12		10		11				15		12				11	136
Bachelor of Education	85	5	74	8	67	0	47	78	69	7	72	6	63	88	94	4	3
							11										
Bachelor of Entrepreneurship and Small Business Management	0	0	80	46	99	42	8	50	85	32	68	46	61	31	77	44	835
Bachelor of Environmental Health Science	14	20	9	27	0	0	10	31	10	26	17	30	19	34	16	24	263
Bachelor of Environmental Science	23	44	14	43	17	23	20	38	25	32	20	29	27	26	19	28	400
Bachelor of Geographical Sciences	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	11	8
	16		23	11	29	13	21	10	20		15		18		21		234
Bachelor of Human Resource Management	6	89	1	3	9	0	9	4	0	87	4	76	7	73	8	71	6
Bachelor of Industrial and Fine Arts	36	76	64	67	51	57	62	75	60	72	74	86	64	78	51	81	973
	13		14		11				11		11		13		12	1	140
Bachelor of Industrial and Organisational Psychology	8	63	3	57	1	64	98	47	3	49	2	70	1	84	7	59	7
			10	31												1	
Bachelor of Information Systems	48	64	2	0	0	0	29	57	19	41	32	72	2	19	3	11	798
Bachelor of Information Systems & Technology	0	0	0	0	0	0	0	0	0	0	0	0	2	19	33	78	54

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	1
	13	16	14	18		13											120
Bachelor of Information Technology	4	7	3	6	82	3	39	70	31	62	45	80	9	22	4	7	7
	11		16	11	14	11	12		15		12		14		17	11	176
Bachelor of International Business	2	63	5	7	6	3	2	76	1	79	4	98	1	84	3	0	4
Bachelor of Journalism and Communication	49	27	64	20	86	56	70	37	85	34	59	19	64	23	72	16	765
Bachelor of Laboratory Science Education and Industry	0	0	0	0	1	3	2	5	16	14	14	15	0	3	0	3	73
	15	10	16	11	10	14	10	16		17		13		18		11	188
Bachelor of Laws	5	4	4	8	3	4	9	7	82	5	83	4	92	4	69	8	3
Bachelor of Leadership and Governance	22	12	17	18	19	29	20	26	24	13	19	25	21	11	13	12	289
Bachelor of Leisure and Hospitality Management	62	28	40	23	90	8	71	21	60	17	63	7	47	6	40	12	583
			15		13		10		12				13				126
Bachelor of Library and Information Science	98	38	9	62	6	58	7	51	4	44	92	41	3	52	66	29	1
Bachelor of Livestock Industry and Business	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	3
Bachelor of Medical Education	47	39	33	22	36	30	36	27	34	18	40	45	35	31	25	28	498
												11		10		10	101
Bachelor of Medicine and Bachelor of Surgery	27	85	29	81	36	90	34	90	44	91	45	0	73	8	67	8	0
							11									1	
Bachelor of Office and Information Management	99	22	61	9	85	17	3	21	84	13	87	14	70	22	65	17	782
Bachelor of Optometry	0	0	0	0	0	0	0	0	2	3	2	1	2	0	3	12	13
Bachelor of Pharmacy	4	23	10	36	20	55	1	18	13	23	18	37	7	42	20	69	327
Bachelor of Poultry Industry and Business	0	0	0	0	0	0	0	0	0	0	0	0	1	0			1
	24	16	25	22	27	21	28	18	23	15	27	15	16	11	26	14	320
Bachelor of Procurement and Supply Chain Management	2	8	7	4	4	3	0	8	1	4	5	6	2	5	9	6	8
Bachelor of Real Estate Business Management	0	0	0	0	0	0	0	0	0	0	0	0	3	9	18	8	30
					12				12				13		11	1	
Bachelor of Records and Archives Management	0	0	0	0	5	81	1	0	9	55	0	0	7	63	8	53	709
Bachelor of Science	17	43	29	76	31	60	72	94	41	80	41	82	48	78	26	79	818
			12	11	12				11		11		11		15		113
Bachelor of Science Accounting	0	0	0	6	3	83	0	0	9	44	4	75	6	77	1	8	8
Bachelor of Science Finance	0	0	0	0	0	0	0	0	0	0	51	40	43	45	71	39	250
Bachelor of Science in Actuarial Science	22	37	19	22	18	24	23	35	16	19	17	16	21	15	16	14	320
Bachelor of Science in Agricultural Engineering	2	16	5	20	2	21	5	12	3	9	6	15	4	18	8	12	146
Bachelor of Science in Agricultural Land Use and																	
Management	7	13	8	7	10	12	10	27	9	25	13	34	9	14	14	15	212

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	1
Bachelor of Science in Agriculture	9	48	9	26	12	38	12	42	11	32	14	24	12	37	9	10	335
Bachelor of Science in Biomedical Engineering	0	0	0	0	8	16	16	36	0	0	3	12	10	18	9	11	128
Bachelor of Science in Biomedical Sciences	14	6	17	12	24	12	10	23	0	0	8	39	13	23	20	35	221
Bachelor of Science in Biotechnology	6	17	5	19	15	35	13	29	7	23	13	21	9	15	11	24	238
Bachelor of Science in Business Statistics	68	64	46	44	65	65	74	63	49	73	69	84	49	47	43	80	903
Bachelor of Science in Civil Engineering	21	69	12	66	21	70	14	85	15	81	17	75	14	67	16	79	643
Bachelor of Science in Computer Engineering	16	34	10	27	9	33	7	19	11	37	9	19	7	14	5	22	257
		15		11		15		13		10							115
Bachelor of Science in Computer Science	80	2	59	4	68	8	46	4	35	8	21	85	13	63	20	49	6
Bachelor of Science in Conservation Biology	5	6	0	5	3	2	3	8	3	6	0	15	4	8			68
Bachelor of Science in Construction Management	9	50	7	49	10	34	11	25	6	30	11	21	14	20	15	26	312
Bachelor of Science in Electrical Engineering	16	59	18	49	19	64	14	45	16	77	13	62	20	62	9	47	543
Bachelor of Science in Fisheries and Aquaculture	0	0	3	12	0	0	7	16	0	0	0	0	6	23	6	21	73
Bachelor of Science in Food Science and Technology	8	14	8	13	10	12	6	10	6	14	3	9	21	20	10	15	164
Bachelor of Science in Human Nutrition	12	6	30	11	14	13	23	16	12	12	14	9	14	10	9	5	205
Bachelor of Science in Industrial Chemistry	14	43	13	41	15	52	14	20	12	30	12	22	13	45	21	28	367
Bachelor of Science in Land Economics	21	36	19	20	12	18	13	24	14	22	10	34	13	17	26	17	299
Bachelor of Science in Land Surveying and Geomatics	0	0	8	25	10	19	6	29	11	19	6	27	11	35	26	39	232
Bachelor of Science in Marketing	43	51	72	65	66	63	60	66	78	65	38	41	48	36	72	64	864
Bachelor of Science in Mechanical Engineering	4	29	4	41	5	44	9	35	12	53	4	50	10	49	15	56	364
Bachelor of Science in Medical Radiography	0	1	3	12	3	10	1	8	2	10	3	15	6	16	3	16	93
Bachelor of Science in Meteorology	0	1	0	0	12	9	7	9	2	10	13	11	12	12	11	15	109
Bachelor of Science in Nursing	10	7	12	4	13	6	9	5	11	10	9	6	13	6	20	7	141
Bachelor of Science in Palliative Care	9	10	13	8	10	9	15	7	8	3	14	12	9	5	8	8	140
Bachelor of Science in Petroleum Geoscience and Production	7	25	18	38	15	39	8	26	12	38	4	22	10	24	15	23	301
Bachelor of Science in Population Studies	58	45	34	40	49	41	37	53	65	47	44	40	22	22	34	25	631
Bachelor of Science in Quantitative Economics	46	52	44	58	49	73	71	96	57	73	82	79	51	98	55	67	984
Bachelor of Science in Quantity Surveying	25	40	16	45	13	40	19	25	12	33	25	31	21	27	20	21	392
		12		14		17		13		12							118
Bachelor of Science in Software Engineering	52	9	57	7	59	4	38	1	40	0	40	79	28	68	18	60	0
Bachelor of Science in Speech & Language Therapy	1	0	0	4	4	6	3	3	4	1	6	3	8	7	1	1	51
Bachelor of Science in Surveying	8	38	1	10	1	3	0	2	0	2	0	0	0	1	0	1	66
Bachelor of Science in Sports Science	17	17	9	11	14	16	2	10	2	7	0	0	2	6	0	4	113
Bachelor of Science in Telecommunication Engineering	11	38	16	37	11	38	13	28	8	32	15	30	12	28	15	32	332

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	1
Bachelor of Science in Tourism and Hospitality Management	0	0	0	0	0	0	0	0	0	0	0	0	8	8	8	8	24
Bachelor of Science in Wildlife Health and Management	0	5	3	2	1	11	1	5	2	5	1	5	2	8	0	6	51
						11		18		19		19		18		16	144
Bachelor of Science with Education	29	95	20	96	36	7	51	8	48	5	67	8	63	1	61	7	5
Bachelor of Social and Entrepreneurial Forestry	19	15	6	14	0	0	15	24	19	39	16	21	4	3			195
Bachelor of Social Work and Social Administration	54	35	45	35	84	51	80	31	58	29	72	26	80	31	54	43	765
Bachelor of Statistics	41	42	21	26	36	47	32	44	35	29	30	37	29	30	32	29	511
							10										
Bachelor of Tourism	66	47	93	58	81	74	1	70	94	69	49	68	16	9	5	5	900
Bachelor of Transport and Logistics Management	0	0	48	43	45	35	64	83	77	73	62	79	43	51	61	79	764
Bachelor of Travel and Tourism Management	32	19	37	15	35	33	58	27	54	22	50	24	80	44	82	43	612
Bachelor of Urban and Regional Planning	0	0	3	8	12	18	24	22	33	27	25	39	15	20	14	22	260
Bachelor of Veterinary Medicine	8	19	2	19	11	34	14	34	13	41	13	45	15	51	15	58	334
Master of Adult and Community Education	8	0	2	4	1	0	2	1	2	0	1	1	2	1	1	1	26
Master in Geographical Sciences	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3
Master of Engineering (Civil)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1
Master of Agribusiness Management	2	1	0	0	0	0	0	4	2	0	2	3	0	2	1	1	17
Master of Architecture	0	1	2	1	0	0	0	0	1	1	0	0	1	1			8
Master of Arts in African Languages	0	0	0	0	0	0	0	0	0	1	0	0	1	0			2
Master of Arts in Banking and Investment Management	0	0	0	0	0	0	0	0	0	0	0	0	1	2			3
Master of Arts in Counselling	12	0	1	0	8	4	3	0	7	1	1	2	1	2	4	0	46
Master of Arts in Defence and Security Studies	0	0	0	0	0	0	0	0	0	14	0	11	3	13			41
Master of Arts in Demography	2	3	0	1	1	2	0	3	0	1	2	2	0	2	0	1	19
Master of Arts in Economic Policy and Management	21	43	0	0	0	0	0	0	1	5	0	5	10	32	2	7	119
Master of Arts in Economic Policy and Planning	6	23	0	0	0	0	5	17	15	25	19	21	14	24	10	10	179
Master of Arts in Economics	3	12	2	10	2	3	0	2	3	9	2	7	0	1	2	6	58
Master of Arts in Education Policy and Planning	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	7	8
Master of Arts in Educational Management	1	2	4	0	2	3	0	2	0	4	0	0	2	3	7	6	30
Master of Arts in Financial Services	5	4	3	5	4	3	5	6	8	9	5	5	5	5	1	5	73
Master of Arts in Fine Art	0	0	1	1	3	2	3	3	2	2	0	0	1	0	1	1	19
Master of Arts in Gender Studies	10	1	6	0	12	1	5	2	15	1	4	1	7	3	10	2	78
Master of Arts in Geography	1	2	0	1	1	4	2	1	1	1	3	4	3	1	0	3	25
Master of Arts in History	0	0	0	2	0	0	0	1	0	0	0	2	0	2	2	3	9
Master of Arts in Human Rights	13	4	2	5	4	4	5	11	4	7	8	6	4	2	6	6	85

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	1
Master of Arts in International Relations and Diplomatic																	
Studies	11	6	8	13	3	6	3	2	3	9	4	7	8	8	4	13	95
Master of Arts in Journalism and Communication	2	7	0	1	8	12	5	6	1	2	11	11	9	12	12	4	99
Master of Arts in Land Use and Regional Development	0	1	0	0	0	0	0	0	1	1	0	0	1	2	0	1	6
Master of Arts in Linguistics	1	2	0	3	2	5	1	1	1	0	1	2	3	0	2	1	24
Master of Arts in Literature	3	3	3	1	1	1	3	2	0	0	3	1	4	2	1	1	28
Master of Arts in Music	0	0	0	0	0	0	0	0	0	0	0	0	0	1			1
Master of Arts in Peace and Conflict Studies	4	12	4	6	4	7	3	1	2	6	7	2	2	1	7	8	68
Master of Arts in Public Administration and Management	26	62	20	11	0	0	4	4	9	11	15	17	11	4	9	8	203
Master of Arts in Religious and Theological Studies	0	48	0	0	0	42	0	28	0	48	0	33	0	44	0	3	243
Master of Arts in Religious Studies	0	0	0	0	0	0	0	0	0	0	1	1	0	1			3
Master of Arts in Rural Development	4	4	5	3	2	3	4	7	2	1	0	1	0	5	0	2	41
Master of Arts in Social Sector Planning and Management	8	12	2	2	13	10	0	1	7	6	9	6	9	10	11	12	106
Master of Arts in Sociology	7	8	2	2	1	1	4	0	1	1	2	2	4	3	3	3	41
Master of Biomedical Laboratory Science and Management	0	0	0	0	0	0	0	0	0	0	0	0	2	5	2	3	9
			60		~ -	11		13		16		12	(2)	11	11	14	148
Master of Business Administration	84	99	68	84	95	5	46	l	91	2	90	8	63	5	4	2	5
Master of Education	0	0	0	0	0	0	0	0	0	0	l	2	9	8	0		20
Master of Education in Curriculum Studies	1	1	0	0	0	0	5	1	4	2	6	5	0	3	2	1	30
Master of Education in Educational Psychology	0	0	1	1	0	1	2	1	0	0	1	2	1	0	0	3	10
Master of Energy Economics and Governance	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	4
Master of Health Informatics	0	0	0	0	0	0	0	0	0	0	3	2	3	5	3	5	16
Master of Health Sciences in Bioethics	0	0	0	0	0	0	0	0	0	0	3	0	4	3	4	2	14
Master of Health Services Research	3	4	3	2	2	6	1	5	11	7	7	5	2	2	3	1	63
Master of Hospitality and Tourism Management	3	3	1	3	1	2	0	3	3	1	0	2	1	0	4	3	27
Master of Human Resource Management	23	20	24	15	34	13	11	7	16	15	20	15	16	4	14	8	247
Master of International Business	0	0	3	1	1	6	1	2	3	2	0	3	1	1	0	2	24
Master of Laws	5	9	13	13	7	11	4	9	3	5	11	8	17	8	10	9	133
Master of Medicine	31	50	28	55	29	53	30	45	23	51	39	60	38	88	35	67	655
Master of Organizational Psychology	0	0	0	0	0	0	0	2	4	2	11	3	0	3	3	1	28
Master of Philosophy in Social Studies	0	0	0	0	0	0	0	0	0	0	0	0	2	4		<u> </u>	6
Master of Public Health	28	25	21	31	22	24	13	24	42	44	24	26	11	20	24	29	379
Master of Public Health Disaster Management	0	0	0	0	2	2	2	3	2	5	5	0	4	3	1	1	29
Master of Science in Integrated Watershed Management	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	3

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	1
Master of Science in Agricultural and Applied Economics	0	0	0	0	0	0	0	0	3	4	1	1	2	6	1	1	18
Master of Science in Agricultural Economics	0	3	0	3	0	5	3	3	1	2	0	1	1	0	1	3	23
Master of Science in Agricultural Engineering	0	0	0	1	4	6	0	8	0	1	0	5	0	4	1	4	30
Master of Science in Agricultural Extension Education	3	5	0	2	2	1	0	0	0	0	0	0	0	1			14
Master of Science in Agroforestry	0	0	3	0	0	3	0	0	0	3	1	1	0	5	0	1	16
Master of Science in Agroforestry and Community																	
Development	0	0	0	0	0	0	0	0	0	0	0	0	0	2			2
Master of Science in Animal Science	0	1	1	4	1	0	1	2	1	1	0	0	0	1	0	2	13
Master of Science in Applied Human Nutrition	5	5	9	7	1	3	6	5	4	1	1	2	1	1	6	2	57
Master of Science in Biochemistry	1	1	0	2	0	3	0	0	0	0	1	1	0	2	1	1	12
Master of Science in Biostatistics	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	4
Master of Science in Botany	1	1	3	1	1	3	0	2	0	0	0	0	1	1	2	3	16
Master of Science in Chemistry	3	2	0	3	1	3	0	5	6	13	2	3	2	4	1	3	48
Master of Science in Civil Engineering	0	5	0	0	1	5	1	5	1	9	0	5	0	1	4	9	37
Master of Science in Clinical Epidemiology and Biostatistics	1	1	0	0	0	0	7	3	5	7	7	8	11	9	6	10	65
Master of Science in Clinical Psychology	0	0	3	1	0	0	1	0	0	0	0	0	4	1	6	3	16
Master of Science in Computer Science	1	10	2	6	1	1	1	6	0	8	0	3	4	9	0	6	52
Bachelor of Science in Dental Technology	0	0	0	0	1	6	0	0	3	2	0	0	3	3	3	3	21
Master of Science in Construction Management	0	0	0	0	1	8	0	11	1	26	0	0	3	31	15	26	96
Master of Science in Crop Science	4	19	5	16	1	6	2	7	6	3	1	4	4	5	3	12	86
Master of Science in Data Communication and Software																	
Engineering	5	21	3	8	7	10	2	10	0	8	1	3	2	3	4	7	87
Master of Science in Disaster Risk Management	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	2	6
Master of Science in Electrical Engineering	0	0	0	0	0	1	0	0	0	1	0	1	0	1	9	47	13
Master of Science in Entrepreneurship	3	4	3	3	5	4	0	0	0	0	0	0	1	2	1	4	26
Master of Science in Environment and Natural Resources	5	14	8	32	5	12	8	13	6	18	7	18	15	18	12	24	191
Master of Science in Food Science and Technology	0	4	6	1	1	3	2	4	2	5	2	0	1	2	3	1	36
Master of Science in Forestry	1	3	0	4	0	0	0	2	1	1	0	2	0	2	1	13	17
Bachelor of Science in Horticulture	2	4	4	8	3	6	8	0	10	12	5	9	0	6	0	6	77
Master of Science in Forestry and Biodiversity Management	0	0	0	0	0	0	0	0	0	0	0	0	1	0			1
Master of Science in Geo-Information Science and Technology	0	0	0	0	4	4	3	3	2	8	4	3	12	25	10	15	78
Master of Science in Health Professional Education	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	2
Master of Science in Human Anatomy	0	0	0	0	0	1	1	0	2	1	0	2	1	0			8

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	1
Master of Science in Human Resource Management in																	
Education	2	3	2	1	0	0	0	1	0	0	0	0	1	0			10
Master of Science in Immunology and Clinical Microbiology	0	0	0	0	0	0	0	0	0	0	0	0	3	11	7	2	21
Master of Science in Information Science	3	3	6	6	9	8	2	4	4	2	3	2	5	3	7	3	67
Master of Science in Information Systems	10	15	4	13	6	13	6	1	0	3	1	4	2	3	3	5	84
Master of Science in Information Technology	0	0	0	0	0	0	0	0	1	3	1	6	1	1	2	2	15
Master of Science in International Infectious Diseases																	
Management	0	0	1	1	0	0	0	0	0	3	2	1	4	7	1	5	20
Master of Science in Leadership and Governance	1	4	1	3	4	4	0	0	0	2	2	1	1	0	0	1	23
Master of Science in Livestock Development and Management	0	0	0	0	0	0	0	0	0	0	0	0	1	5	1	0	7
Master of Science in Marketing	4	6	2	4	0	4	1	4	2	3	1	1	1	0	1	2	34
Master of Science in Mechanical Engineering	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	3
Master of Science in Medical Illustration	0	0	0	1	0	0	0	0	0	3	0	0	1	0			5
Master of Science in Molecular Biology	0	0	4	10	4	11	1	2	1	3	1	6	7	13	2	6	65
Master of Science in Nursing (Midwifery & Women's Health)	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	0	6
Master of Science in Petroleum Geoscience	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1
Master of Science in Pharmaceuticals and Health Supplies																	
Management	0	0	0	0	0	0	0	0	0	0	0	0	1	4	4	6	9
Master of Science in Pharmacognosy	0	0	0	0	0	1	2	0	0	0	0	0	0	2	0	2	5
Master of Science in Pharmacology	1	4	0	3	2	4	0	1	0	6	0	0	2	1	0	2	24
Master of Science in Physics	2	4	1	3	0	1	0	4	1	2	2	4	0	1	0	6	25
Master of Science in Physiology	1	2	0	0	0	1	0	1	0	0	1	0	1	0	0	6	7
Master of Science in Plant Breeding and Seed Systems	1	7	3	5	4	10	11	14	2	6	2	2	12	7	5	1	91
Master of Science in Population and Reproductive Health	4	5	4	4	6	9	9	1	4	2	9	10	3	7	4	6	81
Master of Science in Power Systems Engineering	0	0	0	0	0	0	0	0	0	1	0	0	0	2	1	2	4
Master of Science in Procurement and Supply Chain																	
Management	9	8	8	20	11	18	2	6	7	14	10	4	10	11	10	19	148
Master of Science in Quantitave Economics	0	0	0	0	0	0	0	0	0	0	0	0	4	2	4	6	10
Master of Science in Records and Archives Management	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	4
Master of Science in Technology Innovation and Industrial																	
Development	1	5	0	0	1	4	2	4	2	5	1	4	2	5	2	3	38
Master of Science in Telecommunication Engineering	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	2
Master of Science in Urban Planning and Design	0	0	0	0	0	0	0	0	0	4	0	1	0	4	2	4	11
Master of Science in Wildlife Health and Management	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6	4

	20	15	20	16	20	17	20	18	20	19	20	20	20	21	20	22	Tota
Programme	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	Μ	1
Master of Science in Wildlife Tourism and Recreation																	
Management	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	2
Master of Science in Zoology	2	6	5	10	5	7	2	2	3	6	1	6	2	8	0	2	65
Master of Statistics	5	7	4	19	3	14	2	13	2	5	4	18	7	4	5	16	112
Master of Veterinary Preventive Medicine	1	9	0	7	0	0	1	2	0	6	0	2	2	6	0	5	36
Masters of Science in Renewable Energy	0	0	0	0	0	0	0	0	0	0	0	0	1	4	2	3	7
Postgraduate Diploma in Construction Project Management	0	0	0	8	0	0	2	18	1	17	0	21	1	14	2	19	84
Postgraduate Diploma in Demography	0	0	0	0	0	1	1	0	0	0	2	5	1	7	0	2	17
Postgraduate Diploma in Education	5	20	4	12	9	13	5	16	19	51	7	17	2	3	5	18	188
Postgraduate Diploma in Environmental Impact Assessment	0	0	0	0	1	1	0	0	0	9	2	5	2	6	2	5	28
Postgraduate Diploma in Gender and Local Economic																	
Development	4	9	11	8	0	0	3	1	0	0	0	0	2	4	1	0	43
Postgraduate Diploma in Livestock Development Planning and																	
Management	0	0	0	1	0	0	0	7	0	2	0	5	1	11	0	5	27
Postgraduate Diploma in Medical Education	0	0	0	0	5	9	15	13	0	0	23	26	24	33	23	20	171
Postgraduate Diploma in Statistics	1	2	0	1	1	3	1	3	1	6	0	3	0	4	4	6	30
Postgraduate Diploma in Counseling	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4
Postgraduate Diploma in Urban Planning and Design	0	0	0	0	1	0	0	4	0	0	0	0	0	7	0	7	12
Postgraduate Diploma in Data Communication and Software																	
Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Doctor of Philosophy	19	38	22	42	26	51	23	47	15	40	18	44	38	70	42	58	535
Total	6,11 4	6,17 6	6,35 7	6,40 3	7,02 7	6,71 1	6,49 2	6,36 2	6,45 6	6,34 2	6,56 0	6,38 0	6,44 8	6,14 9	6,59 3	5,86 5	96,57 0

Year	2014		2015		2016		2017		2018		2019		2020		2021/2022		Total
Assessment type	UVQ		UVQ		UVQ		UVQ		UVQ		UVQ		UVQ				
Gender	Μ	F	Μ	F	Μ	F	Μ	F	Μ	F	М	F	Μ	F	Μ	F	
Modular (BTVET Programme)	3,456	5,882	5,393	8,403	1,951	2,690	2727	4677	0	0	0	0	0	0			35,179
Modular (Private)	4,991	4,012	1,268	1,072	2,504	2,442	3302	3884	21,901	13,683	37,696	12,386	17,146	33,768	20,110	30,940	211,105
Worker's PAS	-	-	-	-	138	112	14	15	270	221	997	256	3,704	646	1415	1261	9,049
UVQF Level I	1,421	1,739	1,276	1,726	1,249	1,778	1565	2037	2,295	2,652	2,876	3,139	1,415	1,743	981	1,243	29,135
UVQF Level II	2,515	1,668	2,489	1,735	2,597	1,581	2654	1614	3,011	1,799	3,281	1,929	4,249	2,329	854	639	34,944
UVQF Level III	24	8	2	6	11	4	24	13	35	24	101	78	21	15	88	114	568
UVQF IV (Diploma)	18	4	-	-	-	-	0	0	0	0	10	7	27	5	83	39	193
Road Works	100	-	50	-	-	-	0	0	0	0	0	0	0	0			150
CVTI (Instructor Level III)	92	25	29	14	-	-	0	0	0	0	0	0	0	0			160
DVTI (Instructor level IV-Diploma)	52	13	31	4	-	-	0	0	16	8	16	0	0	0			140
DTIM (Institution Manager level V - Diploma)	59	12	35	9	-	-	0	0	30	12	0	0	0	0			157
Sub Total	12,728	13,363	10,573	12,969	8,450	8,607	10,286	12,240	27,558	18,399	44,977	17,795	26,562	38,506	23,531	34,236	320,780
Total	26,091		23,542		17,057		22,526		45,957		62,772		65,068		57,767		320,780

Annex 7: Directorate of Industrial Training (DIT) Statistics of Candidates for UVQ Assessments from 2014 To 2020