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Associação para o Desenvolvimento da Educação em África

# STUDY REPORT

## ALTERNATIVE FINANCING MECHANISMS FOR TVSD IN AFRICA

The Case of  
Kenya, Rwanda,  
and The Gambia



DECEMBER 2023

**Mapping Mechanisms for TVSD Financing and  
Role of the Private Sector, in Light of Emerging  
National Reforms and the COVID-19 Pandemic in  
Kenya, Rwanda, and The Gambia**



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## Acronyms

ADEA	Association for the Development of Education in Africa
AfDB	African Development Bank
AU	African Union
CBET	Competence-Based Education and Training
CDACC	Curriculum Development, Assessment and Certification Council
CoE	Center of Excellences
COVID-19	Coronavirus Disease 2019
DTE	Directorate of Technical Education
DVET	Directorate of Vocational Education and Training
EAC	East African Community
GDP	Gross Domestic Product
GLMIS	Gambian Labour Market Information System
GoK	Government of Kenya
HE	Higher Education
HELB	Higher Education Loans Board
HEWG	Higher Education Work Group
ICT	Information and Communication Technology
JICA	Japan International Cooperation Agency
KII	Key Informant Interviews
KLMIS	Kenya Labour Market Information System
KNEC	Kenya National Examination Council
KSh	Kenyan Shillings
LMI	Labour Market Information
MoBSE	Ministry of Basic and Secondary Education
MoTIE	Ministry of Trade, industry and Energy
MoYS	Ministry of Youth and Sports
NDP	National Development Plan
NITA	National Industrial Training Authority
NSDEPS	National Skills Development and Employment Promotion Strategy
NST1	National Strategy for Transformation 1
NTA	National Training Authority
RDB	Rwanda Development Board
RTQF	Rwanda TVET Qualification Framework
SAPs	Structural Adjustment Programs
SDGs	Sustainable Development Goals
TVET	Technical and Vocational Education and Training
TVETA	Technical and Vocational Education and Training Authority
TVSD	Technical and Vocational Skills Development
USD	US Dollars

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# Executive Summary

## Report Purpose

Generally, in Africa the reality of skills acquisition is informal-sector dominated coupled with over 20% youth unemployment population of about 200 million in sub-Saharan Africa has prompted the call for a paradigm shift from a school-based formal Technical and Vocational Education and Training (TVET) system to a holistic and inclusive system of Technical and Vocational Skills Development (TVSD). This paradigm shift from TVET to TVSD according to Afeti and Adubra, (2014) was endorsed by the participants at the 2012 ADEA Triennale held in Ouagadougou, Burkina Faso, under the sub-theme of “Lifelong technical and vocational skills development for sustainable socio-economic growth in Africa.”

TVSD is not only about a holistic, multi-stakeholder, and inclusive system of skills acquisition but is also concerned about financing and costs (Afeti& Adubra, (2014) as well as mechanisms to support the integration of trainees into the world of work which requires: a diversified skills evaluation and validation mechanism that recognizes the different skills acquisition pathways (formal, non-formal, and informal) and an examination system that emphasizes skills rather than certificates; and a diversified and sustainable financing mechanism based on accurate information on the cost of training.

Against this background, ADEA undertook a study whose overall aim is to map recent, current and developing mechanisms for financing TVSD, and the role of the private sector, in light of emerging national reforms and factors such as the COVID-19 pandemic and digitalization. The purpose of this study was to produce evidence-informed mapping of recent, current and ongoing mechanisms for TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic in Kenya, Rwanda and Gambia.

This report provides evidence-informed mapping of recent, current and ongoing mechanisms for TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic in Kenya, Rwanda and Gambia. The five countries that were initially selected for the study were representing East Africa (Kenya), east-central Africa (Rwanda), western Africa on the Atlantic coast (Gambia), North Africa (Tunisia) and Southeast Coast of Africa (Mozambique). This gave regional representation and the different unique operationalization of the TVSD concepts among the English and French speaking countries. The key informants in this study were: (i) employers of graduates from the TVET Institutions for research tool #1; (ii) TVET Institutions which implement TVSD Initiatives for research tool #2; and (iii) Ministry of Education or TVET Regulators for research tool #3.

To achieve the objectives laid out in the study purpose, the present research study addresses the following overarching question: Do current vocational training funding mechanisms focus exclusively on what is commonly referred to as technical and vocational education and training or do they embrace the concept of TVSD? What are the different funding mechanisms for TVSD in Africa and successful examples of funding mechanisms that have worked? What is the nature and role of the private sector in these funding mechanisms? What are the different incentives provided by the



government to promote TVSD? Given the impact of COVID-19 on TVSD, what are the most innovative and resilient technical, financial, and operationalization mechanisms?

## Key Findings and Outcomes

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The ratio of the number of countries which participated in this given research to the number of eligible countries which were asked to participate was 3/5 which shows an effort of 60% given to properly carry out this TVSD alternative financing mechanisms study for the purposes of executing the study objectives.

### **RQ1: Do current vocational training funding mechanisms focus exclusively on what is commonly referred to as technical and vocational education and training or do they embrace the concept of TVSD?**

From the findings, the student number benefiting from different funding mechanisms are on the increase (as observed on the general enrolment and graduation levels above) across those who rely on: need-based scholarships, merit-based scholarships, government loans, private loans and grants. This is a confirmation that public funding has enhanced enrolment levels in TVSD. It was worth nothing that need-based scholarships refer to funds and financial support given for students who qualify based on economic need while merit-based scholarships refer to funds, and to financial aid given based on criteria of performance in secondary school and/or in entrance exams to tertiary institutions. Study Outcome#1: TVET funding is usually through public funding and levy-grant subsidy system which has encountered a number of challenges ranging from “lack of adequate funds to support TVSD implementations and the initial stages of TVSD financing, fragmented financing systems from both private and donor funds, general high cost of financing TVET, lack of commitment by stakeholders, poor image of TVET against academic education and inadequate public budgetary allocations by most governments.

### **RQ2: What are the different funding mechanisms for TVSD in Africa and successful examples of funding mechanisms that have worked?**

From the findings, TVSD funding mechanisms in most African countries are predominantly through public funding and levy-grant system but the alternative TVSD funding sources include training centers/schools' income generating activities, corporate and donor funding, fees from students and student grant-loan schemes. Subsequently there is need to have adequate funding to ensure that graduates fully gain the necessary TVSD competencies to support the national development agenda and social human resources development.

### **RQ3: What is the nature and role of the private sector in these funding mechanisms?**

The key findings relating to this research question indicate that the nature and role of the private sector in the funding mechanisms that can used to promote TVSD through include: leveraging international funding; financial support through scholarships, infrastructure development, curriculum development support, support expatriates to train; sponsored training, skills competitions, research and innovation initiatives in developed countries; promoting entrepreneurship among TVSD graduates, which can contribute to job creation and economic growth, which in turn can generate

more resources for TVSD. For instance, TVET institutions could offer entrepreneurship training, provide start-up grants for graduates, or establish business incubators to support new enterprises; provision of training equipment and research funding initiatives, support of industrial attachment and internship; and provision of funded industrial linkage. Study Outcome #3: Alternative financing has led to successful implementation of TVET policies and plans, such as the upscaling of staff skills in industrial mechatronics. The TVSD funding through digitalization to cut costs through blended learning, income-generating units, privatization of state entities, development of Open and Distance e-Learning (ODEL) to reduce TVSD costs, production and manufacturing in TVET Institutions, retooling and spacious workshops with the involvement of the private sector in TVSD financing should be the key mechanisms to avail adequate funding to ensure that graduates fully gain the necessary TVSD competencies to support the national development agenda and social human resources development in Africa.

#### **RQ4: What are the different incentives provided by the government to promote TVSD?**

The key findings relating to this research question indicates that there are a number of TVSD alternative funding to students and TVETs which can be in form of loans and scholarships (direct to the students), capital grants (for TVETs) and other grants (for both the students and the TVETs). The source of the above funding could be private donations, internally generated funds or government subsidies. The private sector in Africa has not and doesn't provide any form of funding in TVSD in form of loans and capital grants but it has given scholarships to students undertaking TVSDs. The public or government subsidized is available to students in form of loans, capital grants and scholarships but it is on the decline yet the enrolment levels and demand for TVSD is on the rise. It is worth noting that each of these strategies above could contribute to more sustainable and efficient financing of TVSD in African countries, however the effectiveness of these strategies will depend on the specific context of each country, including the structure of the economy, the capacity of TVET institutions, and the regulatory environment. Study Outcome#4: the TVSD funding can be made efficient and sustainable if the TVETs could develop TVSD operationalization policy and funding policy by clearly showing how these policies can help to support the long-term sustainability of TVSD particularly on resource mobilization strategies, resource utilization strategies, accountability of resources utilization strategies, grants disbursement, business development enterprise units and capitation. Each of these strategies could contribute to more sustainable and efficient financing of TVSD in African countries. However, the effectiveness of these strategies will depend on the specific context of each country, including the structure of the economy, the capacity of TVET institutions, and the regulatory environment. Therefore, it's crucial to recommend conducting a thorough analysis of the local context before implementing any of these strategies.

#### **RQ5: Given the impact of COVID-19 on TVSD, what are the most innovative and resilient technical, financial, and operationalization mechanisms?**

Given the impact of COVID-19 on TVSD, the following are the most innovative and resilient technical, financial, and operationalization mechanisms which should be implemented by TVET institutions towards alternative financing of TVSD: eLearning; exploitation of income generating activities as a means of containing over reliance on government funding; incorporating online learning for programmes that do not require laboratory or workshop presences; provision of infrastructure for online teaching and learning; and sound Public-Private Partnership. Study Outcome#5: Financing

TVSD in a sustainable and efficient way is a complex challenge that requires a multi-faceted approach. The transition from The TVET funding model to TVSD funding mechanisms requires a systematic approach of addressing common challenge especially the limited access to financial sustainability advisory services and strained capitation/operation grants from the Government. By exploring a range of strategies and learning from successful examples in other countries, African countries can make progress towards this goal.

## Recommendations

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Based on the findings, the study recommends the following:

- There is need to encourage more private investors in TVSD through ownership and legal registration using business models that are profitable for them to deliver value to the competitive TVET subsector as it is the case for technical universities;
- There is need for dual-training where the trainees spent half of the training duration in the industry to learn practical skills using the state-of-the art equipment/machines/tools and half of the duration in the TVET classrooms/workshops learning the theoretical aspects of the training; funding model requires approach that leaves institutions stable;
- There is need for more Public-Private Partnerships (PPPs) to foster collaborations between the government, private sector, and non-governmental organizations to jointly finance and deliver TVSD programs through cost-sharing arrangements, corporate sponsorships, or donations;
- There is need to establish a Skills Development Levy on employers or industries to create a dedicated fund for TVSD through legislative support as a sustainable financing mechanism;
- There is need for TVETs to engage in Fundraising and Grants by actively pursuing grants from international organizations, development agencies, and philanthropic foundations that support education and TVSD initiatives. Additionally, institutions can engage in local fundraising campaigns to mobilize community support;
- There is need for the TVETs to embrace Entrepreneurial Initiatives by exploring income-generating activities such as offering fee-based courses, providing consultancy services, or establishing partnerships with industries for skills development and vocational training;
- There is need for the TVETs to focus on Technology-enabled Solutions by embracing digital platforms and online learning to reduce infrastructure costs and reach a wider audience for TVSD programs. This approach can include e-learning modules, virtual classrooms, and remote mentoring;
- The focus in TVSD funding should be student-centric based on Kenya's funding model. The fees paid for different TVSD courses varies with the level of effort, course duration and resource requirements. For example engineering courses cost more than the business management courses. The TVSD funding model should be pro-learners as opposed to differentiated unit cost model which was focused on the institutional capacity thus affecting progression and graduation rates;
- And lastly there is need to lobby through Policy Advocacy by engaging in advocacy efforts to raise awareness about the importance of education and TVSD, and lobby for increased government funding or policy reforms that prioritize skills development.

There are major gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD due to delays in disbursements of funds, regulation of payable fees, poor state of economy affecting fees collection and funding gap especially from the funding model on capitation whereby the capitation amount and time for disbursement is unpredictable.

- There is need to adopt sustainability of TVSD training programmes and deploy those that have adequate enrolment; establish and adopt cheaper methods of procurement of goods and services; establish a trainee funding model with adequate bursary and scholarships and fee payment; due to constrained national budget needs, the government should engage more development partners and encourage public private partnerships for alternative TVSD financing; due to inadequate government financing, the TVET institutions need to initiate income generating activities;
- Since the need for TVET skills and resources have become limited, there is need for an intervention of private and non-governmental organization;
- There is need to emphasize on dynamic production units within the TVETs to boost revenue for the TVSD financing; the TVET institutions should be encouraged to generate their own revenue as much as this requires heavy funding that TVETs are not able to acquire;
- There is need for capacity building towards Improved internal incoming generation for self-sustainability;
- There is need to address the disbursement gaps through support and better funding to established institutions instead of channeling to newly poorly established Technical Vocation Training Institutes (TVIs);
- There is need to develop and operationalize an at institutional level to enable public-private partnerships in financing the TVETs;
- There is need for an alternative TVET financing model to be developed to counter-finance the TVET subsector;
- Urgent need for collaboration among relevant stakeholders, including TVET staff, government agencies, industry representatives, and development partners, is crucial to identify and address the gaps in TVET policies, plans, and achievements, while exploring alternative financing options to support TVSD;
- The current study didn't focus inclusion of youths and people with disability in TVSD financing as a special stakeholder group in TVET institutions. As per ADEA's strategic planning, "Equity and Inclusion" in TVSD are of paramount. It is therefore highly recommended that ADEA considers "equity and inclusion" as one of the most critical cross cutting issues in next years study especially the youth and people living with disability;
- And lastly there need for advocating for increased funding, exploring alternative financing options, and prioritizing TVET within the national budget while strengthening institutions, enhancing coordination mechanisms, and establishing effective monitoring and evaluation systems.

TVSD and its financing is a new concept for most TVETs and hence given the impact of COVID-19 on TVSD, the most innovative and resilient technical, financial, and operationalization mechanisms which should be implemented by TVET institutions towards alternative financing of TVSD are:

- Digitalization cuts costs through blended learning;

- Differentiated unit costs can focus government support towards priority areas;
- Flexible approach of training for maximum use of resources;
- Establishing and promoting income generating units;
- Privatization of stable entities;
- Development of ODeL to reduce TVSD costs;
- Establish economic zones in TVET institutions;
- Enhancing production and manufacturing in TVET Institutions;
- Spacious workshops and avail more funds needed to retool.

# CHAPTER ONE: INTRODUCTION

## 1.1. Background of the Study

The main objective of TVET is the acquisition of practical skills that enable the graduates to be employable or create jobs through entrepreneurial activities when opportunities emerge. The acquisition of relevant skills is a pre-requisite for everyone in order to participate meaningfully in economic activities that lead to achievement of sustainable livelihoods. This need made many African countries to revitalize or establish their TVET in 1990s (Afeti & Adubra, 2014).

Contrary to this view, African youths are either unemployed, in low-paid or precarious jobs whereby employment creation in the formal sector of has not kept pace with the growing numbers of new job seekers even in rapidly growing economies (African Economic Outlook, 2010) This situation is clearly an indictment on the efficiency of national education and training systems since most new entrants lack the skills required for employment in capital-intensive and technology-driven firms. Sometimes even the labour intensive jobs do not fully get the manpower required because some level of intellectual engagement is necessary.

Generally, the reality of skills acquisition in Africa is geared towards the informal-sector which is the largest employer. However, with 20 percent of youth unemployment and a population of about 200 million in sub-Saharan Africa the continent needs to have a paradigm shift from a school-based formal TVET system to a holistic and inclusive system of TVSD (Afeti & Adubra, 2014; Garcia & Fares, 2008). The shift is due to the failure of the formal TVET system to measure up to the expectation of equipping young people with the skills that align with the needs of the constantly evolving employment sector, TVET rigid supply-side curriculum which is largely school-based dominated by theory lessons, theoretical based examinations and the quest for certificates rather than the acquisition of the practical skills competences demanded by labour markets. The majority of workers in micro and small enterprises learn their trade on the job (a kind of apprenticeship) in the informal sector as they observe those already in the jobs as they do it. This is because this form of training is available and is more flexible than school-based TVET. The current TVET training is characterized by rigid admission criteria, age restrictions, and foreign language which places limitations on learners. The skills-needs of out-of-school youth, early school leavers, and adults are best addressed by both the formal and informal sector (TVSD) training providers (Afeti & Adubra, 2014).

## 1.2. Rationale and Purpose of the Study

### 1.2.1. Rationale of the Study

In Africa as in most parts of the world, TVET education is often associated with the formal schooling and training system based more on obtaining a qualification rather than on acquiring skills and competencies necessary for successful integration to the world of work. The reality of skills acquisition in Africa, which is informal-sector dominated, calls for a paradigm shift in skilling African youths from a school-based formal TVET system to a holistic and inclusive system of TVSD. This was endorsed by the participants at the 2012 ADEA Triennale held in Ouagadougou, Burkina Faso, under the sub-

theme of “Lifelong technical and vocational skills development for sustainable socio-economic growth in Africa.” ( Afeti and Adubra,2014).

The proposed TVSD paradigm shift encompasses both the technical and cross-cutting skills such as critical thinking, problem-solving, entrepreneurial and analytical skills. The importance of these is to promote employability, employment, productivity, and lifelong learning. The paradigm shift also emphasizes the keyrole of ICT in the provision of TVSD and the need for innovative, multi-partnership financing options. The rationale and justification for this shift from TVET to TVSD is premised on the following key attributes and characteristics of the new model: TVSD is non-discriminatory with regard to age, gender, status or stage in life of an individual. It is tailored for all and does not discriminate one learning or training environment over and over another. It covers the entire spectrum of skills training ranging from basic to higher level skills; TVSD acknowledges the diversity of provision and pathways which that a leaner can persue. This in effect implies that it is a unique system of recognition, validation and certification of skills acquired from the different learning environments which may be formal, informal, and non-formal. Technical and vocational skills development take place at different levels and in varied learning environments. These include technical and vocational schools, polytechnics, business enterprises, and apprenticeship training centres (Afeti & Adubra, 2014; Garcia & Fares, 2008).

Supporting the importance of TVSD, Afeti & Adubra, (2014) explains that this model is a holistic, multi-stakeholder, and inclusive system of skills acquisition and it is also concerned with financing and costs (as well as mechanisms that support the integration of trainees into the world of work. To achieve this, a multi-partnership mechanism to assure training quality; relevant teaching, availability of learning equipment and infrastructure are required. In addition a diversified skills evaluation and validation mechanism that recognizes the different skills acquisition pathways (formal, non-formal, and informal) and an examination system that emphasizes skills rather than certificates. The finacing and costing should be based on diversified and sustainable financing mechanism derived from accurate information backed by data.

It is against this background that ADEA undertook a study whose overall aim was to map out the recent, current and developing mechanisms for financing TVSD, and the role of the private sector, in light of emerging national reforms and factors such as the COVID-19 pandemic and digitalization.

### **1.2.2. Purpose of the Study**

Key players in the TVET sector have begun to address the issue of TVSD financing. To date, only a few African governments currently fund TVET at a level that can support quality training and TVSD. TVSD is generally expensive in terms of cost per student. Yet this is not reflected in the budget allocation for the TVET sector, which remains part of the normal education sector. Moreover, most of the resources devoted to TVSD are for trainers’ salaries and operating costs. In addition, the share for equipment and working tools holds a very small part of the total national TVSD budget. In addition, employment and/or job creation and TVSD must be closely linked. The financing of the sector must therefore be understood as part of the responsibility of the whole ecosystem and in particular the productive sector, of both public and private.

The overall aim of this study was to provide evidence-informed mapping of recent, current and ongoing mechanisms for TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic in Kenya, Rwanda and Gambia.

### 1.3. Study Objectives and Expected Outcomes

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The alternative financing of within TVSD can be seen as strategic collaboration between institutions, students and enterprises is considered the core identity of the educational model (Afeti & Adubra, 2014; ILO, 2021). In addition, employment and/or job creation and TVSD must be closely linked. During the ADEA 2022 Triennale that is, ten years since the above recommendations, African countries have made significant strides, but challenges remain fueled by the continent's ever-growing youth population and driven by emerging issues such as the COVID-19 pandemic, digitalization and the fourth industrial revolution (4IR), climate change, and the blue and green economy. Some of the progress in 2022 include blended learning and hybrid forms of training, digital technology adoption and digital skills (towards effective administration and process efficiency), industry-integrated higher education (shift from supply-side to industry demand) and increased corporate investment in improving and modernising industrial training. The main critical issues after the discussion at the Triennale include: Quality of TVSD systems; The evolving labour market and the skills ecosystem; and Innovations and disruptions in TVSD specially technology, financing, sustainability, access, and equity (ADEA, 2022). Some of this issues have been addressed in this current study. The financing of the sector must therefore be understood as part of the responsibility of the whole ecosystem, This includes, the productivity in both public and private sector. It has been observed that private training institutions Are growing because of increased TVSD enrolment rates in such instutions that are akready in existence.

#### 1.3.1. Objectives of studying TVSD Alternative Financing Mechanisms Model

The specchic objectives of the study were:

- a. To propose a typology of existing TVSD financing mechanisms that includes private sector entities that responds to national, regional and continental reforms.
- b. To make a comparative analysis of the existing TVSD financing mechanisms in the three African countries with the different typologies of financing mechanisms.
- c. To make recommendations on how financing mechanisms identified in the three African countries can be more efficient and sustainable considering factors such as the COVID-19 pandemic, digitalization and the role of private sector entities.

#### 1.3.2. The expected Alternative Financing for TVSD Outcomes

As the voice of education in Africa and a key network of Education Ministries, the Association for the Development of Education in Africa (ADEA) plays a significant roles in the education space. These were identified as a convenor, knowledge creator, and forum for policy dialogue. Under the first pillar, ADEA serves as a Pan-African knowledge hub for peer-to-peer learning. It elevatesthe voice of Africa on education priorities through organizing or participating in policy dialogue forums at regional, continental, and global levels. In this context TVSD isassociated with training in public and private



educational establishments or other forms of formal or informal instruction aimed at providing access to lifelong learning resources and aviling TVSD skills to all segments of society. Therefore the outcomes that were expected were:

- a. To understand the difference and benefits between TVET and TVSD financing models
- b. To understand the paradigm shift from TVET to TVSD.
- c. To have an appreciation of difference and benefits between TVET and TVSD financing models.
- d. To have knowledge on the different mechanisms for financing TVSD.
- e. To gain knowledge on how to transition from the TVET funding model to TVSD funding mechanisms.
- f. To gain knowledge on how TVSD funding can be achieved ly and in a sustainable manner.

## 1.4. Audience of the Study Report

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The findings from this study were intended to inform :

- a. African Union’s Continental Education Strategy for Africa 2016-2025 (CESA 16-25).
- b. The Sustainable Development Goal No. 4 on Education (SDG4) in the area of alternative financing for TVSD.
- c. African Development Bank.
- d. Academia.
- e. CSOs.
- f. Private sector player funders.
- g. Association for the Development of Education in Africa.
- h. Multilateral private and not-for-profit organizations funding TVSD activities in Africa.
- i. Private sector.
- j. The governments of Kenya, Rwanda and The Gambia.
- k. Other African Union member countries engaged in TVSD activities especially the ministries of education, or equivalent ministry entities responsible for TVET and TVSD.

These were intended audience because key players in the TVET sector have begun to address the issue of TVSD financing. To date, only a few African governments fund TVET at a level that can support quality training and TVSD. TVSD model is generally expensive in terms of cost per student. Yet this is not reflected in the budget allocation for the TVET sector, which are considered to be part of the education sector. Moreover, most of the resources devoted to TVSD are for trainers’ salaries and operating costs. Equipment and working tools holds a very small part of the total national TVSD budget. In addition, there is need to link employment and/or job creation and TVSD. The financing of the sector must therefore be understood as part of the responsibility of the whole ecosystem and in particular the productive sector, both public and private.

The three countries were also identified as target audience because the purpose of this study was to produce evidence-informed mapping of recent, current and ongoing mechanisms for TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic in Kenya, Rwanda and Gambia. Observations by ILO, (2021), the COVID-19 pandemic, related lockdown and physical distancing measures caused unprecedented disruption in the provision of

education and training and catalyzed innovation in distance learning ICT systems. While access to learning and skills development was maintained in some institutions through a rapid shift to distance learning, pre-existing social and digital divides deprived the most marginalized groups of continued learning and put them at risk of falling further behind in knowledge, skills and competence acquisition. Since then public and private stakeholders in TVSD have forged partnerships to increase the availability of accessible distance learning solutions, developing new training programs and allocate additional resources for mitigating skills and labour shortages in sectors heavily that were affected by the health crisis. The results of these collective efforts have led to the emergence of innovative solutions in response to the pandemic, but without much efforts to expand and improve TVSD systems. Consequently the innovative responses are likely to become a short term stop gap solution.

Education and training are critical in achieving the goals of Agenda 2063 for Africa and the 2030 agenda for sustainable development goals. Both the African Union's Technical and Vocational Education and Training Strategy and the Sustainable Development Goal 4 for promoting TVET systems aim to increase the number of youth and adults with the technical and vocational skills. These are required for employment, decent work and entrepreneurship. To achieve this, the African Union's Continental Education Strategy for Africa 2016-2025 (CESA 16-25) and the global education agenda have called for a collective effort by all partners to address the challenges of TVSD as opposed to TVET and lifelong learning. TVSD in this context covers the broader aspects of skills development in non-formal education settings.

## CHAPTER TWO: REVIEW OF TVSD ALTERNATIVE FINANCING MECHANISMS

### 2.1. Background of TVSD in Kenya, Rwanda and Gambia

This study was commissioned by ADEA to map mechanisms for financing TVSD, and the role of the private sector, in light of emerging national reforms and factors such as the covid-19 pandemic and digitalization. The study covered the following selected countries: Rwanda, Kenya and Gambia. The subsections below give the country specific recent and current TVET funding profiles, TVET skills anticipation and development.

### 2.2. Characterization of Alternative Financing for TVSD in Kenya

This section includes description of status of TVSD in the three countries with a view of understanding the nature and the path of development that they have gone through.

#### 2.2.1. Characterization of TVET Funding in Kenya

TVET education subsector in Kenya is under the Ministry of Education, and operates under State Department for Vocational and Technical Training. The department has two directorates namely: the Directorate of Technical Education (DTE) and Directorate of Vocational Education and Training (DVET). The TVET is in charge of policy that provides a framework for achieving a harmonized and coordinated approach to post school training and development of skilled manpower required by the country. The introduction of cost sharing policy and drastic budget cuts followed by Structural Adjustment Programs (SAPs) of the 90s and others that have followed has adversely affected the funding of TVET system, and especially youth polytechnics found country wide. In addition, the funds that TVET institutions raise through tuition fees are insufficient for effective and efficient running of costly to run technical curriculum. Consequently the expensive facilities and equipment have gradually gone into waste through decay out of neglect (Orodho 2005; Government of Kenya, 2018).

In addition, numerous Acts and Sessional Papers were passed between 2012 and 2019 that serve as the legal basis for a diverse array of new agencies and entities pertaining to the education, training systems and the Kenyan labour market. For example, the aim of Sessional Paper no. 14 (2012) increased enrolment in TVET by 20 per cent by 2023. It also provided the impetus for a new TVET Act. Technical and Vocational Education and Training Act no. 29 of 2013 together with its associated subsidiary regulations from 2015 laid down guiding principles for vocational skills formation; identifying of the training institutions that comprise the TVETs stipulated management arrangements; and regulates the accreditation of TVET institutions and the licensing of trainers.

The mandate of TVET institutions is primarily aimed at empowering individuals, organizations, enterprises and communities, as well as fostering employment, decent work and lifelong learning. These lead to promoting inclusive and sustainable economic growth and competitiveness, social equity and environmental sustainability (Orodho 2003; Government of Kenya, 2018). The key

challenges facing TVET and TVSD in Kenya include a fragmented TVET ecosystem that has several players handling conflicting mandates,. Others are resource constraints, limited adoption of technology, and negative perception about TVET among Kenyans. There is also limited certifications among the informal sector workforce who in the process of searching for one end up exerting pressure on the existing inadequate physical facilities for training. Sufficient modern equipment is also lacking (Orodho, 2004).

Financing of TVET programs has always been shared amongst government, local communities, beneficiaries, religious and private organizations, donors and private business. For youth polytechnics to mitigate financial constraints they should moot income generating activities to partly finance their own programs, control expenditure, offer quality education, and adopt modern technology in training. These have hamper their operations and affect their efficiency (Orodho 2003; 2005).

Between 2010 and 2017, the GoK spent on average 5 percent of GDP on education and training This is lower than in the early 1990s and early 2000s when education spending was 6 to 7 percent of GDP (MOEST, 2019, World Bank, 2019f). The education budget is distributed according to educational level (see table 1). In the financial year 2014/15, public TVET entities, under the aegis of the 47 counties and MOEST, received only 5 percent of the total education budget, whereas around two-thirds went towards recurring expenditure (MOEST, 2019). In comparison, in the same year, 41 percent of the total education budget went towards primary education, 31 percent secondary education, 15 per cent universities and 2 percent Early Childhood Development and Education; lastly, administrative costs accounted for a further 6 percent of the budget (MOEST, 2019 ).

Under-funding: financial resources are not available to recruit a sufficient number of instructors, buy enough teaching and learning materials or source for equipment for training institutions. Consequently, poor equipment and a limited number of inadequately qualified teachers and trainers result in curricular requirements rarely being met. This is the case particularly as far as the implementation of CEBET is concerned (Republic of Kenya, 2016; 2019). TVETs in Kenya continue to have a poor reputation among parents and young people alike and is perceived as a reserve for academic strugglers whose mental capacity is less compared to those in the formal higher education This attitude affects the enrolment levels and subsequent less funds capitation from government. In general, there is little public awareness of qualification paths and career opportunities found in the TVETs. Currently no systematic vocational and careers guidance in schools to help alleviate the problem (MOEST, 2019) ). Further, linkages between research, industry and TVET remain weak and therefore curriculum development is not systematically demand-driven which affect the funding and financing models towards TVSD (MOEST, 2019, ). In Kenya, it is estimated that 70% of TVET institutions are privately owned.

### **2.2.2. Characterization of TVET Skills Anticipation and Development in Kenya**

The national TVET system anticipating labour market and skills development is to “provide every Kenyan with decent and gainful employment” and build “globally competitive quality education, training and research for sustainable development” (Republic of Kenya, 2018a,). The industrial skills system administered by National Industrial Training Authority (NITA) is mainly financed by a training levy that is currently USD 2.45 (KSh. 50) per employee. Every company registered in Kenya is required by law to pay this levy. It is not deducted automatically from a company’s payroll, but instead

transferred to NITA at the end of each month. The Kenya Labour Market Information System (KLMIS) was established in 2017 to provide a diverse array of labour market services. These include the accreditation of private employment agencies, the delivery of public employment services in cooperation with the National Employment Agency (see below) as well as the attestation of foreign employment contracts (in cooperation with the Department of Labour), which is mandatory for Kenyans wanting to work abroad. The KLMIS is also supposed to supply information to each county on skills demand and skills gaps, labour market indicators, training institutions and programs (KLMIS, n.d.-a).

Skills shortages have been identified in construction and crafts, machine operation and assembly, clerical work and sales (KLMIS, n.d.-b). It is anticipated that the mining, oil and gas, information and communication technology (ICT) and railway sectors will all create jobs and new occupations, although no timeframe is given for this to happen (KLMIS, n.d.-c).

The Technical and Vocational Education and Training Authority (TVETA) and the TVET CDACC quality assure public TVET provision. TVETA registers and accredits public and private TVET institutions and trainers. CDACC approves occupational standards and curricula as well as curriculum developers and TVET assessors (TVET CDACC, n.d.-a). In the industrial skills formation system, NITA accredits companies and in-company trainers as training providers, and oversees curriculum development, assessment, and certification (NITA, n.d.-c).

In summary, from the forgoing, the TVET and TVSD systems in Kenya has shortages in TVSD skills in construction and crafts, machine operation and assembly, clerical work and the future anticipated skills are in oil and gas, information, and communication technology (ICT) and railway sectors will all create jobs and new occupations. The linkages between research, industry and TVSD in Kenya remain weak as curriculum development is not systematically demand-driven thus affecting the funding and financing models towards TVSD. This study therefore sets to check on the manifestation of the recent, current, and ongoing mechanisms for TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic in Kenya.

## **2.3. Characterization of Alternative Financing for TVSD in Rwanda**

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### **2.3.1. Characterization of TVET Funding in Rwanda**

The Republic of Rwanda (hereinafter “Rwanda”) sets the development of human resources as one of the top priorities for economic development according to the “National Strategy for Transformation (NST1) 2017-2024” and has focused on enhancing TVET. The “National Skills Development and Employment Promotion Strategy (NSDEPS) 2019-2024” set by the Rwanda Development Board (RDB) also emphasizes the enhancement of TVET that meets the skills needs of the private sector.

In addition, the objective of the republic of Rwanda strategic position in the education sector is to ensure Rwandan citizens have sufficient and appropriate competencies (skills, knowledge and attitudes) to drive the continued social and economic development of the country. However, it will be difficult to achieve the overarching previously stated TVET policy objectives without additional financial resources considering the new policy option of orienting 60% of lower secondary education graduates into quality TVET programmes; as well as the implementation of the Rwanda TVET

Qualification Framework (RTQF), competence-based curriculum, quality standards, a trainer's strategy and modernizing TVET infrastructure" (Ministry of Education Rwanda, 2018 page 20).

TVET is also being promoted at the regional levels, such as the East African Community (EAC) and the African Union (AU). EAC launched the EAC TVET Center of Excellence (CoE) in 2012 to promote collaboration and improve the quality of TVET programs of partner states. Tumba College of Technology was certified as TVET CoE in Rwanda. Although no progress has been seen on this initiative since then, regional meetings have been held from 2020 onwards and concrete progress is expected. AU also calls the period from 2019 to 2028 the "Decade for Technology, Professional and Entrepreneurship Training and Youth Employment" and emphasizes the importance of skills development across Africa (JICA, 2021).

Currently, most public TVET institutions just receive enough budgets to pay the salaries of the trainers, but not to procure the necessary equipment, tools and consumables, particularly needed to skill TVET students. It is the responsibility of parent and trainees to pay (school fees) for the school to get required resources such as workshops, equipment, consumables, other infrastructures and required resources for boarding schools. TVET Education in Rwanda is expensive due to the use of tools, materials during practical sessions which are not affordable for a number of families (giz, 2020; UNESCO-UNEVOC, 2022).

In general, private sector (companies) are involved in the curriculum development, assessment, and occupational analysis and in delivery of apprenticeship, internship, industrial based training. The number of workplace learning opportunities provided by companies does not meet the growing demand; capacities of companies to appropriately train, guide and supervise interns and apprentices are underdeveloped; many of the existing workplace learning schemes are not certified; and finally, necessary systems, structures and regulations to foster and manage workplace learning are not effective, and minimum quality standards are missing (GIZ, 2020; UNESCO IIEP, 2021; UNESCO-UNEVOC, 2022).

### **2.3.2. Characterization of TVET Skills Anticipation and Development in Rwanda**

According to the Education Sector Strategic Plan 2019 – 2025 (Ministry of Education Rwanda, 2018), one of the challenges facing TVETs is limited capitation to procure the necessary equipment, tools and consumables, particularly needed to skill TVSD students. Any anticipated skills development if well financed shall be aimed at improving education, particularly skills development, to meet the labour market demand, increasing the coverage and the quality of nine-year basic education, strengthening Post Basic Education (PBE) and TVET, and improving the quality of Tertiary Education and fast tracking the 9-year Basic Education Program (GIZ, 2020; UNESCO-UNEVOC, 2022).

The Rwanda TVET Qualification Framework (RTQF) structure and architecture consists of seven levels set out in a single strand a 7-level framework that includes a Foundation Level as Level 1, four TVET Certificates (at Levels 2 to 5), a TVET Diploma at Level 6, and an Advanced TVET Diploma at Level 7. At Level 5, the current Year 12 Technical School Graduation qualification is shown as being at the same level as TVET Certificate III. In TVET subsector, a person can be accepted as a student if the education provider considers that he/she has adequate requirements for completing the level of technical and vocation education and training from level one (1) to five (5). The students may include

prior learning in the qualification and use it to replace compulsory, elective or free choice studies. There are private companies who provide different upgrading short courses depending on the need of trainee or employer. This is done in non-formal way (giz, 2020; UNESCO-UNEVOC, 2022).

Rwanda TVET Board (RTB) is a government institution established in 2020 by the presidential order No N° 123/01 of 15/10/2020. RTB has the following core responsibilities: to design and distribute curricula, teaching materials, trainer's guides, methodologies and establish training methods for TVET from level one (1) to five (5); to promote the use of information and communication technology in technical and vocation education and training from level one (1) to five (5); to coordinate and fast track technical and vocation education and training programs and activities; to coordinate programs and activities to ensure trainers development, build their capacities and monitor their management; to advise the Government on all activities which can fast track technical and vocation education and training development in Rwanda (giz, 2020; UNESCO IIEP, 2021; UNESCO-UNEVOC, 2022).

The Workforce Development Authority's (WDA) role, which is reporting to the Ministry of Education (MINEDUC), has been reduced to overseeing TVET policy strategic orientation, accreditation and quality assurance after parenting Rwanda Polytech (RP) responsible for the implementation of TVET policy including curricula development, certification and Training of the Trainers (TOTs). RP is in charge also of 5 Integrated Polytechnic Regional Centers' (IPRCs), one in each of the 4 provinces and one in Kigali City. The local government entities (Districts) are now overseeing all TVET schools including vocational schools in their respective district (giz, 2020; UNESCO IIEP, 2021; UNESCO-UNEVOC, 2022).

In summary, although the expectations of the Rwandan citizens from the national TVET policy are premised on sufficient and appropriate competencies (skills, knowledge and attitudes) which can drive the continued social and economic development of the country, difficulties have been cited on failure to achieve the overarching TVET policy objectives without additional financial resources considering the new policy option of orienting 60% of lower secondary education graduates into quality TVET programmes. It was further noted that most public TVET institutions just receive enough budgets to pay the salaries of the trainers, but not to procure the necessary equipment, tools and consumables, particularly needed to skill TVET students. This study therefore sets to check on the manifestation of the recent, current and ongoing mechanisms for TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic in Rwanda.

## **2.4. Characterization of Alternative Financing for TVSD in Gambia**

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### **2.4.1. Characterization of TVET Funding in Gambia**

Generally speaking, between 1998 and 2017, unlike for almost all other countries in Sub-Saharan Africa, the contribution of the service sector to GDP in Gambia decreased from 65 per cent to 57 per cent. During the same period, the contribution of industry fluctuated between 16 per cent and 12 per cent. Only 16 per cent of the labour force work in industry (World Bank, 2019). In 2015, approximately one-third of young people (aged 15–24) were illiterate. Youth face a higher unemployment risk, with an unemployment rate at 12.3 per cent in 2019 (World Bank, 2019). The latest available data from the ILO's Labour Force Survey show that a considerable proportion of youth are not in education, employment or training: 34 per cent in 2012 (ILOSTAT, 2019).

Between 2010 and 2018, the net enrolment rate at primary level – measured as the share of boys and girls of primary-school age who actually attended primary school – increased from 63 per cent to 76 per cent (UNESCO, 2019). In 2018, the net enrolment rates for lower and upper secondary education stood at 44 per cent and 31 per cent, respectively (GBS, 2019). Furthermore, learning outcomes are poor. At the primary level, only 10 per cent of children demonstrate solid reading skills and only 8 per cent have sufficient numeracy skills. At the lower secondary level, the shares are 60 per cent and 35 per cent, respectively (GBS, 2019). Improving education is one of the eight strategic priorities of the NDP.

In 2018, the new Government launched The Gambia National Development Plan (2018–2021) (NDP), setting out its own strategy to “deliver good governance and accountability, social cohesion, and national reconciliation and a revitalized and transformed economy for the wellbeing of all Gambians” (Republic of the Gambia, 2018). TVET is a key policy area in this regard. “All persons shall have the right to equal educational opportunities and facilities and with a view to achieving the full realization of that right secondary education, including technical and vocational education, shall be made generally available and accessible to all by every appropriate means, and in particular, by the progressive introduction of free education.”

The uneven provision of TVET opportunities across regions remains the major challenge regarding access to TVET in the Gambia. In addition, the tuition fees charged by most institutions pose a financial barrier to TVET participation, especially for socio-economically disadvantaged youth. Another challenge is the generally low level of education and skills in the population. Employers are represented on the Governing Council of the NAQAA and are largely involved in the development of qualification standards for various occupations. However, there is a need for cooperation in other areas, such as in curriculum development and assessment standards and procedures. Increasing the collaboration between the TVET system and the private sector, and making existing collaboration more formal, has the potential to contribute to the creation of more internships, work placements and apprenticeships. TVET institutions, both public and private, are underfunded. Many collect tuition fees to fulfil their funding needs which, as noted above, can restrict access to TVET for low-income groups.

#### **2.4.2. Characterization of TVET Skills Anticipation and Development in Gambia**

The importance of TVET for increasing the employability of the Gambia’s youth is emphasized in a number of strategic plans and policy documents. The Education Sector Policy 2016–2030 – the first sector-wide policy framework developed by the Ministry of Higher Education, Research, Science and Technology (MoHERST) and the Ministry of Basic and Secondary Education (MoBSE) – states that: (a) TVET should be strengthened, expanded and diversified; (b) the quality and labour market relevance of training should be improved; and (c) the private sector should be involved in the provision and financing of training, especially in rural regions. In addition, the Revised National Youth Policy recommends that TVET should be aimed at “increasing the overall employability of youth trainees rather than training them for narrow occupational categories” (page 29). Finally, the National Tertiary and Higher Education Policy 2014–2023 aims at improving access to TVET nationwide and recommends the establishment of skill centres in each of the regions of the Gambia.



TVET at the secondary education level is governed by MoBSE, while the Ministry of Trade, Industry and Employment (MoTIE) is mandated to ensure that vocational qualifications meet the private sector's needs and interests (ITC, 2018). The Gambian public TVET sector is funded by the Government through an annual subvention mechanism based on company revenues which may vary strongly depending on the performance of the economy. Private TVET providers largely rely on tuition fees and donor funding. There are no data on the level of government spending on TVET. However, the overall low level of public expenditure on education suggests there are financial pressures. In 2016, the Gambia spent only 2.1 per cent of GDP on education, a share which is lower than in other countries in West Africa, such as Sierra Leone (3.1 per cent), Senegal (5.1 per cent) or Burkina Faso (4.2 per cent in 2015). In addition, there is a clear emphasis on primary education, with 55 per cent of public education spending allocated to primary education (World Bank, 2019). This shows that TVET funding may be crowded out by other expenditure priorities.

The policy goals of the current National Development Plan (NDP) include the development of labour market and TVET information systems. The need for labour market information (LMI) on which to base skills investments and TVET strategies was recognized early on, in the National Training Authority (NTA) Act of 2002. Accordingly, the Labour Market Information Unit of the NTA, the predecessor of the National Accreditation and Quality Assurance Authority (NAQAA), conducted a first enterprise survey in 2007 to identify skills shortages and training needs in different economic sectors (World Bank, 2011). However, such projects have been rare. As a result, a number of policy performance reviews and strategic plans have highlighted limited LMI as being a key challenge to providing labour market relevant skills (UNDP, 2014). Currently, the NAQAA is responsible for assessing and disseminating information on training needs. A new bureau for providing quantitative and qualitative information related to employment in the Gambia – the Gambian Labour Market Information System (GLMIS) – has also been established. The GLMIS's scope is broader than that of the NAQAA as it covers information on industrial relations, labour law, occupational safety, and health. The GLMIS is under the jurisdiction of MoTIE, and its governing committee includes representatives from MoBSE, the NAQAA and the Ministry of Youth and Sports (MoYS). However, the GLMIS faces many challenges in fulfilling its mandate. Limited financial and human resources restrict its ability to conduct surveys, and inadequate cooperation and collaboration with partner institutions makes the exchange and dissemination of data difficult (Jah and Darboe, 2016).

In summary, unemployment rate in Gambia was at 12.3 per cent in 2019 with the youth facing a higher unemployment risk whereby a considerable proportion of youth (34 per cent in 2012) are not in education, employment, or training. The worse scenario is characterized with poor learning outcomes whereby only 10 per cent of children demonstrate solid reading skills and only 8 per cent have sufficient numeracy skills. Furthermore, the tuition fees charged by most institutions pose a financial barrier to TVET participation, especially for socio-economically disadvantaged youth. There is need to increase the formal collaboration between the TVET system and the private sector, with enhanced potential to contribute to the creation of more internships, work placements and apprenticeships since both public and private TVET institutions, are underfunded. This study therefore sets to check on the manifestation of the recent, current, and ongoing mechanisms for TVSD financing and role of the private sector, considering emerging national reforms and the COVID-19 pandemic in Gambia.

## CHAPTER THREE: METHODOLOGY OVERVIEW AND DATA APPROACH

### 3.1. Overarching Question

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To achieve the objectives laid out in the study purpose, the present research study addresses the following overarching questions:

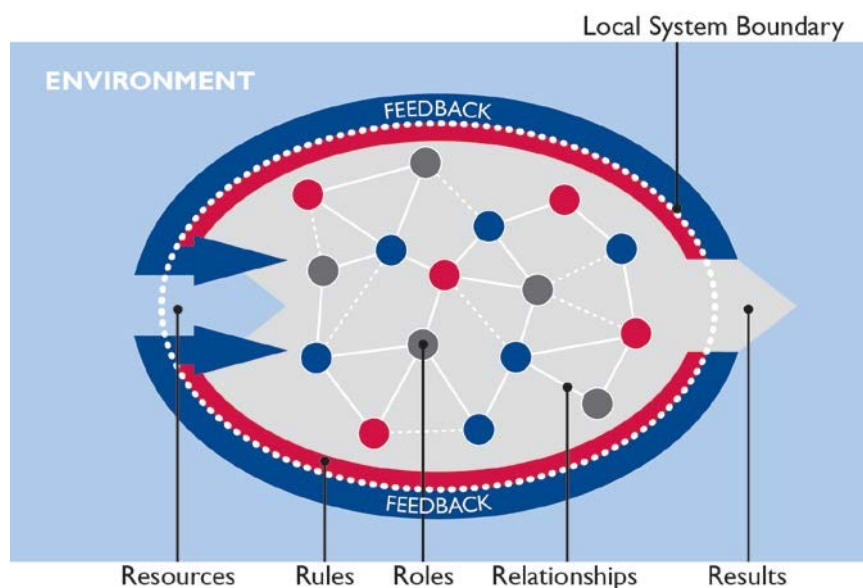
- a. Do current vocational training funding mechanisms focus exclusively on what is commonly referred to as technical and vocational education and training or do they embrace the concept of TVSD?
- b. What are the different funding mechanisms for TVSD in Africa and successful examples of funding mechanisms that have worked?
- c. What is the nature and role of the private sector in these funding mechanisms?
- d. What are the different incentives provided by the government to promote TVSD?
- e. Given the impact of COVID-19 on TVSD, what are the most innovative and resilient technical, financial, and operationalization mechanisms?

### 3.2. Conceptual Framework

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The list of questions presented above are framed in terms of ADEA's systems approach to map the recent, current and developing mechanisms for TVSD financing and the role of the private sector, in light of emerging national reforms and the COVID-19 pandemic and digitalization. Although a single result will serve as the organizing principle of a system, that system will produce other results, both positive and negative, in addition to the focal one. Roles and Relationships - Actors, whether organizations or individuals, and their interactions are at the heart of all human systems. Rules - Rules refer to formal laws, regulations and statutes and to less formal norms, incentives and expectations that influence the structure of the system and the way it functions. Resources - Resources encompass the various inputs that are transformed into results. Financial resources, whether in the form of government budget flows, private sector investments, or donor grants, are likely to be important in any system of interest.

The systems approach followed the USAID document titled "The 5 Rs Framework in the Program Cycle", USAID emphasizes that a systems approach requires an understanding: Results, Roles, Relationships, Rules and Resources (ie, the five Rs) (USAID 2016, 3. Those interactions depend on certain inputs or **resources** (the incoming light blue arrow) and produce certain outcomes or **results** (the outgoing gray arrow). And the whole process of transforming resources into results through the interactions of system actors is governed by a set of **rules** (the red band).



*Figure 1: The 5 Rs Framework in the Program Cycle*

### 3.3. Design Methodology Overview

The study used a mixed methods approach to analyze the recent, current and recommend mechanisms for TVSD financing by TVET institutions, private entities and partner governments, donors, and other relevant stakeholders to engage. The study approached both research questions concurrently. The approach detailed below focuses on the methods used to answer the research questions on TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic and digitalization.

### 3.4. Preliminary Literature Review TVSD Alternative Financing and TVET Insitutions Selection

An analysis and synthesis was undertaken on the extant literature on the TVSD alternative financing and role of the private sector as seen in the characterization of the three countries in section 2.2 to 2.4 above. The literature review included the existing mechanisms and models that promote TVSD financing and role of the private sector. We also conducted a desk review of the published literature on TVSD financing and role of the private sector in each country included in the study. This review gave the team a more in-depth understanding of the context for each in-country study as well as the ways the study can build on what has already been done to investigate TVSD financing and role of the private sector.

### 3.5. Secondary Data Collection

In each country, we compiled and analyzed national and institutional level secondary data related to government TVET funding, non-governmental TVET revenue sources, government TVET policies, TVSD financial management, and TVET government expenditures.

### 3.5.1. Systems Thinking Webinar

A systems thinking webinar was organized in each country to engage key stakeholders especially the focal points from the ministries to identify and analyze issues related to TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic and digitalization. The systems thinking webinars were followed by actual data collection using the survey tools and google-documents.

## 3.6. TVSD & TVET Finances Data Analysis Through Quantitative Methods

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One of the goals of this study was to examine comparable data sets (as available) across the three countries containing measures of TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic and digitalization. The analysis helped to draw generalizable implications relevant to TVSD financing and role of the private sector.

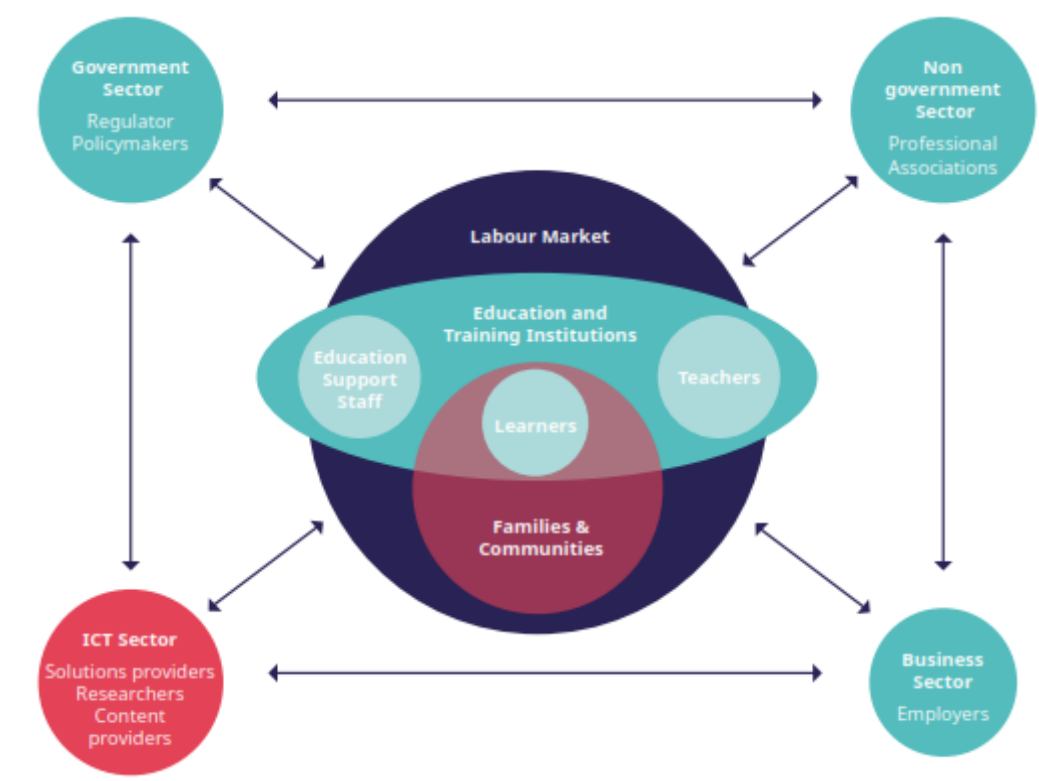
The study's data collection included collecting and reviewing official documents, budgetary data, and statistics from higher education authorities, sampled TVETs in the three countries (through their annual reports, financial statements, or an online survey of a sample of institutions) as well as key informant interviews with stakeholders relevant to mapping of recent, current and developing mechanisms for TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic and digitalization in the five countries. An assumption had been made to the effect that the most updated government data on developing mechanisms for TVSD financing, was going to be available and accessible. The researchers has conducted a survey with key personnel from a representative sample of TVETs in each country. Quantitative data was also supplemented with an array of qualitative data on recent, current and developing mechanisms for TVSD financing.

## 3.7. Sampling Strategy/Selection of Respondents

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### 3.7.1. Typical Stakeholders in TVET and Skills Development

According to Keevy et al. (2019), a traditional view of educational systems conflates knowledge development with academically oriented education, and skills development with TVET. However, academically oriented education is increasingly expected to show direct relevance to the labour market, while skills development is not just limited to technical knowledge and aptitude, but increasingly focuses on “soft skills”, such as communication, digital and media literacies, critical thinking, negotiation and teamwork which are currently market driven and in a great shortage to the youth and adults. Several stakeholder groups (see their specific roles in figure 2) have a legitimate interest in the alternative financing of the TVET sector and TVSD.



**Figure 2: Typical Stakeholders in TVET and Skills Development**

*Source: Adapted from Keevy et al. (2019).*

They include government sector (regulator/policymakers), non-government sector (professional associations), labour market, education and TVET institutions (education support staff, learners, and teachers), families & communities and business sector (employers). TVSD systems are defined by the government, professional associations, and employers, in collaboration with the labour market in terms of what is expected. They are then implemented in a more formal sense by education and training institutions, and in a lifelong sense through experience gained in communities. The interactions are as in the figure above.

### 3.7.2. Sampling Strategy

The first step mapped the TVET and TVSD financing System and Key Stakeholders in each of the three countries. Each country had the TVSD Financing Stakeholders Table to demonstrate the organizations involved in the TVSD Evidence Ecosystem (EE), which include technical and vocational training institutes, polytechnics, government ministries and private partners by defining TVSD financing evidence ecosystem, the evidence ecosystem roles and domain specific system.

**Table 1: TVSD Financing Stakeholders**

Stakeholder	TVSD Research Question	Methods
<p>Policymakers (Ministers of TVET, finance, and elected representatives)</p>	<ul style="list-style-type: none"> <li>• How does government policy, regulation, and funding relate to TVSD financing and role of the private sector in different contexts?</li> </ul>	<ul style="list-style-type: none"> <li>• Webinars with key policymakers to understand the political context influencing the current higher education policy framework as well as opportunities and constraints on TVET and TVSD funding policy change.</li> <li>• Engagement of policymakers in systems thinking workshops to identify the causes of the current policy framework and enablers and barriers to change TVSD financing and role of the private sector.</li> </ul>
<p>TVET Leadership (e.g., President, Principals, Deans, Board of Regents)</p>	<ul style="list-style-type: none"> <li>• How does government policy, regulation, and funding relate to TVSD financing and role of the private sector in different contexts?</li> <li>• How do different financial management approaches (e.g. performance-based financial management, funding formulas, negotiated budgets) relate to TVSD financing and role of the private sector in different contexts?</li> <li>• How do TVET funding' revenue streams relate to TVET and TVSD funding in different contexts?</li> <li>• How do different approaches to financial sustainability relate to key equity considerations (e.g., affordability for low-income learners) in different contexts?</li> <li>• What are the major effects of COVID-19 on TVET and TVSD funding?</li> </ul>	<p>Engagement of higher education leadership in KIIs and the systems thinking workshop to understand:</p> <ul style="list-style-type: none"> <li>• the ways the current policy framework shapes TVSD financing and role of the private sector ecosystems,</li> <li>• the current dormant and engaged TVSD financing and role of the private sector ecosystems,</li> <li>• the current resources available to TVSD financing and role of the private sector,</li> <li>• the current relationships among key actors (e.g., relationships between TVET and TVSD funding faculty and private sector actors) and how those relationships facilitate TVET and TVSD funding engagement in innovation ecosystems as well as TVET and TVSD funding ability to generate diverse sources of revenue.</li> <li>• The informal norms, rules, and values that shape actors' behavior in the innovation ecosystem,</li> <li>• The ways TVET and TVSD funding model influences access for learners from less privileged groups,</li> <li>• the current financial strategies taken by universities,</li> <li>• the impacts of COVID-19 on TVET and TVSD funding</li> </ul>

	<ul style="list-style-type: none"> <li>To what extent do TVET and TVSD funding strategies (e.g., diverse sources of revenue, contingency planning) shape their resilience to shocks, such as the COVID-19 pandemic?</li> </ul>	
Employers/Private Sector	<ul style="list-style-type: none"> <li>How do TVETs' revenue streams relate to TVET and TVSD funding in different contexts?</li> </ul>	<p>Kills with private sector actors to understand:</p> <ul style="list-style-type: none"> <li>their current TVSD financing and role of the private sector,</li> <li>the extent to which TVET and TVSD funding are providing needed resources, such as human capital (e.g., qualified graduates, c private sector actors toward TVSD financing and role of the private sector (e.g., level of trust, perceived capacity TVET and TVSD funding actors, etc.) and how that influences their relationships with TVSD financing and role of the private sector actors and investments in TVSD services. (Individual researchers) and infrastructure (labs, maker spaces) to support their engagement in innovation ecosystems,</li> <li>the perceptions of private sector actors toward TVET and TVSD funding (e.g., level of trust, perceived capacity TVSD actors, etc.) and how that influences their relationships with TVET and TVSD funding actors and investments in TVSD services.</li> </ul>

### 3.8. Research Ethics

The research team carried out the informed consent process prior to any data collection with research participants. Consistent with the informed consent process, we have informed all participants that they have a right to refuse to participate in the study, a right to withdraw from the study at any time, and a right to refuse to answer any question without penalty.

This study took the necessary measures to ensure confidentiality. We took into account the particular risks to confidentiality due to our sampling method, where participants are recruited through the contacts and networks of other participants. To maintain participant confidentiality, we adopted several recommendations made by numerous qualitative researchers and synthesized in the work of

Kaiser (2009) at four points during the research process: research planning, data collection, data analysis, and dissemination of research results.

We also protected confidentiality during data collection and analysis. All identifiers were removed from the data set. Also, for research dissemination, we removed any identifying information from all research products. The research team also took care to consider how a “mosaic” of inputs could lead to identification even in cases where direct identifiers have been removed. The research team also considered any instances in which the identifying information of a group, not just an individual, could lead to risks and will take the appropriate steps necessary to protect such groups in any research dissemination strategies.

### **3.8.1. Data Management**

All primary and secondary data was de-identified and stored on a secure Google Drive file system hosted by the ADEA. The PI stored a copy of de-identified data on a password protected computer for two years following the completion of the study. All secondary data received from higher TVET institutions, government authorities, and other relevant institutions was scanned to the secure Google drive using a password protected mobile device, such as a tablet and a mobile phone. The three countries Country Point of Contact (PoC) supervised the de-identification of secondary data stored on the drive. For key informant interviews, the research team requested permission from all research participants to audio record interviews. The audio files were then deleted from the individual recorders.

## **3.9. Data Analysis Procedures**

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Our conceptual framework listed in the background section guided our analysis. In particular, we examined TVSD financing in relation to: (1) national level dynamics influencing the TVSD financing and role of the private sector (e.g., policies and regulations, allocation mechanisms, equity concerns, and political will), (2) the various revenue sources TVETs are able to generate, (3) the shape and size (supply) of the TVSD financing system and how it relates to achieving national targets for expanding enrollment in TVSD, (4) the capacity of TVSD personnel to manage and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic and digitalization, (5) the mechanisms to ensure accountability of TVSD financing and role of the private sector, and (6) the ability of TVETs to plan for/manage shocks and be resilient over time in light of emerging national reforms and the COVID-19 pandemic and digitalization.

## **3.10. Quality Checks**

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Throughout the research process, the PI met regularly and frequently with the ADEA director to discuss: (1) progress with the study to oversee and provide support for the data collection and analysis processes, (2) any challenges that emerge, and (3) support needed from the broader technical team while discussing the refinement of codes and the emergence of themes and patterns in the data.



## 3.11. Key Tasks & Deliverables

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### 3.11.1. Tasks

The major tasks in this study were to:

- a. Identify the difference, as well as benefits, between TVET and TVSD funding models in each of the selected countries.
- b. Provide a summary of the current context of the different TVSD financing mechanisms in each of the selected countries.
- c. Analyze and assess TVSD practices (moving from policy and strategy to implementation).
- d. Identify innovative solutions/approaches to make TVSD funding efficient and sustainable and to improve access, quality and relevance, including those based on digital technology.
- e. Record cross-border collaborations/partnerships to promote TVSD funding.
- f. Provide recommendations on innovative solutions, lessons learned and gaps in TVSD funding policies and practices.

### 3.11.2. Deliverables

The key deliverables from this study were:

- a. Draft and Final Inception Report.
- b. Draft and Validated Survey Tools see Annex II-IV.
- c. Draft Study Report.
- d. Validation Workshop Report.
- e. Final Study Report.

## CHAPTER FOUR: DATA ANALYSIS, RESULTS AND FINDINGS

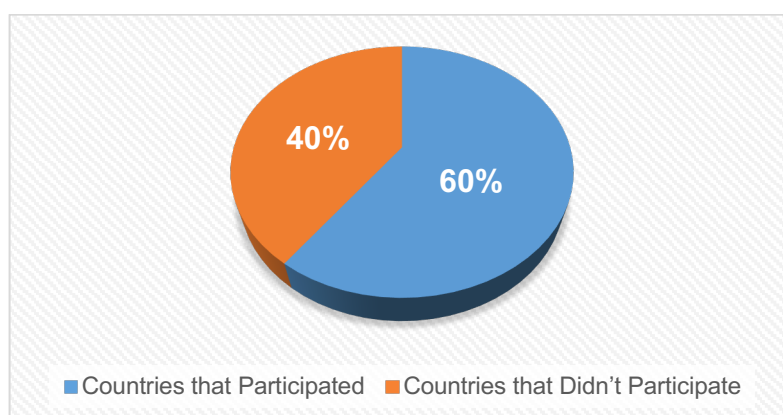
This chapter presents the results and findings. The results are presented in the form of descriptive statistics. The analysis is country-specific starting with Kenya, Rwanda and Gambia. The analysis covers the following thematic areas in line to the study objective: TVET Background (legal status and Tax status of the TVET institution, Number of employees Year of establishment of the TVET institution, Membership of industry association(s) to which the TVET institution belongs, major issues and problems currently faced by the TVET institution in their day to day operations and activities); National TVET/TVSD Policy (its existence, any gaps between policies, implementation plans and achievements in TVET institution's alternative financing for TVSD, the status of implementation of TVET policies and plans from the view of the TVET staff in relation to the institution's alternative financing for TVSD; the reasons and what are considered as countermeasures in relation to the budget for providing education and various TVSD programs decrease year by year); TVSD Systems IN TVET Institutions (the expected roles of TVET institutions in TVSD in the three countries, institution's expected role to be played by their graduates in promoting innovation within the national innovation ecosystem, any gap between the expectation and reality in relation to the TVET institution's alternative financing for TVSD, any project to minimize the gap in collaboration with private entities especially in relation to the institution's alternative financing for TVSD, types of TVSD are in demand to promote industrial development and innovation in the three countries, which TVSD field (occupation) recruited during the last 3 years from 2019-2021, TVSD skills for newly hired employees, types of TVSD digital technology/skills are prioritized and/or specifically to be utilized to promote industrial development and innovation in the three country); TVSD Programmes Market Orientation (the market orientation of the TVSD programmes in the three countries, the curriculum orientation of the TVSD programmes in the three countries, the curriculum accreditation of the TVSD programmes in the three countries); Government Budgetary Contribution for TVET Institution Towards TVSD (the number of enrolled students, as well as the number of graduates for the last three (3) years for all TVET programs, finding through need-based scholarships refer to funds and financial support given for students who qualify based on economic need, funding levels through Need-based Scholarships, Merit-based Scholarships, Government Loans, Private Loans and Grants, amount of loans and benefits by source for the years 2018 through 2022); Ministry of Education Operations On TVSD (Proportion % of TVSD's budget to the whole TVET budget, Proportion % of TVET budget to the whole, TVET Qualifications Framework, the different incentives which have been provided by the government to promote TVSD, impact of COVID-19 on TVSD, what are the most innovative and resilient technical, financial, and operationalization mechanisms); Gender Equality And Cross Cutting Issues Towards TVSD In The Country (Gender Equality Issues in TVET Institution towards TVSD, Cross Cutting Issues in TVET Institution towards TVSD in the Country, Life Skills Issues in TVET Institution towards TVSD in the Country).

### 4.1. Response Rate

The response rate herein can be presented in terms of the countries which were sampled and the nature of the key informants' typology who participated in the study from the countries which participated in this study as shown below.

### 4.1.1. Global Country Response Rate

The five countries that were initially selected for the study were representing East Africa (Kenya), east-central Africa (Rwanda), western Africa on the Atlantic coast (Gambia), North Africa (Tunisia) and Southeast Coast of Africa (Mozambique). This gave regional representation and the different unique operationalization of the TVSD concepts among the English and French speaking countries. The ratio of the number of countries which participated in this given research to the number of eligible countries which were asked to participate was 3/5 which shows an effort of 60% given to properly carry out this TVSD study for the purposes of executing the study objectives.



**Figure 3: Country Response Rate**

The countries that participated were Kenya, Rwanda, and Gambia while Tunisia and Mozambique had challenges in initialization after several webinars to induct them to the study.

### 4.1.2. Key Informants Response Rate Per Country

The key informants in this study were: (i) employers of graduates from the TVET Institutions for research tool #1; (ii) TVET Institutions which implement TVSD Initiatives for research tool #2; and (iii) Ministry of Education or TVET Regulators for research tool #3. The main respondents were the TVET institutions for most of the study questions. The responses by country and by the key informants is given below.

**Table 2: Key Informants Response Rate per Country**

Key Informants	Country			Total
	Kenya	Gambia	Rwanda	
TVET Institutions	31	29	17	77
Employers of TVET Graduates	7	2	3	12
Ministry of Education or TVET Regulators	5	4	1	10
<b>Total</b>	<b>43</b>	<b>35</b>	<b>21</b>	<b>99</b>
<b>Rank</b>	<b>1</b>	<b>2</b>	<b>3</b>	

Source: TVSD Survey Data, 2023

From the response rate in table 2 above, majority of the key informants across the three countries were the TVET Institutions which implement TVSD (totaling 77), followed by the employers of the graduates from the TVET Institutions (totaling 12), and finally the Ministry of Education or TVET regulators (totaling 10). This is an indication that all the key informants were all well represented in this study given their roles and level/intensity in TVSD/TVET initiatives.

In terms of country-specific representations, Kenya had the highest response rate of 43 respondents, followed by Gambia with 35 respondents and lastly Rwanda with 21 respondents. This shows fair distribution across all the three countries based on the number and intensity of the key informants as reviewed in section 2.2 of this report. The numbers and the results can be comparable and can be used for generalization in the current qualitative study.

In both cases (country and key informants' response rates) the response rate meets the basic rules on how many units should be included in the research sample (Lichtman, 2010,). As noted by Sandelowski (1995, p. 179), assessment of sample size's appropriateness becomes a "matter of judgement", depending on the milestones retained in the attention field by the researcher. The 99 overall response rate reached the information point where the homogeneous respondents either in the TVET institutions or in the education ministry could yield similar responses since they all operate in the similar country regulatory and competitive environment.

## 4.2. TVET Demographic Profile (Descriptive Analysis)

The following descriptive demographic profiles cover the legal status, tax status, number of employees and year of establishment of the TVET institution including the major issues and problems currently faced by TVET institution which execute the TVSD initiatives.

### 4.2.1. Legal and Tax Status of the TVET Institution

There are different forms of ownership for the TVET institutions which will eventually affect their tax status. The subsections below show the overall findings and the country-specific findings on this aspect.

This status will eventually affect the scope of operations and mandates in the execution of the TVSD initiatives within the TVET institutions. The respondents were asked to indicate the legal ownership and tax status of their TVET institutions and the results are in table 3 below.

**Table 3: Legal Status of the TVET Institution (Overall)**

Legal Status	Descriptive		Rank
	Freq. (N)	Perc. (%)	
Government owned	61	80.3	1
Other (Catholic church/mission, Private school, Parent association, Municipal Council and Board of Governors )	9	11.8	2
Solely proprietorship	3	3.9	3

Publicly limited	2	2.6	4
Partnership	1	1.3	5
<b>Total</b>	<b>76</b>	<b>100.0</b>	

Source: TVSD Survey Data, 2023

From the data in table 3 above, majority (80.3%) of the TVET institutions are funded by the government while the rest are funded by the private sector. Those private sector investment (19.7%) is represented by catholic church/ mission, private school, parent association, municipal council, board of governors, solely proprietorship, publicly limited and partnership.

On the tax status of the TVET institutions, the findings are as in table 4 below. From the findings in table 4, majority of the TVET institutions are public institutions in their tax obligations meaning they are financed and funded by the government as indicated in table 2 on ownership. Further, 20.8% of the private TVET institutions are registered as not-for-profit organizations while 3.9% are registered as for-profit organizations. This is an indication that the government is playing her role of providing its mandatory of funding TVET institutions while providing room for private investors to finance TVET institutions initiatives at 24.7% while limiting those doing business in education to minimal 3.9%.

**Table 4: Tax Status of the TVET Institution (Overall)**

Tax Status	Descriptive		Rank
	Freq. (N)	Perc. (%)	
Public institution	58	75.3	1
Not-for-profit organization	16	20.8	2
For-profit organization	3	3.9	3
<b>Total</b>	<b>77</b>	<b>100.0</b>	

Source: TVSD Survey Data, 2023

The country specific forms of ownership for the TVET institutions which will eventually affect their tax status as discussed above are presented below.

On the leg and tax status of the TVET institutions in Kenya, the findings are as in table 5 below.

**Table 5: Legal and Tax Status of the TVET Institutions in Kenya**

Legal Status	Descriptive		Rank
	Freq. (N)	Perc. (%)	
Government owned	31	100	1
<b>Total</b>	<b>31</b>	<b>100.0</b>	

Tax Status	Descriptive		Rank
	Freq. (N)	Perc. (%)	
Public institution	31	100	1
<b>Total</b>	<b>31</b>	<b>100.0</b>	

Source: TVSD Survey Data, 2023

From the findings in table 5 above, all the TVET institutions in Kenya that participated in this study are government owned. Equally their tax status is public meaning they are all government funded. This is an indication that Kenya has not encouraged other private prayers to fund TVET institutions and TVSD.

**Table 6: Legal and Tax Status of the TVET Institutions in Rwanda**

Legal Status	Descriptive		Rank
	Freq. (N)	Perc. (%)	
Government owned	9	52.9	1
Other (Catholic church/mission, Private school, Parent association)	6	35.3	2
Publicly limited	1	5.9	3
Solely proprietorship	1	5.9	3
<b>Total</b>	<b>17</b>	<b>100.0</b>	

Tax Status	Descriptive		Rank
	Freq. (N)	Perc. (%)	
Public institution	10	34.5	1
Not-for-profit organization	6	20.7	2
For-profit organization	1	3.4	3
<b>Total</b>	<b>17</b>	<b>100.0</b>	

Source: TVSD Survey Data, 2023

From the findings in table 6 above, most (52.9) TVET institutions in Rwanda that participated in this study are government owned. The remaining 47.1% are private entities represented by Catholic church/ mission, Private school, Parent association, publicly limited entities and sole proprietorships. On the tax status, majority (34.5) of the TVET institutions in Rwanda have “public institutions” tax obligations meaning they are funded by the government or public funds while 20.7% of them are not-for profit as 3.4% are for-profit TVET institutions. This implies Rwanda has a balanced funding topology in TVET funding involving both the public and private funding based on the legal and tax obligations of the country’s TVET institutions. This is an indication that most of the TVET institutions in Rwanda are funded by the public and private sources of funds.

**Table 7: Legal and Tax Status of the TVET Institutions in Gambia**

Legal Status	Descriptive		Rank
	Freq. (N)	Perc. (%)	
Government owned	21	75.0	1
Other (Catholic church/ mission, Municipal Council and Board of Governors )	3	10.7	2
Solely proprietorship	2	7.1	3
Partnership	1	3.6	4
Publicly limited	1	3.6	4
<b>Total</b>	<b>28</b>	<b>100</b>	

Tax Status	Descriptive		Rank
	Freq. (N)	Perc. (%)	
Public institution	20	69.0	1
Not-for-profit organization	7	24.1	2
For-profit organization	2	6.9	3
<b>Total</b>	<b>17</b>	<b>100.0</b>	

*Source: TVSD Survey Data, 2023*

From the findings in table 7 above, the majority (75.0) of the TVET institutions in Gambia that participated in this study are government owned. The remaining 25.0% are private entities represented by Catholic church/ mission, Municipal Council and Board of Governors, sole proprietorships, partnerships and publicly limited entities. This shows a fair representation of the TVETs from both private and public sectors thereby reflecting that TVETs in Gambia are funded by both the public and private sources of funds.

On the tax status of the TVET institutions in Gambia, majority (69.0) of the TVET institutions in Gambia are public institutions funded by the government while 24.1% of them are not-for profit as 3.9% are for-profit TVET institutions. This implies Gambia has a fair distribution in its TVET funding topology involving both the public and private funding which is an indication that most of the Gambia TVET institutions are funded by the public and private sources of funds. based on the legal and tax obligations of the country's TVET institutions.

#### **4.2.2. Year of Establishment of the TVET Institutions (Country-specific)**

Generally, the year of establishment of a TVET institutions determines the scale of operations, the infrastructure and show how relevant it has in the delivery of the TVET/TVSD programmes. It can also show the level of financial sustainability based on the funds received from either/both public or/and private funders. The TVET institutions in the three countries were asked to indicate the TVET institution's year of establishment and the results are as in the table below.

**Table 8: Year of Establishment of the TVET Institutions**

Year of Establishment	Kenya			Rwanda			The Gambia		
	Freq. (N)	Perc. (%)	Rank	Freq. (N)	Perc. (%)	Rank	Freq. (N)	Perc. (%)	Rank
2000-2019	13	56.7	1	8	44.4	1	4	25	2
1950-2000	12	20.0	2	6	33.3	2	9	56.2	1
2020-2022	5	13.3	3	4	22.2	3	3	18.8	3
<b>Total</b>	<b>30</b>	<b>100.0</b>		<b>18</b>	<b>100.0</b>		<b>16</b>	<b>100.0</b>	

Source: TVSD Survey Data, 2023

**Kenya:** From the findings from table 8 above, majority (56.7%) of the TVET in Kenya were established between 2000 – 2019 to meet the higher demand for technical and vocational training/education with a new set (13.3) of TVETs started in 20220 – 2022 to cater for technical vocational skills development in Kenya. The 20% of 1950 – 2000 have full-fledged scale of operations, and infrastructure in the delivery of the TVET/TVSD programs. Both the newly established and the oldest TVETs show greater levels of financial sustainability based on the funds received from either/both public or/and private funders in Kenya.

**Rwanda:** From the findings from table 8 above, a significant number (44.4%) of the TVET institutions in Rwanda were established between 2000 – 2019 to meet the higher demand for technical and vocational training/education with a new set (22.2%) of TVETs started in 2020 – 2022 to cater for technical vocational skills development in Rwanda. The 33.3% of 1901 – 2000 have full-fledged scale of operations, and infrastructure in the delivery of the TVET/TVSD programmes. Both the newly established and the oldest TVETs show greater levels of financial sustainability based on the funds received from either public or private funders in Rwanda.

**The Gambia:** From the findings from table 8 above, majority (56.2%) of the TVET in Gambia were established between 1950 – 1999 as the oldest TVETs show greater levels of financial sustainability based on the funds received from either public or private funders in Gambia. The next generation (25%) of TVETs in Gambia were established between 2000 – 2019 to meet the higher demand for technical and vocational training/education with current new set (18.8%) of TVETs started in 20220 – 2022 to cater for technical vocational skills development in Gambia. The three strata cases on years of establishment have key funders from both the public and private sector.

#### 4.2.3. Number of Employees of the TVET institution (Country-specific)

Generally speaking, the number of employees (both teaching and support staff) is key in ascertaining the support required in the delivery of credible academic programmes especially the implementation of TVSD mandates. The following subsections present country-specific findings.



**Table 9: Number of Employees of the TVET institutions In Kenya**

Number of Employees	Kenya			Rwanda			The Gambia		
	Freq. (N)	Perc. (%)	Rank	Freq. (N)	Perc. (%)	Rank	Freq. (N)	Perc. (%)	Rank
40 and above	17	56.7	1	3	17.6	2	6	21.4	2
Less than 10	6	20.0	2	3	17.6	2	11	39.3	1
30 to 39	4	13.3	3	2	11.8	3	3	10.7	5
10 to 19	2	6.7	4	7	41.2	1	3	10.7	4
20 to 29	1	3.3	5	2	11.8	3	5	17.9	3
<b>Total</b>	<b>30</b>	<b>100.0</b>		<b>19</b>	<b>100.0</b>		<b>28</b>	<b>100.0</b>	

Source: TVSD Survey Data, 2023

**Kenya:** From the findings from table 9 above, in Kenya majority (56.7) of the TVET institutions in Kenya have 40 and above. Based on the range used for 30 and above (30-39 and above 40), further majority (70% = 56.7 + 13.3%) have adequate staff to support the teaching, education and training programmes among the TVET institutions in Kenya which implies that TVET institutions in Kenya have the required human capacity and support in the delivery of credible academic programmes especial the implementation of TVSD mandates.

**Rwanda:** From the findings from table 9 above, majority (41.2) of the TVET institutions in Rwanda have 10 to 19 employees. This might because of the nature of TVET organization in which is offered in high schools although from the distribution on the number of employees against the age of the institutions, there is some evidence that TVET institutions in Rwanda have the required human capacity and support in the delivery of credible academic programmes especial the implementation of TVSD mandates since there some who have 47 and 94 employees.

**The Gambia:** From the findings from table 9 above, majority (39.3) of the TVET institutions in Gambia have less than employees while on the extreme few (10.7%) have between 30 – 39 employees. This might be attributed to the date of establishment that is falling between 2015 – 2022 for most TVET institutions. This fair distribution based on the year of establishment shows some evidence that TVET institutions in Gambia have the required human capacity and support in the delivery of credible TVET/TVSD programmes since there some who have 45, 86 and 155 employees.

### 4.3. TVSD Institutional Capacity Analysis

Before analyzing the transition and funding of TVSD, there was need to do a institutional capacity analysis of the TVET insitutions towards TVSD operationalization.

#### 4.3.1. TVSD Field (Occupation) Capacity in TVETs (2020-2022)

The ability to meet the TVSD demand need enough human capacity through recruitment process. The TVETs were asked to indicate the total number trainers employed in 2020 to 2022, out of which

they were indicated how many are new graduates / Rookies and how many are mid-career in an effort to support TVSD in the TVETs. The findings per a country are presented below.

The following table shows the average in the total number of recruitment in TVETs to support the implementation of TVSD in the three countries for the past three years.

**Table 10: TVSD Field (Occupation) Capacity in TVETs (2020-2022)**

TVSD Field/ Occupation	Kenya			Rwanda			The Gambia		
	Average Total Recruits	New Graduates / Rookies	Mid-Career	Average Total Recruits	New Graduates / Rookies	Mid-Career	Average Total Recruits	New Graduates / Rookies	Mid-Career
Civil Engineering	29	18	8	4	2	2	10	13	2
Electric communication	20	22	4	0	0	0	7	3	8
Mechanical Engineering	19	10	10	2	0	2	20	8	12
English language	17	10	4	1	1	1	9	7	3
Electrical/Electronic Engineering	14	12	16	12	10	2	3	3	2
Hospitality	13	9	6	2	1	1	13	8	4
Information and Communication Technology	12	8	6	13	11	2	7	4	4
Agriculture and food processing	10	6	11	0	0	0	8	6	3
Renewable energy	4	6	3	0	0	0	7	4	3
Wildlife management/ tourism	3	2	1	0	0	0	0	0	0
Forest resources management	0	0	0	23	22	1	65	0	65
Irrigation and Drainage technology	0	0	0	17	15	2	12	9	3
Mining Engineering	0	0	0	0	0	0	6	2	4
Veterinary Technology	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>141</b>	<b>103</b>	<b>69</b>	<b>74</b>	<b>62</b>	<b>13</b>	<b>167</b>	<b>67</b>	<b>113</b>

Source: TVSD Survey Data, 2023

**Kenya:** From the findings in the table 10 above, a number of TVSD areas have recruited professional especially civil engineering, electric communication and mechanical engineering while others didn't have any recruitment in the past three years particularly irrigation and drainage technology, mining engineering, forest resources management and veterinary technology. This recruitment partners are in line with the demand patterns for TVSD courses which were engineering, electrical/electronic, mechanical engineering, information and communication technology, agriculture and food processing, hospitality and digital business planner. The preference is given to fresh graduates (73% preference) compared to those in the middle of their careers. This preference can be attributed to the TVETs resolve to have a fresh start in TVSD as opposed to using those in the middle of their career with deep-rooted culture in TVET courses orientation.

**Rwanda:** From the findings in the table 10 above, a number of TVSD areas have recruited professionals especially forest resources management, irrigation and drainage technology, information and communication technology, and electrical/electronic engineering while others didn't have any recruitment in the past three years particularly electric communication, renewable energy, mining engineering, agriculture and food processing, wildlife management/ tourism and veterinary technology. This recruitment partners are in line with the demand patterns for TVSD courses which were information and communication technology, hospitality, wild life management/ tourism, infrastructure engineers, application engineers (programmers), agriculture and food processing and electrical/electronic. The preference is given to fresh graduates (83.8% preference) compared to those in the middle of their careers. This preference can be attributed to the TVETs resolve to have a fresh start in TVSD as opposed to using those in the middle of their career with deep-rooted culture in TVET courses orientation.

**The Gambia:** From the findings in the table 10 above, a number of TVSD areas have recruited professionals especially forest resources management, mechanical engineering, hospitality, irrigation and drainage technology, civil engineering and English language while others didn't have any recruitment in the past three years particularly wildlife management/tourism and veterinary technology. This recruitment partners are in line with the demand patterns for TVSD courses which were agriculture and food processing, electrical/electronic, English language, information and communication technology, infrastructure engineers, hospitality, and engineering. There is high preference to fresh graduates (90.5% preference) compared to those in the middle of their careers. This preference can be attributed to the TVETs resolve to have a fresh start in TVSD as opposed to using those in the middle of their career with deep-rooted culture in TVET courses orientation.

#### **4.3.2. Employees Skills Distribution Critical for TVSD Implementation**

There certain TVSD skills that are important for newly hired employees especially the distribution of qualification among all employees not limited to TVSD graduates in the TVET for effective implementation and transition from TVET training into TVSD. The TVETs were asked to indicate the priority skills considered during the recruitment process with the view to ease the implementation of TVSD on a three-likert scale *where 1= low demand; 2 = Medium Demand and 3 = High Demand*. The findings from each country are given below.

The findings on the TVSD skills that are important for newly hired employees especially the distribution of qualification among all employees not limited to TVSD graduates in the TVET for effective implementation and transition from TVET training into TVSD in the three countries are presented below.

**Table 11: TVSD Skills and Distribution of Qualification**

TVSD Skills and Distribution of Qualification	Kenya			Rwanda			The Gambia		
	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank
Communication	2.7857	.41786	1	2.1250	.83452	13	2.7857	.41786	1
Sense of responsibility	2.7857	.49868	2	2.0000	.92582	16	2.7857	.49868	2
Logical thinking	2.7143	.46004	3	2.2500	.70711	9	2.7143	.46004	3
Time management	2.6786	.61183	4	2.3750	.74402	5	2.6786	.61183	4
Marketing	2.6552	.55265	5	2.6000	.51640	1	2.6552	.55265	5
ICT skills regarding Network	2.6333	.55605	6	2.0909	.83121	15	2.6333	.55605	6
ICT skills regarding operation	2.6333	.55605	7	2.3846	.65044	3	2.6333	.55605	7
Leadership	2.6207	.49380	8	2.2000	.63246	10	2.6207	.49380	8
ICT related business skills (Capability to use ICT to promote new business with digital technology)	2.5667	.56832	9	2.1667	.83485	11	2.5667	.56832	9
Mathematical skills (calculation, etc.)	2.5517	.63168	10	2.3750	.51755	4	2.5517	.63168	10
Business planning	2.5357	.57620	11	2.1429	.69007	12	2.5357	.57620	11
ICT skills regarding system development	2.5333	.68145	12	2.3571	.63332	6	2.5333	.68145	12
Project management	2.5000	.50918	13	2.1111	.92796	14	2.5000	.50918	13
ICT skills regarding Hardware	2.4667	.68145	14	2.2500	.86603	8	2.4667	.68145	14
English skills	2.4286	.50395	15	2.3333	.50000	7	2.4286	.50395	15
Sales	2.3793	.67685	16	2.5000	.53452	2	2.3793	.67685	16
Finance and accounting	2.3571	.62148	17	2.0000	.75593	17	2.3571	.62148	17
<b>Valid N (listwise)</b>	<b>22</b>			<b>10</b>			<b>19</b>		

Source: TVSD Survey Data, 2023

**Kenya:** From the findings, the TVSD skills and distribution of qualification which are on **high priority** (Ranking 1-14;  $2.79 \geq \text{Mean} \geq 2.46$ ) in Kenya during the recruitment of employees for effective

implementation of TVSD are: communication, sense of responsibility, logical thinking, time management, marketing and ICT skills regarding Network. The rest have a modest priority/importance (Ranking 15-17;  $2.318 \geq \text{Mean} \geq 1.625$ ). The focus on TVSD funding in Kenya should focus on those TVSD skills and qualifications with high importance/priority in the execution of TVSD initiative.

**Rwanda:** From the findings, the TVSD skills and distribution of qualification which are on **high priority** (Ranking 1-2;  $2.600 \geq \text{Mean} \geq 2.500$ ) in Rwanda during the recruitment of employees for effective implementation of TVSD are: marketing and sales to enable Rwanda create awareness and mobilize for TVSD. The rest have a modest priority/importance (Ranking 3-17;  $2.38 \geq \text{Mean} \geq 2.00$ ). The focus on TVSD funding in Rwanda should focus on those TVSD skills and qualifications with high importance/priority in the execution of TVSD initiative.

**The Gambia:** From the findings, the TVSD skills and distribution of qualification which are on **high priority** (Ranking 1-13;  $2.786 \geq \text{Mean} \geq 2.500$ ) in Gambia during the recruitment of employees for effective implementation of TVSD are: Communication, Sense of responsibility, Logical thinking, Time management, ICT skills regarding Network and Marketing to enable Gambia create awareness and mobilize for TVSD. The rest have a modest priority/importance (Ranking 14 – 17;  $2.4 \geq \text{Mean} \geq 2.3$ ). The focus on TVSD funding in Gambia should focus on those TVSD skills and qualifications with high importance/priority in the execution of TVSD initiative.

#### 4.3.3. Types of TVSD Digital Technology/Skills Prioritized by TVETs to Promote National Industrial Development and Innovation

One of the key thematic areas that has attracted interest in the TVETs is the use of ICT and there are a number of TVSD digital technology/skills which can be prioritized in TVSD training which will in the long-run to promote national industrial development and innovation in any country. The TVETs were asked to check (✓) priority level relevant to each technology on a three-likert scale where 1= low demand; 2 = Medium Demand and 3 = High Demand. The findings from each country are given below.

The findings on the types of TVSD digital technology/skills which are prioritized to promote industrial development and innovation in the three countries are given below.

**Table 12: Types of TVSD Digital Technology/Skills to Promote Industrial Development and Innovation**

Types of TVSD Digital Technology/ Skills	Kenya			Rwanda			The Gambia		
	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank
Fintech (Finance x ICT)	2.7931	.49130	1	2.7273	.46710	1	2.2857	.82542	5
Operation skills	2.7333	.52083	2	2.4167	.51493	14	2.2857	.91387	6
Database development	2.7241	.59140	3	2.6923	.48038	2	2.2308	.92681	8
Travel Tech (Tourism x ICT)	2.7241	.52757	4	2.5000	.75593	7	2.0714	.91687	13

Application development	2.7000	.59596	7	2.5000	.51887	6	2.3333	.77850	2
CAD (3D, including design)	2.7000	.59596	6	2.2500	.62158	20	2.2143	.89258	11
Healthtech (Health x ICT)	2.7000	.59596	5	2.5455	.68755	5	2.2857	.91387	4
Big Data analysis	2.6333	.61495	8	2.3333	.86603	18	2.0000	.91287	17
Foodtech (Food x ICT),	2.6207	.62185	9	2.5000	.75593	9	1.9286	.82874	18
Edtech (Education x ICT)	2.5862	.68229	10	2.4167	.66856	15	2.4286	.85163	1
Martech (Marketing x ICT)	2.5862	.68229	11	2.5000	.75593	8	2.2143	.97496	9
Robots	2.5667	.72793	13	2.2222	.83333	22	1.6154	.86972	27
Web development	2.5667	.72793	12	2.5000	.52223	10	2.2857	.91387	7
3D printer	2.5517	.68589	15	2.0000	.86603	27	1.9231	.86232	19
Agritech (Agriculture x ICT)	2.5517	.68589	14	2.6667	.49237	3	2.2143	.89258	10
Retech (Real Estate x ICT)	2.5357	.57620	16	2.6250	.51755	4	2.2857	.91387	3
AI	2.4828	.78471	17	2.2500	.70711	21	1.8462	.80064	21
Drone	2.4828	.73779	18	2.1250	.83452	25	1.9167	.99620	20
Instech (Insurance x ICT)	2.4643	.69293	19	2.4444	.52705	12	1.8333	.93744	22
PC disassembly and assembly	2.4333	.62606	20	2.5000	.67420	11	2.1429	.86444	12
Smart factory (Manufacturing x ICT)	2.4286	.69007	21	2.3750	.51755	16	2.0714	.99725	14
Embedded control system	2.4000	.72397	22	2.1818	.87386	23	2.0000	.85280	16
Mobility tech (Mobility x ICT)	2.3929	.73733	23	2.2500	.70711	19	2.0714	.99725	15
IoT sensor technology	2.3793	.77523	24	2.4444	.52705	13	1.6923	.85485	26
VR/AR	2.3571	.73102	25	2.1111	.78174	26	1.7500	.75378	24
RFID	2.3448	.72091	26	2.1250	.83452	24	1.6923	.75107	25
Block Chain	2.2759	.79716	27	2.3750	.74402	17	1.7692	.83205	23
<b>Valid N (listwise)</b>	<b>22</b>			<b>10</b>			<b>19</b>		

Source: TVSD Survey Data, 2023

**Kenya:** From the findings, types of TVSD digital technology/skills which are on **high priority/importance** (Raning 1-19;  $2.79 \geq \text{Mean} \geq 2.46$ ) in TVETs to promote industrial development

and innovation in Kenya: Fintech (Finance x ICT), Operation skills, Database development, Travel Tech (Tourism x ICT), Healthtech (Health x ICT), CAD (3D, including design), Application development, Big Data analysis and Foodtech (Food x ICT). The rest have a modest importance (Ranking 20-27;  $2.43 \geq \text{Mean} \geq 2.28$ ). The focus on TVSD public funding in Kenya should focus on those types of TVSD digital technology/skills with high importance/priority in the execution of TVSD initiative.

**Rwanda:** From the findings, types of TVSD digital technology/skills which are on **high priority/importance** (Ranking 1-21;  $2.79 \geq \text{Mean} \geq 2.46$ ) in TVETs to promote industrial development and innovation in Rwanda: Fintech (Finance x ICT), Database development, Agritech (Agriculture x ICT), Retech (Real Estate x ICT), Healthtech (Health x ICT), Application development, Travel Tech (Tourism x ICT), Martech (Marketing x ICT), Foodtech (Food x ICT) and Web development. While Robots, Embedded control system, RFID, Drone, VR/AR and 3D printer have a modest importance. The focus on TVSD public/private funding in Rwanda should focus on those types of TVSD digital technology/skills with high importance/priority in the execution of TVSD initiative.

**The Gambia:** From the findings, all the types of TVSD digital technology/skills that promote industrial development and innovation in TVETs are of moderate priority/importance in Gambia especially: Edtech (Education x ICT), Application development, Retech (Real Estate x ICT), Healthtech (Health x ICT), Fintech (Finance x ICT), TVSD Operation skills, Web development, Database development, Martech (Marketing x ICT) and Agritech (Agriculture x ICT). The focus on TVSD public/private funding in Gambia should focus on the listed types of TVSD digital technology/skills with high means within the modest importance/priority in the execution of TVSD initiative.

#### 4.4. TVSD Curriculum Orientation and Accreditation Analysis

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The attractiveness and motivation to fund any TVSD is determined by its curriculum orientation and accreditation for feasible marketability. The TVSD programmes curriculum orientation is related to the study objective *towards understanding how to transition from the TVET funding model to TVSD funding mechanisms*. The finding on the TVSD curriculum orientation and accreditation are discussed below.

##### 4.4.1. Curriculum Orientation for Successful Delivery of the TVSD Programmes

The TVETs were asked to indicate the extent of contribution of curriculum orientation to the successful delivery of the TVSD programmes in their respective countries on a five-likert scale where 1= Very small extent, 2 = Small Extent, 3 = Moderate Extent, 4 = Great Extent, 5 = Very Great Extent. The findings from each country are given below.

**Table 13: Curriculum Orientation of the TVSD Programmes**

Curriculum Orientation of the TVSD Programmes	Kenya			Rwanda			The Gambia		
	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank
The TVET institutions provide academic, career and psychosocial guidance to support TVSD learners as they make decisions about coursework and careers before, during and after enrolment	3.50	0.97	1	4.07	1.10	1	2.83	1.34	3
The TVET institutions facilitate policy development and TVSD programme flexibility to allow recognition of prior learning and qualifications in order to eliminate barriers to accessing TVSD	3.20	1.10	2	3.45	1.35	7	2.56	1.29	6
The TVET institutions sensitize learners and parents to the advantages of TVSD as an alternative to university or other tertiary education	3.14	1.16	3	3.73	1.39	5	3.06	1.39	2
The TVET institutions always ensure that TVSD mentorship structures are in place to provide individualized advice to learners from more advanced students, professors or private-sector volunteers	2.83	1.26	4	3.67	1.45	6	2.72	1.41	4
TVET curriculum systems treats foreign and native learners the same way with regard to tuition fees, access to internships and other opportunities	2.45	1.22	5	3.69	1.08	4	3.24	1.44	1
The TVET institutions provide formal TVSD orientation courses with a focus on protection considerations	2.77	0.94	6	4.00	1.13	2	2.47	1.33	7
The TVET institutions design curricula to facilitate mobility and portability of credits across institutions	2.80	1.06	7	3.47	1.19	3	2.69	1.20	5
<b>Valid N (listwise)</b>	<b>29</b>			<b>15</b>			<b>16</b>		

Source: TVSD Survey Data, 2023



The findings on the extent of contribution of curriculum orientation to the successful delivery of the TVSD programmes in the three countries are presented below.

**Kenya:** From the findings below, to a great extent (Ranking 1; Mean $\geq$ 3.500), TVET institutions provide academic, career and psychosocial guidance to support TVSD learners as they make decisions about coursework and careers before, during and after enrolment while to a moderate extent (Ranking 2-7; 3.20 $\geq$ Mean $\geq$ 2.453), The TVET institutions facilitate policy development and TVSD programme flexibility to allow recognition of prior learning and qualifications in order to eliminate barriers to accessing TVSD; they sensitize learners and parents to the advantages of TVSD as an alternative to university or other tertiary education to ensure that TVSD mentorship structures are in place to provide individualized advice to learners from more advanced students, professors or private-sector volunteers; as they design curricula to facilitate mobility and portability of credits across institutions to provide formal TVSD orientation courses with a focus on protection considerations while treating foreign and native learners the same way with regard to tuition fees, access to internships and other opportunities.

This modest contribution of curriculum orientation to the successful delivery of the TVSD programmes in Kenya show a better potential to attract funding from both the public and private partners.

**Rwanda:** From the findings above, to a great extent (4.067 $\geq$ Mean $\geq$ 3.450), TVET institutions provide academic, career and psychosocial guidance to support TVSD learners as they make decisions about coursework and careers before, during and after enrolment while facilitating policy development and TVSD programme flexibility to allow recognition of prior learning and qualifications in order to eliminate barriers to accessing TVSD; they sensitize learners and parents to the advantages of TVSD as an alternative to university or other tertiary education to ensure that TVSD mentorship structures are in place to provide individualized advice to learners from more advanced students, professors or private-sector volunteers; as they design curricula to facilitate mobility and portability of credits across institutions to provide formal TVSD orientation courses with a focus on protection considerations while treating foreign and native learners the same way with regard to tuition fees, access to internships and other opportunities.

This contribution of curriculum orientation to the successful delivery of the TVSD programmes to a great extent in Rwanda shows a better potential to solid funding from both the public and private partners.

**The Gambia:** From the findings above, to a moderate extent (Ranking 1-7; 3.235 $\geq$ Mean $\geq$ 2.471), TVET curriculum systems treats foreign and native learners the same way with regard to tuition fees, access to internships and other opportunities as they sensitize learners and parents to the advantages of TVSD as an alternative to university or other tertiary education; they provide academic, career and psychosocial guidance to support TVSD learners as they make decisions about coursework and careers before, during and after enrolment while ensuring that TVSD mentorship structures are in place to provide individualized advice to learners from more advanced students, professors or private-sector volunteers; the curricula design facilitates mobility and portability of credits across institutions with solidified policy development and TVSD programme flexibility to allow recognition of prior learning

and qualifications in order to eliminate barriers to accessing TVSD through formal TVSD orientation courses with a focus on protection considerations.

This contribution of curriculum orientation to the successful delivery of the TVSD programmes to a modest extent in Gambia shows a better potential to solid funding from both the public and private partners.

#### 4.4.2. Curriculum Accreditation of the TVSD Programmes in the Country

The TVETs were asked to indicate the extent of contribution of TVSD curriculum accreditation to the successful delivery of the TVSD programmes in their respective countries on a five-likert scale *where 1= Very small extent, 2 = Small Extent, 3 = Moderate Extent, 4 = Great Extent, 5 = Very Great Extent*. The findings from each country are given below.

**Table 14: Curriculum Accreditation of the TVSD Programmes**

Curriculum Accreditation of the TVSD Programmes	Kenya			Rwanda			The Gambia		
	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank
The TVET institutions always ensure that existing TVSD programmes are nationally accredited	3.97	1.19	1	4.13	1.13	3	3.29	1.40	1
The TVET institutions always make sure that new TVSD programmes are both nationally and preferably internationally accredited, having designed and aligned their qualifications frameworks with a view to regional or international mobility	3.50	1.11	2	3.87	1.06	4	2.94	1.55	3
The TVET institutions always develop and implement competence frameworks for TVET professionals	3.23	0.94	3	4.13	1.06	2	3.28	1.36	2
The TVET institutions always support continuing professional development (CPD) of TVSD teachers and trainers	2.87	1.11	4	4.19	1.11	1	2.94	1.55	4
The TVET institutions always provide pre-service, TVET-specific teacher education that includes training on issues of TVSD relevance	2.72	1.22	5	3.67	1.35	5	2.94	1.55	5
<b>Valid N (listwise)</b>	<b>29</b>			<b>15</b>			<b>17</b>		

Source: TVSD Survey Data, 2023

The findings on the extent of contribution of TVSD curriculum accreditation to the successful delivery of the TVSD programmes in the three countries are presented below.

**Kenya:** From the findings above, to a great extent (Ranking 1-2;  $3.967 \geq \text{Mean} \geq 3.500$ ), The TVET institutions in Kenya always ensure that existing TVSD programmes are nationally accredited especially for the new TVSD programmes which are nationally and preferably internationally accredited, having designed and aligned their qualifications frameworks with a view to regional or international mobility. To a moderate extent (Ranking 3-5;  $3.233 \geq \text{Mean} \geq 2.724$ ), The TVET institutions always develop and implement competence frameworks for TVET professionals by supporting continuing professional development (CPD) of TVSD teachers and trainers especially through pre-service, TVET-specific teacher education that includes training on issues of TVSD relevance. This curriculum accreditation of the TVSD programmes in Kenya is likely to attract more students who will support the funding portfolio through fee payment and the government subsidy for every student enrolment.

**Rwanda:** From the findings above, to a great extent (Ranking 1-5;  $4.18 \geq \text{Mean} \geq 3.667$ ), the TVET institutions in Rwanda always support continuing professional development (CPD) of TVSD teachers and trainers while developing and implementing competence frameworks for TVET professionals. They equally ensure that existing TVSD programmes are nationally accredited such that new TVSD programmes are both nationally and preferably internationally accredited, having designed and aligned their qualifications frameworks with a view to regional or international mobility. They further to a great extent provide pre-service, TVET-specific teacher education that includes training on issues of TVSD relevance. To a great extent this curriculum accreditation of the TVSD programmes in Rwanda is likely to attract more students who will support the funding portfolio through fee payment and the government subsidy for every student enrolment.

**The Gambia:** From the findings above, to a moderate extent (Ranking 1-5;  $3.2941 \geq \text{Mean} \geq 2.944$ ), the TVET institutions in Gambia always ensure that existing TVSD programmes are nationally accredited especially as they develop and implement competence frameworks for TVET professionals to make sure that new TVSD programmes are both nationally and preferably internationally accredited, having designed and aligned their qualifications frameworks with a view to regional or international mobility. Further, to a modest extent they have always supported continuing professional development (CPD) of TVSD teachers and trainers by providing pre-service, TVET-specific teacher education that includes training on issues of TVSD relevance. Therefore, to modest extent this curriculum accreditation of the TVSD programmes in Gambia is likely to attract more students who will support the funding portfolio through fee payment and the government subsidy for every student enrolment.

In summary across the three countries, the accreditation particularly in support of the shift from a traditional TVET approach to a more holistic and inclusive TVSD approach shall ensure that existing TVSD programmes are nationally accredited such that new TVSD programmes are both nationally and preferably internationally accredited, having designed and aligned their qualifications frameworks with a view to regional or international mobility while focusing on supporting continuing professional development (CPD) of TVSD. This will enhance the market visibility while attracting more students for enrolment and investors for joint partnerships.

## 4.5. TVSD Programmes Market and Demand Analysis

The attractiveness and motivation to fund any TVSD is determined by its marketability of the TVSD programmes. The TVSD programmes market orientation is related to the study objective *towards understanding how to transition from the TVET funding model to TVSD funding mechanisms*. The finding on the TVSD programmes market orientation are discussed below.

### 4.5.1. National Market Orientation of the TVSD Programmes

The TVETs were asked to indicate the extent do they agree with a number of statements with regard to the market orientation of the TVSD programmes in their countries on a five-likert scale where 1= Very small extent, 2 = Small Extent, 3 = Moderate Extent, 4 = Great Extent, 5 = Very Great Extent. The findings from each country are given below.

The TVETs were asked to indicate the extent do they agree with a number of statements with regard to the findings on national market orientation of the TVSD programmes in the three countries are given below.

**Table 15: National Market Orientation of the TVSD Programmes**

National Market Orientation of the TVSD Programmes	Kenya			Rwanda			The Gambia		
	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank
The employers offer end support to TVSD programmes that do not follow a clear market orientation	2.94	1.55	4	3.13	1.51	4	2.65	1.32	3
The TVET institutions have designed new TVSD programmes taking into account the current and emerging needs of the local market and the recommendations	2.94	1.55	3	3.31	1.20	3	2.56	1.09	4
The TVET institutions have realigned existing TVSD programmes and certification, as needed, to the current and emerging needs of the market so as to maximize gainful employment of TVET graduates	3.28	1.36	1	3.56	1.09	1	3.18	1.42	1

The TVET institutions set out new TVSD programmes by considering available market evaluations or assessments that identify and anticipate the specific hard and soft skills needed to successfully engage in employment opportunities	3.29	1.40	2	3.47	1.30	2	2.71	1.36	2
<b>Valid N (listwise)</b>	<b>30</b>			<b>15</b>			<b>16</b>		

Source: TVSD Survey Data, 2023

**Kenya:** To a moderate extent (Rank 1-4;  $2.900 \geq \text{Mean} \geq 2.500$ ), the TVET institutions have realigned existing TVSD programmes and certification, as needed, to the current and emerging needs of the market so as to maximize gainful employment of TVET graduates by considering available market evaluations or assessments that identify and anticipate the specific hard and soft skills needed to successfully engage in employment opportunities taking into account the current and emerging needs of the local market and the recommendations as the employers offer end support to TVSD programmes that do not follow a clear market orientation. There is need to refocus the market orientation to enhance the funding from the private and public alternative financing for TVSD among TVETs in Kenya.

**Rwanda:** To a great extent (Ranking 1-2;  $3.56 \geq \text{Mean} \geq 2.500$ ), the TVET institutions have realigned existing TVSD programmes and certification, as needed, to the current and emerging needs of the market so as to maximize gainful employment of TVET graduates by considering available market evaluations or assessments that identify and anticipate the specific hard and soft skills needed to successfully engage in employment opportunities. To a moderate extent (Ranking 3-4;  $3.31 \geq \text{Mean} \geq 3.13$ ), the TVET institutions have taken into account the current and emerging needs of the local market and the recommendations as the employers offer end support to TVSD programmes that do not follow a clear market orientation. There is need to refocus the market orientation to enhance the funding from the private and public alternative financing for TVSD among TVETs in Rwanda.

**The Gambia:** To a moderate extent ( $3.17 \geq \text{Mean} \geq 2.5625$ ), the TVET institutions have realigned existing TVSD programmes and certification, as needed, to the current and emerging needs of the market so as to maximize gainful employment of TVET graduates as the employers offer end support to TVSD programmes that do not follow a clear market orientation by considering available market evaluations or assessments that identify and anticipate the specific hard and soft skills needed to successfully engage in employment opportunities taking into account the current and emerging needs of the local market and the recommendations. There is need to refocus the market orientation to enhance the funding from the private and public alternative financing for TVSD among TVETs in Gambia.

#### 4.5.2. Types of Human Resources that are Required by Employers from TVSD

The following are the types of human resources that are required by employers in from TVSD programmes.

**Kenya:** The following are the types of human resources that are required by employers in Kenya from TVSD as provided by TVET institutions to contribute for industrial development in the country:

- a. To build up a well-established TVSD training program for teachers (TOT)
- b. To emphasize on more TVSD hands-on skills rather than theoretical education;
- c. To establish well-prepared TVSD internship programs among all educational institutions
- d. To prepare market best-matched TVSD education curriculums

**Rwanda:** The following are the types of human resources that are required by employers in Rwanda from TVSD as provided by TVET institutions to contribute for industrial development in the country:

- a. To build up a well-established TVSD training program for teachers (TOT)
- b. To emphasize on more TVSD hands-on skills rather than theoretical education;
- c. To prepare market best-matched TVSD education curriculums
- d. To prepare market best-matched TVSD education curriculums;
- e. To emphasize on more TVSD hands-on skills rather than theoretical education

#### **4.5.3. Demand Level of TVSD Provided by TVET Institution to Promote Industrial Development and Innovation**

The transition in financing the TVSD other than TVET should be informed by the demand levels. The TVET institutions were asked to indicate the level of the demand relevant to each TVSD with the intention to promote industrial development and innovation in the country as currently provided by the TVET institution in support of the paradigm shift from a traditional TVET approach to a more holistic and inclusive TVSD approach.

The respondents were asked to indicate the level of demand for TVSD courses by rating them based on a scale range *where 1= low demand; 2 = Medium Demand and 3 = High Demand*. The level of the demand relevant to each TVSD provided by TVET institution in the three countries to promote industrial development and innovation in support of the paradigm shift from a traditional TVET approach to a more holistic and inclusive TVSD approach are presented below.

**Kenya:** From the findings, the TVSD courses which are on **high demand** in support of the paradigm shift from a traditional TVET approach to a more holistic and inclusive TVSD approach (Ranking 1-6;  $2.67 \geq \text{Mean} \geq 2.48$ ) are: information and communication technology, agriculture and food processing, engineering, hospitality, electrical/electronic, digital business planner and mechanical engineering. The other TVSD courses with high demand in Kenya are: automotive engineering, welding and fabrication, industrial mechatronics and automation, housing, and blue economy skills as sought after by employers based on the industrialization pillar of the government's Big-Four Agendas. The rest have a modest demand (Ranking 7-21;  $2.43 \geq \text{Mean} \geq 1.58$ ). The focus on TVSD funding in Kenya should focus on those courses with high demand as sought after by employers in support of the paradigm shift from a traditional TVET approach to a more holistic and inclusive TVSD approach.

**Table 16: Demand Level of TVSD Provided by TVET Institutions**

Demand Level of TVSD	Kenya			Rwanda			The Gambia		
	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank	Mean	Std. Dev.	Rank
Information and Communication Technology	2.6667	.54667	1	2.6154	.50637	1	2.2692	.77757	4
Agriculture and food processing	2.5862	.56803	2	2.2308	.43853	9	2.7600	.52281	1
Engineering	2.5714	.63413	3	2.0909	.70065	13	2.1304	.81488	8
Hospitality	2.5667	.50401	4	2.5385	.66023	2	2.1667	.76139	6
Electrical/Electronic	2.5333	.57135	5	2.2308	.43853	8	2.6923	.61769	2
Digital business planner (who has capability to promote digital transformation in a company and/or create new business with digital technology)	2.5000	.74536	6	2.1667	.57735	10	2.1304	.81488	7
Mechanical Engineering	2.4828	.50855	7	2.0714	.73005	15	2.0000	.78019	13
Application engineers (programmers)	2.4286	.69007	8	2.2500	.62158	5	2.0833	.88055	9
Civil Engineering	2.3333	.66089	9	2.2308	.59914	7	2.0435	.87792	11
IT/Business Consultants (who has capability to support CEO and CIO to set and implement ICT strategy in a company)	2.3333	.66089	10	2.0833	.90034	14	2.0800	.81240	10
Infrastructure engineers	2.3333	.67937	11	2.2500	.75378	4	2.2500	.79400	5
Electric communication	2.1786	.66964	12	2.2308	.72501	6	2.0400	.78951	12
Renewable energy	2.0370	.85402	13	2.0833	.79296	12	1.8750	.89988	15
Irrigation and Drainage technology	2.0000	.80000	14	2.0833	.79296	11	1.8400	.89815	18
Operators	1.9231	.74421	15	1.8333	.71774	21	1.7083	.75060	21
Forest resources management	1.8889	.75107	16	1.9091	.70065	20	1.8000	.86603	20
Project managers	1.8889	.80064	17	1.9167	.79296	19	1.8261	.83406	19

System architects	1.8750	.67967	18	2.0000	.81650	18	1.9130	.94931	16
Wild life management/ tourism	1.7407	.85901	19	2.2500	.62158	3	1.9167	.77553	14
English language	1.7308	.72430	20	1.7857	.69929	22	2.3182	.64633	3
Veterinary Technology	1.6538	.79711	21	2.0000	.67937	16	1.8750	.89988	17
Mining Engineering	1.5769	.70274	22	1.9167	.66856	17	1.6250	.87539	22
<b>Valid N (listwise)</b>	<b>22</b>			<b>10</b>			<b>19</b>		

Source: TVSD Survey Data, 2023

**Rwanda:** From the findings, only two TVSD courses are on **high demand** in support of the paradigm shift from a traditional TVET approach to a more holistic and inclusive TVSD approach (Ranking 1-2;  $2.61 \geq \text{Mean} \geq 2.53$ ) in Rwanda are: Information and Communication Technology and Hospitality. The other TVSD courses with high demand in Rwanda are: fashion design in modeling, robot, drones, piloting, building construction, land surveying, interior design, electronic and telecommunication and wood technology. The rest have a modest demand (Ranking 3-21;  $2.25 \geq \text{Mean} \geq 1.79$ ). The focus on TVSD funding in Rwanda should focus on those courses with high demand.

**The Gambia:** From the findings, the TVSD courses which are on **high demand** in support of the paradigm shift from a traditional TVET approach to a more holistic and inclusive TVSD approach (Ranking 1-2;  $2.7600 \geq \text{Mean} \geq 2.692$ ) in Gambia are: agriculture and food processing; and electrical/electronic. The other TVSD courses with high demand in Gambia are: technical drawing, auto mechanic, plumbing, construction, wood work, home science, arts and craft metal work, applied electricity and agricultural science. The rest have a modest demand (Ranking 3-21;  $2.318 \geq \text{Mean} \geq 1.625$ ). The focus on TVSD funding in Gambia Should focus on those courses with high demand.

#### 4.5.4. The Number of Interns Accepted by Employers from TVETs

**Kenya:** It was found out that most employers (71.4%) in Kenya had taken between 1-5 interns in 2022 periodically on yearly basis. The employers were 94% satisfied with the skills of the interns. Further, 84% of the employers will always consider hiring the interns if they have good skills and if there are opportunities with adequate budgetary provision.

**Rwanda:** It was found out that most employers (52%) in Rwanda had taken between 6-10 interns in 2022 but not periodically. The employers were 100% satisfied with the skills of the interns. Further, 66% of the employers will always consider hiring the interns if they have good skills and if there are opportunities with adequate budgetary provision.

#### 4.5.5. Recruitment of Employees from TVET Graduates (Employers)

The number of TVET graduates hired during the last 4 years (2019-2022) by employers in Kenya and Rwanda is given below.



**Kenya:** Although the sample was small, the number of graduates being hired is on the rise except in 2020. This confirms the marketability of the TVET graduates. Among newly hired TVET-graduates, six of them were accepted as student interns previously. The information on the department/specialization where the newly employed person from the TVET institution graduate from/in was not available.

**Table 17: Number of TVET Graduates Hired During the Last 4 Years**

Year	2019	2020	2021	2022
Number in Kenya	12	2	16	13
Number in Rwanda	7	25	13	13

Source: TVSD Survey Data, 2023

**Rwanda:** Although the sample was small, the number of graduates being hired is on the rise from 7 in 2019 to 13 in 2022. This confirms the marketability of the TVET graduates. Among newly hired TVET-graduates, four (4) of them were accepted as student interns previously. The information on the department/specialization where the newly employed person from the TVET institution graduate from/in was not available.

## 4.6. Understand the Paradigm Shift from TVET to TVSD

The paradigm shift from TVET to TVSD requires a number of initiatives especially the networking with the industry, development of the TVSD-friendly policies, the identification of the gaps and countermeasures towards operationalization of TVSD. These initiatives, gaps, countermeasures and policy documents by the countries that will: (i) inform the study on the different incentives provided by the government to promote TVSD; (ii) help one to make informed decisions as whether governments are embracing the concept of technical and vocational education and training or TVSD; and (iii) lastly to demonstrate the different funding mechanisms for TVSD in Africa and successful examples of funding mechanisms that have worked. The following subsections will briefly discuss these issues as highlighted below.

### 4.6.1. Affiliation of TVET Institutions to Industry Associations (Country-specific)

TVET institutions need to produce for the market and learn as much as possible from the industry. The industry has the most modern and adaptive technologies which the learners (through attachment or industrial internship) and graduates (through membership for professional standardization and membership) can enhance their skills, certification and marketability. The TVET institutions were asked to list their key membership of industry association(s) to which the TVET institution belongs, and the findings are presented below.

The industry associations that have shaped the technical vocational training and training in specific countries working towards Technical Vocational Skills Development are listed below in the order of intensity of interactions:

**Table 18: Affiliation of TVET Institutions to Industry Associations**

Affiliations in Kenya	Affiliations in Rwanda	Affiliations in The Gambia
<ul style="list-style-type: none"> <li>• Technical Vocation Education Training Authority (TVETA)</li> <li>• Kenya Association Technical Training Institutions (KATTI)</li> <li>• National Industrial Training Authority (NITA)</li> <li>• Kenya Coast Tourist Association</li> <li>• Federation of Kenya Employers (FKE)</li> <li>• Jua Kali Association</li> <li>• Centurion Systems</li> <li>• The Kenya Elders Association</li> </ul>	<ul style="list-style-type: none"> <li>• The Government of Rwanda</li> <li>• Parents Associations</li> <li>• NAQAA</li> <li>• APEJERWA NYANGE - Educate Rwanda</li> <li>• Rwanda Muslim Community</li> <li>• Josephite Brothers Congregation/Catholic Church</li> <li>• Initiative Don Bosco</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Basic and Secondary Education - MoBSE</li> <li>• Ministry of Higher Education, Research, Science and Technology - MoHERST</li> <li>• Government of Gambia</li> </ul>

Source: TVSD Survey Data, 2023

**Kenya:** For instance, TVETA as a regulator through regular policy guidelines has shaped technical vocational training and skills development as Kenya is currently admitting adult learner based on their years of industry experience as opposed to the prior academic scores. KATTI is a professional body that co-ordinates the activities of Technical Training Institutes in Kenya which has been in existence since 1997. The affiliation of the TVETs in Kenya has ensured that all activities relating to TVSD are centrally coordinated thereby providing a common forum for identifying common interests to the TVETs and determining strategies for addressing such issues for the purpose of the qualitative and quality improvement of Technical Education and Training and TVSD in Kenya.

Jua Kali Association, Kenya Coast Tourist Association and FKE works with TVET institutions to ensure that their programs align with the needs of employers, they also play a stake in curriculum development for alignment to the market needs while supporting TVSD students in work placement opportunities in Kenya to ensure quality and relevance of TVSD. The government has a sound framework to guide the collaborations and affiliations to delimit any obstacles and challenges.

**Rwanda:** The affiliations with NAQAA, NYANGE, Catholic Church and Don Bosco have ensured support to the Government of Rwanda's efforts to improve the quality and relevance of TVSD, and especially towards the achievement of national development goals premised on sufficient and appropriate TVSD competencies (skills, knowledge, and attitudes) which can drive the continued social and economic development of the country

**The Gambia:** The affiliations between TVET institutions and industry associations are basically aimed at improving the quality and relevance of TVSD in Gambia as coordinated by the two ministries of MoBSE and MoHERST.

In summary, the affiliations across the three countries TVET institutions and industry associations are aimed at ensuring the TVSD programs are marketable, relevant and the curricula are derived from the national aspirations and skill needs.

#### 4.6.2. Major Issues and Problems Currently Faced by the TVET Institutions (Country-specific)

There are a number of major issues and problems currently faced by TVET institution in their day-to-day operations and activities. The TVETs were asked to indicate the major issues and problems which are country-specific from a list of multiple items including “others” that might have not been listed and the findings are presented below for every country.

**Table 19: Major Current Issues and Problems Facing TVET Institutions**

Major Current Issues and Problems	Kenya			Rwanda			The Gambia		
	Freq. (N)	Perc. (%)	Rank	Freq. (N)	Perc. (%)	Rank	Freq. (N)	Perc. (%)	Rank
Market	12	40	1	8	47	1	5	19	4
Access to financial sustainability advisory services	12	40.0	2	4	24	4	17	63	1
Human resource development	10	33.3	3	6	35	2	9	33	3
Access to financial institutions	10	33.3	4	5	29	3	9	33	2
<b>Total</b>	<b>30</b>	<b>100.0</b>		<b>11</b>	<b>100.0</b>		<b>28</b>	<b>100.0</b>	

Source: TVSD Survey Data, 2023

**Kenya:** The major issues and problems currently faced by TVET institutions in Kenya in their day to day operations and activities are market for their graduates & their products; and limited access to financial sustainability advisory services to enhance their financial sustainability or on mechanisms to seek alternative funding for TVSD programmes in the institutions.

The other key issues and problems currently faced by TVET institutions in Kenya in their day to day operations and activities include: Lack of sufficient trainers of trainers and training halls; inadequate training equipment and facilities; poor transport and Communication Network, inadequate accommodation and infrastructural facilities; low enrolment due to location and lack of hostels; strained capitation/operation grants from the Government; delayed disbursement of capitation/Grants; lack of basic infrastructure especially boarding facility, library/resource Centre, Internet access/connectivity and power connectivity; inadequate and inconsistent financing funding of training programmes; fragmented TVET ecosystem; limited adoption of technology; negative perception about TVETs among Kenyans and other office staff; delayed Higher Education Loans Board (HELB) loan for trainees; access to financial resources to run daily operations.

The funding related issues facing the TVETs in Kenya are: limited access to financial sustainability advisory services to enhance their financial sustainability or on mechanisms to seek alternative funding for TVSD programmes in the institutions; strained capitation/operation grants from the

Government; inadequate and inconsistent financing funding of training programmes; delayed HELB loan for trainees; and access to financial resources to run daily operations.

**Rwanda:** The major issues and problems currently faced by TVET institutions in Rwanda in their day to day operations and activities are market for their graduates & their products; and human resources management while the one with the least score of 24 percent is the limited access to financial sustainability advisory services to enhance their financial sustainability or on mechanisms to seek alternative funding for TVSD programmes in the institutions.

The other key issues and problems currently faced by TVET institutions in Rwanda in their day to day operations and activities include: inadequate security infrastructure especially securing the compound; inadequate boarding facilities especially for the female trainees; limited mobility facilities for the trainees especially utility buses; inadequate healthy emergence facilities especially utility vans to take trainees to the hospital when they are sick; insufficient teaching and learning facilities/equipment; lower school and training fees that doesn't match the market economic trends against the cost of living; insufficient training equipment; building Infrastructures and small scale irrigation scheme; access to internship for trainees; and lack of electricity in rural areas doesn't not favorable to students.

The funding related issues facing the TVETs in Rwanda are: inadequate boarding facilities especially for the female trainees; limited lower school and training fees that doesn't match the market economic trends against the cost of living; insufficient training equipment; limited access to internship for trainees; and lack of electricity in rural areas doesn't not favorable to students

**The Gambia:** The major issues and problems currently faced by TVET institutions in Gambia in their day to day operations and activities are: access to financial institutions especially for the private TVETs coupled with the limited access to financial sustainability advisory services to enhance their financial while seeking alternative funding for TVSD programmes in the institutions.

The other key issues and problems currently faced by TVET institutions in Gambia in their day to day operations and activities include: insufficient training tools and equipment; the school improvement grant cannot sustain the school's day to day expenditure; the school finds it very difficult to buy teaching materials for the TVET programme; and lack of teaching and learning materials/tools in certain TVET programme.

The funding related issues facing the TVETs in the Gambia are: access to financial institutions especially for the private TVETs coupled with the limited access to financial sustainability advisory services to enhance their financial sustainability or on mechanisms to seek alternative funding for TVSD programmes in the institutions; the school improvement grant cannot sustain the school's day to day expenditure; and limited funds to buy equipment/tools for training and learning.

#### **4.6.3. Country's National Policy Guiding TVET institution's Alternative Financing for TVSD**

The TVETs were asked to provide the latest version of any published documents or government's URL addresses which describe the country's national policy which has impacted on the operations of

their TVET institution's alternative financing for TVSD; and the country specific responses are given below.

**Kenya:** Kenya's latest version of published documents and national policy guiding TVET institution's alternative financing for TVSD include: TVET financing Policy; TVETA Strategic Plan 2019-2025; CDACC Strategic Plan 2021-2025; KNQA Strategic plan 2020-2025; TVET Sector plan for education and training 2018-2022; TVET ACT 2013 (Revised in 2015); Sessional Paper no 1 of 2019; National TVET Blue Print (2025); National Skills Development Guidelines, 2020; Income Generating Activities (IGA) policy; Capitation and development grants; Big 4 Agenda; Performance Contracting Policies and Scheme of Service for Vocational and Technical Trainers; Public service commission; The Digitization of TVET and Skills; TVET Blueprint; and TVET Financing Policy (The documents are not available in their digitized version but in PDF and hardcopy versions). The Kenyan government's URL addresses which describe the country's national policy policies with regard to the operations of their TVET institution's alternative financing for TVSD are in annex VI.

According to the employers in Kenya, the government's TVSD/TVET policy should include the following its operation/management, academic curriculums, students/trainers/teachers' activities:

- a. Needs to be updated to in cooperate the dynamism of the world
- b. The government should ensure that TVET institutions are well funded so that various
- c. policies are actualized as opposed to being left at theoretical level
- d. Materials for training should be deployed for both learning and assessment
- e. Funding, sourcing for both funds and opportunities, monitoring and evaluation
- f. Paid industry based learning
- g. Provide internship to TVET interns, support in the acquisition of training equipment
- h. The private sector needs to be incorporated as partners to undertake some specific funding of some programs which may even involve sponsorship of trainee pursuing specific courses
- i. There is need for more private sector participation in TVET funding.

**Rwanda:** Rwanda's latest version of published documents and national policy guiding TVET institution's alternative financing for TVSD include: National Strategic Transformation 1 (NST1); Guidelines of Industrial attachment program; and TVET Reform Policies 2022-2023. The Rwanda government's URL addresses which describe the country's national policies which have impacted on the operations of their TVET institution's alternative financing for TVSD are in Annex VII. Rwanda's key players in the development of national policy guiding TVET institution's alternative financing for TVSD include:

- a. A National TVET Qualifications Framework (NTQF). The National Qualifications Framework will ensure mobility and skills development at all levels and includes classifications for all economic sectors. The NTQF specifies the different occupational levels and the occupational standards indicating the learning outcomes in terms of what a learner is able to do as result of the learning process.
- b. The National Occupational Standards. Occupational Standards describe the competence a person has to reach in order to be considered as qualified at a given level in a given field. Competence includes skills, knowledge and attitudes required to perform a specific occupation.

- c. National Examination and Certification Framework. For all defined qualifications levels, examinations and certification will be offered by a legally competent institution.
- d. Labour Market Information System (LMIS). A reliable LMIS will provide with precise and concise information on the needs of Rwanda employers and thus the type of curriculum to implement in Rwanda.
- e. Business Incubation (Entrepreneurship Development) facility to provide support services to up-coming entrepreneurs with lower vocational skills.

According to the employers in Rwanda, the government's TVSD/TVET policy should include the following its operation/management, academic curriculums, students/trainers/teachers' activities should be to minimize internship during teaching period, they can plan it in holidays.

**The Gambia:** The Gambia's latest version of published documents and national policy guiding TVET institution's alternative financing for TVSD include: National TVET Committee Review; National Education Sector Policy 2016- 2030; TVET Roadmap 2020-2024; Youth Empowerment through TVET; and The Gambia - FINAL GCM REPORT - APRIL 2022. The Gambia government's URL addresses which describe the country's national policies which have impacted on the operations of their TVET institution's alternative financing for TVSD are in Annex VIII.

#### **4.6.4. Existence, Tenets, Outcomes and Main Drivers of a Formal TVET Financing Policy in the Ministry of Education**

**Kenya:** From the findings, the Ministry of Education confirmed that they have a formal TVET/TVSD financing policy and the main tenets of this TVET financing policy are:

- a. Resource mobilization strategies
- b. Resource utilization strategies
- c. Accountability of resources utilization strategies
- d. Guidelines on grants disbursement
- e. Guidelines on Business Development Enterprise Units
- f. Capitation

The Guidelines are geared towards making TVET offer training sustainably. The tenets revolve around sufficiency, equitable and prudent utilization of resources. The Guidelines are geared towards making TVET offer training sustainably although this financing policy is still in draft format.

The findings indicate that the main drivers causing these TVET financing policies to be formulated in Kenya are:

- a. Under funding of TVET
- b. To enable each individual to benefit from available limited resources
- c. The need for expanding TVET finance bases to cater for increased demand of TVET, and harmonization on application of funds across board and the need to inculcate prudence in resources utilization
- d. Rationalizing the fees as well as mobilizing resources for infrastructure development
- e. Limited accessibility, relevance, equity and quality of TVET,

- f. Lack of structured mechanism to construction, rehabilitate and equip TVET institutions
- g. Lack of Prioritization of TVET initiatives during budgeting.
- h. Lack of legislated financing guidelines/framework for TVET, TVET reforms in the country
- i. Aggressive competing financing interests between Basic Education, University Education and TVET

From the findings, the social and or economic outcomes which the TVET financing policies in Kenya are expected to bring about including:

- a. Availability of customized training equipment and learning materials
- b. Developing an attractive as well as inclusive and accessible TVET system
- c. Equitable application of resources
- d. Increased access to TVET
- e. Increased number of skilled work force
- f. Enhanced Research, Innovation, Entrepreneurial start- ups and incubation support services
- g. Equitable distribution of limited resources
- h. Established initiatives to finance infrastructure development
- i. Improved relevance, access, equity and equality in TVET
- j. Improved staffing levels and competencies
- k. Improved TVET quality and employability of youths
- l. Increased number of TVET institutions
- m. Positive perception of TVET in the country
- n. Rationalized TVET fee structure
- o. Skilled TVET graduates
- p. Strengthened Private sector and industry participation in TVET
- q. Sustainability in TVET Financing whereby main financing will be internally generated by the TVET Institutions and Government Financing will top-up to cater for affirmative action such as the catering for the vulnerable trainees in TVET.

**The Gambia:** From the findings, the Ministry of Education confirmed that they don't have a formal TVET/TVSD financing policy and as such there are tenets of this TVET financing policy. Gambia has not revised its first TVET Qualifications Framework (RTQF) since it was developed.

#### **4.6.5. Gaps Between National Policies, Implementation Plans and Achievements in the TVET Institution's Alternative Financing for TVSD (Country-specific)**

The execution of government policy is always expected to have some gaps between policies, implementation plans and achievements especially in the TVET institution's alternative financing for TVSD. The findings on these gaps which are country specific are presented in the following subsections.

##### ***Gaps Between National Policies, Implementation Plans and Achievements in the TVET Institution's Alternative Financing for TVSD in Kenya:***

67.7% of the respondents (TVETs) indicated that there are major gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in

Kenya. The most critical gaps include: delays in disbursements of funds, regulation of payable fees, poor state of economy affecting fees collection; the TVET institution's production units are not protected from the competition from other service providers; funding gap especially from the funding model on capitation whereby the capitation amount and time for disbursement is unpredictable; the disbursement of capitation has been a challenge and TVET institutions have always operated at deficits; there is no doable policy on income Generating Activities; and there is unguaranteed remittance of capitation per trainee against policy, erratic and arbitrary disbursement of HELB loans.

The reasons to the gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Kenya include: delayed disbursement, too little and limited government financing; delays in releasing funds due to inadequate funding and change in government priorities in addressing budgetary constraints; funding model is the biggest challenge especially the current one which appears unsustainable; government inability to support all round training needs for Special TVET trainees yet the cost of recurrent training expenditure is very expensive; inadequate finances to complete the defined plans; limited technology and limited or insufficient capital to start such production units; limited universal access to TVET and available training facilities and equipment gap; rapid changes in technology interrupting the defined plans; scarce financial resources hinder acquisition of adequate training facilities; short fall in budget due to lack of adequate trainers and poor fees payments; skills training in TVET and Industry skills expectation gap; some TVETs are too young to successfully start IGAs which also requires finances, which is nonstarter due to reduction in capitation meaning less fee is received from trainees hence low financial base; trainee inability to finance own training; non and delayed remittance of government commitment towards trainee fees; and higher suppliers costs of items and services.

According to the representatives from the employers of the graduates from the TVETs in Kenya, 75% of the key informants indicated that there are major gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Kenya. The most critical gaps include: government policies on recruitment and off course budget for taking care of new recruits is a heavy burden; most of the young institutions have not been equipped by the government hence the trainees are not well prepared to meet the industrial needs; skills mismatch between skills produced and industrial demand; the equipment for training in the TVET institutions are not necessarily what the industry is using in their operations; the staff capacity in TVET institutions is not adequate for industry processes; curriculum review lags behind technological changes in the industry counter measures; industry should supply, install, test and commission some of their industry equipment in the TVET institution and workshops; industry to allow the TVET instructors to work alongside their staff for purposes of capacity building and technology transfer new occupational standards from the industry to be infused in curriculum as soon as changes occur in the industry; and the problem of under budgets and unrealistic targets.

The counter measures to the gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Kenya are: funding model requires approach that leaves institutions stable; local leaders where the institution is built need to have plans or measures put in place to boost development; the funding programs should be continuous so as to cover a wider group of trainees and a wider range of trade areas; the TVET and TVSD programmes should target a wider range of trade areas; the TVET institutions should be encouraged to generate their own revenue as much as this requires heavy funding that TVETs are not able to acquire; there



is need for capacity building towards Improved internal incoming generation for self-sustainability; there is need to address the disbursement gaps through support and better funding to established institutions instead of channeling to newly poorly established Technical Vocation Training institutes (TVCs); there is need to develop and operationalize an at institutional level to enable public-private partnerships in financing the TVETs; there is need to have clear communication as to when capitation is disbursed; there is no clear guideline on income generating activities and sharing of revenue; and lastly TVET institutions may be mapped out to be industrial hubs and become teaching factories.

According to the ministry of education representatives, the gaps between the policy and its execution are dues to: strategies provided not fully funded at the implementation stage; M&E mechanisms are weak; shifting of priorities that relate to ruling parties' blue prints; this will be determined in due course as the implementation of the new plan gets underway; many trainees cannot supplement the government resources; new institutions build in constituencies but not equipped; lack or shortage of trainers hence challenge in equipping the trainees with adequate skills; and policy on capitation not clear since at time it's paid while other times it's not remitted and no stop.

### ***Gaps Between National Policies, Implementation Plans and Achievements in the TVET Institution's Alternative Financing for TVSD in Rwanda:***

52.9% of the respondents indicated that there are major gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Rwanda. The most critical gaps include: the curriculum is well elaborated but there are no books adapted to this curriculum even students' books; and there are gaps between policies, implementation plans and achievement in the TVETs are mainly related to financing for TVSD.

The reasons to the gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Rwanda are: inadequate financial to procure current teaching and learning materials; lack of school infrastructures like Refectory, dormitories and other TVET infrastructures; lack of sufficient equipment and less access to industrial attachment for TVSD; lack of sustainable financing; massive migration of trainees from one TVET to the other due to insufficient tools and equipment ; and the trainers mostly lack enough methodology to train the trainers and updating to the new technology.

According to the representatives from the employers of the graduates from the TVETs in Rwanda, the key informants indicated that there are major gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Rwanda. The most critical gaps include: competing demands on education budget with other sub-sectors such as basic education and higher education; difficulties in linking TVET development to national and district development; and competing capacity and skills of workers among the East African countries.

The counter measures to the gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Rwanda are: there is need for a clear policy on how to manage the funding from government, owner of the school and the parents within the school administration; and the need for an alternative TVET financing model has been developed to counter-finance the TVET subsector.

### ***Gaps Between National Policies, Implementation Plans and Achievements in the TVET Institution's Alternative Financing for TVSD in Gambia:***

54.4% of the respondents indicated that there are major gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Gambia. The most critical gaps include: financial gap due to inadequate financial support; funding gaps due to lack of alternative funding; insufficient human and material resources to efficiently implement and achieve the TVSD plan; lack of a clear TVSD Policy; the provision of funds for the implementation of any TVSD related-policy is a serious challenge; and there are no alternatives financing for TVET at which is tantamount to funding from the SIG and is only limited to the practical exams.

The reasons to the gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Gambia are: inadequate monitoring and evaluation mechanisms has led to a lack of accountability and awareness of the gaps between policies and achievements; insufficient financial resources allocated to TVET have hindered the implementation of development plans and policies; insufficient involvement and engagement of relevant stakeholders, including TVET staff, industry representatives, and communities, has led to gaps between policies and actual implementation; lack of access to financial and sustainability and advisory services; lack of teaching and learning materials; limited capacity in terms of skilled TVET staff, trainers, and administrators can hinder the effective implementation of TVET policies and plans; limited finance, lack of teaching materials and human resources in the areas of TVET.

There are gaps between the TVET development plan and our institution as a result of the limited tools at the institution's disposal; misalignment between TVET programs and the needs of the labor market has resulted into a gap between development plans and the actual situation; weak institutional capacity, lack of coordination among stakeholders, and ineffective governance structures can contribute to gaps between TVET development plans and their actual implementation.

The counter measures to the gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD in Gambia are: urgent need for collaboration among relevant stakeholders, including TVET staff, government agencies, industry representatives, and development partners, is crucial to identify and address the gaps in TVET policies, plans, and achievements, while exploring alternative financing options to support TVSD; advocating for increased funding, exploring alternative financing options, and prioritizing TVET within the national budget; strengthening institutions, enhancing coordination mechanisms, and establishing effective monitoring and evaluation systems; encouraging active participation through regular consultations, partnerships, and feedback mechanisms can help bridge the stakeholder engagement gap; there is need to conduct regular labor market assessments, engaging with industry representatives, and updating curriculum based on emerging trends can help address the skills mismatch gap; for proper implementation of the plans, there is need to provide access to the needed tools; investing in capacity building, teacher training programs, and professional development initiatives can help close the policy implementation capacity gap; need to training more personnel and provide basic materials in the areas of TVET; strengthening monitoring and evaluation frameworks, conducting regular assessments, and utilizing feedback to inform policy adjustments can be effective countermeasures; the policy is a cry

for the moon as it can't not be implemented due to limited financial support for its implementation; and materials have to be procured for teaching and learning process.

In summary, across the three countries it can be noted that while there are numerous gaps between national policies, implementation plans, and achievements in TVET institution's alternative financing for TVSD, focusing on the most critical ones allows for targeted and effective countermeasures. By addressing these key issues, Kenya, Rwanda, and Gambia can significantly improve their TVSD financing and, consequently, the quality and accessibility of their TVSD.

#### **4.6.6. The Employers Expectations from TVET Institutions on TVSD**

The following are the employers expectations from TVET institutions on TVSD:

**Kenya:** In general, the employers expect the following towards TVSD from TVET institutions:

- a. Implementation of policies as expected
- b. Funding and employment of more trainers
- c. Granting of attachment opportunities and even sponsorship of needy students
- d. More robust training especially on practical
- e. Funding and equipping of technical institutes
- f. Accomplished graduates who can handle all tasks as per occupational standards
- g. Rolling out the internship to acquire skill and job experience
- h. Well trained graduates equipped with generic skills, as a way of promoting their coping with change in skill needs
- i. Value addition in agriculture and related processes expert.

**Rwanda:** In general, the employers in Rwanda expect the following towards TVSD from TVET institutions:

- a. Rwandans people to be innovators and job creators
- b. to develop work values and attitudes of individuals towards professionalism expressed in quality, efficiency, creativity, adaptability, commitment, responsibility, and accountability, the spirit of service and genuine love of well
- c. To get good skills for their employability and develop their ability to learn with autonomy during their professional life without any forms of discrimination and prepare them to self-employment;
- d. To satisfy quantitative and qualitative needs of priority sectors by training required manpower for the relevant qualification areas to provide graduates with required skills for profession.

They equally expect the following with regard contents of operation/management, academic curriculums and students'/ teachers' activities: more course on building technology, marine engineering, clothing technology, applied technology, motor vehicle, ICT for developing software, engineering and smart climate as well as medical courses.

#### 4.6.7. The TVET Staff's View on the Status of Implementation of Policies and Plans on Alternative Financing for TVSD

TVSD and its financing is a new concept for most TVETs and hence there was need to check on the status of implementation of TVET policies and plans from the view of the TVET staff in relation to the country's TVET institution's alternative financing for TVSD. The findings on these staff's view of the status on alternative financing for TVSD which are country specific are presented in the following subsections.

**Kenya:** The following are the TVET staff's and employers' view on the status of implementation of policies and plans on alternative financing for TVSD: Alternative financing has assisted in the implementation of TVET policies and plans such as upscaling staff skills in areas such as industrial mechatronics; Development of income generating unit policy is yet to be released; The TVETs are also looking for alternative sources of finance by writing funding proposals to the MP, Governor and women Rep; They are also collaborating with the Ministry of housing to be able to produce affordable housing blocks to construct classrooms; Funds not adequate to support the TVSD implementations; Majority of the staff feel incompetent to implement TVSD and they perceive it to be full of uncertainty; The TVETs are gradually shifting away from KNEC courses to CBET courses that are geared towards skills development; The TVSD financing is at the initial stages; The TVSD financing requires formulation through the TVET funding body; There are very good TVSD policies and plans done but implementation is at an all-time low; There is high staff turnover since they are now well remunerated; There is urgent need to establish and operationalize Income Generation Units to provide alternative sources of revenue for TVSD; TVSD curriculum implementation requires a lot of resources, the shift from exam based to CBET requires more resources to be put in place.

The following are the employers of TVET graduates' view on the status of implementation of policies and plans in Kenya's TVET institution's alternative financing for TVSD: At 90% implementation, below expectations since staffing and resource provision is hindering effective implementation of the same; and on track as the policies are in place now and currently recruitment process for 1300 is ongoing. According to the ministry representatives in this study, TVET graduates' view on the status of implementation of policies and plans in Kenya's TVET institution's alternative financing for TVSD: it is at 70% of its implantation and might not be satisfactory.

**Rwanda:** The following are the TVET staff's view on the status of implementation of policies and plans in Rwanda's TVET institution's alternative financing for TVSD: The staff in TVETs view of the TVSD is good and interesting although they have a somewhat negative feel that TVSD is somehow difficult because of missing some materials; The TVETs are experiencing good performance although it requires hard work to find effective stakeholders for its successful implementation to enhance the education in Rwanda; The TVETs are implementing the TVET Policies by following the CBT/CBA as the government established funding; The TVSD requires its own revenues from parents' contribution and production unity; TVET staff are not yet well trained, they need training to adapt to current TVSD education; TVSD needs a lot of consumables materials which are not readily available and they consume resources; Develop TVET teacher development programs which ensure the both quality and quantity; Emphasize on initial and further training focused on practical, pedagogical and entrepreneurial skills concerning teaching in workshops and laboratories as well as strengthening

relationships to enterprises; Set up TVET teacher assessment which link with career pathway; and Provide other incentives so as to attract and retain TVET teachers in their profession.

**The Gambia:** The following are the TVET staff's view on the status of implementation of policies and plans on the Gambia's alternative financing for TVSD: Some general insights on how TVET staff members might view the implementation of TVET policies and plans in relation to alternative financing for TVSD; TVET staff members are foreseeing TVSD funding constraints especially at implementation of TVET policies and plans as challenging especially in procuring necessary equipment and resources, conducting teacher training programs, or updating curricula to meet evolving industry demands; TVET staff members are foreseeing TVSD funding uncertainty into the future especially due to insufficient funding which can lead to a lack of job security and limited career advancement opportunities for TVET staff, which will eventually demotivate teachers and trainers, affecting the quality of TVSD programs; TVET staff members are foreseeing TVSD challenge in training/learning infrastructure and facilities resulting from inadequate funding which can hinder the establishment and maintenance of modern infrastructure and up-to-date facilities for TVET institutions thus limiting the hands-on practical training opportunities for trainees; TVET staff members are foreseeing TVSD challenge due to technological advancements whereby TVET staff may face challenges in keeping up with the latest technological advancements in their respective fields due to limited funding for professional development and equipment acquisition thus impacting on the quality and relevance of TVSD programs; Alternative financing for TVSD, TVET staff actually view it as a potential solution to overcome funding constraints and enhance the implementation of TVET policies and plans thus through sensitization they are likely to have a positive perspective on alternative financing methods such as public-private partnerships, fundraising initiatives, skills development levies, and entrepreneurial activities; The implementation of TVSD is at slow pace; The recruitment for more skilled and competent personnel in TVSD is of great challenge since it is somehow very difficult to have trainers for the TVSD specialization areas; The status of TVET implementation in most TVSD institutions is just about 30% since the membership is encouraging but resources are lacking; TVSD funding is only from school improvement grant; and TVSD requires improvisation of materials suitable from TVET education from the environment and in the institution.

#### **4.6.8. Reasons and Countermeasures to The Year-By-Year Decline TVSD Programs' Budgetary Allocation in The Country's TVET Institutions**

The budget for providing education and various TVSD programs seems to be decreasing year by year as seen in the following country-specific results in the following subsections. The TVETs were asked to highlight some of the key reasons and what are considered as countermeasures in relation to their TVET institution's alternative financing for TVSD in their respective countries, and the findings are highlighted below.

##### ***Reasons and Countermeasures to the Year-By-Year Decline in TVSD Programs' Budgetary Allocation in Kenya:***

Kenya's budget data for TVET in these 3 fiscal years is given below.

**Table 20: TVET Budget Amount**

Fiscal Year	TVET Budget Amount	Budget Proportion to the whole (%)
2020	Kes 16,806 billion	0.58%
2021	KES 18,392 Billion	0.59%
2022	19,045 Billion	0.58%

Source: TVSD Survey Data, 2023

The average budget for TVETs is at 0.58% which is a very small amount. The subsector is likely to be underfunded. From the study findings, the budget flow for TVETs in Kenya starts from the National Treasury to the ministry and from ministry to the training institutes then to SDTVET where it's consolidated.

Although the allocation is showing an increase, this doesn't consumerate with the increased enrolment levels. The reasons to the year-by-year decline in TVSD programs' budgetary allocation in Kenya's TVET institution's alternative financing are: Capitation funding model seems to be unsustainable; Current economic challenges in the country; Dwindling funding from the government to students; High enrolment of trainees in TVET institutions has led to a decrease in the budget; Inability of students to fund their training; Many TVET institutions established in a short time whereby more funding for a new institution is necessary for establishment; More funds are channeled to free primary and secondary education programs, at the expense of Tertiary/TVET sector, thus decrease in funding; The annual increase of trainees' population due to 100% transition in the basic Education eventually leading to an increase of Government funding and training staff in relation to the trainees' population; The number of public TVET institutions is on the rise while funding is constant; There are several competing TVSD projects with higher political goodwill; and Too much competing needs in the ministry of Education- TVET with a limited budget.

*According to Employers of TVET graduates*, the reasons to the year-by-year decline in TVSD programs' budgetary allocation in Kenya's TVET institution's alternative financing are: Unrealistic financial targets and program monitoring procedures; Budget needs to be increased, government to source other players like public private partnerships; Increasing demand due to growing population without corresponding growth in economy; Government policy which is not entrenched in the constitution on capitation for students in TVET hence the need for TVET institutions to venture into production units for income generation; and Increased enrolment and depressed government allocation.

*According to Ministry of Education Representatives in Kenya*, reasons to the year-by-year decline in TVSD programs' budgetary allocation in Kenya's TVET institution's alternative financing are: Competing needs; Considerable budget is allocated to the basic education sector; Human resources requirements account for a large chunk of the resources committed to the sector; Reasons are increasing popularity of TVET thereby attracting more trainees and the competing interests between basic, university and TVET education and training; Lack of prioritization of TVET initiatives; Poor understanding of financial challenges and needs facing TVET; Negative perception towards TVET; More willing trainees leading to inadequate resources.

*The counter measures to the year-by-year decline in TVSD programs' budgetary allocation in Kenya's TVET institution's alternative financing include:* Adopt sustainability of training programmes and deploy those that have adequate enrolment; Establish and adopt cheaper methods of procurement of goods and services; Establish a trainee funding model with adequate bursary and scholarships and fee payment; ASAL areas to embrace TVET education, that they can be able to support the local TVETs so that they may support the institute financially; Designate TVETS institution as sagas and be allowed to charge fees as per the budget requirements; Due to constrained national budget needs, the government should engage more development partners and encourage public private partnerships for alternative TVSD financing; Due to inadequate government financing, the TVET institutions need to initiate income generating activities; Due to increasing government priorities, TVETs should enhance their efforts towards Income Generating Activities, enhanced collaborations with industry and other development partners; The Government funds are not adequate to fund all education programmes and TVET institutions have to find ways of generating some additional income; The government has prioritized other basic education programmes such as CBET and junior secondary schools; The TVET institution is not in a position to fund education and various TVSD programs due to financial constraints to run the institution; The TVETs should active their alternative sources of revenue generation collaboration with stakeholders to assist bridge the financial gap; There is need for the government has to prioritize TVET sector as economic drivers and enablers by increasing its funding basket; There is need increase in fee payable by trainees in addendum to the high enrolment of trainees in TVET; There is need to cap funding as pegged on realistic enrollment into the public TVET institutions from time to time; There is need to train the TVSD applicable curriculum to the current demand; TVET needs to be put separately from the ministry of education where basic takes a bigger chunk of money; and TVETs trainers to capacity build themselves using the own finances.

*According to Ministry of Education Representatives in Kenya, The counter measures to the year-by-year decline in TVSD programs' budgetary allocation in Kenya's TVET institution's alternative financing include:* Increasing parental obligations; Employing differentiated costing and budgeting for courses in TVET; Entrenching business development and enterprise units in TVETs for income generation; Forging partnerships and collaborations with an array of stakeholders; Create awareness on contribution of TVET to the economy; sensitize policy makes on TVET financing best practices; strengthen public private partnership; and Make TVET financing 7% percent of the total annual budget of the country.

***Reasons and Counter measures to the Year-By-Year Decline in TVSD Programs' Budgetary Allocation in Rwanda:***

*The reasons to the year-by-year decline in TVSD programs' budgetary allocation in Rwanda's TVET institution's alternative financing are:* Decreasing of financial support to TVETs; Less salary to the government employees in TVETs; There is a general increase of the cost of consumable materials and others materials; and the effects of economic downturn due to COVID19.

*The counter measures to the year-by-year decline in TVSD programs' budgetary allocation in Rwanda's TVET institution's alternative financing:* Since the need for TVET skills and resources have become limited, there is need for an intervention of private and non-governmental organization; The TVETs need more budgets for good learning hence the need to allocate budget for tools, materials

and equipment for better learning; There is need to emphasize on dynamic production units within the TVETs to boost revenue for the TVSD financing; There is need to seek partnerships from impact partners and stakeholders to invest in skills development; and the need to update TVSD curriculums year by year.

### ***Reasons and Countermeasures to the Year-By-Year Decline in TVSD Programs' Budgetary Allocation in the Gambia:***

*The reasons to the year-by-year decline in TVSD programs' budgetary allocation in the Gambia's TVET institution's alternative financing are:* Failure by the government to focus on TVSD as the government is not currently prioritizing TVET education as funds are not provided for the TVSD implementation; Reduction in enrollment as more and more students are moving to urban centers, earnings decrease and thus budget declines Financial resources mismanagement in the TVETs; Limited budget allocation to the education sector from the national budget and grants; Limited financial resources and competing priorities within the national budget have led to reduced allocations for education and TVSD programs; Instability or changes in government, corruption, and mismanagement have led to ineffective budget planning and inadequate funding for education and TVSD; Economic downturns, fluctuations in international aid, or changes in donor priorities have impacted on the availability of funds for education and TVSD.

*The counter measures to the year-by-year decline in TVSD programs' budgetary allocation in Gambia's TVET institution's alternative financing:* There is need for more Public-Private Partnerships (PPPs) to foster collaborations between the government, private sector, and non-governmental organizations to jointly finance and deliver TVSD programs through cost-sharing arrangements, corporate sponsorships, or donations; There is need to establish a Skills Development Levy on employers or industries to create a dedicated fund for TVSD through legislative support as a sustainable financing mechanism; There is need for TVETs to engage in Fundraising and Grants by actively pursuing grants from international organizations, development agencies, and philanthropic foundations that support education and TVSD initiatives. Additionally, institutions can engage in local fundraising campaigns to mobilize community support; There is need for the TVETs to embrace Entrepreneurial Initiatives by exploring income-generating activities such as offering fee-based courses, providing consultancy services, or establishing partnerships with industries for skills development and vocational training; There is need for the TVETs to focus on Technology-enabled Solutions by embracing digital platforms and online learning to reduce infrastructure costs and reach a wider audience for TVSD programs. This approach can include e-learning modules, virtual classrooms, and remote mentoring; There is need to lobby through Policy Advocacy by engaging in advocacy efforts to raise awareness about the importance of education and TVSD, and lobby for increased government funding or policy reforms that prioritize skills development; It is crucial for the government, educational institutions, and relevant stakeholders to work collaboratively to address the funding challenges in TVSD and ensure a sustainable and quality education system; and Technical education is indeed much needed, thus it needs to be prioritized for creating more technical institutions and providing adequate and relevant technical materials for enhancing capacity building in various technical area.



## 4.7. Mapping the Transition from the TVET to TVSD Training Concept and Funding Model/Mechanisms

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One of the expected outcomes from the study was to understand how to transition from the TVET to TVSD training concept and funding model/mechanisms. This section is out to check whether the current vocational training funding mechanisms focus exclusively on what is commonly referred to as technical and vocational education and training or do they embrace the concept of TVSD. The findings on how to transition from the TVET funding model to TVSD funding mechanisms are presented in the following subsections.

### 4.7.1. The Expected Roles of TVET Institutions in the Operationalization of the Concept of TVSD

The TVETs were asked to list some of the expected roles of their TVET institutions in the operationalization of TVSD in their countries and the responses are as below.

***The list some of the expected roles of TVET institutions in the operationalization of TVSD in Kenya are:***

- a. TVETs now provide conducive learning environment to trainers to acquire knowhow, provide opportunities to trainers to showcase their acquired knowledge.
- b. TVETs have concrete plans to provide a multi-level system of post-secondary school education and training programmes relevant to the needs of the community covering a wide range of fields and levels with provision for recognition of prior learning and flexibility of transition between programmes; collaborate with recognized universities for the conduct and award of degree programmes in technology; with powers to grant higher diplomas, diplomas, certificates, or other academic qualifications which may, for the time being, be authorized by the Academic Policy of the National Polytechnic.
- c. TVETs have developed funding proposals to attract alternative funding from private partners to develop curriculum that fits the market demand, provide work place based training, provide incubation and innovation hubs and to train those in the industry on the new technology.
- d. TVETs have mechanisms in place to impart technical skills through training; research, innovation and development; entrepreneurial skills for self-employment and job creation; and digital skills for on-line job market
- e. TVETs have provided a budgetary allocation to sponsor skills development to fill identified gaps while employing staff with specific skills identified and missing from the institution
- f. TVETs have played a key to demonstrate that TVSD has led to the development and delivery of high-quality training programs that are relevant to the needs of industry and the labor market by providing opportunities for learners to acquire practical skills and knowledge through internships, apprenticeships, and other work-based learning experiences.
- g. TVETs have played a key to demonstrate that TVSD has created partnerships with industry and employers to ensure that training programs are up-to-date, relevant, and responsive to changing market needs by fostering innovation and entrepreneurship among trainees from training in business and entrepreneurship skills.

- h. The integration of TVET into national development plans and strategies, and working with other stakeholders to ensure that TVET is recognized as a key driver of economic growth and development.
- i. TVETs have played a key to demonstrate that provision of access to alternative financing mechanisms for TVSD, such as loans, grants, and scholarships, to ensure that all learners have access to quality TVET programs regardless of their financial situation.
- j. TVSD has encouraged and supported lifelong learning and skills development, including continuing education and professional development opportunities for TVET graduates and workers in the industry.
- k. TVSD approach of training of trainees and capacity building for employees and collaboration with industries which develop manpower for economic growth.
- l. TVSD has enabled TVET institutions to focus on Competence-Based Education and Training (CBET) which is skills based unlike KNEC exam
- m. TVSD promotes RPL so that experienced youth with no certificate can get them and therefore be able to practice their skills.
- n. TVSD has necessitated the recruitment of trainees for skills and knowledge acquisition, collaboration with industry to bridge skills gap, capacity building of staff and practical industrial attachments and internships
- o. TVSD is a pedal to moving towards industrialization by offering of skills for self-reliance, stimulating development and incubating business ideas.
- p. TVSD provides relevant and quality training especially through the provision of entrepreneurial skills.
- q. TVSD through industry partnerships provides expert trainers, state-of-the-art facilities-equipment, mentorships and incubation programmes

***The list some of the expected roles of TVET institutions in the operationalization of TVSD in Rwanda are:***

- a. TVETs have played their role to show that TVSD can integrated Rwanda into regional economic blocks while addressing international and regional concerns for TVET
- b. TVETs have played their role to show that TVSD can reduce unemployment rate of the youth in Rwanda through coordinated skills development, soliciting external funding for TVET, collaboration with the private sector to offer quality hands-on skills, improving the level of innovation and creativity of the students and providing technical skills that impact labor market.
- c. TVETs have played their role to show that TVSD can lead to increase in the number of employees with the skills of technical field, youth job creation and innovation, poverty reduction and increase/speed up technology in the country to satisfy the local market.
- d. TVETs have played their role to show that TVSD can stimulating economic growth, improves employment and wage of workers, reduces poverty and create job access.
- e. TVSD can train skilled people who are able to create jobs and capable to increase their income and contribute towards the development of the country by training learners to be job creators through self-employment and increasing country's economic

***The list some of the expected roles of TVET institutions in the operationalization of TVSD in the Gambia are:***

- a. TVET institutions play a crucial role in TVSD in the Gambia. Here are some expected roles that TVET institutions typically fulfill.
- b. The new pedagogy is child-centered that will avail the creativity of the students through critical thinking.
- c. Skill Training and Education whereby TVET institutions are responsible for providing practical and theoretical training to equip individuals with the skills and knowledge needed for various trades and vocations. They offer a range of programs and courses that align with the needs of the labor market, providing students with relevant technical skills.
- d. TVET institutions play a crucial role in TVSD through skill training and education whereby TVET institutions are responsible for providing practical and theoretical training to equip individuals with the skills and knowledge needed for various trades and vocations. They offer a range of programs and courses that align with the needs of the labor market, providing students with relevant technical skills.
- e. TVET institutions play a crucial role in TVSD through curriculum development whereby TVET institutions develop and update curricula to ensure their programs reflect current industry standards, technological advancements, and market demands. They collaborate with industry experts, employers, and professional bodies to design curricula that meet the changing needs of the workforce.
- f. TVET institutions play a crucial role in TVSD through industry engagement and partnerships whereby TVET institutions foster relationships and partnerships with industries, businesses, and employers. They collaborate closely with these stakeholders to align training programs with industry requirements, facilitate work-based learning opportunities such as apprenticeships and internships, and ensure graduates possess skills that meet industry needs.
- g. TVET institutions play a crucial role in TVSD through workforce development and continuing education whereby TVET institutions contribute to the continuous development of the workforce by offering lifelong learning opportunities, upskilling, and reskilling programs. They provide avenues for individuals to enhance their existing skills or acquire new ones to adapt to changing industry demands.
- h. TVET institutions play a crucial role in TVSD through quality assurance and certification whereby TVET institutions ensure the quality and standards of TVSD programs by implementing robust quality assurance mechanisms. They conduct assessments, evaluations, and examinations to certify students' competencies and issue recognized qualifications and certifications.
- i. TVET institutions play a crucial role in TVSD through research and innovation whereby TVET institutions engage in research and innovation activities to identify emerging industry trends, develop new training methodologies, and enhance the effectiveness of TVSD programs. They contribute to knowledge creation and dissemination within the field of technical and vocational education.
- j. TVET institutions play a crucial role in TVSD through career guidance and counseling whereby TVET institutions provide career guidance services to help individuals make informed decisions about their educational and career paths. They assist students in identifying suitable

TVSD programs and career opportunities based on their interests, aptitudes, and labor market requirements.

- k. TVET institutions play a crucial role in TVSD through entrepreneurship and job creation whereby TVET institutions foster an entrepreneurial mindset among students and support them in developing skills for self-employment. They provide entrepreneurship training, mentorship, and access to resources to enable students to start their own businesses and contribute to job creation.
- l. TVET institutions play a crucial role in TVSD through reinforce technical vocational education and training system whereby TVET institution create an enabling environment that will give young people, especially girls, a better chance to learn skills.
- m. TVETs in support for TVSD have encourage self-employment and youth empowerment self-employment and economic development to make the youths self-employable, to curb the deadly illegal migration to Europe and Middle East, and to reduce the delinquencies among the youths.
- n. TVETs in support for TVSD have initiated curriculum and skills development, training delivery, apprenticeship and internship, industry partnership, job placement, research and innovation.

#### **4.7.2. TVSD Graduates Expected Role in Promoting Innovation Within the National Innovation Ecosystem**

To complement the role played by the TVETs in promoting/ operationalization of TVSD, the graduates from the TVETs in promoting innovation within the national innovation ecosystem. The TVETs were asked to describe some of the TVET institution's expected role to be played by their TVSD graduates in promoting innovation within the national innovation ecosystem, and the findings are presented below.

##### ***TVSD Graduates Expected Role in Promoting Innovation Within Kenya's National Innovation Ecosystem:***

In an effort to promote national innovation ecosystem, the TVSD graduates in Kenya are expected to:

- a. Demonstrate self-reliance skills, incubating of ideas, and attract funding of innovative solutions.
- b. Act as an agent of change in the society and mentorship.
- c. Implement innovated ideas discovered during research and development activities such as Trade fairs and exhibitions.
- d. Develop porotypes for fabrications and skilled man power.
- e. Providing graduates with technical and vocational skills, but also involves empowering them with the necessary knowledge, attitudes, and mindset required to drive innovation.
- f. Carry out research in the community and coming up with possible solutions to challenges faced by the community.
- g. participate in TVET fair and Exhibition.
- h. The TVSD graduates should be encouraged to participate in innovations during TVET fairs and NACOSTI Science Week to show case their talents.
- i. Carry out innovation research, participate in national innovation fairs and competitions.

- j. Developing and applying new technologies and techniques that enhance productivity, quality, and efficiency in different industries.
- k. Promote sustainable and environmentally friendly innovations that contribute to the achievement of national development goals.
- l. Provide leadership and technical expertise in innovation-related activities, such as research and development, design, prototyping, and testing.
- m. Foster a culture of innovation and entrepreneurship by creating and supporting new businesses and startups that address societal challenges and create employment opportunities.
- n. Collaborate with other stakeholders in the national innovation ecosystem, including government, industry, academia, and civil society, to develop and implement policies, strategies, and programs that support innovation.
- o. Participate in innovation-related networks, forums, and events to exchange knowledge, ideas, and best practices, and to keep up-to-date with the latest trends and developments in the field.
- p. Innovate within the national innovation ecosystem by applying their technical and practical skills to create new solutions, products, and services that address societal challenges and contribute to sustainable development.
- q. Participate in science, technology and innovation and participating in robotics by providing budgetary allocation.
- r. Participate in technological innovation as well as in the discovery, transmission and enhancement of knowledge and to stimulate the intellectual life in the economic, social cultural, scientific, and technological development.
- s. Contribute to industrial and technological development of Kenya in collaboration with industry and other organizations through transfer of technology.
- t. Participate in teaching, training, scholarship, entrepreneurship, research, consultancy, community service, among other educational services and products, with emphasis on technology and its development, impact and application within and outside Kenya.

Most employers accept internship students from TVET institutions in Kenya in the following areas:

- a. Human Resource Management
- b. Supply Chain Management
- c. Business and procurement
- d. Civil and Building & construction Computing and Informatics
- e. Computing and IT
- f. Electrical and Electronics
- g. Health and Applied Sciences
- h. Agriculture
- i. Hospitality and Institutional Management
- j. Procurement and ICT
- k. Liberal studies
- l. Library and Learning Resources
- m. Maintenance and Administration.
- n. Mechanical Engineering

### ***TVSD Graduates Expected Role in Promoting Innovation Within Rwanda's National Innovation Ecosystem:***

In an effort to promote national innovation ecosystem, the TVSD graduates in Rwanda are expected to:

- a. Create their own businesses and employing others.
- b. develop a workforce able to use opportunities for a decent job, working with high productivity and protecting environment.
- c. Develop responsible citizens able to address issues related to sustainable production and consumption for instance on the efficient use of natural resources, reduce waste and pollution, enhance high quality products and services.
- d. Eliminate poverty basing self-employment and creating the job opportunities in different engineering field because they are hand on skills and competent.
- e. Enhance human capital through technical skills and providing sustainable and standard strategies that can protect environment.
- f. Help Country in development to help learners for being innovator.
- g. Implement strategies which enable youth especially women and vulnerable, to face the future with hope and confidence to possess the capacity for survival.
- h. Increase the company creations and the actually increase innovation for example made in RWANDA products and also more job creation.
- i. Increase the qualified graduates which will increase the living life of Rwandan and promote self-employment.
- j. Job creation to increase the numbers of trainees in TVET.
- k. Own development and creativity for hard-working citizens by the end of studies.
- l. Show case what they learnt and innovate (create new things) to bring solution to problems of the country.

Most employers accept internship students from TVET institutions in in Rwanda in the following areas:

- a. IT Department and Civil department.
- b. Accounting and masonry.
- c. Fashion Design.

### ***TVET Graduates Expected Role in Promoting Innovation Within the Gambia's National Innovation Ecosystem:***

In an effort to promote national innovation ecosystem, the TVSD graduates in the Gambia are expected to:

- a. Contribute significantly to the development of a skilled workforce, economic growth, and social development.
- b. Encourage exportation of furniture instead of importation.
- c. Tickling unemployment
- d. Identify problems and propose smart solutions to problems in society
- e. be able to create job to be self-employed and be able to employed others.

- f. to be able to innovate and construction simple tools and also to recycle.
- g. Act as an agent of change in the society and mentorship

#### 4.7.3. TVSD Initiatives and the Country's Economic Development Agenda

Some of Kenya's specific examples on TVSD that the government has recommended in TVET institutions teaching & learning which are likely to change the economy are:

- a. Business Development and Entrepreneurship Units are fulcrums for economic development in the localities of TVETs
- b. The big four agenda
- c. Industrial hubs in TVETS will promote employment, production and absorption of inputs from the economy as it will increase income and can contribute to GDP of the country
- d. The Business Development Enterprise Unit (BDEU) model for encouraging internally generated TVSD financing to ease the pressure on government financial support
- e. The introduction of CBET with emphasis of research and innovation
- f. Project based learning
- g. TVET institutions/Industrial linkages
- h. Digitization of TVET
- i. Establishment of centers of excellence and incubation centers
- j. Reskilling while changing the curriculum from the theory based to CBET which guarantees employability of graduates
- k. Enhanced industry involvement

From the findings, 98% of the responded agreed that the TVSD in TVET institutions has allowed for new ways of improving labour market relevance through actions taken before, during or after the current government policy development, as it can be supported as follows:

- a. Emphasis of maintaining alumni data base.
- b. Implementation of CBET.
- c. Implementation of RPL policy.
- d. Introduction of competency Based Education and training draws on the requirements of the labor markets for training.
- e. More emphasis on industrial attachment and or dual training.
- f. Promotion of continuous professional development.
- g. Recognition of prior learning.
- h. Strengthening of TVET authority to monitor and regulate quality of TVET.
- i. The BDEU emphasis on closer industry links to the TVET Institutions.
- j. The government is currently developing the TVET-industry linkage policy.
- k. This is actualized through the labour sector skills councils that develop occupation standards that guide training in TVETs Innovations from TVET assist in providing solutions to the labor market.
- l. Tracer studies of TVET graduates provides indicative direction for training.

The TVSD in TVET institutions that are likely to have the highest impact on the Kenya's economic development are:

- a. Agricultural Value addition since Kenya's economy is mostly agricultural especially the wastage experienced during harvest time can be mitigated if skills are harnessed/developed for the sector. The application of the skills can be practical since there are diverse agricultural activities that can be supported through the initiative.
- b. Building and Civil engineering because the building and Civil engineering industry is growing by day.
- c. Business Development and Enterprise Units (BDEU) where the best example is the Technical University of Mombasa Enterprise Limited (TUMEL) which makes cost training at TUM very sustainable thus in developing the BDEU policy the government benchmarked with TUMEL
- d. Hospitality (the demand is there since its an ongoing concern ICT and digital skills as the world has become a global village.
- e. Implementation of CBET and the implementation of RPL policy where CBET will provide graduates with market relevant skills as RPL will provide avenue for mainstreaming the large informal sector to formal sector. The authority capacity should be enhanced to monitor and regulate the implementation of CBET and RPL.
- f. New Technology driven TVSD.

It is worth noting that in Kenya there are no jobs but there's plenty in other areas of the world which our graduates can take advantage of virtually.

The following are some of the way through which TVSD digitization in TVET institutions has changed/transformed the kinds of skills which are required by Kenya's economic development agenda:

- a. The digital skills required by the economy requires acceleration by TVET institutions in digitization to provide graduates that can fill the gaps although most TVETs are yet to diversify on courses offered as infrastructure is also limited and all effort is geared towards improving this before meaning full impact is realized.
- b. There are several initiatives that have led to introduction of mechatronics courses that require graduates skilled in ICT that use ICT in training.
- c. Pedagogy leadership is required and practical oriented graduate who ordinarily graduate from TVETS and not University which has ensured more reach and increased enrolment in TVET.
- d. Digitization still at infant stage in Kenya so the change and impact yet to be felt however, judging from the developed countries experiences and lessons, the hands-on manual jobs are shrinking as the knowledge based jobs are increasing.
- e. The future jobs are with us, these are AI skills, software development, block chain jobs, virtual and augmented reality jobs, online content creators, big data analysis and ethical Harker
- f. Industry 4.0 (Smart manufacturing (Extreme automation).
- g. Vertical networking of smart production (use Cyber-Physical Production Systems (CPPSs), to allow industries to rapidly reply to unexpected order changes resulting from demand fluctuations, equipment failure, or stock shortages).
- h. Horizontal integration over a new generation of global value chain networks, End to End engineering over the whole value chain) in addendum to the industry needs.
- i. Digitization is in every aspect of life today so digital skills enable people to work at home and earn a living



The following are the TVSD skills which are becoming more important in Kenya's economic development agenda:

- a. Skills in ICT such as cyber security, data analysis, building trades are important as dictated by the labour market.
- b. Data science, big data and Internet of things.
- c. Digital skills coupled with creativity, critical thinking skills, collaboration skills and communication Skills that are declining in significance include those that can be automated and computer driven especially theoretical skills in business, secretarial, accounts robots and AI.

#### 4.7.4. TVET Institution's Gaps Between the Expectation and Reality in Alternative Financing for TVSD

The reality in TVSD funding is usually below the expectations. The TVETs were asked to demonstrate whether there is any gap between the expectation and reality in relation to their TVET institution's alternative financing for TVSD and the country specific finding are given below. The TVETs were asked to indicate whether there any gap between the expectation and reality in relation to your TVET institution's alternative financing for TVSD in the three countries. The responses on whether there are any gaps between the expectation and reality in relation to their TVET institution's alternative financing for TVSD in the three countries is given in the table below.

**Table 21: Existence of Gap Between the Expectation and Reality in Alternative Financing for TVSD**

Existence of Gap Between The Expectation and Reality in Alternative Financing for TVSD	Kenya		Rwanda		The Gambia	
	Freq. (N)	Perc. (%)	Freq. (N)	Perc. (%)	Freq. (N)	Perc. (%)
Yes	26	89.7	9	52.9	14	87.5
No	3	10.3	8	47.1	2	12.5
<b>Total</b>	<b>29</b>	<b>100.0</b>	<b>17</b>	<b>100.0</b>	<b>16</b>	<b>100.0</b>

Source: TVSD Survey Data, 2023

**Kenya:** From the responses in table 11 above, majority (89.7%) of the TVETs indicated that there gaps between the expectation and reality in relation to their TVET institution's alternative financing for TVSD in Kenya which can be explained by: Challenge in operationalizing IGAs; The proposals to stakeholders are not honored because they are also affected by the economic hardship; Challenge of matching with new technology changes; Challenges related to the availability and accessibility of alternative financing sources, such as loans, grants, and scholarships, particularly for learners from disadvantaged backgrounds; Constraints in funding, linkage between the institution and the industry, lack funding in research and innovation; Funding is not forthcoming it is channeled to well established institutions, due to smallness and newness it is difficult to attract investors both local and private, a lot of teething problems rendering not attracting funds even from the parent Ministry; Inadequate funding coupled with delays in releasing funds; Lack of awareness or understanding of alternative financing

mechanisms among potential beneficiaries, which may limit their uptake; Lack of appropriate training machines and equipment; Lack of sensitization on curricular development for TV courses; Most organizations are coming out of COVID 19 with various challenges and may not be in a position to spend on their non-core activities; Most TVET graduates still expect to be employed instead of creating jobs; Parents are not willing to meet the capitation deficit since they were meant to believe TVET training is free; Poor collection of fees; Procurement policy used for procuring goods and services for income generating activities leads to high production costs; Since the financing is not continuous, some trade areas have not been provided in terms of equipment and training to check the gaps; The increase in trainees' population does not match funding; The not yet established institution can hardly be involved in alternative financing venture.

**Rwanda:** From the responses in table 11 above, majority (52.9%) of the TVETs indicated that there are gaps between the expectation and reality in relation to their TVET institution's alternative financing for TVSD in Rwanda which can be explained by: Alternative financing to TVET is not enough to cover the major problems there; Financial budget is not responding to the market prices; Financing for TVSD are not corresponding with market cost in order to accomplish hands-on skills; Lack of enough infrastructure and institutions capacity; Lack of training tools and equipment, boarding facilities, and ICT Facilities; Less committed graduates; and The gaps are relating to the high package of theories than practice.

**The Gambia:** From the responses in table 11 above, majority (87.5%) of the TVETs indicated that there are gaps between the expectation and reality in relation to their TVET institution's alternative financing for TVSD in the Gambia which can be explained by: Inadequate human resources and lack of materials/equipment; lack of startup capital, job placement, checks and balances for quality assurance; There is some cultural connotation of certain skills that are a totem to certain clans in the society; and Lack of coordination.

## 4.8. The Nature and Role of the Private Sector in Funding Mechanisms for TVSD in Africa

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One of the key objectives of the study was to propose a typology of existing TVSD financing mechanisms, including private sector entities, that respond to national and/or regional or continental reforms. The subsections below provide the findings to address the above objectives.

### 4.8.1. Private Entities Engagement in Alternative Financing for TVSD

Private entities play a key role in financing TVSD programmes and this can be in the form of collaborations between those private entities and the TVETs. The TVETs were asked to indicate whether there are any current projects being implemented to minimize the gap in collaboration with private entities engagement in alternative financing for TVSD and the responses are given below.

The TVETs' response on any current projects being implemented to minimize the gap in collaboration with private entities engagement in alternative financing for TVSD in the three countries are given in the table below.

**Table 22: Existence of Collaborative Projects with Private Entities Engagement in Alternative Financing for TVSD**

Private Entities Engagement in Alternative Financing for TVSD	Kenya		Rwanda		The Gambia	
	Freq. (N)	Perc. (%)	Freq. (N)	Perc. (%)	Freq. (N)	Perc. (%)
Yes	17	60.7	11	61.1	20	90.9
No	11	39.3	7	38.9	2	9.1
<b>Total</b>	<b>28</b>	<b>100.0</b>	<b>18</b>	<b>100.0</b>	<b>22</b>	<b>100.0</b>

Source: TVSD Survey Data, 2023

**Kenya:** From the responses in table 12 above, majority (60.7%) of the TVETs indicated that there are a number of current projects being implemented to minimize the gap in collaboration with private entities engagement in alternative financing for TVSD in Kenya can be explained by:

- a. Collaborations with private entities to introduce income generating activity.
- b. KFW-GIZ donor funding.
- c. Proposals for Joint Public Private Partnership exploring ways of incorporating Public Private Partnerships in providing accommodation facilities.
- d. Provision of accommodation and food to the students as much goes outside.
- e. Skills Development for Entrepreneurship Project was a Train the Trainer Project in partnership with George Brown College of Canada under the Support Innovation in Technical Vocational Education Sector in collaboration with Colleges and Institutions Canada and funded by IDRC. The project involved 10 trainers from CIT who were virtually capacity built on areas of entrepreneurship and thereafter the knowledge gained passed on to 40 trainees of equal gender, 20 males and 20 females. The end product was 6 concept notes for identified business ideas by the trainees which were pitched internally and externally to our GBC facilitators.
- f. Special Economic Zone sponsor trainees for training and provide job opportunities for them, it will earn income to the institutions and reduce government dependence.
- g. The Kenya Youth Employment and Skills Program (K-YES): This program is a partnership between the Government of Kenya and the United States Agency for International Development (USAID), which aims to provide training and job placement services for Kenyan youth. K-YES works closely with private sector partners to identify job opportunities and provide alternative financing options, such as apprenticeships and on-the-job training.
- h. The Equity Group Foundation: This foundation is the philanthropic arm of Equity Group Holdings, a leading financial services provider in Kenya. The foundation provides scholarships and loans to students pursuing technical and vocational education and training, as well as supporting the development of TVET institutions in Kenya.
- i. The Kenya Private Sector Alliance (KEPSA): KEPSA is a business membership organization that works to promote the interests of the private sector in Kenya. KEPSA supports TVET institutions by providing alternative financing options, such as grants and loans, to support the development and delivery of high-quality TVET programs.
- j. The private entities collaborations project has assisted students to successfully complete their courses through fees sponsorship.
- k. There is a plan to establish collaboration with the county government and the constituency.

- I. TVETs are now being encouraged to create linkages with the industry in terms of developing training programs, assessment and internship opportunities.

From the Ministry of Education in Kenya's past experience in funding and management of TVET institutions, the following defines the nature and role of the private sector in these funding mechanisms that can be used to promote TVSD:

- a. Financial support through scholarships, infrastructure development, curriculum development support, support expatriates to train.
- b. Sponsored training, skills competitions, research and innovation initiatives in developed countries.
- c. Provide start up kits, cash or kind and incubation of skills.
- d. Provision of training equipment and research funding initiatives, support of industrial attachment and internship.
- e. Provision of funded industrial linkage.

**Rwanda:** From the responses in table 12 above, very few (38.9%) of the TVETs indicated that there are a number of current projects being implemented to minimize the gap in collaboration with private entities engagement in alternative financing for TVSD in Rwanda can be explained by:

- a. A TVET financing model has been developed and is being fine-tuned to see it's feasibility.
- b. For help the students in industrial attachment to face the needed on market.
- c. Industrial attachment program where the trainees learn with companies in relation to what they learnt in their different trades.
- d. Spend a half of period of study in workplace (industry attachment).
- e. The school management are providing to build up a strong partnership with different private stakeholders.
- f. There are production units in charge to find market for our products and the income in terms of money can supplement consumable funds provided by the government.

**The Gambia:** From the responses in table 12 above, minority (90.9%) of the TVETs indicated that they don't have any current projects being implemented to minimize the gap in collaboration with private entities engagement in alternative financing for TVSD in Gambia as the only collaboration is in Internship with the private sector.

#### 4.8.2. Frameworks Used When Working With Private Entities in TVSD Financing

The Ministry of Education in Kenya uses the following frameworks when working with private entities and organizations in the field of TVSD financing:

- a. Private entities are looped into the TVSD financing frameworks through a national framework spearhead by The National treasury where partners' engagement is formalized and necessary documentations done before on boarding.
- b. Some Private entities are sourced through institutions into the TVSD financing frameworks before the arrangements are formalized through the National Treasury.
- c. TVETA enters into collaboration agreement of either co-financing or co-creation of activities.

- d. Partnerships are done through MoUs.

Most of the data on the amount of money received by the Ministry of Education from private entities and organizations in the field of TVET financing in the last 3 fiscal years was not available as sought from state department of TVETs. However, the Ministry of Education indicates that out 80% of the money received from private entities and organizations by the Ministry of Education in the field of TVET financing is dedicated to TVSD.

Majority (60%) of the ministry of education indicated that they have in the past and current financial year receive money from collaboration work of several TVET institutions inside or outside country on TVSD in form of:

- a. Donor support in kind from Germany GIZ support and South Africa, Kiambu Institute of science and technology, Nairobi Technical and Thika Technical.
- b. Kenya school of TVET collaborate under common wealth of learning.
- c. BEAR II Project with Bukura, KIBIT, Institute of oil and Gas.

Some of the major TVET projects targeting TVSD which are supported by development partners in Kenya are:

- a. Gok/ KFW which is Germany and Kenya project on promotion of youth employment and vocational training
- b. Capacity building of trainers funded by world bank
- c. EASTRIP promote attractiveness for TVET Courses

## 4.9. The Current TVSD Funding Mechanisms

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This section addresses itself to the following overarching themes of the research study on the current TVSD funding mechanisms. The student enrolment, graduation rates and funding of the current cohorts can be used to show the current vocational training funding mechanisms.

### 4.9.1. Student Enrolment Levels and Graduation Rates (Average of Three Years)

The student enrolment can be used to gauge the amount of revenue raised from the school fees source of funding; while the graduation rates can be used to measure how reliable the source of funding is to successfully support the trainees through the training to successfully completion. The TVETs were asked to provide information on the number of enrolled students, as well as the number of graduates for the last three (3) years for all TVET programs; and the findings for each country are presented below.

The TVETs in the three countries were asked to provide information on the number of enrolled students, as well as the number of graduates for the last three (3) years in TVET programs; and the findings are given below.

**Table 23: Average Student Enrolment Levels and Graduation Rates**

Measure	Students Enrolled					Students that Graduate				
	2022	2021	2020	2019	2018	2022	2021	2020	2019	2018
Kenya	3564	3255	2861	2548	2221	883	653	641	520	475
Rwanda	193	136	124	112	78	109	107	51	47	50
The Gambia	368	342	463	242	402	406	197	383	371	351

Source: TVSD Survey Data, 2023

**Kenya:** From the findings above, generally the student enrolment has been on the upward trend meaning the uptake of the TVSD/TVET programmes has been having increasing demand Kenya and the completion rates are equally on the increasing. This implies that the funding models favor trainees' motivation to enroll as well the financial support enables trainees to move from enrolment to completion/graduation successfully as they are reliable.

**Rwanda:** From the findings above, generally the student enrolment has been on the upward trend meaning (except in 2019) the uptake of the TVSD/TVET programmes has been having increasing demand Rwanda and the completion rates are equally on the increasing. This implies that the funding models in Rwanda favor trainees' motivation to enroll as well the financial support enables trainees to move from enrolment to completion/graduation successfully as they are reliable.

**The Gambia:** From the findings above, generally the student enrolment has been on the upward trend (except in 2021) meaning the uptake of the TVSD/TVET programmes has been having increasing demand Gambia and the completion rates are equally on the increasing. This implies that the funding models in Gambia favor trainees' motivation to enroll as well the financial support enables trainees to move from enrolment to completion/graduation successfully as they are reliable.

#### **4.9.2. Number of Students and Amount Received from Alternative Funding Mechanisms (Average of Five Years)**

The number of students enrolled has an influence on the financial sustainability of the TVETs. The nature of the funding mechanism can equally influence the enrolment levels. There are a number of funding mechanisms which can stimulate the student enrolment levels. The TVETs Student Financial Aid (SFA) were asked to provide data on number of students and amount received from alternative funding mechanisms per year for the most recent academic years 2018-2022; and the findings for each country are presented below.

The TVETs Student Financial Aid (SFA) in the three countries were asked to provide data on number of students and amount received from alternative funding mechanisms per year for the most recent academic years 2018-2022; and the findings are presented below.

**Table 24: Average Student Enrolment Levels and Graduation Rates**

Designation	Year	Funding Type/Mechanism				
		Need-based Scholarships	Merit-based Scholarships	Government Loans	Private Loans	Grants
Number of Students in Kenya	2018	471	139	875	0	458
	2019	534	171	892	0	1278
	2020	614	278	1059	0	1290
	2021	679	325	1300	2	1288
	2022	696	372	1398	4	1457
Number of Students in Rwanda	2018	548	11	1	0	10
	2019	608	15	1	0	10
	2020	684	22	2	1	24
	2021	740	52	33	1	41
	2022	756	57	33	1	47
Number of Students in the Gambia	2018	26	13	4	5	2
	2019	28	12	5	3	2
	2020	31	15	5	5	1
	2021	33	15	8	2	2
	2022	47	23	5	4	3

Source: TVSD Survey Data, 2023

It was worth noting that need-based scholarships refer to funds and financial support given for students who qualify based on economic need while merit-based scholarships refer to funds, and to financial aid given based on criteria of performance in secondary school and/or in entrance exams to tertiary institutions.

**Kenya:** From the findings above, all the TVETs provided the student numbers for each funding mechanism but they could not provide the absolute figures of the amount that was given to those students. Generally, from the findings, the student number benefiting from different funding mechanisms are on the increase (as observed on the general enrolment and graduation levels above) across those who rely on: need-based scholarships, merit-based scholarships, government loans, private loans and grants in Kenya. This is a confirmation that public funding has enhanced enrolment levels in TVSD.

**Rwanda:** From the findings above, all the TVETs provided the student numbers for each funding mechanism but they could not provide the absolute figures of the amount that was given to those students. Generally, from the findings, the student number benefiting from different funding mechanisms in Rwanda are on the increase (as observed on the general enrolment and graduation levels above) across those who rely on: need-based scholarships, merit-based scholarships, government loans, private loans and grants in Rwanda. This is a confirmation that public funding has enhanced enrolment levels in TVSD in Rwanda.

The Gambia: From the findings above, all the TVETs in Gambia provided the student numbers for each funding mechanism but they could not provide the absolute figures of the amount that was given to those students. Generally, from the findings, the student number benefiting from different funding mechanisms in Gambia are on the increase (as observed on the general enrolment and graduation levels above) across those who rely on: need-based scholarships, merit-based scholarships, government loans, private loans and grants in Gambia. This is a confirmation that public funding has enhanced enrolment levels in TVSD in Gambia.

#### 4.9.3. Different Incentives Provided by the Government to Promote TVSD

This subsection addresses itself to the following overarching themes of the research study on the different incentives provided by the government to promote TVSD, particularly TVSD alternative funding to students.

There are a number of TVSD alternative funding to students and TVETs which can be in form of loans and scholarships (direct to the students), capital grants (for TVETs) and other grants (for both the students and the TVETs). The source of the above funding could be private donations, internally generated funds or government subsidies. The TVETs in every country were asked to provide data on the nature of funding and the sources/funding agent for the years 2018 through 2022; and the findings for each country are presented below.

The TVETs in the three countries were asked to provide data on the nature of funding and the sources/funding agent for the years 2018 through 2022; and the findings are presented below.

**Table 25: Funding from TVSD Alternative Funding Mechanisms/Sources in Kenya for the Years 2018-2022**

Funding Type/ Mechanisms	Year	Average Amount Per Year		
		Private donations (USD)	Internal to the institution (USD)	Public or government subsidized (USD)
<b>Source of Funding in Kenya</b>				
Scholarships	2018	94,477	4,420,821	7,866,800
	2019	125,375	5,670,750	7,298,556
	2020	123,318	5,827,467	6,617,600
	2021	189,030	5,055,162	10,541,843
	2022	207,808	3,301,849	8,698,095
Loans	2018	0	7,893,549	-
	2019	0	29,250,268	51,864
	2020	0	25,917,109	47,433
	2021	0	27,025,925	40,384
	2022	0	23,762,006	39,381



Capital Grants	2018	0	2,307	0
	2019	0	26	51,864
	2020	0	3,994,158	47,433
	2021	0	4,705,655	40,384
	2022	107,143	3,088,504	39,381
<b>Source of Funding in The Gambia</b>				
Capital Grants	2018	12	0	4.9
	2019	12	1	0.2
	2020	20	0	2.6
	2021	41	2	4.0
	2022	12	16	5.0

Source: TVSD Survey Data, 2023

**Kenya:** From the findings above, the private sector in Kenya has not and doesn't provide any form of funding in TVSD in form of loans and capital grants but it has given scholarships to students undertaking TVSDs. The public or government subsidized is available to students in form of loans, capital grants and scholarships but it is on the decline yet the enrolment levels and demand for TVSD is on the rise. The loans, scholarships and grants that are internal to the TVET institutions in Kenya has equally been on the decline. This trend is not good for the financial sustainability of the TVSD and TVET programmes in Kenya.

The employers' opinion based on past experience in funding and management of TVET institutions, the following are the different incentives which have been provided by the government to promote TVSD in Kenya:

- a. Equipment
- b. Capitation and HELB
- c. Capitation grants offered to TVET trainees in Kenya has promoted increased enrollment in TVET institutions unlike the previous level when such funds were not there
- d. Improve on the CBET curriculum and CDACC in Kenya
- e. Capitation for trainees or students
- f. The government provide the trainers and capitation in supporting implementation of the programmes

From the Ministry of Education in Kenya's past experience in funding and management of TVET institutions, the following are some of the different incentives which have been provided by the government of Kenya to promote TVSD:

- a. Capitation for students
- b. Higher education loan from HELB
- c. Infrastructure development
- d. Provision of adequate operational grants to enable realistic start
- e. Scholarships for trainees and trainers

- f. Tax incentives for industry to participate in training and construction of TVETs in every constituency to increase access

**Rwanda:** From the findings above, the data on nature of funding and the sources/funding agent for the years 2018 through 2022 was not available although it was registered that the student number benefiting from different funding mechanisms in Rwanda are on the increase (as observed on the general enrolment and graduation levels above) across those who rely on: need-based scholarships, merit-based scholarships, government loans, private loans and grants in Rwanda. This is a confirmation that public funding has enhanced enrolment levels in TVSD in Rwanda. Like in Kenya and Gambia, this trend is not good for the financial sustainability of the TVSD and TVET programmes in Rwanda. The employers in Rwanda's opinion based on past experience in funding and management of TVET institutions, the following are the different incentives which have been provided by the government to promote TVSD should be to hold the trainees for internship and provide job for them.

**The Gambia:** The data on nature of funding and the sources/funding agent for the years 2018 through 2022 was not available need-based scholarships, merit-based scholarships although it was registered that the student number benefiting from those two scholarships was on the increase in Gambia. The findings further indicate that capital grants have been on an irregular trend (sharp decline before 2020 with a sharp increase after 2021) from private donations, internal income generating. This unpredictable trend like in Kenya and Rwanda is not good for the financial sustainability of the TVSD and TVET programmes in Gambia.

#### 4.10. Resilient Innovative and Resilient Technical, Financial, and Operationalization Mechanisms

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Employers of the graduates from the TVETs play a key role in shaping policy in the funding mechanisms for TVSD financing by TVET institutions, private entities and partner governments, donors, and other relevant stakeholders to engage.

Given the impact of COVID-19 on TVSD, the following are the findings on the most innovative and resilient technical, financial, and operationalization mechanisms which should be implemented for resilience.

**Kenya:** Given the impact of COVID-19 on TVSD, the following are the most innovative and resilient technical, financial, and operationalization mechanisms which should be implemented by TVET institutions in Kenya towards alternative financing of TVSD:

- a. Production units
- b. eLearning
- c. Exploitation of income generating activities in learning institutions should be fully pursued as a way of containing over reliance on government funding
- d. Incorporate online learning for programmes that do not require laboratory or workshop presences

- e. Provide assistance to technical Institutions to produce personal protection products to help in preventing COVID 19
- f. Provide infrastructure for online teaching and learning
- g. Public Private Partnership

Given the impact of COVID-19 on TVSD, according to the Ministry of Education, Kenya, the most innovative and resilient technical, financial, and operationalization mechanisms according to the ministry of education which should be implemented by TVET institutions in Kenya towards alternative financing of TVSD are:

- a. Digitalization cuts costs through blended learning
- b. Differentiated unit costs can focus government support towards priority areas
- c. Flexible approach of training for maximum use of resources.
- d. Establishing and promoting income generating units
- e. Privatization of stable entities
- f. Development of ODeI to reduce TVET costs
- g. Establish economic zones in TVET institutions
- h. Enhancing production and manufacturing in TVET Institutions
- i. Spacious workshops needed
- j. More funds needed to retool

**Rwanda:** Given the impact of COVID-19 on TVSD, the following are the most innovative and resilient technical, financial, and operationalization mechanisms which should be implemented by TVET institutions in Rwanda towards alternative financing of TVSD should be to allow trainees to follow the courses online.

## 4.11. Cross Cutting Issues in TVET Institution towards TVSD

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There are a number of crosscutting issues in the implementation of TVSD and subsequent to the TVSD funding mechanisms. The findings on a number of crosscutting issues from the different stakeholders are discussed below.

### 4.11.1. Gender Equality Issues in TVET Institution towards TVSD in Kenya

The findings on the employers' and Ministry of Education's extent of congruence on gender issues in the TVET institution in Kenya towards TVSD are presented below.

**Kenyan Employers:** From the findings, to a great extent and according to the employers, the TVET institutions in Kenya always designed TVSD programmes for environmental sustainability and green jobs and support entrepreneurship or other self-employment ventures. To moderate extent, the TVET institutions in the Kenya: always ensure girls and women have equal access to TVSD programmes and avoid isolating girls in gender-biased programmes, e.g. sewing or hairdressing; explore opportunities for TVSD blended learning delivery methods to promote flexibility and access; provide formal instruction on financial; provide courses or instruction on job hunting, CV writing and interview preparation and assist learners with job placement.

**Ministry of Education, Kenya:** From the findings above, to a very great extent according to the Ministry of Education, the TVET institutions in Kenya always ensure girls and women have equal access to TVSD programmes and avoid isolating girls in gender-biased programmes for example sewing or hairdressing. To a great extent according to the Ministry of Education, the TVET institutions in the Kenya always design TVSD programmes for environmental sustainability and green jobs while exploring opportunities for TVSD blended learning delivery methods to promote flexibility and access. To a moderate extent, the TVET institutions in Kenya always provide formal instruction on financial, support entrepreneurship or other self-employment ventures, assist learners with job placement and provide courses or instruction on job hunting, CV writing and interview preparation.

**Ministry of Education in the Gambia:** From the findings, to a great extent according to the Ministry of Education, the TVET institutions in Gambia always: support entrepreneurship or other self-employment ventures; and ensure girls and women have equal access to TVSD programmes and avoid isolating girls in gender-biased programmes, for example sewing or hairdressing. To a small extent according to the Ministry of Education, the TVET institutions in the country always: assist learners with job placement; design TVSD programmes for environmental sustainability and green jobs; provide courses or instruction on job hunting, CV writing and interview preparation; and provide formal instruction on financial.

#### **4.11.2. Cross Cutting Issues in TVET Institution towards TVSD in Kenya**

The findings on the extent of congruence of employers' and Ministry of Education's on cross cutting issues in your TVET institution in Kenya towards TVSD are presented below.

**Employers in Kenya:** From the findings above, according to the employers to a great extent the TVET institutions always ensure meaningful on-the-job learning experiences and partner with the public and private sectors to connect learners to entry-level work. To moderate extent, according to the employers the TVET institutions in the Kenya: advocate for access to services that support TVSD in entrepreneurship/self-employment; negotiate for paid training, apprenticeships and internships (even at a reduced rate) that are closely aligned to individual specializations; and provide incentives to employers to create inclusive workplaces.

**Ministry of Education, Kenya:** From the findings, according to the employers to a moderate extent the TVET institutions always advocate for access to services that support TVSD in entrepreneurship/self-employment while ensure meaningful on-the-job learning experiences and partner with the public and private sectors to connect learners to entry-level work. To a small extent, according to the Ministry of Education the TVET institutions always provide incentives to employers to create inclusive workplaces.

**Ministry of Education in the Gambia:** From the findings, according to the Ministry of Education in Gambia to a moderate extent the TVET institutions always advocate for access to services that support TVSD in entrepreneurship/self-employment while ensure meaningful on-the-job learning experiences and partner with the public and private sectors to connect learners to entry-level work. To a small extent, according to the Ministry of Education the TVET institutions always provide incentives to employers to create inclusive workplaces.

### 4.11.3. Life Skills Issues in TVET Institution towards TVSD in Kenya

The findings on the extent of employers' and Ministry of Education's congruence on life skills issues in TVET institution in Kenya towards TVSD are presented below.

**Employers in Kenya:** From the findings above, according to the employers to a great extent the TVET institutions in the country always instill empathy and appreciation for cultural diversity while improving TVSD delivery through integration of ICT where applicable. To moderate extent, according to the employers the TVET institutions in the Kenya: equip learners with effective communication skills for writing, speaking and presenting, as well as digital media skills; ensure that facilities have connectivity and students have digital access to a variety of TVSD supplementary content; develop digital and information literacy as it relates to the learner's specialization; facilitate essential TVSD skills and competencies through collaborative learning approaches; make sure that institutes are equipped with the current TVSD technology used in the workplace; teach critical thinking skills and examination of multiple perspectives; and provide incentives to employers to create inclusive workplaces.

**Ministry of Education in Kenya:** From the findings, according to the Ministry of Education to a great extent the TVET institutions in Kenya always: teach critical thinking skills and examination of multiple perspectives; develop digital and information literacy as it relates to the learner's specialization; equip learners with effective communication skills for writing, speaking and presenting, as well as digital media skills; improve TVSD delivery through integration of ICT where applicable; and instill empathy and appreciation for cultural diversity. To moderate extent, according to the Ministry of Education the TVET institutions in Kenya always: ensure that facilities have connectivity and students have digital access to a variety of TVSD supplementary content; make sure that institutes are equipped with the current TVSD technology used in the workplace; facilitate essential TVSD skills and competencies through collaborative learning approaches; and provide incentives to employers to create inclusive workplaces.

**Ministry of Education in the Gambia:** From the findings, according to the Ministry of Education to a moderate extent the TVET institutions in Gambia always: improve TVSD delivery through integration of ICT where applicable; instill empathy and appreciation for cultural diversity; teach critical thinking skills and examination of multiple perspectives; and develop digital and information literacy as it relates to the learner's specialization. To small extent, according to the Ministry of Ministry the TVET institutions in Gambia always: equip learners with effective communication skills for writing, speaking and presenting, as well as digital media skills; facilitate essential TVSD skills and competencies through collaborative learning approaches; make sure that institutes are equipped with the current TVSD technology used in the workplace; provide incentives to employers to create inclusive workplaces; and ensure that facilities have connectivity and students have digital access to a variety of TVSD supplementary content.

## 4.12. Making a Case for the New Higher Education And TVET Financing Model In Kenya

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The Universities Fund (UF) is a government institution established under Section 53 of the Universities Act, 2012 to finance universities in Kenya. The Fund is managed by a Board of Trustees, is known as the Universities Fund (UF), and has been in operation since 2016. UF also mobilizes resources, develops incentives for private sector participation in university education and public-private partnership frameworks for university education and negotiates tax waivers to foster individual and corporate/institutional support to university education. The Universities Fund and the Higher Education Loans Board (HELB) have distinct roles in terms of student financial support. While the Universities Fund primarily provides scholarships, HELB offers loans and bursaries. It is advisable to only apply for the scholarship if the student needs government financial assistance (KYEB, 2023).

The Higher Education Government Student Scholarship is a financial assistance programme provided to learners in public universities and TVET institutions. It is funded through government resources, and it aims to support students pursuing undergraduate, diploma, craft certificate and artisan education. Beneficiaries are required to complete their studies within the stipulated course/programme duration. Any extended study duration cost will not be catered for by the scholarship. This scholarship is restricted to Kenyans only. Loans and scholarship awards will be categorised differently. This makes use of the “Means Testing Instrument” in assessment of students to be awarded scholarships, specifically this instrument assesses students’ financial needs by assigning points and clustering them into different categories based on eight variables that includes parents’ background, gender, type of course, marginalized groups, disability as well as family size and its composition. These variables will help classify students according to their levels of need namely; **Vulnerable, Extremely Needy, Needy and Less Needy**. This assessment helps to determine the level of assistance required for students admitted for diploma, craft certificate or artisan course at one of the accredited public universities or TVET colleges. The new funding model is student specific. That is, it focuses on funding each student based on their needs instead of generalizing which eventually leaves the very needy still stuck by categorizing TVET students into four (KYEB, 2023). A vulnerable student will get 82 per cent scholarship and 18 per cent loan of the cost of the programme. An extremely needy learner will get 70 per cent scholarship and 30 per cent loan of the cost of the course while a needy learner will get 53 per cent scholarship, 40 per cent loan and seven per cent household of the cost of the programme. Lastly, a less needy learner will get 38 per cent scholarship, 55 per cent loan and seven per cent family of the cost of the course to be pursued. In summary, the distribution is as given below:

- a. **Vulnerable TVET Student:** the parent will contribute 0%; Scholarship - 82%; and HELB loan - 18%
- b. **Very Needy TVET Student:** the parent will contribute 0%; Scholarship - 70%; and HELB loan - 30%
- c. **Needy TVET Student:** the parent will contribute 7%; Scholarship - 53%; and HELB loan - 40%
- d. **Less Needy TVET Student:** the parent will contribute 7%; Scholarship - 38%; and HELB loan - 55%

The loan burden is usually paid back with interest and it increases as you move from the vulnerable case to less needy cases meaning vulnerable cases get more scholarship support with less loans while the less needy get less scholarship but higher loans because of their ability to pay school fees. The benefits of the new funding model in relation to placement of students include: One is eligible to apply for various forms of financial assistance, including government scholarships, loans, and upkeep funds; and funding is based on the actual cost of the programme, which varies in the institutions of higher learning.

The previous model used the Differentiated Unit Cost (DUC) criteria for paying tuition fees to universities, that is, it was universities that were funded. In the new model, students are individually funded. Second, funding is no longer tied to placement; students must apply for scholarships and loans. It emphasizes on both equality and equity, ensuring that financial support is available to those in need. The specific benefits of the new funding model in relation to TVSD are:

- a. The funding model will address/resolve the debt crisis in TVETs, do away with the surging pending bills, financial and debt crisis.
- b. The funding will be consistent and stable, univ/colleges will no longer increase fees once a student has begun their studies in TVETs.
- c. This Model guarantees TVSD students are treated fairly without breaking the learning process as well as the TVETs' financial situation.
- d. It encourages TVETs to place emphasis on academic performance by directly allocating funds.
- e. It creates a sustainable TVETs in TVSD training environment by limiting constant increases in tuition.
- f. Individual vulnerable TVSD learners with serious social and economic challenges will receive 100% funding, extremely Needy, Needy and less Needy will receive 97% funding with adjusted Scholarship & Loans percentages per category.
- g. The New Model promotes equity and enhances inclusivity, this funding of TVET students whether on scholarships, loans, or bursaries will be based on the level of need. Every student will be eligible for financial assistance.
- h. It will increase cash flow to TVETs by motivate TVETs to raise additional resources that will enhance the quality of education which will attract more students.
- i. It will fund TVSD students based on the actual programme cost they have been placed to pursue.

It is worthy noting that the cost of the course is factored, and TVETs are financed per student and according to the cost of the courses a student is taking. In the past, all students were financed equally, without considering that costs incurred in training an artisan or engineering student differs greatly from other art technical courses. This new model cures the inadequacy of funds that led the TVETs to fail to balance expenses and available resources, ending up with billions in debts.

## CHAPTER FIVE: SUMMARY OF FINDINGS, OVERALL RESULTS AND RECOMMENDATIONS

### 5.1. Summary of Findings

The aim of this study was to produce evidence-informed mapping of recent, current and ongoing mechanisms for TVSD financing and role of the private sector, in light of emerging national reforms and the COVID-19 pandemic in Kenya, Rwanda and Gambia.

The summary of the findings based on the overarching study research questions is presented as follows.

#### 5.1.1. TVSD vs TVET Funding Mechanisms

The study investigated whether current vocational training funding mechanisms focus exclusively on what is commonly referred to as technical and vocational education and training or do they embrace the concept of TVSD. The number of students enrolled has an influence on the financial sustainability of the TVETs. The nature of the funding mechanism can equally influence the enrolment levels. The findings show that:

- a. The budget for providing education and various TVSD programs seems to be decreasing year by year. This can be explained by the capitation funding model, which seems to be unsustainable; current economic challenges in the country; dwindling funding from the government to students; high enrolment of trainees in TVET institutions has led to a decrease in the budget; inability of students to fund their training. The challenges facing the Kenya, Rwanda and Gambia in their TVSD funding mechanisms are similar with those facing Botswana, SA, and Zimbabwe. As documented and confirmed by findings from Hondonga and Ramaligela (2023), some challenges in TVSD funding range from “fragmented financing systems, general high cost of financing TVET, lack of commitment by stakeholders, poor image of TVET against academic education, inadequate public budgetary allocations by most governments, lack of research and feedback to TVET planners from labour market to allow planning and adjusting funding models for future skilled manpower requirements”
- b. The integration of TVET into national development plans and strategies, and working with other stakeholders to ensure that TVSD is recognized as a key driver of economic growth and development.
- c. TVETs have played a key to demonstrate that provision of access to alternative financing mechanisms for TVSD, such as loans, grants, and scholarships, to ensure that all learners have access to quality TVET programs regardless of their financial situation.
- d. TVSD has encouraged and supported lifelong learning and skills development, including continuing education and professional development opportunities for TVET graduates and workers in the industry.
- e. TVETs have played their role to show that TVSD can reduce unemployment rate of the youth in Rwanda through coordinated skills development, soliciting external funding for TVET,



- collaboration with the private sector to offer quality hands-on skills, improving the level of innovation and creativity of the students and providing technical skills that impact labor market.
- f. Skill Training and Education whereby TVET institutions are responsible for providing practical and theoretical training to equip individuals with the skills and knowledge needed for various trades and vocations. They offer a range of programs and courses that align with the needs of the labor market, providing students with relevant technical skills.
  - g. TVET institutions play a crucial role in TVSD through skill training and education whereby TVET institutions are responsible for providing practical and theoretical training to equip individuals with the skills and knowledge needed for various trades and vocations. They offer a range of programs and courses that align with the needs of the labor market, providing students with relevant technical skills.
  - h. TVET institutions play a crucial role in TVSD through curriculum development whereby TVET institutions develop and update curricula to ensure their programs reflect current industry standards, technological advancements, and market demands. They collaborate with industry experts, employers, and professional bodies to design curricula that meet the changing needs of the workforce.
  - i. TVET institutions play a crucial role in TVSD through industry engagement and partnerships whereby TVET institutions foster relationships and partnerships with industries, businesses, and employers. They collaborate closely with these stakeholders to align training programs with industry requirements, facilitate work-based learning opportunities such as apprenticeships and internships, and ensure graduates possess skills that meet industry needs.
  - j. TVET institutions play a crucial role in TVSD through workforce development and continuing education whereby TVET institutions contribute to the continuous development of the workforce by offering lifelong learning opportunities, upskilling, and reskilling programs. They provide avenues for individuals to enhance their existing skills or acquire new ones to adapt to changing industry demands.

### **5.1.2. Different Funding Mechanisms and Successful Examples of Mechanisms for TVSD in Africa**

The study investigated the different funding mechanisms for TVSD in Africa and successful examples of funding mechanisms that have worked. The summary of findings on different funding and successful examples of mechanisms for TVSD in Africa is presented below.

Generally, from the findings, the student number benefiting from different funding mechanisms are on the increase (as observed on the general enrolment and graduation levels above) across those who rely on: need-based scholarships, merit-based scholarships, government loans, private loans and grants. This is a confirmation that public funding has enhanced enrolment levels in TVSD. It was worth noting that need-based scholarships refer to funds and financial support given for students who qualify based on economic need while merit-based scholarships refer to funds, and to financial aid given based on criteria of performance in secondary school and/or in entrance exams to tertiary institutions.

A number of TVSD areas have recruited professional especially civil engineering, electric communication and mechanical engineering while others didn't have any recruitment in the past three

years particularly irrigation and drainage technology, mining engineering, forest resources management and veterinary technology. This recruitment partners are in line with the demand patterns for TVSD courses which were engineering, electrical/electronic, mechanical engineering, information and communication technology, agriculture and food processing, hospitality and digital business planner.

***The key funding mechanisms and successful examples of mechanisms for TVSD in Africa are:***

- a. *Digitalization to cut costs through Blended Learning and Virtual Operations:* Most institutions especially during the Covid-19 situation successfully digitized their operations especially fee collection and the use of google-meet, teams and zoom platforms to conduct classes, practical sessions and to hold meetings. This led to huge cost cutting and this is current becoming a norm even after the Covid-19 pandemic. Currently blended learning is very convenient to the students and institutions especially in meeting geographical distance needs and saving time to access the physical institutions. This has led to huge savings for both the institutions and the students coupled with fee reductions for blended learning which has enhanced enrolment and shall continue to save on costs for intuitions as they shift from TVET to TVSD gradually.
- b. *Differentiated Unit Costs (DUC) funding mechanisms* to focus government support towards priority areas. The Kenyan government has successfully implemented this strategy whereby the TVSD courses particularly Science, Technical Agricultural, Engineering and mathematical (STEAM) courses which require heavy funding funded heavily since they require materials, workshops and practical sessions as opposed to other business courses offered by the institutions. Most of the High Priority skills in the government Skills Needs are always given high priority in funding as opposed to low priority skill levels which can be funded by the individual learners. Through DUC, the DVSD STEAM courses receive high support and funding in form of capitation, development grants and staff recruitment compared to low cost costs.
- c. *Performance-Based Funding Strategy:* This funding strategy supports competition among the key players or institutions in the TVSD whereby those that have excelled in innovations, incubations and income-generating units are given more funding to boost their research, innovation and revenues yield/productivity. This has worked well for TVETs which have well established infrastructure as opposed to the newly establish TVETs especially in Kenya that lack momentum.
- d. *Establishing and Promoting Income-Generating Units:* Most TVET institutions have established farms, garages, production units, hospitality centers, bakeries, cottages, economic zones to enhance production and manufacturing in TVET Institutions which run independently as stand-alone enterprises with trading number. The revenue generated from these units complements the government funding and gives the trainees an opportunity to acquire practical technical and entrepreneurial skills for the future self-employment and employment creation opportunities for others in the society.
- e. *Privatization of Stable Entities:* Most countries especially Kenya are in the process of approving the appropriate policies on how to privatize some of the stable TVET entities so as to apply the Profit-Making business model which are competitive and none-wasteful. This will reduce over-reliance of the TVETs on the exchequer and eventually focus on quality and industry focused TVSD programs which can attract more enrolments while sustaining their operations at cost.

- f. *Development of Open and Distance e-Learning (ODeL)* to reduce TVSD costs. The ODeL mode of curriculum delivery gives wide accessibility to trainees and it is mechanism of internalization both in curriculum and skills development for the world as opposed to limited geographical space. This will always enhance the TVSD portfolio offered in Africa and increase the fee collection while limiting the physical inconveniences that characterized with in-person classes. This ODeL strategy is an excellent framework in support of the shift from a traditional TVET approach to a more holistic and inclusive TVSD approach. Kenya is on the lead on the this in collaboration with international development partners from German.
- g. Grant proposal writing to attract funds needed for retooling and spacious workshops. This is an ever-revolving strategy depending the dynamic needs of the country and the institutional needs.

Going beyond Kenya, Rwanda and Gambia's funding mechanisms as delineated in the study, Hondonga and Ramaligela (2023) from the comparison of literature on funding models in Botswana, SA, and Zimbabwe reveals TVSD funding mechanisms in the three countries is predominantly through public funding and levy-grant system. They further listed the alternative TVSD funding sources include income generating activities, corporate and donor funding, fees from students and student grant-loan schemes.

In summary, there is need to have adequate funding to ensure that graduates fully gain the necessary TVSD competencies to support the national development agenda and social human resources development.

### **5.1.3. The Nature and Role of the Private Sector in Funding Mechanisms for TVSD in Africa**

The private sector can play a crucial role in financing TVSD and this can be in form of collaborations between those private entities and the TVETs. The study investigated the nature and role of the private sector in these funding mechanisms for TVSD in Africa and the findings are presented below.

***There are a number of current projects being implemented to minimize the gap in collaboration with private entities engagement in alternative financing for TVSD in Kenya can be explained by:***

- a. Collaborations with private entities to introduce income generating activity.
- b. KFW-GIZ donor funding.
- c. Proposals for Joint Public Private Partnership exploring ways of incorporating Public Private Partnerships in providing accommodation facilities.
- d. Provision of accommodation and food to the students as much goes outside.
- e. Skills Development for Entrepreneurship Project was a Train the Trainer Project in partnership with George Brown College of Canada under the Support Innovation in Technical Vocational Education Sector in collaboration with Colleges and Institutions Canada and funded by IDRC. The project involved 10 trainers from CIT who were virtually capacity built on areas of entrepreneurship and thereafter the knowledge gained passed on to 40 trainees of equal gender, 20 males and 20 females. The end product was 6 concept notes for identified business ideas by the trainees which were pitched internally and externally to our GBC facilitators.

- f. Special Economic Zone sponsor trainees for training and provide job opportunities for them, it will earn income to the institutions and reduce government dependence.
- g. The Kenya Youth Employment and Skills Program (K-YES): This program is a partnership between the Government of Kenya and the United States Agency for International Development (USAID), which aims to provide training and job placement services for Kenyan youth. K-YES works closely with private sector partners to identify job opportunities and provide alternative financing options, such as apprenticeships and on-the-job training. The Equity Group Foundation: This foundation is the philanthropic arm of Equity Group Holdings, a leading financial services provider in Kenya. The foundation provides scholarships and loans to students pursuing technical and vocational education and training, as well as supporting the development of TVET institutions in Kenya.
- h. The Kenya Private Sector Alliance (KEPSA): KEPSA is a business membership organization that works to promote the interests of the private sector in Kenya. KEPSA supports TVET institutions by providing alternative financing options, such as grants and loans, to support the development and delivery of high-quality TVET programs.
- i. The private entities collaborations project has assisted students to successfully complete their courses through fees sponsorship.
- j. There is a plan to establish collaboration with the county government and the constituency.
- k. TVETs are now being encouraged to create linkages with the industry in terms of developing training programs, assessment and internship opportunities.

***There are a number of current projects being implemented to minimize the gap in collaboration with private entities engagement in alternative financing for TVSD in Rwanda can be explained by:***

- a. A TVET financing model has been developed and is being fine-tuned to see it's feasibility.
- b. For help the students in industrial attachment to face the needed on market.
- c. Industrial attachment program where the trainees learn with companies in relation to what they learnt in their different trades.
- d. Spend a half of period of study in workplace (industry attachment).
- e. The school management are providing to build up a strong partnership with different private stakeholders.
- f. There are production units in charge to find market for our products and the income in terms of money can supplement consumable funds provided by the government.

The TVETs indicated that they don't have any current projects being implemented to minimize the gap in collaboration with private entities engagement in alternative financing for TVSD in Gambia as the only collaboration is in Internship with the private sector.

Generally, the following defines the nature and role of the private sector in these funding mechanisms that can used to promote TVSD:

- a. Leveraging international funding: Many international organizations and development partners provide funding for vocational education and training. For instance, in Germany, the dual system of vocational education and training is largely financed by private companies. These companies provide on-the-job training and cover its cost, while the government finances the

school-based part of the training. This model could be adapted to the African context, with companies providing financial support for practical training in fields that are relevant to their industry. This not only helps to finance TVSD but also ensures that the training is relevant to the labor market.

- b. Financial support through scholarships, infrastructure development, curriculum development support, support expatriates to train.
- c. Sponsored training, skills competitions, research and innovation initiatives in developed countries.
- d. Promoting entrepreneurship among TVSD graduates, which can contribute to job creation and economic growth, which in turn can generate more resources for TVSD. For instance, TVET institutions could offer entrepreneurship training, provide start-up grants for graduates, or establish business incubators to support new enterprises.
- e. Provision of training equipment and research funding initiatives, support of industrial attachment and internship.
- f. Provision of funded industrial linkage.

In summary, it is worth noting that each of these strategies above could contribute to more sustainable and efficient financing of TVSD in African countries. However, the effectiveness of these strategies will depend on the specific context of each country, including the structure of the economy, the capacity of TVET institutions, and the regulatory environment. Therefore, it's crucial to recommend conducting a thorough analysis of the local context before implementing any of these strategies. Financing TVSD in a sustainable and efficient way is a complex challenge that requires a multi-faceted approach. By exploring a range of strategies and learning from successful examples in other countries, African countries can make progress towards this goal.

#### **5.1.4. Different Incentives Provided by The Government to Promote TVSD**

The study documented the different incentives provided by the government to promote TVSD in Africa and the findings are presented below. The number of students enrolled has an influence on the financial sustainability of the TVETs. The nature of the funding mechanism can equally influence the enrolment levels. There are a number of TVSD alternative funding to students and TVETs which can be in form of loans and scholarships (direct to the students), capital grants (for TVETs) and other grants (for both the students and the TVETs). The source of the above funding could be private donations, internally generated funds or government subsidies. The private sector in Africa has not and doesn't provide any form of funding in TVSD in form of loans and capital grants but it has given scholarships to students undertaking TVSDs. The public or government subsidized is available to students in form of loans, capital grants and scholarships but it is on the decline yet the enrolment levels and demand for TVSD is on the rise. The loans, scholarships and grants that are internal to the TVET institutions in Kenya has equally been on the decline. This trend is not good for the financial sustainability of the TVSD and TVET programmes in Africa.

The following are the different incentives which have been provided by the government to promote TVSD:

- a. Capitation for trainees or students.

- b. Capitation grants offered to TVET trainees has promoted increased enrollment in TVET institutions unlike the previous level when such funds were not there.
- c. Equipment.
- d. Infrastructure development.
- e. Provision of adequate operational grants to enable realistic start.
- f. Scholarships for trainees and trainers.
- g. Tax incentives for industry to participate in training and construction of TVETs in every constituency to increase access.
- h. The government provide the trainers and capitation in supporting implementation of the programmes.

### **5.1.5. Resilient Innovative and Resilient Technical, Financial, and Operationalization Mechanisms**

Given the impact of COVID-19 on TVSD, the study investigated the most innovative and resilient technical, financial, and operationalization mechanisms and the findings are presented below.

Given the impact of COVID-19 on TVSD, the following are the most innovative and resilient technical, financial, and operationalization mechanisms which should be implemented by TVET institutions in towards alternative financing of TVSD:

- a. eLearning.
- b. Exploitation of income generating activities in learning institutions should be fully pursued as a way of containing over reliance on government funding.
- c. Incorporate online learning for programmes that do not require laboratory or workshop presences.
- d. Provide assistance to technical Institutions to produce personal protection products to help in preventing COVID-19.
- e. Provide infrastructure for online teaching and learning.
- f. Public Private Partnership.

## **5.2. Overall Results**

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The overall results are based on the specific outcomes of the investigation.

### **5.2.1. The Difference and Benefits Between TVET and TVSD Financing Models**

The first outcome of the study was to understand the difference and benefits between TVET and TVSD financing models and the overall results indicate that Alternative financing has assisted in the implementation of TVET policies and plans such as upscaling staff skills in areas such as industrial mechatronics. The following are the general results on this: development of income generating unit policy is yet to be realized; funds not adequate to support the TVSD implementations; the TVSD financing is at the initial stages and the TVSD financing requires formulation through the TVET funding body; the staff in TVETs view of the TVSD is good and interesting although they have a somewhat negative feel that TVSD is somehow difficult because of missing some materials; the TVETs are

experiencing good performance although it requires hard work to find effective stakeholders for its successful implementation to enhance the education; TVET staff members are foreseeing TVSD funding constraints especially at implementation of TVET policies and plans as challenging especially in procuring necessary equipment and resources, conducting teacher training programs, or updating curricula to meet evolving industry demands; and on alternative financing for TVSD, the stakeholders actually view it as a potential solution to overcome funding constraints and enhance the implementation of TVET policies and plans thus through sensitization they are likely to have a positive perspective on alternative financing methods such as public-private partnerships, fundraising initiatives, skills development levies, and entrepreneurial activities.

*In summary*, TVET funding is usually through public funding and levy-grant subsidy system which has encountered a number of challenges ranging from “lack of adequate funds to support TVSD implementations and the initial stages of TVSD financing, fragmented financing systems from both private and donor funds, general high cost of financing TVET, lack of commitment by stakeholders, poor image of TVET against academic education and inadequate public budgetary allocations by most governments. Alternative financing has led to successful implementation of TVET policies and plans, such as the upscaling of staff skills in industrial mechatronics. The TVSD funding through digitalization to cut costs through blended learning, income-generating units, privatization of stable entities, development of Open and Distance e-Learning (ODEL) to reduce TVSD costs, production and manufacturing in TVET Institutions, retooling and spacious workshops with the involvement of the private sector in TVSD financing should be the key mechanisms to avail adequate funding to ensure that graduates fully gain the necessary TVSD competencies to support the national development agenda and social human resources development in Africa.

### **5.2.2. The Paradigm Shift from TVET to TVSD Financing Models**

The second outcome of the study was to understand the paradigm shift from TVET to TVSD as well as the difference and benefits between TVET and TVSD financing models and the overall results indicate that majority of the TVET institutions are public institutions in their tax obligations meaning they are financed and funded by the government since they are financed by government that regard them as public goods in form of public funding from the exchequer. There is need to shift from public financing to allow other TVETs to be funded by NGOs, private entities, for-profit organization and Public-private partnership mechanisms which are more industry focused when financing TVSD. Those will be TVSD performance-based funding models (as opposed to public funding from the exchequer) especially by considering the competitive level of the TVSD skills, the marketability of the graduates, the employability and innovativeness through research incubations and enterprise development through self-employment.

The TVET institutions have realigned existing TVSD programmes and certification, as needed, to the current and emerging needs of the market so as to maximize gainful employment of TVET graduates by considering available market evaluations or assessments that identify and anticipate the specific hard and soft skills needed to successfully engage in employment opportunities taking into account the current and emerging needs of the local market and the recommendations as the employers offer end support to TVSD programmes that do not follow a clear market orientation. There is need to refocus the market orientation to enhance the funding from the private and public alternative financing for TVSD among TVETs. The contribution of curriculum orientation to the successful market

orientation of the TVSD programmes shows a better potential to attract funding from both the public and private partners.

*In summary*, the alternative TVSD funding sources include income generating activities, corporate and donor funding, fees from students and student grant-loan schemes. Given the challenges of over relying on government funding in TVET which is not sustainable and on the decline, there is need to shift from public financing to alternative financing methods to alternative TVSD financing methods, such as public-private partnerships, fundraising initiatives, skills development levies, and entrepreneurial activities, to address these limitations in current TVET funding.

### **5.2.3. The Different Mechanisms for Financing TVSD**

The third outcome of the study was to get deep understanding into the different mechanisms for financing TVSD and the overall results indicate that.

The industry associations have shaped the technical vocational training and training in working towards Technical Vocational Skills Development especially professional associations and industry which shapes the curriculum reviews, internships and co-sharing of the training equipment and facilities. The student enrolment can be used to gauge the amount of revenue raised from the school fees source of funding; while the graduation rates can be used to measure how reliable the source of funding is to successfully support the trainees through the training to successfully completion. generally, the student enrolment has been on the upward trend meaning the uptake of the TVSD/TVET programmes has been having increasing demand and the completion rates are equally on the increasing. This implies that the funding models favor trainees' motivation to enroll the financial support as well enables trainees to move from enrolment to completion/graduation successfully as they are reliable. There is need to:

- a. build up a well-established TVSD training program for teachers (TOT).
- b. emphasize on more TVSD hands-on skills rather than theoretical education.
- c. prepare market best-matched TVSD education curriculums.
- d. prepare market best-matched TVSD education curriculums.
- e. emphasize on more TVSD hands-on skills rather than theoretical education.

*In summary*, the different mechanisms for financing TVSD include: digitalization to cut costs through blended learning and virtual operations, Differentiated Unit Costs (DUC) funding mechanisms to focus government support towards priority areas, TVSD Performance-Based Funding Strategy, establishing and promoting income-generating units, and development of Open and Distance e-Learning (ODEL) to reduce TVSD costs.

### **5.2.4. Transition from The TVET Funding Model to TVSD Funding Mechanisms**

The fourth outcome of the study was to get deep understanding on how to transition from the TVET funding model to TVSD funding mechanisms and the overall results indicate that major issues and problems currently faced by TVET institutions in when transiting from TVET funding model to TVSD funding mechanisms are market for their graduates & their products; and limited access to financial sustainability advisory services to enhance their financial sustainability or on mechanisms when



seeking alternative funding for TVSD programmes in the institutions. The smooth transition can only be handled after addressing the limited access to financial sustainability advisory services to enhance their financial sustainability or on mechanisms to seek alternative funding for TVSD programmes in the institutions; strained capitation/operation grants from the Government; inadequate and inconsistent financing funding of training programmes; delayed subsidies or loan for trainees and the school improvement grant; and access to financial resources to run daily operations. The curriculum accreditation of the TVSD programmes is likely to attract more students who will support the funding portfolio through fee payment and the government subsidy for every student enrolment. There is need for a formal TVET/TVSD financing policy and the main tenets of this TVET financing policy are:

- a. Resource mobilization strategies.
- b. Resource utilization strategies.
- c. Accountability of resources utilization strategies.
- d. Guidelines on grants disbursement.
- e. Guidelines on Business Development Enterprise Units.
- f. Capitation.

*From the findings, the social and or economic outcomes which the TVSD financing policies are expected to bring about including:*

- a. Business Development and Entrepreneurship Units are fulcrums for economic development in the localities of TVETS to promote employment, production and absorption of inputs from the economy as it will increase income and can contribute to GDP of the country.
- b. The Business Development Enterprise Unit (BDEU) model for encouraging internally generated TVSD financing to ease the pressure on government financial support.
- c. Availability of customized training equipment and learning materials.
- d. Developing an attractive as well as inclusive and accessible TVET system.
- e. Enhanced Research, Innovation, Entrepreneurial start-ups and incubation support services.
- f. Equitable application of resources.
- g. Established initiatives to finance infrastructure development.
- h. Increased access to TVET.
- i. Increased number of skilled work force.
- j. Increased number of TVET institutions.

*In summary*, Financing TVSD in a sustainable and efficient way is a complex challenge that requires a multi-faceted approach. The transition from The TVET funding model to TVSD funding mechanisms requires a systematic approach of addressing common challenge especially the limited access to financial sustainability advisory services and strained capitation/operation grants from the Government. By exploring a range of strategies and learning from successful examples in other countries, African countries can make progress towards this goal.

### **5.2.5. How to Make TVSD Funding Efficient and Sustainable**

The fifth outcome of the study was to get deep understanding on how to make TVSD funding efficient and sustainable and the overall results indicate that TVSD operationalization policy and funding policy is very key for enhancing efficiency and sustainability of TVSD and to help one to make informed

decisions. The TVETs have TVSD national policies showing that governments are embracing the concept of technical and vocational education and training or TVSD and the need to support the TVETs to implement the TVSD funding and operational sustainability through proper financing in the long-run and during unpredictable situations. The following are some of the recommendations on how to make TVSD funding efficient and sustainable. The TVSD in TVET institutions that are likely to have the highest impact on the national economic development are:

- a. Agricultural Value addition since Africa's economy is mostly agricultural especially the wastage experienced during harvest time can be mitigated if skills are harnessed/developed for the sector. The application of the skills can be practical since there are diverse agricultural activities that can be supported through the initiative.
- b. Building and Civil engineering because the building and Civil engineering industry is growing by day.
- c. Business Development and Enterprise Units (BDEU).
- d. Hospitality (the demand is there since it's an ongoing concern ICT and digital skills as the world has become a global village).

*In summary*, the TVSD funding can be made efficient and sustainable if the TVTS could develop TVSD operationalization policy and funding policy by clearly showing how these policies can help to support the long-term sustainability of TVSD particularly on resource mobilization strategies, resource utilization strategies, accountability of resources utilization strategies, grants disbursement, business development enterprise units and capitation. Each of these strategies could contribute to more sustainable and efficient financing of TVSD in African countries. However, the effectiveness of these strategies will depend on the specific context of each country, including the structure of the economy, the capacity of TVET institutions, and the regulatory environment. Therefore, it's crucial to recommend conducting a thorough analysis of the local context before implementing any of these strategies.

### 5.3. Recommendations

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The recommendations from this study are based on the study's three specific objectives as below.

#### 5.3.1. Proposed Typology of Existing TVSD Financing Mechanisms

The proposed typology of existing TVSD financing mechanisms, including private sector entities, that respond to national and/or regional or continental reforms. Currently there are two gaps: financial gap due to inadequate financial support and funding gaps due to lack of alternative funding. The following recommendations have been made:

- a. There is need to encourage more private investors in TVSD through ownership and legal registration using business models that are profitable for them to deliver value to the competitive TVET subsector as it is the case for technical universities.
- b. There is need for dual-training where the trainees spent half of the training duration in the industry to learn practical skills using the state-of-the art equipment/machines/tools and half of the duration in the TVET classrooms/workshops learning the theoretical aspects of the training, this will help to make products which can be sold and generate income.
- c. Funding model requires approach that leaves institutions stable.

- d. There is need for more Public-Private Partnerships (PPPs) to foster collaborations between the government, private sector, and non-governmental organizations to jointly finance and deliver TVSD programs through cost-sharing arrangements, corporate sponsorships, or donations.
- e. There is need to establish a Skills Development Levy on employers or industries to create a dedicated fund for TVSD through legislative support as a sustainable financing mechanism.
- f. There is need for TVETs to engage in Fundraising and Grants by actively pursuing grants from international organizations, development agencies, and philanthropic foundations that support education and TVSD initiatives. Additionally, institutions can engage in local fundraising campaigns to mobilize community support.
- g. There is need for the TVETs to embrace Entrepreneurial Initiatives by exploring income-generating activities such as offering fee-based courses, providing consultancy services, or establishing partnerships with industries for skills development and vocational training.
- h. There is need for the TVETs to focus on Technology-enabled Solutions by embracing digital platforms and online learning to reduce infrastructure costs and reach a wider audience for TVSD programs. This approach can include e-learning modules, virtual classrooms, and remote mentoring.
- i. There is need to lobby through Policy Advocacy by engaging in advocacy efforts to raise awareness about the importance of education and TVSD, and lobby for increased government funding or policy reforms that prioritize skills development.
- j. The current study didn't focus inclusion of youths and people with disability in TVSD financing as a special stakeholder group in TVET institutions. As per ADEA's strategic planning, "Equity and Inclusion" in TVSD are of paramount. It is therefore highly recommended that ADEA considers "equity and inclusion" as one of the most critical cross cutting issues in next years study especially the youth and people living with disability.

### 5.3.2. A Comparative Analysis of the Existing TVSD Financing Mechanisms

*Specific objective 2:* Make a comparative analysis of the existing TVSD financing mechanisms in 3 African countries with the different typologies of financing mechanisms identified after the validation of the evaluation criteria. There are major gaps between national policies, implementation plans and achievements in the TVET institution's alternative financing for TVSD due to delays in disbursements of funds, regulation of payable fees, poor state of economy affecting fees collection and funding gap especially from the funding model on capitation whereby the capitation amount and time for disbursement is unpredictable. The following can be recommended:

- a. Adopt sustainability of TVSD training programmes and deploy those that have adequate enrolment.
- b. Establish and adopt cheaper methods of procurement of goods and services.
- c. Establish a trainee funding model with adequate bursary and scholarships and fee payment.
- d. Due to constrained national budget needs, the government should engage more development partners and encourage public private partnerships for alternative TVSD financing.
- e. Due to inadequate government financing, the TVET institutions need to initiate income generating activities.
- f. Since the need for TVET skills and resources have become limited, there is need for an intervention of private and non-governmental organization.

- g. There is need to emphasize on dynamic production units within the TVETs to boost revenue for the TVSD financing.
- h. The TVET institutions should be encouraged to generate their own revenue as much as this requires heavy funding that TVETs are not able to acquire.
- i. There is need for capacity building towards Improved internal incoming generation for self-sustainability.
- j. There is need to address the disbursement gaps through support and better funding to established institutions instead of channeling to newly poorly established Technical Vocation Training institutes (TVCs).
- k. There is need to develop and operationalize an at institutional level to enable public-private partnerships in financing the TVETs.
- l. There is need for an alternative TVET financing model has been developed to counter-finance the TVET subsector.
- m. Urgent need for collaboration among relevant stakeholders, including TVET staff, government agencies, industry representatives, and development partners, is crucial to identify and address the gaps in TVET policies, plans, and achievements, while exploring alternative financing options to support TVSD.
- n. Advocating for increased funding, exploring alternative financing options, and prioritizing TVET within the national budget. Strengthening institutions, enhancing coordination mechanisms, and establishing effective monitoring and evaluation systems.
- o. The focus in TVSD funding should be student-centric based on Kenya's funding model. The fees paid for different TVSD courses varies with the level of effort, course duration and resource requirements. For example engineering courses cost more than the business management courses. The TVSD funding model should be pro-learners as opposed to differentiated unit cost model which was focused on the institutional capacity thus affecting progression and graduation rates.

### **5.3.3. More Efficient and Sustainable Considering Factors such as the COVID-19 Pandemic, Digitalization, and the Role of Private Sector Entities**

*Specific objective 3:* Make recommendations on how financing mechanisms identified in the 3 African countries can be more efficient and sustainable considering factors such as the COVID-19 pandemic, digitalization and the role of private sector entities. TVSD and its financing is a new concept for most TVETs and hence given the impact of COVID-19 on TVSD, the what are the most innovative and resilient technical, financial, and operationalization mechanisms which should be implemented by TVET institutions in Kenya towards alternative financing of TVSD are:

- a. Digitalization cuts costs through blended learning.
- b. Differentiated unit costs can focus government support towards priority areas.
- c. Flexible approach of training for maximum use of resources.
- d. Establishing and promoting income generating units.
- e. Privatization of stable entities.
- f. Development of ODeI to reduce TVSD costs.
- g. Establish economic zones in TVET institutions.
- h. Enhancing production and manufacturing in TVET Institutions.
- i. Spacious workshops needed.

j. More funds needed to retool.

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