SADC TVET Symposium

Building effective national TVET policy framework in the SADC Member States

Note 2: Labour market responsiveness

1.0 Background

The Southern African Development Community (SADC), in cooperation with ACQF-II project implemented by the European Training Foundation (ETF), and with the ILO and UNESCO is convening a technical vocational education and training (TVET) symposium with the SADC Member States on 8-9 May 2023 contributing to strengthen TVET policies and systems. The decision was approved at the annual Joint Meeting of ESTI Ministers of SADC (14-17/June 2022).

The symposium will deepen the findings and conclusions of the 'Situational analysis of TVET in SADC' study and propose pertinent measures towards strengthening TVET in the Member States.

2.0 Preamble

Education, training and skills development are important for socio-economic development. Technical and vocational skills development, through among others – quality TVET. The definition of TVET used is adapted from the "UNESCO Recommendation concerning TVET" (2015): 'TVET, as part of lifelong learning, can take place at secondary, post-secondary, tertiary levels and working life, and includes work-based learning and continuing training and professional development which may or may not lead to qualifications. It also encompasses the wide range of skills development opportunities that an individual benefits from during his/her working life, to acquiring learning to learn skills, the development of literacy and numeracy skills, transversal skills and citizenship skills'.

The following four themes have been identified as contributing to the development of, will contribute to the discussion at the symposium;

- Policy framework;
- Labour market responsiveness;
- Articulation; and
- Innovation in TVET and responsiveness to green and digital transition.

This concept note focusses on labour market and is intended to stimulate discussions at the symposium.

3.0 Adopted methodology

This concept note on 'labour market responsiveness' is based on a rapid scoping and evidence literature review and is intended to stimulate discussions at the symposium. It borrows from the sub-themes that

have been suggested by SADC to be considered under 'labour market responsiveness', at the TVET symposium. Section 4.0 summarises the main findings of the SADC TVET Situational Analysis, followed by a short description of 'articulation in section 5.0. Section 6.0 presents the various sub-themes, their respective case studies and associated questions for discussion.

4.0 SADC TVET situational analysis[1]

- **TVET monitoring and evaluation (M&E) systems in SADC member states are at different stages of development**, with varying levels of capacity to manage the M&E functions. Participation of the industry in the M&E process should be more widespread with the publication of frequent performance monitoring reports are produced in some countries like South Africa, Mauritius, Namibia, Zimbabwe, Zambia and Botswana with the reports being shared with all the relevant stakeholders.
- **TVET research in Sub-Saharan Africa is not systematic** and not of high enough quality to provide systematic labour market feedback to ensure that policy-making is evidenced based and that the sector responds to market demand for skilled workers.
- Most SADC member states have a National Qualification Framework, but they are still **facing issues with the articulation pathways**, whereby it is challenging for a TVET graduate to effortlessly and systematically join a Higher Education Institution (HEI). There are working platforms that have been established in some member states whereby TVET and Higher Education Authorities (HEA) are addressing challenges related to articulation arrangements and pathways.
- Despite having national gender inclusive education policies and the implementation of specific affirmative strategies in certain member states, the **enrolment rates of girls and special needs individuals are generally low**.
- Member states have formulated policies to improve the performance of national TVET systems. Reforms have been taking place, but have not been mainstreamed and sustained due mainly to a **lack of financial and capital investment.**
- The situational analysis found that most Member states' systems are supply-driven. Such **systems are inadequately responsive to labour demand**, resulting in persistent skills mismatches. Most countries have bifurcated labour markers wherein high employment, especially youth unemployment exists alongside high demand for semi- and high-skilled labour. The major problem is that TVET systems have not explored non-traditional learning modalities, alternative credentialing and new technologies that can expand access, increase relevance and speed upskilling and re-skilling.
- TVET systems have **timidly embraced the use of digital-pedagogical technologies**. Many reasons underpin this low uptake, including resistance of trainers and learners to change, limited digital skills of trainers, lack of financial resources to invest in digital learning technologies, challenges in accessing and using existing learning platforms, inadequate digital skills development capabilities as well as the realities of TVET requiring physical contact between trainers and learners.
- TVET generally has a **poor public image** amongst youths and parents. The perception that TVET is a segment of education that is designed for drop-outs and the academically poor is engrained in

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[1] The main points summarized here originate from the 'SADC (2022) Situational Analysis of Technical Vocational Education and Training (TVET) in SADC Member States, April. SADC: Gaborone'.

the psyche of both prospective learner and parents. Innovative and marketing advocacy work needs to be generalized in the member states.

5.0 Labour market responsiveness:- a working definition

Labour responsiveness for skills refers to the dynamics and processes by which the labour market adjusts and optimally responds to changes in the demand for skills. More specifically, it refers to how the supply of labour with required skills, changes in response to changes in the demand for those skills in a timely manner. Unresponsive or slowly-responsive markets result in skills mismatches with all its ensuing deleterious consequences.

6.0 Sub-themes & pointers for discussion

1. **Linkage programme for youth employment**
2. **Skills anticipation**
3. **Dual systems, through apprenticeship**
4. **Using data analytics for skills intelligence**
5. **Sector councils and labour market responsiveness**
6. **National strategy to improve labour market responsiveness**

6.1 Linkage programme for youth employment

Developing market-driven skills development programmes can provide a crucial role in improving labour market responsiveness by providing youths with the theoretical, practical skills and knowledge required to meet the demand of the labour markets. TVET and others skills providers can work work with enterprises or industry associations to co-mount/mount training programmes that are aligned with the current and forthcoming requirement so the labour market. This alignment allows learners to acquire and use skills and knowledge that are demanded.

6.1.1 Case from Mauritius: National Skills Development Programme

The Human Resource Development Council (HRDC) operates under the aegis of the Ministry of Labour, Human Resource Development and Training (MLHRD&T) and is mandated to foster skills development in Mauritius. The HRDC developed the National Skills Development Programme (NSDP) to fill the short to medium term skills gap at level of enterprises, through skills intermediation projects. Such projects target unemployed youths., who often face the double conundrum of lack of required skills and lack of working experience. The philosophy behind the NSDP is that it aims at better matching skills with the demand of employers by equipping young people with technical and soft skills which are required. Labour market responsiveness forms an integral part of the design of NSDP. Based on the available vacancies at their enterprises, employers have the flexibility to design their NSDP training project in collaboration with registered training centres, to deliver workplace specific skills and knowledge-based competencies to trainees as per specific needs. The NSDP also comprises a placement component at respective participating enterprise, where trainees are coached and mentored by seniors at the enterprise.

Registration of potential trainees is done through the online NSDP platform at http://nsdp.hrdc.mu in a transparent manner and selection is done by participating employers themselves. Training under NSDP is usually of short duration varying generally between 3 and 12 months and covers all industrial sectors of the economy. The training costs are funded by the HRDC (at times co-funded by enterprises) and trainees

are also incentivised through a training stipend. Given that the programmes are a function of vacant posts, the majority of those who successfully followed and completed NSDP programmes are employed, underpinning the labour responsiveness of the programme.

6.1.2 Pointers for discussion

- Are enterprises willing to participate in the skills formation of unemployed youths in your country?
- What could be the factors that would incentivize such a process?
- What should be the contribution of the private sector in such an endeavour?
- Does the private sector acknowledge their role in skills formation and their contribution to making labour market more responsive?
- Do TVET institutions/other training providers have the capabilities to furnish all the skills required by the private sector in your country?

6.2 Skills anticipation

Many countries are experiencing a persistent gap between the skills needed in the labour market and those offered by the workforce. Skills anticipation is a strategic and systematic method through which labour market actors identify and prepare to meet future skills needs. The objective is to avoid future potential gaps between skills demand and supply. Output form skills anticipation programmes can enable various stakeholders (e.g. youths, policy-makers, employers, training providers, … and others) to make better educational, training and skills investment choices

6.2.1 Case from Canada: Canadian Occupational Projection System

Employment and Social Development Canada[2] (ESDC) uses the models of the Canadian Occupational Projection System (COPS) to develop projections of future trends in the major sources of job openings (including both expansion and replacement demand) and job seekers (including school leavers and new immigrants) by occupation over the medium term, at the national level. By looking at prospective changes in both the demand and supply sides of the labour market, the projections allow for identifying occupations where potential labour market imbalances can occur. Generally, the projections will point towards shortage pressures in a given occupation, if the projected number of job openings in that occupation significantly exceeds the projected number of new job seekers. Conversely, the projections will point towards surplus conditions in an occupation if the projected number of job openings in that occupation is well below the projected number of new job seekers.

The focus of COPS is on trends over a 10-year horizon, not on year-to-year developments. In addition to assisting labour market analysts and policy makers, the projections can be used in labour market information (LMI) products targeted at assisting Canadians and potential immigrants in their education and career decisions.

Users can access projection results for the total number of job openings by occupation, including those attributable to expansion or replacement demand. On the supply side, users can access projection results for the total number of people seeking work in the occupation, including job seekers coming from the main sources of new labour market entrants. The projections were developed for 293 occupational groupings (covering 500 occupations across occupation groups) that cover the entire workforce.

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[2] https://open.canada.ca/data/en/dataset/e80851b8-de68-43bd-a85c-c72e1b3a3890

As for any forecast or projection models, COPS has to rely on assumptions regarding several factors that will influence future occupational labour demand and supply in Canada, including economic conditions, the size and distribution of occupational demand within industry and the number and occupational distribution of new entrants in the labour market. The model also has large data requirement and necessitates a wide array of technical expertise to run and maintain it. The COPS model can also accommodate qualitative inputs in its different components, including expert inputs in the vetting of projected trend in expansion demand of the model. IT is recommended that the development of skill assessment and anticipation systems, adopt a holistic approach to the measurement of current and future skill needs, using a combination of various methods to achieve robust and reliable results. It is generally viewed as best practice to use both quantitative and qualitative sources in the assessment of current and future skill needs.

6.2.2 Pointers for discussion

- Do member states have the capabilities and resources to develop, maintain and run complex econometric models?
- Should skills anticipation tools rely on both quantitative (labour market information, employer and worker surveys), and qualitative (sector studies) data sources to develop forecasts, that is both for input and validation?
- Bearing in mind capabilities in many member states, what anticipation methods/mix of anticipation methods should be adopted and invested upon?
- What would be the relevance of mounting a sustained training and development programme for member states that could build capabilities, as well as sustain the development of anticipation models over time?
- How can skills foresight exercises be used in skills anticipation at SADC level? How can such capabilities be built and sustained?

6.3 Dual systems through apprenticeships

TVET should equip youths with the skills to access the world of work, including skills for self-employment. An important skills acquisition component of TVET is work-based learning, which can reduce barriers to entering the workplace, ensuring that young people get recognised and certified skills. Through such programmes, occupational skills are dually developed, hence improving their responsiveness to the labour market.

6.3.1 Case from Germany: German dual VET system

In Germany, the main stakeholders are the Federal Government, Länder and industry. The Vocational Training Act (Berufsbildungsgesetz,BBIG), which was adopted in 1969, introduced a national legal framework for the different traditional training paths in the skilled trades and in industry and commerce. The most striking feature of this system is the engagement of businesses (and employers in general) in the conception and implementation of dual apprenticeships: cooperation between employers, vocational schools, chambers, governmental bodies and labour unions is at the heart of dual vocational education. The dual system seeks to provide the labour market with the skilled workforce it requires and to equip young apprentices with market-relevant skills for their future professional lives.

The post-secondary education system in Germany is divided into two domains, the academic and the vocational. Both are, in turn, subdivided into two further tracks: in the academic domain we can distinguish universities from universities of applied sciences, while in the vocational domain we can

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distinguish school-based vocational education from dual vocational training. The distinguishing feature of this system is the combination of a workplace-based apprenticeship with a classroom-based education. In contrast to school-based programmes that also include work-based learning, dual VET programmes follow the so-called "dual principle".

During the work-based part of their training, apprentices contribute to the productivity of their employer's organisation; they therefore receive a monthly salary from their employer for the duration of the training. Employers shoulder the costs of training but they also benefit from dual vocational education: employing apprentices in their production process allows them to save on skilled and unskilled workers' salaries, and training their own prospective employees allows them to save on recruitment costs as well as to guarantee that their future workforce will have the required skills.

In general, vocational education and training is designed to contribute to economic, social and individual goals; more specifically, vocational training seeks to equip workers with the skills and competencies that allow them to be mobile and capable of working in their chosen professional fields. Dual VET has a proven record in producing skilled workers, allowing employers to save on hiring costs, contributing to youth employability and supporting individuals in their transition into the labour market. In order to ensure that it contributes to these goals, dual VET is governed by a comprehensive legal framework that includes national and mandatory standards that must be followed by all sixteen federal states. Nevertheless, cooperation between partners extends beyond the legal arrangements of dual VET, permeating the whole system and its daily functioning. Dual system partners forge national and regional agreements to help ensure a balance of supply and demand, looking to motivate firms to offer training spots and to make vocational training attractive for young people.

Dual VET programmes last between two and three-and-a-half years, with most programmes being approximately three years in duration. Learning happens at two different locations, in line with the dual principle: apprentices receive the practical part of their training at their employer's facilities (on average about 70%), while the theoretical or scientifically-oriented part of their education takes place in a vocational school (approximately 30% of their time). Typically, apprentices spend three to four days a week in work-based learning, and one to two days a week at school. The quality of a dual VET programme depends on how well the two types of learning are integrated. During the company-based training, apprentices receive formal and systematic training under real-life working conditions, mostly by an in-company trainer.

During the school-based part of their education, which is free of charge to the student, apprentices follow a problem-based curriculum related to their professional field, learning the scientific underpinnings of their trade or acquiring management skills. In addition, apprentices can also follow general education courses and study foreign languages with the aim of completing upper secondary education at a later point, or simply to improve their employability.

At the end of their training, apprentices face a final examination that determines whether they qualify to practice their trade as licensed professionals. The examination is organised by the respective chamber of the apprentice's professional field, with the examination itself being conducted by an examination board composed of several stakeholders: companies or potential future employers (such as trade masters or expert technicians), employees (e.g. labour unions) and vocational school teachers (who are state employees).

Source: Cedefop, Vocational education and training in Germany.
https://www.cedefop.europa.eu/en/publications/4184

6.3.2 Pointers for discussion

- Is the informality of an economy a deterrent to establishing an effective apprenticeship programme?
- How to dissociate the 'poor' esteem of TVET from apprenticeship programmes?
- How to entice the private sector to participate more in dual apprenticeship programmes? Is there need for any fiscal incentives or they should release that this is their responsibility in human capital formation?
- What is the maturity level of the apprenticeship programme in your country?
- How can TVET provider offer flexible training options tha are accessible to learners in different locations and at difference stages of their careers?
- What is the involvement of the private sector in apprenticeship programmes in your country?
- What are the challenges faced in your countries in the implementation of apprenticeship programmes?

6.4 Using data analytics for labour market intelligence

Given the multiple drivers of change facing, conventional skills intelligence is not enough to understand the direction and extent of the transformation of tasks, jobs, skills and qualifications. New data analytics have emerged to advance skills intelligence and complement conventional statistics, surveys and administrative data. Digitalisation of processes, services, businesses, personal and social interactions generates a growing mass of data across the globe. Data is being called the new oil. Creating knowledge out of large volume and high velocity labour market data, is a new avenue to improve labour market responsiveness.

Artificial intelligence (AI) and machine learning are not only changing the labour market, but also giving us new tools for analysing the workforce. Job vacancies or job advertisements are published, refreshed, updated in large numbers through websites of different types, size and coverage. Exploring the inherent information of a such large data source has become an objective of research centres and public bodies in a number of countries. These vast data sources are essential to understand the dynamics and functioning of Web Labour Markets, and of changing employers' recruitment choices. Big Data analytics can be used to map skills by occupations, to identify obsolete skills, to do predictive analysis of demand for new occupations and skills, and to better capture skills interactions - based on granularity of data and quasi in real time

### 6.4.1 Case from Europe: Big data for Labour Market Intelligence

The European Training Foundation (ETF) started the project "Big Data for Labour Market Intelligence" in 2019, targeting development of an innovative data system for analysis of skills demand. The system is based on online job vacancies / advertisements (OJV) collected from web sources. In the first phase (2019-2021) the project achieved tangible results, notably the establishment of the databases and online visualisation platforms (dashboards) in three countries (Ukraine, Tunisia, Georgia). In 2022 the project started a new phase, marked by the inclusion of additional countries in the data system (Egypt and Kenya), upgrade of data quality and exploration of new themes and data sources. Currently ETF data system is focused on demand analysis. Analysis of supply side using social profiles is in preparation.

ETF works with a specialised consortium of data scientists and researchers (*LightCast and CRISP – University Milano Bicocca*), and applies a conceptual and technical approach similar to the system developed by CEDEFOP in the context of platform Skills Ovate (EU 27). Therefore, the data of ETF OJV system is comparable with the data produced on the EU Member States.

Every year the project carries out regular capacity development programmes, and all resources and learning materials are accessible online for any interested institution. In the dedicated YouTube channel you find over 40 videos covering different aspects of the concepts, methodology, analysis and use cases.

Key outcomes of ETF project "Big Data for LMI," including the data dashboards, training programmes, methodological handbook and analytical reports are accessible online:

- Dashboards OJV analysis (5 countries): https://solutions.lightcast.io/?pc=x$fhADtD*cu$BjY9

- Brief methodological handbook (English) "Big Data for labour market intelligence: an introductory guide" (2019). Brief Methodological Handbook, 2019 Russian and in French

- Training programmes with learning resources:
  - YouTube channel: over 40 videos
  - A specific training programme for data analysts and experts, November 2019
  - Webpage of webinar on Big Data for LMIS, 10 December 2020
  - Online training programme on Job vacancy analysis, 8, 10 and 15 June 2021
  - Online training programme "What's new with Big Data for LMI?": 22-24 November 2021
  - Online training programme 2022: 6 webinars in November-December 2022
- Report: Feasibility study OJV sources: methodology and two case studies (Morocco and Tunisia), 2019
- Report: Big Data for LMI, Web Labour Market Landscaping Ukraine, 2020.
- Report: Big Data for LMI in Ukraine: analytical report, 2020.
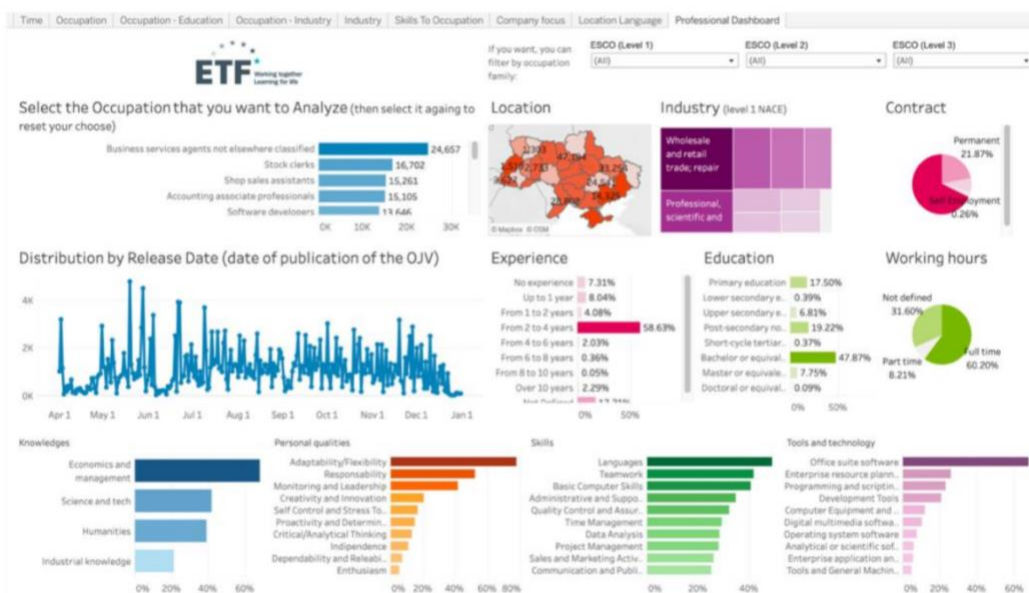
Given the fragmentation of data within TVET systems, it is always challenging to capture the status of skills demand in the labour market. Having recourse to big data analytics supported by AI can complement

traditional labour market information, and result in more updated and detailed data on skills requirements for TVET.

6.4.2 Pointers for discussion

- What is the availability of Online Job Vacancy data in your country? How do the public and private sector advertise their recruitment needs?
- Should SADC in collaboration with partners mount a regional training and development programme in OJV analytics for member states?
- Do member states require technical support to build and use such dashboards?
- How would outputs from such dashboards integrate conventional labour market information channels, and inform TVET training supply?
- Do TVET institutions have the methodology, processes and capacities to respond to information from big data?
- How often do TVET institutions in your country review their curriculum? Do timings depend on specific trades?
- Do adopted methodologies respond to market dynamics?

6.5 Sector skills councils and labour market responsiveness

Sector skills councils (SSC) are introduced to address a wide variety of skills issues with a greater contribution and commitment from industry. They can be singly funded by Government or the private sector, of jointly by both. They take a multitude of forms, but in general they aim[3] to:

- Understand the future skill needs of a sector and take measures to ensure that learners can develop appropriate skills for the future;
- Address a gap between skills demand from a sector and supply by TVET and HE institutions;
- Adopt innovative skills solutions to address labour market changes, such as automation, disruption and digitalisation;
- Increase the amount of employer investment in training and skills development;
- Address youth unemployment and reducing the reliance on migrant labour;
- Support and promote government and industry skills initiatives; and
- Promote sectoral skills development at enterprise level.

Variations of Sector councils or Sector technical committees have good track record in a few African countries, notably in relation to development of TVET qualifications and NQFs. Examples: Mozambique (ANEP) and Cabo Verde (UC-SNQ).

6.5.1 Case from India: The National Skills Development Corporation and Sector Skills Council

The National Skill Development Corporation (NSDC) is a not-for-profit public limited company incorporated in 2008 set up by Ministry of Finance as Public Private Partnership (PPP) model. The Government of India through Ministry of Skill Development & Entrepreneurship (MSDE) holds 49% of the share capital of NSDC, while the private sector has the balance 51% of the share capital.

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[3] https://iloskillskspstorage.blob.core.windows.net/development/resources/4998/WEB-Sector%20Skills%20Bodies%20Resource.pdf

Since its inception, one of the major pillars of NSDC's strength are, setting up Sector Skill Councils (SSCs), which play a vital role in bridging the gap between what the industry demands and what the skilling requirements ought to be. The SSCs operate as autonomous bodies. NSDC is mandated to initiate and incubate SSCs with initial seed funding to facilitate their growth and enable them to gradually achieve self-sustainability. Priority sectors have been identified based on the skill gap analysis. Some of the function of the SSCs that directly relate to labour responsiveness include:

- Identification of skill development needs including preparing a catalogue of types of skills, range and depth of skills to facilitate individuals to choose from them.
- Development of a sector skill development plan and maintaining skill inventory.

- Determining skills/competency standards and qualifications and getting them notified as per the national qualification framework.
- Standardization of affiliation, accreditation, examination and certification process in accordance with NSQF as determined by NSQC.
- Plan and facilitate the execution of Training of Trainers along with NSDC and states.
- Promotion of academies of excellence.

The National Occupational Standard is one of the most significant contributions of NSDC through the SSCs to India's skilling ecosystem. The national occupational standards are developed be bringing together all the major stakeholders in the skills ecosystem, namely industry, labour and the TVET and HE institutions.

(Source: About Us | National Skill Development Corporation (NSDC) (nsdcindia.org),
https://nsdcindia.org/about-us)

6.5.2 Pointers for discussion

- Do you think that SSC are efficient instruments to improving labour responsiveness?
- How do SSC integrate with TVET? What are the linkages modalities? How quickly are skills demand relayed to TVET providers?
- What challenges do they usually face?
- How does the private sector interact with them?
- How are they funded?
- Is your country large enough for the establishment of sector skills councils?
- What alternative with similar functions can be established in smaller counties with smaller labour markets?
- What methodology should be adopted in the establishment of sector skills council?

6.6 National strategy to improve labour market responsiveness

Labour market responsiveness can be achieved through a multitude of programmes, instruments, and initiative.

6.6.1 Case from Rwanda: The National Skills Development and Employment Promotion Strategy

The National Skills Development and Employment Promotion Strategy (NSDEPS) aims to contribute to Transforming the skills of Rwanda to transition to a middle-income economy. The implementation falls under the mandate of the Rwanda Development Board. The NSDEPS identifies priorities for building skills

and promoting employment considering Rwanda's new vision for transformation. As a middle-income country the economy will have shifted towards services and industry, and a more capable workforce will increasingly be required for these sectors. The strategy is built on 3 pillars, namely skills development, employment promotion, and matching

- Pillar 1: Skills Development: This pillar aims to ensure that current employers and interested investors can access the skills they need, currently and in the future. The National Training and Education Excellence Program will reward effective TVET, and Higher Education institutions which adopt best practices and solve critical emerging issues. The Market-led education initiative will support a demand-led approach, through elevating the voice of the private sector, reinvigorating the Sector Skills Councils, and ensuring that the sectoral skills gaps are clearly identified. The Capacity Development Programme will allow skills development to be responsive to needs of investors and the sectoral development priorities of the government.
- Pillar 3: Matching: Currently, there is an asymmetry of information between job-seekers and employers in Rwanda, resulting in mismatch between labour supply and demand. This pillar aims to support a well-functioning jobs ecosystem that connects job seekers, employers, and the education pipeline. The Evidence Based Workforce Planning and Matching Program will support an ecosystem where employers and workers can find each other, and TVET and HE institutions can quickly respond. This process will be supported by an integrated data system. Furthermore, it will enable an ongoing labour market planning to bring the demand and supply sides more aligned over time. The Strengthening Employment Services and Career Guidance Program will promote active linkages between skills supply and demand, providing incentives for career services and matching providers based on performance.

https://rdb.rw/wp-content/uploads/2019/07/NSDEPS.pdf

6.6.2 Pointers for discussion

- What is the quality of TVET graduates? How responsive are the graduates to the needs of industry in your country?
- Does the TVET intake form secondary school impact in the quality of TVET graduates, and consequently determine TVET labour market responsiveness?
- What is the percentage of TVET learners that are being fully employed after graduation?
- Do learners that graduate, respond to the needs of your country in terms of economic development?
- What specific national programmes could drive/improve labour market responsiveness?
- How to improve/incentivize the role of the private sector in improving labour market responsiveness?
- What is your opinion on the use panels of panels of employers as a complementary source of guidance about labour market demand?
- How can career guidance programmes contribute to enhancing the linkages between supply and demand of skills?