

Linkages between TVET-academia-private sector in Ghana. Untapped potential.

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Executive Summary

Ghana's education sector and the TVET sector in particular have seen a tremendous change in the past years. However, it remains detached from industry demands, and public institutions fail to address the missing linkages to the private sector. Similarly, the TVET sector and academia and research are detached from each other. This is imminent on all levels of TVET: from the lower qualification levels to higher education in TVET, imparted in the Technical Universities (formerly Polytechnics). The paper aims at identifying practical and hands-on opportunities to increase the linkages between academia – TVET – industry. Two possible linkages are distinguished for this purpose: the links between TVET (on all levels) and industry, as well as the links between academia and TVET (on all levels).

The methodology of the paper is a desktop research in combination with semi-structured expert interviews and therefore should be understood as not exhaustive. The analysis indicates that a closer linkage between TVET, academia and industry holds the potential for stronger education and research systems. Some areas already lay a good foundation for future cooperation between TVET and the private sector, e.g. the recently established Sector Skill Bodies, the re-structuring of the Technical Universities and the envisioned implementation of a Dual TVET system. The linkage between academia and TVET equally holds opportunities for further exploration, e.g. in the area of research cooperation, realization of studies or improvement of quality in TVET. However, these linkages have been even less accessed until now.

The paper provides an overview on the TVET system in Ghana, also by adding general information on the country and economy. It also provides concrete steps policy makers and education practitioners can take to increase linkages between TVET – academia – industry.

Introduction

The recent reforms in Ghana's technical and vocational training (TVET) show that the Ministry of Education (MoE) and the government have a sustained interest in the further development and expansion of vocational training. The reform efforts in vocational education and training are part of the development goals of Ghana and are linked by the government to other overall policy initiatives such as "One district, one factory" (increase in industrialisation and the associated need for more trained skilled workers) or "Ghana beyond aid" (reduction of dependence on international donors by increasing the country's competitiveness and expanding education). The reforms in vocational

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education and training are accompanied by a government image campaign, e.g. through high-profile statements by President Nana Addo Akufo-Addo or through participation in the WorldSkills Competition.

Despite these efforts and integration of TVET in economic and labour market initiatives, the linkages between TVET, industry and academia remain low. TVET in Ghana has seen a steady rise in student numbers in the recent years. Since 2015 the figures have tripled to about 100.000 students in 2019/2020, whereas the student numbers in Technical Universities have remained steady in the same period (CTVET 2022). The coordination of the Technical Universities (previously Polytechnics) has formally moved under the mandate of the Commission for TVET end of 2020. The National TVET Qualification Framework (NTVETQF) now covers all qualification levels up to Doctor of Technology, paving the way for a better progression within the TVET system. All these aspects indicate that a closer linkage between academia/tertiary education and TVET/pre-tertiary education is desired by policy makers in Ghana.

This paper will first provide a short overview about Ghana's economy and education system, pointing out potential for further improvement and existing linkages between TVET – academia – industry. Throughout the paper, potential areas for further collaboration will be identified. For this analysis, two possible linkages are distinguished: the links between TVET (on all levels) and industry, as well as the links between academia and TVET (on all levels), potentially in combination with industry partners.

Overview economy and education in Ghana

The country's economic centres are located in the south and centre of the country, with the Accra metropolitan region (2.5 million inhabitants), the industrial city of Tema, the coastal city of Sekondi-Takoradi, which is important for oil production, and Kumasi, the country's largest city (3.3 million inhabitants). In total, Ghana has 33.1 Million inhabitants (CIA 2022). Economic growth picked up in 2021 thanks to dynamic agriculture and services sectors, after slowing to 0.5 % in 2020. Ghana's economy rebounded from the COVID-19 slowdown, growing by 5.4 % in 2021, but the recovery is already facing challenges due to the global economic situation and war in Ukraine (World Bank 2022b; Germany Trade and Invest 2022). In recent years, the oil and gas sector has contributed significantly to economic growth, and since 2019, agriculture and related industries have also recorded good growth rates. The agriculture sector is estimated to have significant value chain deepening potential despite the fact that most people with employment are in small and medium-sized enterprises (SMEs) (ILO 2019; World Bank 2017). In 2019 (last available figure), industry contributed 34.2 % of GDP, services 47.2 % and agriculture 18.5 %. The shares have remained constant in recent years (Ghana Statistical Service 2022). Since the development of oil wells off the coast of Ghana in 2010, the share of oil revenues in GDP has ranged between 1 and 5 %, most recently at 3.1 % in 2020 (World Bank 2022a).

Overall, the economy has moved away from an agrarian economy towards a stronger service and industrial sector in recent decades. In the service sector, trade in particular has been a growth driver. In the industrial sector, construction industry as well as mining and oil production have been the main contributors to growth. A relative decline in the manufacturing sector can be identified, which, together with a still low local value creation, shows the need for structural changes in the economy. This is also evident in the export economy, which focuses on primary products such as cocoa, gold, timber and petroleum rather than more complex economic goods. Diversification of the economy is seen as urgently needed, even though productivity has developed positively in recent decades (Nxumalo and Raju 2020). The World Bank has identified the following sectors where further

development should be prioritised: agriculture and food processing, education, energy, finance, health, information and communication technology and transport (World Bank 2017).

The fact that Ghana has not moved from a developing country to a manufacturing economy, as has been a success model, for instance, for many South East Asian countries, poses the challenge of low value addition and job creation in the country. Manufacturing jobs tend to be more labour intense than service jobs and therefore play an important role in the economy and labour market. The government is making an effort to attract more local production and international companies to set up their manufacturing facilities in Ghana. In 2017, the government established the "One District, one factory" initiative to promote value chains locally, especially in the food processing sector. Under the initiative, 232 projects were started, new companies were established (28) or the capacities of existing companies were expanded (48, figures from Government of Ghana 2022; Awal 2022). The effectiveness of the initiative has not yet been systematically studied, but Mensah et al. argue that the projects would only bring sustainable benefits if "green" and "clean" industries were promoted through them, which is not an explicit goal of the initiative (Mensah et al. 2021). A missing element throughout the policy is the aspect of training and skilling. The initiative only mentions as one objective to "Create massive employment particularly for the youth in rural and peri-urban communities, and thereby improve income levels and standards of living, as well as reduce rural-urban migration." (Government of Ghana 2022), however no operational plan to do so has been put in place. The aspect of training for the job profiles required at these new factories has been neglected completely. It is evident that linkages between education, whether tertiary education or TVET, and the private sector are not considered in policy initiatives of this kind, despite offering great potential for collaboration, for instance by implementing in-company training of different qualification levels.

Generally, agriculture and the food industry has proven to be very resilient during the pandemic and is considered an important part of the Ghanaian economy and industry with many employees and great potential for the future. On the other hand, the sector is quite complex and unstructured. There is a lot of potential for optimisation in the value chain, especially in industrial processing, cooling, packaging and logistics of the products. The lack of machinery and equipment for these value-added processes, but also of qualified personnel and standards, is challenging. In addition to food processing, the automotive industry is being particularly promoted by the current government and has been able to report initial successes with the establishment of an assembly plant by a Chinese company and VW. The "Ghana Automotive Development Policy - Auto Policy", as part of the "Agenda for Industrial Change", aims to achieve greater economic diversification and increase the local share of value added. By promoting the automotive industry, the government also hopes to build up a supplier industry and thus have positive effects on other economic sectors such as the petrochemical, aluminium and bauxite industries. Despite Ghana's low importance as a sales market for new vehicles, the industry is considered to have a good chance, also due to the regional networking in West Africa (iMOVE 2021).

The informal sector of the economy is widespread in Ghana and contributes significantly to employment and economic output. Although it is difficult to obtain up-to-date and, above all, reliable statistics, estimates suggest that around 80 % of jobs can be attributed to the informal sector (Osei-Boateng and Ampratwum 2011); the ILO even estimates the share at 90 % (ILO 2019)). Official estimates by the Ghana Statistical Service put the informal sector's share of employment at just under 60 % (Ghana Statistical Service 2015b). Despite this high employment figure, the informal sector only generates about one third of GDP. Agriculture, small workshops and companies mining gold or other raw materials, as well as street vendors, market traders and taxi drivers are particularly common in the informal sector, as are many small businesses (Ocran 2018).

Overview education and TVET in Ghana

Compulsory education in Ghana comprises attendance at a two-year pre-school, a six-year primary school and ends with graduation from a junior high school (JHS), where graduates receive the Basic Education Certificate Examination (BECE). After this graduation and passing an entrance examination, students can pursue higher education at a Senior High School (SHS), where they can take the West African Senior Secondary Certificate Examination (WASSCE) after three years and thus acquire a higher education entrance qualification. Alternatively, in secondary level II, also called pre-tertiary, the path to formal vocational schooling can be pursued. At the tertiary level, in addition to the universities for the academic path, there are the technical universities, formerly polytechnical universities, which offer higher-level vocational training (iMOVE 2021). No fees are charged in the education system until the end of upper secondary education, i.e. also in the formal vocational training system. It is clear that there is a large gap between the capital region and the northern areas in terms of success rates, girls' participation in education or class size. Also striking are the rather high repetition rates in secondary education (up to 15 %), as students missed too much school time due to seasonal work or (before the introduction of fee exemption) could not afford the SHS school fees (Ministry of Education 2018). The tertiary education sector has been greatly expanded in recent years: in 1994 there were only six public universities, in 2018 there were already 205 universities, polytechnics and other institutes of tertiary education. Since 2016, ten polytechnics have been converted into technical universities following the German model of *Fachhochschulen* and *Technische Universitäten* (DAAD 2021). There are about half a million students in total (2019, (DAAD 2021).

Graph 1: Scheme of the education system in Ghana

| Age | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|--------------|------------------------|----------------------------|------------------|---|---|----|----|--------------------------|----|----|------------------------------------|----------|----|-----------------------------------|----|----|----|
| | Preparation for school | | Mandatory school | | | | | | | | | Election | | | | | |
| School years | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | |
| | Pre-School education | Primary education | | | | | | Secondary Education I | | | Secondary Education II | | | Post Secondary Tertiary Education | | | |
| | Nursery School | Elementary/ Primary School | | | | | | Junior High School (JHS) | | | Technical and Vocational Institute | | | Polytechnics | | | |
| | | | | | | | | | | | Senior High School (SHS) | | | University | | | |

Source: own compilation, compare to iMOVE 2021

Formal TVET

The Ghanaian vocational education and training system is undergoing a comprehensive process of change as a result of the Education Regulatory Bodies Act passed at the end of 2020. The system was previously very fragmented and was not centrally coordinated by the Ministry of Education, but was subordinate to 19 other ministries. The Ministry of Employment and Labour Relations with its National Vocational Training Institutes (NVTI), the Ministry of Youth and Sports with the National Youth Authority and the Ministry of Local Government and Rural Development with municipal vocational training institutes played an important role next to the Ministry of Education with the Ghana Education Service (GES). The large distribution of offers across 19 ministries (and additional private providers) has in the past led to an enormous coordination effort, duplicate structures and low effectiveness.

Across the country, 145 pre-tertiary TVET institutes (levels 1-4 of the NTVETQF, of which 35 previously belonged to NVTI) and 102 tertiary institutes (from level 5 of the NTVETQF) are accredited by CTVET. In total, however, it is estimated that there are more than 400 public and private Vocational Training Institutes (VTIs), some of which still operate under other accreditations or under the auspices of other ministries or sub-organisations. 32 further institutes of excellence are to be added in the future.

The number of young people transferring from school to VET has increased in recent years. In 2013, it was still around 2.1 % (Ministry of Education 2018). It is estimated that currently about 7 % of the JHS graduates (2018, 3.7 % of the women and 10 % of the men) are participating in formal training programmes. In addition, about 5 % of youths were enrolled in polytechnics (of which one third were women; ILO 2019 and iMOVE 2021). What is striking, but needs to be further differentiated and investigated, is the low success rate in vocational training, which the MoE puts at 30 % (Ministry of Education 2018). The success rate determined by CTVET in their first-ever report on TVET in Ghana was higher, at almost 90 %, but the underlying study is not representative. As for the reason for dropping out of the TVET system, the payment of fees was by far the most cited reason (62 %), while finding an employment was the reason only for very few persons to drop out (3,5 %) (CTVET 2022). The payment of fees will not be relevant in future, as the Free SHS policy has been extended also to TVET this year. However, other financial constraints may still play a role and should be further analysed.

The low completion rate certainly is an indicator for multiple challenges of the TVET system in terms of quality, resources and qualification of TVET staff. Training is generally very school-based and not very labour market or company-oriented, and trainees attend a VTI where theoretical and practical instruction takes place. In CTVET-certified programmes, learners complete a work placement in a company as part of Workplace Experience Learning (WEL), which lasts four to six weeks. Getting companies and businesses interested in WEL is still a challenge, as confirmed by CTVET and GIZ. Constraints from the companies' side range from reluctance to invest time or money, over security concerns to lack of knowledge how to integrate a learner in the company's processes. No data is yet available on how many companies participate in any form of industrial attachment, whether WEL or other forms of internships, nor is it known how institutions are engaging systematically with companies.

TVET in the informal sector

Vocational education and training in the informal sector (apprenticeship) can usually be started without fulfilling basic school requirements and is therefore also open to school dropouts as an educational path. Informal vocational training takes mostly place in the informal economy, is often not or only partially regulated, standardised or certified. The informal vocational training pathway is taken by about 400,000 of the youth in Ghana, although this number is probably decreasing (ILO 2019). This makes the informal training sector four times larger than the formal TVET sector. As Frommberger and Krichewsky-Wegener describe, this educational pathway is still poorly standardised: There are no uniform regulations on the apprenticeship fee that families pay to the master craftsman (MCP). Furthermore, there are no uniform specifications regarding content, quality or examination standards (Frommberger and Krichewsky-Wegener 2018). This is where various GIZ projects have started in the past to train MCPs and achieve a greater degree of formalisation. Trade associations regulate the informal sector, but here too there are no uniform procedures and the landscape of trade associations is very diverse with varying degrees of formalisation. Normally, training in the informal sector takes 2-3 years and takes place entirely on

the job under the guidance of the Master Craft Person (MCP). In the Collaborative Apprenticeship Training (CAT) project, which took place under the Ghana Skills Development Initiative (GSDI) of GIZ, training programmes were developed and certified in cooperation with the National Vocational Training Institute (NVTI). Participants spent 20 % of their time in VTIs with standardised learning content, 80 % continued with the MCP in the informal economy. The certification targeted a National Proficiency Level I or II. Similarly, the Ghana TVET Voucher Project (GVTP), funded by KfW, has developed a successful approach to formalising traditional training through vouchers given to trainees: If they submit the voucher to a VTI, they can undergo an accredited training programme. VTIs must be accredited by CTVET in order to claim the vouchers in turn. A challenge of both approaches is the transition to permanent funding within the VET system, further formalisation as well as nationwide implementation.

The recently implemented Policy on Recognition of Prior Learning (RPL) has the aim to formalize the procedure of accrediting skills acquired through informal and non-formal learning. So far, 5 institutes are participating, and two accreditation windows have been executed. The implementation of the RPL policy is still in process. NVTI, even if it is formally in nimbus of existence due to the Education Regulatory Bodies Act (ERBA), still offers annual or biennial exams for the recognition of informally acquired competences, which is an important link between informal and formal education. RPL intends to increase permeability in the education system, to enable graduates of informal education to access the formal labour market and to increase the number of available skilled workers for the economy.

In addition to the challenges posed by the informal economy, the potential for the VET system as such should also be illuminated. After all, training in the informal economy is practice-oriented and the transition from training to work should be easier (need for further investigation). Likewise, there are significantly fewer costs in the VET system, as no or fewer workshops, consumables and teachers or trainers are needed. In addition, informal apprenticeships are culturally and socially firmly anchored and enjoy a high level of social acceptance, which represents a good starting point for an upgrading and gradual formalisation of the training model.

Regulatory level

The Ghana Vocational Education and Training Agency, the Council for Technical and Vocational Education and Training (COTVET, now Commission for TVET (CTVET)) was established by the COTVET Act (no. 718) in 2006 with the mandate to develop a strategic vocational education and training policy. In addition to COTVET and the Ministry of Education, the Ministry of Employment and Labour Relations (MELR) is an important player in the VET system and operates about 100 training centres, 35 of which are National Vocational Training Institutes (NVTI). NVTI is both a provider of vocational training and an examination and certification body, and they are among the oldest and most recognised vocational training institutions in the country.

At the end of 2020, a reform in the tertiary education sector was passed that also has a major impact on VET. After a one-and-a-half-year voting process, parliament cleared the way for a consolidation of the VET system (Education Regulatory Bodies Act, Parliament of Ghana 2020) and thus upgraded CTVET as the central institution for VET. The key elements of the reform for VET was the transformation of COTVET from a Council to a Commission responsible for the governance, development and monitoring of the VET system in Ghana, including informal VET. This also includes the development and implementation of strategies for the continuous expansion and improvement of the TVET system.

Technical Universities were established with the Technical Universities Act of 2016, seceding the polytechnical universities. As per the mandate, the aims of a technical university are to provide higher education in engineering, science and technology-based disciplines, technical and vocational education and training, applied arts and related disciplines. One of five guiding principles is to develop strong linkages and collaboration with relevant industries, businesses, professional bodies and technical experts in the design and delivery of programmes (CTVET 2022).

The Standards and Curriculum Development & Evaluation (SCD&E) department is responsible for the development and certification of programmes within CTVET. The most important instrument for the development of standards are the Sector Skill Bodies (SSB), which are led by the companies and accompanied by CTVET. Based on the requirements developed in the SSBs, SCD&E designs and certifies the programmes at the different qualification levels. The SSB is intended to record the personnel and qualification needs of various sectors and systematically feed them into the VET system. Out of 22 planned SSBs, 11 have been inaugurated so far, but not all of them are already working on an operational level. In the past years, many curricula have been updated and under the World Bank Skills and Job program that started in 2021, a total of 200 individual curricula are to be updated until 2025 (CTVET 2022). A constraint in implementation of the SSB has been the lack of financial and personnel resources to support their work. In 2021 GIZ set up an office for the SSBs to support them in administrative questions.

Labour market challenges

The biggest challenge in the labour market is finding suitable candidates with the skills required for a job. In an attempt to compensate for the lack of skills and in view of the low wage level, companies often react by hiring more staff than they need. However, this does not solve the problem conclusively. It should also be emphasised that a high proportion of people work in jobs for which they are too low-skilled (often technicians or in agricultural technology) or too highly skilled (e.g. salespersons) (ILO 2019). There is therefore a clear mismatch, especially in occupations at low or medium qualification levels. Surveys, figures, data and facts on the labour market or forecasting of skilled labour requirements are very fragmented and therefore often not comparable or consistent. The last major labour market survey by the Ghana Statistical Service (GSS) dates from 2015. It states that the share of well-qualified persons is higher in the public sector than in the private sector (72.5 % vs. 54.4 %), although it is not described in more detail what exactly is meant by "qualified". Accordingly, industry has the highest number of unskilled workers (28.3 %), and there is also a gap between urban and rural regions. Most people are employed in micro and small enterprises (32.7 % and 29.4 % respectively) (Ghana Statistical Service 2015a). If the development of the past years continues and agriculture and food processing further professionalise, this will lead to a stronger demand for labour in the short term. In the medium and long term, however, it is to be expected that more qualified skilled workers will be needed (ILO 2019).

Labour market analysis and research

Systematic surveys on the skilled labour needs of companies do not yet exist. As part of its mandate, CTVET has had a skills gap analysis carried out with the support of GIZ and a consulting firm. The aim was to identify the skills needs for individual sectors and thus to have an analytical basis for the development of new VET programmes. However, the study lacks fundamental elements of labour market and qualification analysis. It does consider macro-economic factors and provides an overview of different sectors that were preselected by CTVET, namely information and communication

technology (ICT), agriculture, energy, oil and gas, manufacturing, tourism and electronics & automation. On the other hand, the study lacks clear definitions of terms (e. g. trade areas and competences) and does not investigate the demands of companies in depth. The identified job profiles are not contrasted against existing curricula and programmes at offer or the skills and competences they include (COTVET 2019).

In the future, the Sector Skills Bodies (SSB) have the task to regularly report on the skills needs in their sectors, so that CTNET can design appropriate offers in cooperation with the private sector and social partners. A survey on the needs of local and international companies is not available, but could be helpful for implementing dual approaches in VET in cooperation with these companies. Individual, yet not representative, feedback from German companies indicates an increased need in the areas of mechatronics, electrics, sanitary trades, sales and logistics. Furthermore, companies consider a well-extended research landscape and qualified skilled workers as prerequisites for locating complex production or innovation centres, both factors that are not present in Ghana (iMOVE 2021).

For some years now, Ghana has had a lively start-up scene, which is also supported by Germany, e.g. through the Konrad Adenauer Foundation (KAS), Sparkassenstiftung or GIZ. The success factors of the start-up scene include a high number of well-trained and qualified workers, proximity to users and an open-mindedness towards new technologies. The scene is still heavily dependent on foreign investors (primarily from the USA and China) and does not have the investment volumes of other African start-up regions (e.g. Nigeria, Kenya, South Africa or Egypt). Start-ups in the fintech, agritech and energy sectors have been particularly successful to date (Germany Trade and Invest 2020).

Start-ups and their environments present good contact points for collaboration in future. While in academia the linkage between start-ups, companies and universities work well, sometimes funded by international development partners or universities from abroad, there is no collaboration yet pursued on the level of TVET. However, opportunities for the same are evident: for prototype manufacturing, the design of production processes or other tasks, persons with TVET qualification make a good fit, particularly in the go-to-market phase, when production needs to be scaled up. A strong cooperation and peer learning from start-up hubs that are attached to a university present a good opportunity for TVET.

Vocational education and training research

Vocational education and training research is not very common in Ghana. CTNET has identified a desideratum in its own system with vocational training reporting, as a sub-topic in vocational training research, and has placed it at the centre of cooperation with the Federal Ministry of Education and Research (BMBF). GOVET is advising CTNET on behalf of the BMBF on the preparation of the first VET report, which is due to appear in mid-2022. The goal of the report is to create transparency on the current state of vocational education and training in Ghana and thus provide a solid basis for decision-making. In the first step, basic data have been collected from 85 public and private TVET institutions and other stakeholders. As expected, many data gaps have been discovered, that will have to be continuously closed in the following years in order to build up an effective reporting system. The compilation of the first report has been a learning experience for CTNET as an organization. Around 1/3 of the staff has been involved in the TVET reporting at some point and built up significant capacity among the teams. This will help foster future development in the area of research and monitoring.

An important building block for reporting is also an ongoing GIZ project under the Programme for Sustainable Development (PSED), which promotes the establishment of a Management Information

System (MIS) for CTNET. The aim is to create a modern database in which data collected for a VET report, for example, can be stored, updated and accessed. The Education Management Information System (EMIS) of the MoE collects basic data on the VET system, but even this is not detailed enough for TVET.

With regards to the general research landscape in TVET, GOVET was commissioned by the BMBF to conduct a comprehensive study on the state of research in vocational education and training in sub-Saharan Africa in 2019 and 2020. The study shows that expertise and research activities in most countries in the region are only sporadic, and this is also true for Ghana. Although there are three UNESCO-UNEVOC centres in Ghana (CTNET itself, the Accra Technical Training Centre and the University of Cape Coast), they hardly network with each other. There is no cooperation between the system level in vocational education and training and the country's research community. Based on subjective perception, there have been more publications on TVET in the past years than before. This may be a promising development but further networking opportunities are required to establish a stronger tie between the TVET sector and academia. Another major problem is the limited access to publications and knowledge (Haßler 2020).

Overall, research expenditure in Ghana is very low. They amount to only 0.38 % GDP (2010, for comparison in Germany 2020: 3.14 %; UNESCO 2022). This also has an impact on the country's innovative strength (DAAD 2021).

Labour market data are collected by various institutions. Ghana Statistical Service (GSS) has published a large number of reports that are relevant to the TVET sector, but often do not list it in a differentiated way of qualification. One example is the Labour Force Report from 2015, which provides insightful information on the labour market, but does not identify VET as a separate branch of education (cf. Ghana Statistical Service 2015a, 2015b). With the Ghana Labour Market Information System (GLMIS), all information on the labour market - also from the area of TVET - is to be made available in a bundled form. So far, however, the website is only filled with few and therefore hardly meaningful data. One challenge is the lack of funding for the GSS. The GSS can only produce comprehensive reports, such as the Labour Force Report, with the participation of international donors and only collects some core data on the economy on a regular basis. As a result, there are only isolated reports and surveys that cannot provide a fully comprehensive picture of the labour market situation.

Research in VET is not very extensive, partly due to the underfunding of the research landscape in general, but also due to the low visibility of vocational education and training in Ghana. Strengthening the research community in VET would therefore be urgently recommended. This should take effect on different levels: One fundamental aspect is the financing of research work, e.g. through scholarship programmes. In addition, however, as Haßler have noted, networking in Ghana, within the region and Africa, as well as internationally and with Germany, is a major challenge where bilateral VET cooperation projects can start and make a valuable contribution (Haßler 2020). Furthermore, there is a considerable need for reform in the connection between the research community, actors in the VET system and economic and social partners.

Greater involvement of business and social partners

With the establishment of some SSBs (although not yet for all economic sectors), CTNET has succeeded in involving business and social partners more closely. This is also viewed positively by international and German companies and is seen as an important step towards increasing the relevance and competitiveness of the VET system. A critical point, however, is the involvement of

business associations and social partners beyond the SSB. Both are not or only marginally represented in the Governing Board of CTNET. Nevertheless, it has to be acknowledged that CTNET faces a challenging task: often business associations do not see VET as their original subject or the associations and social partners have few human and financial resources and inadequate organisational structures that stand in the way of effective engagement.

At the same time, individual companies (mostly international or German) have set up their own training programmes without involvement in the national system. Greater involvement to ensure that companies feel truly represented with their needs in the VET system could reduce parallel structures. It would therefore be worth examining to what extent business and social partners can and want to become more involved in VET and to what extent CTNET and the Ministry of Education are willing to grant them a more active role in the VET system. In addition to strengthening the political dialogue, it would be important to find and define concrete fields of activity and work packages that are in the interest of both sides.

The new training standards should be developed consistently for the gaps identified in the Sector Skills Gap Analysis. It is not yet clear whether the transfer between the gaps analysis and new programmes really works. Likewise, the instrument of the analysis must be standardised and carried out for all economic sectors (currently in planning). In addition, an analysis must then be carried out to show which of the skills gaps presented can and should really be covered by CBT programmes. It is recommended to conduct the Sector Skills Gap Analysis especially for those sectors that have a high demand for TVET graduates and that have been identified as growth sectors for the Ghanaian economy (see above, e.g. food production and processing, agriculture, energy, etc.). It should be noted that even though the development of the standards is the first step, they also need to be implemented at TVET institutions. As mentioned above, half of the teachers have no professional competence in the subjects they teach. The training of trainers who are technically, practically and methodologically able to implement the standardised curricula is an important step that has not been considered enough so far.

TVET has a very theoretical structure and most of the training takes place entirely in VTIs, which, due to their insufficient equipment, are often only able to offer practice-oriented teaching to a limited extent. CBT programmes have also integrated Workplace Experience Learning (WEL), which already offers participants a valuable insight into how companies work. However, the practical orientation in VET must be given much more focus, so that on the one hand quality of training as a whole is upgraded and opportunities for graduates to transition into employment are increased. An important step would be to continuously win more companies for the WEL and to extend the duration of the WEL unit (currently 4-6 weeks). Similarly, inter-company training approaches can increase the participation of MSMEs in VET and facilitate their entry into the formal TVET system. It is recommended to implement this collaborative approach in SSBs and in cooperation with CTNET, Trade Associations and VTIs that operate close to the informal economy. Despite these approaches, the practical orientation in a generally less industrialised country is a challenge that is ultimately difficult to solve. Even if incentives can be created through the promotion of entrepreneurship, these are structural aspects that are not within the sole sphere of influence of VET policy makers.

Transitions from TVET to the labour market

About 17.6 % of the working population have a secondary education, TVET or academic degree. The Education Strategic Plan (ESP) attaches great importance to the successful transition between school and work. In 2030, the aim is to ensure that all VTI graduates have a job within 2 years (Ministry of Education 2018). As Nxumalo and Raju noted, the transition between school and work is easier for

younger graduates than for older ones. It is also striking that women are more likely than men not to take up employment after completing their education, which is seen in connection with family status and the birth of children. Another important correlation is that poorer young people are more likely to work during education to support themselves, and this is also more likely to be the case in rural areas. These factors may negatively influence the success rate in education, but require further investigation (Nxumalo and Raju 2020). In addition to these general assessments and statistics on skills mismatch, there is no detailed analysis of the transition between VET and work, even though this is considered by CTNET and MoE as an important indicator to measure the competitiveness of the VET system. Because of the missing data, it has also not been a topic that could be included in the first data report (CTNET 2022).

The Ministry of Labour (MELR) has 62 employment agencies nationwide, but cannot provide comprehensive guidance due to resource constraints. Youth Employment Agencies were established in 2015, but their impact has not yet been evaluated. Their mandate is to support jobseekers between 15 and 35 years of age to take up employment through targeted training and internships. There is no discernible link to the vocational training system. A traditional programme for the transition between study and work is the National Service, which all graduates have to do for one year after graduation. Ideally, they are placed in a suitable department of a ministry or public institution or private company according to their study background with the aim of integrating the students into the world of work (DAAD 2021). However, this is rarely successful and it is rather the rule that the young people are assigned to non-specialist areas and are often hardly integrated into work processes in a meaningful way. Still, CTNET has made good experience with National Service Personnel in the past years and was able to recruit new permanent staff through that channel.

National Service is also open to companies, but the private sector is generally less aware of these mechanisms and/or not convinced of the benefit.

Companies often have difficulties finding suitable applicants, while at the same time many people perform jobs for which they are overqualified or underqualified (skills mismatch). In view of the high share of the informal sector, training in entrepreneurship and self-employment could be an important contribution to a successful transition from school to work. Entrepreneurship is already being considered in many VET cooperation projects in Ghana, but so far there is no systematic approach to this area on the part of the MoE or CTNET. In the technical universities it is also not considered with much focus, but some programmes have entrepreneurship as part of their syllabus.

So far, there are hardly any state-certified further education and training measures for graduates of the vocational education and training system or for adults entering the system at a later stage. As a result, persons who have left the education system, rarely receive further training and are therefore unable to adapt their competences and skills to the changing requirements of the labour market. In view of the widespread problems of matching, it is therefore advisable to set up a coordinated continuing education and training programme. This should ideally be embedded in the other labour market strategies and also be developed and implemented in cooperation with economic and social partners. In addition, the possibility of continuous further training could have a positive effect on the image of vocational education and training, as opportunities for advancement would be made possible. Coordinated CVET provision can also promote increased permeability in the VET system by enabling the transition to technical universities. An interesting approach could be the one from South Africa, where the South African Qualifications Authority has implemented, together with more stakeholders, so-called flexible learning pathways, indicating the options for career progression (Bolton et al. 2020).

Conclusion

Even though a closer linkage between academia/tertiary education and TVET/pre-tertiary education is desired by policy makers in Ghana, reality shows that all three sectors, TVET – academia – industry, operate very much detached from each other.

The analysis indicates that a closer linkage between TVET, academia and industry holds the potential for stronger education and research systems. To foster the linkage between TVET and industry, the established SSB and the initiatives to increase the practice-orientation of TVET present good opportunities for closer collaboration. Companies, institutions and learners would benefit from that. Opportunities arise in the area of labour market and company demand analysis, curricula development, training of trainers and in-company training. In all these activities, financing and a feasible distribution of roles and responsibilities among the stakeholders will be key.

Increasing the linkage between TVET and academia holds equally as many opportunities, for instance in research cooperation (between CTVET and universities, between universities or with international partners) and realization of studies or projects. Of particular relevance are for example activities in the field of labour market analysis, quality of TVET, evaluation on the transition into the labour market or also gender-related studies. Again, financing will be a major concern to increase activities in the TVET – academia linkage. The existing initiatives show that stronger linkages between TVET – academia – industry may well be possible and worth pursuing.

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