

Full Length Research Paper

Challenges and opportunities for the technical and vocational education and training (TVET) in Somalia: A case for Puntland

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Received 10 March, 2022; Accepted 31 May, 2022

The purpose of this paper is to examine the context and circumstances surrounding technical and vocational education training (TVET) in Somalia in general, and Puntland State in particular, in order to have a positive impact on reducing chronic youth unemployment, which currently stands at 67% across the country. The existing condition, difficulties, and prospects of the TVET education industry in Puntland were surveyed in the first section using secondary sources. Second, a quantitative survey was undertaken using the questionnaire approach to explain Puntland's TVET difficulties and potential to diverse stakeholders. The study's findings suggest that insufficient competent teachers, gender imbalance ratios among teachers in some districts, lack of necessary instructional materials, an imbalance in the distribution of TVET facilities, and a lack of public awareness of its value plague TVET facilities across Puntland. The participating governmental ministries have a lot of administrative overlap because they all want to get their hands on the sector's international donor fund. Another important finding of the poll is that university graduates are frequently unemployed due to a lack of automation for available occupations. Puntland's TVET education also lacks clarity on the roles of the private and governmental sectors, as well as a uniform and unified curriculum. To fulfill enterprise and industry standards, fair access to TVET, increasing its quality and relevance, the government's involvement in controlling the sector's delivery, and financing mechanisms are all vital.

Key words: Technical and Vocational Education and Training (TVET), Puntland State, Federal Government of Somali (FGS), skilled worker, standardized curriculum, gender disparity.

INTRODUCTION

Education is the process of transforming and enhancing a person with the goal of passing down knowledge, skills, and cultural heritage from one generation to the next (Ahmad, 2015). It endeavors to draw out the best in a young person's mind. Thus, learning is an indicator of the perfection that has already existed in mankind (Jawara

and White, 2019).

The trend of schooling, formal or otherwise, predates the colonial era, and even the adoption of Islam by the lands that became Somalia (Lewis, 1999). Formal education programmes of learning, though of limited scope, were slowly but steadily established with the

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arrival of colonialism. The schooling scheme in the colonial period was unambitious and chiefly limited to primary schools (Dadfeared, 2018). With independence in 1960, the education sector advanced very rapidly, including the post-primary and post-secondary sectors (Abdi, 1998). The Technical and Vocational Education and Training (TVET) division was established in order to reduce inequalities, through increased training opportunities for the handicapped and learners from disadvantaged communities, as well as women, and above all, to be relevant to the commercial and economic needs of the country (Technical/Vocational Education and Training, 2009). Prior to the collapse of the central government, the state owned and funded all the education systems in the country, and was the sole employer of the graduates, including those from TVET ranks, from all disciplines (Farah, 2020). The 1969 regime subsequently was able to boast that the number of technical and vocational schools had increased from 8 to 17 between 1969 and 1976 (Cassanelli and Abdikadir, 2008). The self-declared government of Somaliland also developed a policy that puts in place procedures intended for the creation of technical and professional institutions as a way of catering for the gaps that exist in the TVET sector (Ahmed, 2009). Since the turn of the century, technical training has been passed down from generation to generation among Somalis in a clan-based context, with the respective craftsmanship limited to a specific clan. Finally, the work presented in here highlights for vocational education is to be equated upon more attention by the various Somali educational authorities, with the aim of making it more comprehensively inclusive, promote social justice, equity and diversity.

LITERATURE REVIEW

African countries' appraisal of TVET systems finds that the existing status of TVET systems in Africa varies and is delivered according to country at different scales, such as technical and vocational schools, technical colleges, businesses, and internship learning centers (Abdul-Wahab and George, 2009). Moreover, as TVET is a means that could help progress the quality of workforce, the mounting mindfulness of the need to adapt the sector to match the speedy global economic obligation is categorically important (Onwusa, 2021). Thus, most African countries have managed to place the growth of technical and occupational skills at the heart of their development strategy (Kingombe, 2011). According to the Provisional Constitution adopted 1st August 2012 Somalia became federal democratic republic in which Puntland is a member state (Provisional Constitution, 2012). By reviewing the state of TVET in Somalia in general and Puntland in particular, this paper attempts to contribute to filling that critical information gap for decision-makers and policymakers so they are able to

make evidence-based decisions on TVET planning and to impart the best remedies to further advance TVET in Puntland State of Somalia. The political assumptions of the TVET policy should have been analysed and compared to the sub-Saharan, particularly the neighboring countries, then subsequently initiated and enhanced cooperation with them in the sector.

Somalia is considered one of the most heavily indebted and poorest countries in the world (The World Bank, 2021). A situation exacerbated by a long civil war and the absence of a functioning central government for more than a quarter-century (Pape and Karamba, 2019). Somalia established fiefdoms out of the ashes of the civil war, which eventually evolved into the aforementioned different member states of the federal government, with Puntland being the earliest and oldest more peaceful and stable Federal Member State. As a result, a notable improvement has been registered in public sector development and service provision, but the TVET sub-sector of the education sphere has been consistently neglected, as it does not obtain proper technical direction for its accomplishment. It has not been cultivated enough to reduce barriers to skills development, and fails to provide lifelong learning opportunities for youth and adults.

The people of Puntland have been playing an important and visibly unique role in that metamorphosis of craftsmanship history, which finally fledged into TVET, particularly the inception of its administration, although this is somewhat neglected and not given its deserved prominence. Those artisans, craftsmen, and women who produced some valuable native products are today marginalized throughout Somalia. Puntland is no different in that regard. It is obvious that they are called Somali "skilled-men", who at least could manage their daily lives and improve their living standards, disparaging remarks like "Tumaal" (Craftsman) (Lewis, 1994; Cassanelli, 1995). Consequently, the social exclusion of skilled craftsmanship consigned the TVET sub-sector to the fringes of the education sector. As a result, over the years, all over Somalia, technical education, which is a significant factor of human resource development with great potential for adding value to products and services, contributing both to the national economy and the quality of life of the Somali people, has been either lacking or neglected altogether in post conflict Somalia (UNDP, 1981). Against all odds, the skills market in Puntland has huge potential to enhance private sector progress. The skills in high demand include: electrical skills, tailoring/dressmaking, plumbing and sanitation, masonry, metal work, shoe making, fabric design, secretarial skills, management and information communication technology (ICT) (Rieckmann, 2018).

As for the current education settings, Somalia has one of the world's lowest enrollment rates, with only 30% of children registered in lower and upper primary education and even fewer (26%) enrolled in secondary education

Table 1. Puntland civil servants' educational background.

The certificate/levels	Number of employees	Percent
PhD	3	0.05
Master's degree	217	4
Graduate	1503	27
Diploma and other certificates	1,040	18
High school	1,619	29
Primary or below (either completed basic school or never had any formal education)	1,206	21.95
Total	5,588	100
(Mean \pm SD)	931.33 \pm 672.2	-

Source: Ministry of Labour, Youth and Sports (MoLYS, 2017).

(MOE&HE, 2020). Access to education, including improvement of adult literacy and access to life skills as well as continuing education for adults and the youth, in Puntland State is still limited, with only 38% receiving schooling, leaving the majority without access to even basic education (MOE&HE, 2020). Girls are at risk of gender-based (sexual?) violence and the limitations of arranged and early marriage (Hujale, 2020). Boys are often enrolled willy-nilly in child labour. There is still a gender disparity in enrollment and completion rates between boys and girls, with only 57% gross enrollment rates (GER) for girls as compared to 70% for boys in Puntland (MOE&HE, 2020).

In most African countries, large numbers of graduates coming out of the formal school system are unemployed (PEC, 2017). In Tanzania the graduates lack the skills required by the labor market and this trend results in mass graduate unemployment (Ndyali, 2016). The same goes to Somalia, as young graduates from higher education institutions virtually lack preparation and switching to work automation skills required by the Puntland labor market (Farah, 2020). This situation has brought into sharp focus the incongruity between training and the "transferrable skills" demanded by the labour market. Critics argue that the absence of input from prospective employers into curriculum design and training delivery is partly responsible for the disparity (PEC, 2017). Another reason that is often cited for the incidence of high unemployment among graduates is the absence of entrepreneurial training in the primary and secondary school curriculum. TVET graduates remain unemployed because they have not acquired the practical, hands-on competencies. There is a disconnection between teaching and the world of work. It is noticeable that Technical and Vocational Education graduates are absent in the statistics of the government civil servants, as per Table 1, over 78% of the government employees have leaving secondary school certificates, whereas 22% have attained primary education and below. While 27% have bachelor's degrees, 4% have master's degrees, and 0.05% PhD degrees (PEC, 2017).

The current status of TVET education sector in Puntland

The technical and vocational education and training enrollment in 2014 was 3637 of which had been 66% female students and 34% male students. Since then, the subsequent enrollment of the TVET programs had been falling year on year, until in the 2018/2019 session, the total was only mere 1995. This situational analysis reveals the fact that the TVET program has recently been less attractive to potential students. According to the Ministry of Education of Puntland, the original cause of the falling numbers in the program was not explained. Based on the data by the MOE&HE (2016), there are 31 vocational training centers in Puntland. There are a total of 209 instructors teaching these vocational training courses (VTCs), with 65% being male and 35% being female. Another issue worth noting is that 68% of the VTCs in Puntland are privately owned institutions, whereas 32% are government-owned ones. It is quite clear that privately retained institutions dominated the government-maintained VTCs centers by a factor of two.

As stated in the data of MOE&HE (2016), in Appendix Tables 1 to 2, abridged ten VTC are registered in the Nugal region. These ten governmental and privately owned TVET institutions have 52 instructors, of which the majorities are male. In contrast, in the Mudug region only five VTCs were documented, with a total of 25 mentors among these five vocational training centers, where female staff were in the majority. Based on data from the Ministry of Education and Higher Education, the public and private TVET institutions in the Bari region number is five: one public vocational training center and four private ones. These five institutions have a total of 40 instructors with roughly equal numbers of male and female trainers. In the Haylan and Sanaag regions of Puntland, there are four privately owned vocational training centers (VTCs). There are a total of 32 instructors across those four VTCs, with males making up the majority with a 5% margin. The government and privately maintained TVET institutions in the Karkaar

region of Puntland have a total of five VTCs with 33 instructors, of which 67% of the teachers characterized as male instructors, and the rest (33%) are female teachers. In the Sool region, only two VTCs have been registered. Altogether, 23 instructors teach in these centers, of whom 69.5% are male, while 30.5% are female.

Objectives

The main objective of this survey is to provide essential information regarding opportunities and challenges facing the TVET education system in Puntland, currently the Cinderella of the educational system in the province. The study modernizes and harmonizes TVET in order to transform it into a mainstream endeavor for Puntland's youth development, leading to employment and thus enhancing economic development. An additional aim must be to provide guidance to young people so that they can become fully effective in their careers. Also, it highlights the need for the Puntland government to give TVET a higher priority. In order to make the sector attractive to students, and so create a pool of skilled technicians of both sexes, essential to running a society in the 21st century.

The scope of the study covers three main areas: (1) to summarize the existing contexts of matters on TVET in Puntland in order to indicate the indispensable evidence for the donors and the researchers; (2) to notify the government and policymakers of Puntland on the greatest performance related to the impact assessment of the TVET in terms of the final labour market outcomes of its participants as well as on finest practices regarding efficient design of school-choice matching mechanisms; (3) to discuss choices in formulating and designing TVET impact evaluation specifically in Puntland and Somalia at large.

Challenges of the TVET

The current TVET curriculum is not producing graduates who have the essential knowledge, skills and attitudes for entry into the workplace. In order to make the curriculum more responsive to the labour market and target resources according to skill priorities, it is important to understand which services are in high demand and which ones are not. Moreover, it is not just significant to identify immediate skill needs, but to be more strategic and think about future skill needs and how to identify them. This will help ensure that policies and strategies for TVET anticipate and support change (MoEHE, 2016-2020). By and large, educational achievement and cognizance level are restricted or limited in Somalia. The 2014 labour force survey (LFS) indicated that 1% of the labour force had attained vocational training. 36% of males and 30% of

females have successfully accomplished secondary education, whereas 21% of males and 9% of females have a first degree at university (NEP, 2017). The UNFPA survey demonstrated the fact that higher education is associated with higher unemployment. Unemployment rates by level of education ranged from 12% for those who have no formal education, 16% for those with primary education, 18% for those with secondary education, and 19% for those with tertiary education. These numbers are clearly suggestive of the need for a wide-ranging effort to boost educational attainment, including vocational education and training (NEP, 2019).

Vocational and technical education in Puntland is currently a minor, neglected educational sub-sector. The term "technical education" refers to post-secondary courses of study and practical training aimed at the preparation of technicians to work as supervisory staff. Although these types of post-secondary TVET courses are not available in Puntland, they refer to lower-level tutoring and training for the preparation of a skilled or semi-skilled workforce in various trades.

In TVET today, there is very little research that has been done on the relationship between skills development and culture. Thus, the question that arises is, 'how do we go about developing systems that fit into the country's culture, values, traditions, and social interaction as well as its particular level of development?' As industry responds to what people value, such as products, TVET needs to appeal to those who cannot make it to the regular education system. Thus, there is not much research done by academics into the country's unique culture and traditions, including values, work habits, relationships among the various sectors of society, and other forms of social traditions and interactions that are still very much adhered to by the majority of the population.

The government of Puntland's budget offers little support for TVET education. To get some perspective, the international community's contribution is indicated only for the year 2014 (Table 2).

The Puntland government spends 48% of its budget on primary education (Grade 1-8 and ABE), 21% is allocated to secondary schooling; while 20% is assigned to educational management and administration. The rest of the budget did not encompass substantial percentages of activity on TVET (ESSP, 2016). The allocation of 1% of the actual government education budget to the TVET subsector confirms suspicions that career and technical education is not a governmental priority. This distorts or damages the students' opportunities and orientation into the world of work. To get some perspective on Puntland administrations' expenditure on the education sector, the 2015 budget breakdown is demonstrated in Appendix Table 3.

So long the administrative challenges of TVET in Puntland are concerned, Governmental Technical and Vocational Training Programs in Puntland are

Table 2. Ten-year MOE&HE budget (Government and donor contribution).

Year	Total government budget	MOE&HE actual budget	MOE&HE percentage of total budget	INGO contribution
2010	\$28,020,000	\$5690,71.9	2.0	
2011	\$30,158,200	\$1,055,537	3.5	
2012	\$38,622,800	\$1,351,798	3.5	
2013	\$39,277,340	\$1,351,798	3.5	
2014	\$60,182,150	\$4,212,750.5	7	\$1,666,650
2015	\$60,182,159	\$4,212,751.13	7	
2016	\$70,118,316	\$4,908,282.12	7	
2017	\$67,200,000	\$4,704,000	7	
2018	\$73,920,000	\$5,174,400	7	
2019	\$81,312,000	\$5,691,840	8	
2020	\$346,416,158.99	\$27,713,292.7	8	

Source: MOE&HE and ESSP (2016, 2017).

administered by two different ministries: the Ministry of Education and the Ministry of Labor, Youth and Sports. This overlap is obviously an administrative challenge which has had a detrimental effect on the development of the TVET sector as far as Puntland administration is concerned. The Ministry of Education, the Ministry of Justice, Religious Affairs, and Rehabilitation (MoJRAR), the Ministry of Labor, Youth, and Sports (MoLYS), the Ministry of Commerce and Industry (MOC & I), and the Ministry of Public Works, Construction, and Housing (MoPW & T) are all directly involved in all TVET activities. Therefore, this creates confusion for the donors as well as the recipients (TVET beneficiaries) of programs. There is a great deal of overlap in the terms of reference for the respective ministries that are involved in TVET matters of the Puntland administration. The presidential decree (Number 59327, September 2015), in which the president tries to demarcate the individual mandates of the concerned ministries, states that the Education Ministry is responsible for the management of TVET for education mainstream and polytechnic schools in Puntland, whereas the Ministry of Labour, Youth and Sports is responsible for the management of vocational training for the development of employable skills programs and short term job creation training in Puntland (Gaas, 2015). The presidential decree has unfortunately created a confusion of responsibilities between the two ministries, which, in turn, has undoubtedly hindered the advancement of TVET in Puntland.

Though rehabilitation of technical and vocational education and training in Somalia has been gradually reconstituted for the last four to five years (Rieckmann, 2018), Somali federal government and federal member states put less value on TVET than upon formal schooling (primary and secondary), university, or tertiary education. A secondary problem is that, often, TVET itself does not respond to the demands of the market, as the Puntland government neglected the TVET system in

terms of curriculum development. As a consequence, the TVET sector lacks qualified, competent, and motivated teachers who see the sector as an educational backwater. This has resulted in commercial companies being unable to recruit sufficiently well-trained technical staff.

Poor perception of TVET in Puntland and gender stereotyping and lack of linkage between vocational and general education

Currently, in Puntland, there is no accepted vision for the future of skills development in TVET around which the government, employers, and workers could unite. In the near future, an increasing number of young people will enter the labor force, necessitating a review of the scope and efficiency of technical education and training. This includes consideration of which ministry should be in charge of developing new and expanded provisions as well as the rate of improvement of publicly-funded TVET. Therefore, it is necessary to urgently adopt the National Skills Strategy for technical education and career development in Puntland. Finally, there are persistent concerns about the quality of technical education and training, which, to underline this, is strictly demand-led in meeting the needs of our economy. The general public believes that vocational education is only appropriate for those who are academically underprivileged. In many other states, including Puntland, graduates of the vocational education stream find it difficult, if not impossible, to proceed to higher education. There is a need to make TVET more attractive and less of an inferior sector. Certain vocational training programs, such as carpentry, masonry, and welding are stereotypically mostly male dominated, whereas dressmaking and tie-dyeing textiles are associated with women and girls who are less gifted academically and have inadequate

technical expertise to drive the TVET system in Puntland.

In many countries, the Ministry of Education principally controls the public TVET institutions, schools, and centers, leaving little room for innovation on the part of the institutions (African Union, 2007). There is a need to increase the operational autonomy of public training providers through decentralization and the devolution of management powers to the institutions. Operational autonomy can be balanced by output-based funding mechanisms that link government funding to institutional performance in the areas of success rates, innovation, and employability of trainees; otherwise, TVET will never get trained and skilled teachers (African Union, 2007).

Because of its negative image, vocational education and training have become isolated from the rest of the country's educational systems. The TVET programs have separate institutions and teachers. This situation tends to reinforce the perception of inferiority of the vocational pathway as a route to a successful career. Therefore, it is important to create a modality that links vocational education to the other sectors of education such as secondary and tertiary education.

Lack of harmonized TVET curriculum

TVET system does not have a unified, harmonized, and standardized curriculum. It is a project-based program. Five ministries of Puntland's government, as aforesaid, are directly involved in TVET activities, without proper unification of course content. According to the MOE & HE, the TVET subsector encompasses seven programs with different levels, such as animal production, auto mechanic, carpentry, construction joinery, electronics, metal fabrication, and plumbing. Some TVET courses omit important areas of skill development and fail to follow technical developments. The TVET subsector faces several other challenges within the system, such as a lack of TVET monitoring and performance evaluation, and inadequate instructional materials and equipment. Those constraints, and many others, undermine the effectiveness of the sector. Moreover, the VTCs have inadequate management systems. This has weakened their effectiveness and relevance to the reality of the workplace or demand of the market. Another substantial challenge is the lack of transfer across streams in the education system.

Opportunities of the TVET

TVET can be designed to contribute to occupational competence through the proper teaching of appropriate skills and training in the development and application of indigenous or local technology. It also must reflect the basic occupational needs of its beneficiaries. Possibilities for individual, community, and national development

include: developing learner confidence and potential through appropriate programs; developing self-sufficiency and independence through real-world expressions and skills; ensuring appropriate learning enhancements for students to identify their vital roles and responsibilities within Puntland; and ensuring vocational training centers are well equipped with the basic skills and knowledge in preparation for the workforce. Developing inclusive programs in which learners will attain the proper skills that lead to the social and economic development of the nation; ensuring practical programs for students to respond constructively to community expectations, cultural imperatives, economic conditions, and national goals.

Problem statement

Puntland has a severe shortage of TVET-trained workers equipped with basic craft and industrial skills to serve society. The impact of the 1991 Somali civil war resulted in a substantial loss of vocationally skilled and trained manpower. That specifically hindered the Puntland government's ability to reach its vision 2024 targets. Furthermore, the Puntland Education Policy Paper, the Puntland Education Act, Revised (2012), Puntland Higher Education Bill (2016), and the Puntland Five-Year Development Plan³ by MoPDEPIC (2019) as well as the Puntland Second Youth Policy Development (MoLYS, 2017) do not clearly indicate the government's commitment to enhance and improve the TVET sector. For that reason, Puntland is still in dire need of a TVET-trained workforce and, as aforesaid, skilled technicians to meet the demands of the market and reality of the workplaces. Even in those occupational fields that indicate a great demand for a trained labor force, TVET graduates remain unemployed due to a lack of incorporating employability skills into the curriculum of TVET institutions (Oresanya et al., 2014). The insufficiency of the government's commitment and well-articulated policy that could guide the development and management of TVET education exacerbated the issues in Puntland. In addition, there is an acute shortage of qualified instructors while there is no harmonized and standard curriculum. It is clear that demand far outstrips current supply, and that TVET does not reach the majority of young people. Many thousands of young people each year leave schools and universities without having acquired employability skills (Idris and Rajuddin, 2012).

METHODOLOGY

The goal of this study is to learn more about the state of TVET in Puntland, Somalia, as well as the issues that surround it. In addition, to put to the test the TVET issues, opportunities, and decline that the program has been experiencing in Somalia's

Table 3. Government submitted breakdown of MOE&HE subsector specific on education.

Subsector	MOE&H Budget	Percentage out of government annual budget 2015
Primary (Grade 1-8) and ABE	\$1,912,247	48
Secondary Education	\$842,540	21
ECE Education	-	0
NFE Education	\$92,171	2
TVET	\$40,074	1
Higher Education	\$150,000	4
Educational Management and Administration	\$801,486	20
Educational Development	\$169,915	4

Source: MOE&HE and ESSP (2016).

Puntland state for some time. Furthermore, the design takes into account the viewpoints of individuals who are most directly involved in the field of education, particularly how the TVET program runs. Purposive sampling, in which components, elements, items, or respondents' qualities are contingent on the researcher's judgment and intuition, was used to select respondents for the study (Kanyonga et al., 2019; Adam and Kamuzora, 2008). A comprehensive planned interview schedule in which all candidates/key informants (30) answered 10 predefined questions in the same order and assessed using a standardized scoring system in a face-to-face setting. Candidates/Key informants with a variety of demographic characteristics were gathered to be interviewed, including age, gender disparity, education level, distinctive institutions, and competence in the TVET subsector. Among them were representatives from higher education institutions/universities, TVET societies, and a number of government agencies, including the Puntland Ministry of Education, Ministry of Labor, Youth, and Sports, and Ministry of Justice. The interviewees' response factors, such as frequencies (n) and proportions (percent), were analyzed and cataloged in a descriptive manner, and the results were reported (Tables 3 to 5) (Dolores and Tongco, 2007). Previous studies on TVET education in Somalia in general and Puntland in particular have also been given priority. Finally, the frequency (n) and proportion (%) of the key informants' demographic data (Table 4) were supplied in scoring method (1, 2, and 3) of the interviewee's response (Table 5).

RESULTS

As far as demographic data and the respective qualifications of the respondents are concerned (Appendix Table 5), of the total number of 30 key informants who participated in the survey, 90% were male. As for their respective qualifications, 70% held master's degrees, 13.3% had bachelor's degrees, 10% were PhDs, and 3.3% had varying post-secondary certificates. The age of the respondents ranged between 21 and 70 years old.

Interviewee's responses

As aforementioned, after 30 key informants were retained in the survey, the majority of respondents in the study population were predominantly university-educated males.

Appendix Table 6 shows how interviewees responded to the questions. The scoring is in a predetermined manner in which the three choices given to the respondents are sequentially categorized into 1, 2, and 3, respectively.

1) 70% of the key informants responded that there is a lack of funding, a chronic shortage of qualified instructors and also a wrong perception, mainly based on gender balance, that TVET programs are seen as being largely male-oriented and, at the same time, inferior to the other available secondary and higher education programs. Whereas, 20% replied that there is a severe lack of educational facilities and equipment for the sector and 10% said government policy and commitment toward the sub-sector is missing.

2) When asked about their expertise on the funding of TVET by the Puntland government, 83% of the participants underscored that the sub-sector has not been allocated, since its inception, any funding by the government. 13% of them responded that the Puntland government assigned only 1% of the yearly actual budget of the Ministry of Education, whereas 3% demonstrated that 15% of that annual actual budget of the Ministry of Education is allotted for the sector.

3) 77% of key informants stated that a lack of government prioritization and commitment is the reason TVET education has not received funding. Whereas 23% of the respondents reasoned that "public-private partnership" is absolutely absent.

4) 93% of the key informants underlined and demonstrated the presence of the administrative challenges that sector faces, while 7% of the interviewees opposed the existence of the challenges.

5) When asked about the overlap of five ministries involved in TVET education terms of references hindered the sectors' ability to get properly established and thrive in Puntland state, 73% of the respondents agreed, 17% strongly disagreed, and 10% of the participants were neutral.

6) A majority of the participants considered that there is a cultural challenge that TVET education faces, and 90% of

Table 4. Key informants' demographic characteristics.

Demographic characteristics of the key informants	Frequency n = 30	Proportion of informants (%)
Age: n (%)		
21-30	11	37
31-40	12	40
41-50	3	10
51-60	3	10
61-70	1	3
Gender: n (%)		
Male	27	90
Female	3	10
Education level: n (%)		
Certificate	1	4
Bachelor Degrees	4	13
Master Degrees	22	73
PhD Degrees	3	10
Experiences (%)		
1-5 years	11	37
6-10 years	9	30
11-15 years	6	20
16 years and above	4	13

Source: Author

the interviewees said cultural taboos such as disparaging remarks about TVET education (Tumaal) or craftsmen equated with the technical and vocational education and training sector are a main hindrance to the sector. 10% rejected the existence of cultural limitations.

7) 57% of the participants argued that cultural taboos that hinder the development of TVET education could be reduced by massive public awareness. 43% responded that the government's commitment and priority to the TVET sector is the greatest factor that can bring sustainable solutions to the sector.

8) 57% of the participants strongly agreed that TVET education depends on the international agencies' contributed expenditures, while 17% strongly disagreed. Another 27% of the respondents neither disagreed nor agreed and remained neutral on the matter.

9) 67% of the key informants agreed that the TVET curriculum is not harmonized and standardized. 30% of the respondents indicated the curriculum is synchronized. 3% underlined 'none' of these.

10) After exposing the TVET curriculum to the participants of the survey for them to highlight the relevance of the sub-sector's curriculum based on the sought skills for the market demand, 82% of the respondents agreed that the curriculum was not relevant, 11% of them disagreed, and 7% of the participants neither agreed nor disagreed.

DISCUSSION

Somalia faces the difficulty of having a large number of secondary school leavers and more than 10,000 university graduates every year with little skills and no real possibility of future employment after more than 30 years of civil conflict and chronic rural and urban poverty. The German Corporation for International Cooperation (GIZ) has been collaborating with the Federal Ministry of Planning, Investment, and Economic Development in Somalia on the restoration of TVET since 2018, and it is hoped that TVET rehabilitation will help to reduce chronic youth unemployment, which currently stands at 67% across the country. The Ministry and GIZ have emphasized two significant reasons as a result of the sluggish and gradual recognition of the younger generation's chronic unemployment: the lack of labor market-oriented TVET systems and the chronic shortage of trained teachers. Thus, by reengaging GIZ, the National Federal Government (NFG) established TVET institutes in Hargeisa (Somaliland), Garowe (Puntland), Kismayo (Jubbaland), and Mogadishu, with various programs aimed at easing chronic youth unemployment and the market shortage of trained labor (Rieckmann, 2018). Ironically, with Puntland's ministry of education failing to make the most of the GIZ initiative and the FGS's difficult working relationship with Puntland's

Table 5. Interviewee's response.

Variable	Scoring	Respondents (n) = 30 (%)
The major challenges of TVET: n (%)		
Lack of fund, poor perception of TVET education and lack of qualified Instructors	1	21 (70)
Deficiency of educational facilities	2	6 (20)
Lack of Government policy	3	3 (10)
Based on your understanding on the matter, roughly what is the overall budget of Puntland's TVET programs? n (%)		
No budget (0%)	1	25 (83)
One percent (1%)	2	4 (13)
Fifteen (15%)	3	1 (4)
Why there is no proper funding for the TVET education sector: n (%)		
Lack of Government prioritization and commitment	1	23 (77)
No public-Private Partnership	2	7 (23)
Administrative challenges exist on TVET education: n (%)		
Yes, there is administration challenge	1	28 (93)
No there is no administration challenge	2	2 (7)
Do you agree the overlap of five ministries involved in TVET education terms of references hindered for the sector to get properly established and thrived in Puntland state of Somalia: n (%)		
Strongly agree	1	22 (73)
Strongly disagree	2	5 (17)
Neither disagrees nor agrees	3	3 (10)
Cultural challenge that hinders the development of TVET education: n (%)		
There is cultural challenge	1	27 (90)
There is no cultural challenge	2	3 (10)
How can we reduce cultural taboo in TVET education: n (%)		
Public awareness	1	17 (57)
Government prioritization	2	13 (43)
TVET is an international donations project-based program: n (%)		
Strongly agree	1	17 (57)
Strongly disagree	2	5 (17)
Neither disagrees nor agrees	3	8 (26)
The TVET curriculum is not harmonized and standardized: n (%)		
Agree	1	20 (67)
Disagree	2	9 (30)
Neither agree nor disagree	3	1 (3)
Is the TVET curriculum relevant based on skill that is on demand in the market or if it enhances the employability rate of the graduates (%)?		
Agree	1	82%
Disagree	2	11%
Neither agree nor disagree	3	7%

Source: Author

administrative institutions (United Nations, 2017; Reliefweb, 2020; Farah, 2020), businesses are frantically seeking assistance. They urgently need electricians, carpenters, and masons to mention a few. Right now, companies are seeking those services from far and away. These "skill gaps," the difference between the skills needed for a job and the capabilities of the workforce represent a major constraint on societal and commercial growth.

The study reveals that there are numerous problems in the TVET education industry, with cultural limits and a lack of government commitments being the most significant impediments to the sector's growth. In the Puntland State of Somalia, the general TVET system is currently on the decrease, owing to lower productivity and rising unemployment rates, which are mostly due to a skills deficit. According to data from the MoE&HE (2017), Puntland has 31 vocational training centers, with 67.7% being privately held and 32.3% being government-operated, and a total of 209 instructors (64.6% are male while 35.4% are female). In this regard, the lack of qualified teachers and limited teaching materials are major issues.

As stated in the data of MoE&HE (2017), abridged in (Appendix Table 1 and 5), VTC is registered in the Nugal region. These ten VTC institutions have 52 mentors, of whom 77% are male, whereas 23% are female. The findings show a deficiency of teachers as some centers are struggling with only one teacher, while others have unsustainably settled for two or three instructors. Another aspect worth noting is that the data depicts gender disparity ratios of the teachers at the VTC in the Nugal region and the TVET education sub sector in general.

Furthermore, in the Mudug region, only five (5) VTCs were documented. As in Appendix Table 2, a total of 25 mentors among these 5 vocational training centers shows a chronic shortage of instructors, although, unlike in the Nugal region, the gender disparity ratio of the teachers is not that wide in Mudug VTC centers: 60% of the instructors are female, whilst 40% of them are male. However, in the Bari region, which is the largest province in Puntland that hosts a population of over one million in the commercial hub of Bosaso city, it is quite unreasonable to have only five VTCs Appendix Table 3. In Karkaar province of Puntland, there are five VTCs that recapitulate the government and privately maintained VTC institutions Appendix Table 4. On this site, 33 instructors teach in these VTCs, 66.7% of the instructors are characterized as male instructors. On the other hand, 33.3% are female teachers. In the Haylan and Sanaag regions of Puntland, only four (4) privately owned VTCs have been registered Appendix Table 5. There are a total of 32 instructors in those 4 VTCs, of which 68.75% are male, whereas 31.25% are female. As a matter of fact, two huge and important provinces, such as Haylan and Sanaag, agreed to settle for only four privately-owned VTCs and no absolutely public ones. This triggers a

concern.

Despite the fact that Sool has experienced political tensions between Puntland and Somaliland, it is nonsensical and inappropriate for the region to have only two privately run VTCs Appendix Table 6. Another noticeable issue is the fact that Sool is a single region with only two VTCs. In total, 23 instructors work in the centers, with 69.5% of them being male teachers and 30.5% being female mentors. Only 23 teachers are clearly insufficient for the TVET centers in the Sool region, and the severe scenario of a persistent instructor shortage is critical to the sector's overall development. As a result, there is a lack of prioritization on the part of the Puntland administration in this area.

Out of the 30 key informants retained in the survey. A majority of respondents had attained a university level of education and were predominantly male. The research has designated the different stakeholders, including members from higher educational institutions, civil society organizations, and the public and private sector, to get primary information about the TVET challenges. Most of the respondents underlined that the TVET is lacking funding, exacerbated by a notable deficiency of qualified instructors, while the public's awareness is largely poor. About 83.3% of the key informants highlighted that TVET was not allocated any budget and that this non-sustainable financing mechanisms in TVET demonstrates that the sector is not in the government's priority. That, at the very least, hinders investments by the private sector and foreign donors. One of the main factors for TVET to reach the critical threshold in Puntland, according to the respondents, is cultural challenge. Around 93% of the key informants accentuated that there is severe administration overlap among various directly involved, in one way or the other, in TVET education due to the overlap in their respective mandates. The relevant ministries believe that in order for the TVET education docket to be included in their terms of reference, they must gain access to international donor financing for the sector. The TVET soup is being spoiled by too many cooks. Another major finding of the survey participants is that most university graduates remain unemployed due to a lack of automation (not sure what automation means) for available occupations. In general, higher education institutions generated unskilled graduates, which harmed both the graduates' future prospects and the country's output level. According to the study, TVET education lacks a consistent and harmonized curriculum, as well as ambiguous responsibilities for the private and public sectors due to the lack of a uniform curriculum.

CONCLUSION AND RECOMMENDATIONS

Most key informants highlighted in major colours that there is a lack of funding; the government has not allocated funding to the sub-sector; tuition fees on TVET

funding should be taken seriously; the overlap of ministries involved in TVET education terms of reference hampered the sector's ability to get properly established and thrive in Puntland State; and dissatisfaction with the sector's dependency on the international community. Thus, if the value of TVET is to be felt in the public and commercial sectors, political stability, transparency, sound economic policies, and reasonable wealth transfer should all be attained (Wahba, 2011). One of the most distinguishing characteristics of TVET is that the curriculum's concentration on the acquisition of applicable skills agrees with the African Union's (AU) goal for the development of the continent's human resources. It recognizes the value of TVET as a means of empowering individuals and believes that it should be custom-made to meet the demands of the community (African Union, 2007; Tom and Norton, 2021).

The document strongly advocates for equitable access to TVET in order to educate young people from all walks of life with the skills they need to help the country's economy recover and grow, and subsequently assist their families and communities. The report strongly recommends that a state-level TVET conference be convened in order to better engage all stakeholders and improve the quality and relevance of TVET. For the conference to be a success, several political, economic, and social changes found throughout the research study must be carefully examined. Partnership with the private sector by giving them a meaningful role in the sector's development, management, and evaluation; policy changes such as integrating TVET into the government's fiscal policy; development of effective and upgraded uniform TVET curricula; bringing in modern technologies in the institutions; adequately experienced TVET trainers; and close ties with already established international donor communities (Chamadia and Shahid, 2018; Wahba, 2011).

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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APPENDIX

Table 1. Government and privately owned TVET institutions in Nugal region.

No.	Region	Institutions		Instructors				Total of instructors
		Public	Private	Male	%	Female	%	
1	Nugaal	Garowe VTC	-	17	77.2	5	-	22
2	Nugaal	-	Hanad VTC	1	100	0%	-	1
3	Nugaal	-	SWA	6	-	-	-	6
4	Nugaal	Burtinle VTC	-	2	50	2	50	5
5	Nugaal	-	Ugbaad VTC	2	-	-	-	2
6	Nugaal	Horseed VTC	-	3	-	5	-	8
7	Nugaal	-	Nasteh VTC	1	100	-	0	1
8	Nugaal	-	Barwaqo VTC	1	100	-	0	1
9	Nugaal	-	X/Tako VTC	6	100	-	0	6
10	Nugaal	-	S/wado VTC	1	100	-	-	1
			Sub-Total	40	77	12	23	-
			Total					52

Source: Ministry of Education and Higher Education MOE&HE (2017).

Table 2. Government and privately owned TVET institutions in Mudug region.

No.	Region	Institutions		Instructors				Total of instructors
		Public	Private	Male	%	Female	%	
1	Mudug	Galkaio VYC		5	45	6	55	11
2	Mudug	B/busle VTC		1	25	3	75	4
3	Mudug	Bursaleh VTC		3	75	1	25	4
4	Mudug	Jareban VTC		2	40	3	60	5
5	Mudug	-	G/dogob VTC	2	40	3	60	5
			-	-	44.8	-	55.2	-
			Sub-Total	13	-	16	-	-
			Total					29

Source: Ministry of Education and Higher Education MOE&HE (2017).

Table 3. Government and privately owned TVET institutions in Bari region.

No.	Region	Institutions		Instructors				Total of instructors
		Public	Private	Male	%	Female	%	
1	Bari	Bosaso VTC		14	73.7	5	26.3	19
2	Bari		Dondor VTC	2	33.3	4	66.7	6
3	Bari		Ilsan VTC	4	57.1	3	42.9	7
4	Bari		PDO VTC	2	40	3	60	5
5	Bari		Reebi VTC	0	0	3	100	3
			Sub-Total	22	55	18	45	-
			Total					40

Source: Ministry of Education and Higher Education MOE&HE (2017).

Table 4. Government and privately owned TVET Institutions in Karkaar region.

No.	Region	Institution		Instructors				Total of instructors
		Government	Privates	Male	%	Female	%	
1	Karkar	Qardo VTC	-	7	77.8	2	22.2	9
2	Karkar	-	Qarwnet VTC	3	50	3	50	6
3	Karkar	Hodman VTC	-	3	37.5	5	62.5	8
4	Karkar	-	PDO VTC	5	-	0	-	5
5	Karkar	-	OTT VTC	4	-	1	-	5
			Sub-Total	22	66.7	11	33.3	-
			Grand Total					33

Source: Ministry of Education and Higher Education MOE&HE (2017).

Table 5. Government and privately owned TVET institutions in Sanaag and Haylan regions.

No.	Region	Institutions		Instructors				Total of instructors
		Public	Private	Male	%	Female	%	
1	Sanaag		Ilsan VTC	14	82.3	3	17.7	17
2	Sanaag		Himilo VTC	2	33.3	4	66.7	6
3	Sanaag		Daryel VTC	4	66.7	2	33.3	6
4	Hiland		Dondor VTC	2	66.7	1	33.3	3
			SUB-Total	22	68.75	10	31.25	-
			Total					32

Source: Ministry of Education and Higher Education MOE&HE (2017).

Table 6. Government and privately owned TVET institutions in Sool region.

No.	Region	Institutions		Instructors				Total of instructors
		Public	Private	Male	%	Female	%	
1	Sool		Ugbad VTC	14	82.4	3	17.6	17
2	Sool		Talex VTC	2	33.3	4	66.7	6
			Sub-Total	16	69.5	7	30.5	-
			Total					23

Source: Ministry of Education and Higher Education MOE&HE (2017).