



Labor Market Demand Assessment Report for Digital & Multimedia Skills

Somaliland/Puntland

Produced By:

Shaqodoon Organization

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Table of Contents

List of Abbreviations	4
About Us	7
Executive Summary	8
1. Introduction	10
1.1. Background Information	10
1.2. Justification of the assessment	11
2. The LMA research study approach	12
2.1. The research purpose & objective	12
2.1.1. The purpose of the assessment	12
2.1.2. The assessment objective	12
2.2. The assessment objective	12
2.3. Research design	13
2.4. Data collection methods	13
2.5. Data quality assurance	14
2.5.1. Fieldwork	15
2.6. Desk review	18
2.7. Survey with employers	19
2.7.1. Data analysis and triangulation	19
2.7.2. Limitations	19
3. Findings	20
3.1. The digital and media skills employment situation	20
3.2. Vulnerable groups within Somaliland & Puntland	22
3.3. Growth sub-sectors & industries in study locations	23
4. Labor market trends in Puntland and Somaliland	24
4.1. Employer profiles across the key growth subsectors/industries	24
4.2. Skill level of workers	29
4.3. Demand and supply for digital and media labor skills	30
4.4. Gender dimensions of the labor market	36
4.5. Vulnerable groups in the labor market	38
5. Future of work	39
5.1. Digital and media job skills needed for future workers	40
5.2. Recruitment practices and challenges	40
5.3. Training Support	41
6. The prevailing institutional relationships	42
6.1. Barriers and enablers for supporting changes	42
7. Conclusions and recommendations	44
7.1. Conclusions	44
7.2. Recommendations	46
Annex	50
Annex 1 - References	50
Annex 2 - Fieldwork	52

List of Abbreviations

ADRF	African Digital Rights Fund
AR	Augmented Reality
AU	African Union
CAD	Computer Aided Design
COVID	Coronavirus Disease 2019 / SARS-CoV-2
DVET	Digital Vocational Education and Training
FCA	Finn Church Aid
FGDs	Focused Group Discussions
FLFP	Female Labor Force Participation
GISWS	Global Information Security Workforce Study
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HAVOYOCO	Horn of Africa Voluntary Youth Committee
IAP	Innovate Accelerator Programme
ICT	Information Communication & Technology
IDP	Internally Displaced Persons
IT	Information & Technology
ITC	International Trade Centre
IOM	International Organization for Migration
INGO	International Non-Governmental Organizations
KII	Key Informant Interviews
LNOB	Leave No One Behind
LM	Labor Market

LMA	Labor Market Assessment
MESAF	Ministry of Employment, Labor and Social Affairs and Family
MoCT	Ministry of Communication and Technology
NRC	Norwegian Refugee Council
RESI	Refugee Employment and Skills Initiative
SDG	Sustainable Development Goals
SME	Small and Medium Enterprises
SSA	Sub-Saharan Africa
SOLJA	Somaliland Journalists Association
TV	Television
TVET	Technical & Vocational Education Training
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commission for Refugees
UX	User Experience
VC4A	Value Chains for Africa
VR	Virtual Reality
WDTI	Weirah Digital Technologies Institute
WIMISOM	Women in Media in Somalia
WTO	World Trade Organization



Committed to inclusivity, skill development, employment services, youth entrepreneurship, environmental protection, private sector business development, and technology for development.

About Us

Shaqodoon is a local NGO founded in 2011 to create innovative and long-lasting solutions to Somalia/land's youth employment challenges. The NGO is the upshot of the former EDC Somali livelihood project funded by USAID that provided youth in Somaliland, Puntland, and South-Central Somalia with greater opportunities to access to work, training, internships, and self-employment opportunities. The organization designs, delivers, and evaluates innovative programs to address some of the local community's most urgent challenges in livelihood skill training, education, and health. Shaqodoon is a national platform whose goal is to prioritize youth employment and education on the development agenda and to exchange knowledge on effective policies and programs to improve employment and education opportunities for youth, prioritizing youth at-risk, marginalized groups, and people who have lost hope and are thus often jailed for local crimes. Shaqodoon Organization is a service provider dedicated to skill development, employment services, youth entrepreneurship, private sector business development, and technology for development. Shaqodoon makes use of participatory methods to ensure youth participate in delivering its services.

Shaqodoon is a member of the Somali Resilience Program (SomReP) which is a members-led resilience consortium whose objective is to build the capacity of pastoralist, agro-pastoralist, fisher folk and peri-urban host and internally displaced persons (IDP) communities. The consortium focuses on women, youth and people with disability to mitigate the impact of natural and man-made shocks and stressors, adapt to climate change, as well as diversify and adopt sustainable livelihood strategies. The consortium evolves to address emergent threats and take advantage of new opportunities. The consortium draws upon its members best-practices and integrates these with the latest global insights from the resilience community of practice to implement a holistic model which bridges the humanitarian and development continuum with the goal of increasing the resilience of chronically vulnerable Somali people, households, communities and systems to climatic shocks and other related risk in pastoral, agro-pastoral and peri-urban livelihood zones by 2023. Other members include Action Against Hunger, Adventist Development and Relief Agency (ADRA), World Vision, Oxfam, Denmark's largest, and a leading international NGO- the Danish Refugee Council (DRC) and Cooperazione Internazionale (COOPI).

Vision

A society where youth and women are at the forefront of fostering a safe and inclusive environment that enables them to attain self-reliance and drive sustainable progress.

Mission

To empower and enable youth and women to generate positive, sustainable impact within their communities, by providing safe, inclusive, and innovative opportunities.

Executive Summary

Shaqodoon has established two digital design training centers: Hargabits (Hargeisa) and Garobits (Garowe) in 2016 and 2020 respectively to offer specialized ICT, entrepreneurship, and life skills training to less privileged youth between the ages of 17-28 to realize their full potentialities and access to meaningful work opportunities. The Academy's specific target Youth group are those living in informal settlements, IDP and refugees who significant portion of the society. These youths are faced with many socio-economic challenges that hinder them from progressing in life and making a meaningful contribution to their societies. Key among these challenges is the lack of education and employment opportunities which leaves these youths idle and despaired and leads them to engage in vices such as drug abuse, illegal migration, and petty crime among others.

labor market demand of digital and multimedia skills in Somaliland and Puntland. The assessment explored the short-term skill that can be taught to marginalized youth including youth migrated from drought-affected rural areas who are seeking employability skills to access market opportunities in the urban areas. It identified the labor market demanded skills in the digital and multimedia sector and recommends the possible skills that Shaqodoon's Bitschool and other relevant technical training institutions can introduce in the labor market. The report also focuses on how young men and women engage with digital and social media platforms in Somaliland and Puntland. The research sought to frame opportunities for employment and livelihoods, thereby unlocking the potential of youth and engaging them in the development of Somaliland and Puntland. It entailed scoping out digital and multi-media skills opportunities within the private sector (testing the potential of youth as future entrepreneurs and active labor market participants) and public sector (testing the potential of youth as the future leaders in Somaliland and Puntland).


"[...] digital skills are vital for employees in the digital era."

Following the challenges facing the youth, various organizations have conducted different labor market assessments and have identified the number of market demand technical skills. However, all of these assessments have not given attention to the digital and multimedia skills which are where the global labor market demand is heading. It is in this regard that, Shaqodoon commissioned this labor market assessment.

The labor market assessment focused on the

Findings in this study demonstrate that the digital transformation in the cities of Garowe, Hargeisa, Burco, Borama and Bossasso has the potential to create new jobs in the digital economy. Tech companies, and indeed all organizations in the digital economy, are coming to realize that digital skills are vital for employees in this digital era. The much needed job-skills in Somaliland and Puntland have become a booming market for foreigners, particularly Africans from neighboring countries





"Interventions should build young people's digital skills to prepare them to find paid jobs or set up their own enterprises [...]"

such as Kenya. The two regions therefore have several opportunities as a result of the rapid urbanization and the growing use of digital technologies among other planned investments in sectors such as Information, Communication and Technology (ICT), energy, ports, education, and health - that can support economic growth and job creation. However, shortage of human resource prevails in the ICT sector in these regions.

The findings also point to a triple mismatch or misalignment between the supply and demand sides. Youth's expectations, interests and digital skills are not aligned with local labor market demands. A number of structural and organizational gaps were also identified during the study. These gaps are namely: (a) the lack of regulation around certification, qualified digital skills teachers and trainers; (b) the absence of job placement, internships or apprenticeships for trainees within the digital and multi-media skills space to gain practical experience; and (c) the lack of consistent follow-up on trainees and support that would promote self-entrepreneurship.

Skill mismatch is a particular outcome of the complex interplay between skill supply and demand within a labor market economy, both of which are constantly affected by adjustment lags and market failures and are shaped by the prevailing contextual conditions (demographics, technological progress, institutional settings).

Based on these findings, the study recommends that for interventions aimed at enabling young people generate sustainable living wages and create optimism about the future

in Puntland and Somaliland. There is a need for stakeholders to consider working on the whole employment ecosystem including digital skills development, fostering an employment opportunities creation enabling environment including employment policies whilst anchoring this on the development of the private sector. Interventions should build young people's digital skills to prepare them find paid jobs or set up their own enterprises, support startups, small and medium-impact businesses to grow so that they can employ more young people while improving social impact, improve policies and attitudes towards youth jobs and small & medium businesses. On the skills mismatch, the study recommends the targeting of skills of groups in training, to be able to match their skills better to (future) labor market needs.

This solution includes the creation of new specific learning paths, campaigns stimulating people to choose educational paths in IT sectors with shortages, and structural improvement of the education to labor market transition. The other solution is targeting existing employees, to optimize their potential as well reduce the risk of them involuntarily leaving the labor market. Solutions may include the introduction of training and retraining programmes and providing better career perspectives for employees.

1. Introduction

1.1. Background Information

The African Digital Rights Fund (ADRF)'s partners, i.e. Digital Shelter, the Somaliland Journalists Association (SOLJA), and the Women in Media in Somalia (WIMISOM)- recognize that increased use of online platforms has the potential to positively impact household livelihoods, shape political participation, promote innovation, enhance inclusion and the realization of human rights in Somalia and its breakaway regions (Ashnah K., 2021).

For example, Somalia's telecommunications sector, which is largely unregulated, has recorded steady growth indicating mobile subscriptions at 48% of the population and 10% internet penetration (Brian M., et al., 2020). Mobile money usage is widespread and, according to the GSMA Mobile Money Regulatory Index, Somalia is ahead of many regional counterparts, having formalized sector regulations during 2019, allowing non-banks to offer electronic and mobile-based financial services, and permitted international mobile money transfers.

Therefore, like any other country, digital skills are essential for the labor market of Somaliland and Puntland, both having a significant number of young populations under the age of 30, who constitute over 70% of the population as per the UNFPA report 2014. There is a decent work deficit in these two areas as per that report and the rate of youth unemployment in Somaliland was estimated to be 84.2% and Puntland 62% for those aged between 14 - 29 years.

Females experience higher unemployment rates at 74 percent compared to males at 61 percent (UNDP, 2012). The higher illiteracy rate is reported as one of the factors contributing to unemployment whereas IOM estimates that 24% of the Somali youth have no educational background mainly those in the age bracket of (26-30 years).

Lack of work often leads to negative coping mechanisms, such as drug abuse, risky migration, and even violent conflict. Inability to access skills and education is a core barrier to employment or starting a business. On the other hand, there are limited enabling policies, limited researches and lack of information as to where the world of work is heading to, the future nexus between the skill-set, jobs and the future architect of the private sector. This is making it difficult for youth to chart their own efforts to become productive and active citizens. Universities and all other higher learning education institutions are churning out hundreds, if not thousands of youth with degrees that may not have a perfect match with the labor market skill needs. This is despite the fact that countless opportunities lie in the horizon including the vast penetration of the tech sector in the market, entrepreneurship in all aspects and other emerging technical skills in the market.

In Puntland, just like in Somaliland and other regions of Somalia, while the many political and economic factors destabilizing Somalia are intertwined, one recognized strand is the large population of unemployed youth, who, unable to find productive work, are at risk for destructive employment (World Bank, 2005). An increasing number of youth are involved in piracy and ancillary illicit activities that are eroding the social fabric and enticing disenfranchised youth to make a "quick buck." In the worst cases, unemployed youth are often hired by local militias to engage in violent and disruptive actions. Often a mere promise of a \$5.00 phone scratch card for a young man (or teenager) is enough of an incentive to throw a grenade into a marketplace (World Bank, 2005).

It is in this regard that Shaqodoon has established two Bit Schools that are digital design training centers, i.e., Hargabits (Hargeisa) and Garobits (Garowe) in 2016 and 2020 respectively to offer specialized ICT, entrepreneurship, and life skills training to less privileged youth between the ages of 17-28 to realize their full potentialities and access to meaningful, decent work opportunities.

The Bit Schools (Hargabits and Garobits) are youth-based social enterprises that use ICT multimedia creativity to improve the lives of less privileged youth from the non-formal settlement co-founded by

Shaqodoon Organization in partnership with Oxfam Novib. The Bit Schools' target population is the youth from the informal settlement areas of Hargeisa and Garowe, IDP and refugees who comprise of a significant portion of the society. These youths are faced with many socio-economic challenges that hinder them from progressing in life and making meaningful contribution to their societies. Key among these challenges is the lack of education and employment opportunities which leaves the youth idle and despaired and leads them to engaging in vices such as drug abuse, joining extremist groups, illegal migration, petty crimes and theft among others. The major cause of unemployment among these youth is their inability to access skills and education.

The Bit Schools' aspirations are that young people realize their full potentialities and access to meaningful work opportunities through creativity and innovation using ICT multimedia courses to gain better access to job markets.

The training is structured in three stages which include taught theory and practical and hands-on training through an internship. The bits' schools use existing curricula designed by Butterfly Works and regularly updated to meet local skill labor market demands. The curriculum is based on creativity and encompasses marketable applications including graphic designs, motion designs, video editing, app development, web design, and development. The beneficiaries are also offered entrepreneurship training to give them self-reliance skills in business planning and management. This gives youth the capacity to develop and actualize ideas and engage in self-employment. The program also aims at linking these youths to financial facilities to enable them to access funds to start and strengthen their own innovative ideas. The Life skills training is designed to assist youth to acquire necessary skills of job-hunting including career development, resume writing, interview practice, work ethics, communication, and leadership skills. Both GaroBits and HargaBits have trained 564 youth since they were established and 60% of the school graduates either established their own business or gotten employment opportunities with various public and private sector actors among them TV stations, Printing agencies, corporate companies, online digital marketing companies, media production companies, telecommunication companies, internet service providers, financial institutions, digital photographers, and ICT service companies. Based on the market needs Shaqodoon is now in the process of launching the third Bits School in Mogadishu to serve marginalized and internally displaced youth.

1.2. Justification of the assessment

Various organizations have conducted different labor market assessments and have identified the number of market demand technical skills, however, all of these assessments have not given attention to the digital and multimedia skills which are where the global labor market demand is heading. Therefore, the labor market assessment focused on the labor market demand of digital and multimedia skills in Somaliland and Puntland. The assessment considered the short-term skill that can be taught to marginalized youth including youth migrated from drought-affected rural areas who are seeking employability skills to access market opportunities in the urban areas.

The main objective of this assessment was to map, identify, recommend and justify the current and the future labor market demand for digital and multimedia skills in the target locations of the assessment. It entailed conducting a needs assessment on the digital and multimedia skills required in Somaliland and Puntland through consultations with private sector employers, government, youth and the training providers while exploring the missing skills based on the market demand. It also comprised the task of identifying specific opportunities of formal employment, self-employment and entrepreneurship in the digital and multimedia sector in Somaliland and Puntland with a focus on young men and women including IDPs and disabled youth.

This LM assessment report is structured as follows. It constitutes the introduction section which is the first chapter comprising of the background information to the study as well as the rationale and justification to the study. The second section of the report focuses on the approach used in undertaking the Labor Market Assessment (LMA). This provides information regarding the study scope, design, data collection and data quality assurance methods employed. The LMA study approach section also provides an overview on how field work and desk reviews were undertaken, as well as the data analysis modalities and the limitations to the study. The third section of the report is on the study findings. This is closely followed by the conclusion and recommendations section of the report.

2. The LMA research study

2.1. The research purpose & objective

2.1.1. The purpose of the assessment

The purpose of the assessment was to identify the labor market demanded skills as well as the supply dynamics within the digital and multimedia sector in Somaliland and Puntland. This is to help explore the possible skills that Shaqodoon's Bitschool and other relevant technical training institutions can introduce in the labor market.

2.1.2. The assessment objective

The main objective of the Labor Market assessment was to map, identify, recommend and justify the current and the future labor market demand and supply dynamism for digital and multimedia skills in the target locations of the assessment.

The specific objectives of the study were to:

1. To conduct a needs assessment on digital and multimedia skills required in Somaliland and Puntland by consulting with private sector employers, government, youth and the training providers through the exploration of the missing skills and the market demand as well as the weakness of the currently exiting skill.
2. To analyze and create a link between the identified digital skills and the exiting market demand.
3. To identify specific opportunities of formal employment, self-employment and entrepreneurship in the digital and multimedia sector in Somaliland and Puntland with a focus on young men and women including IDPs and disabled youth.
4. To map out and identify the exiting relevant training institutions in the digital and the multimedia sector in the focus study regions.
5. To identify and analyze the relevance of the identified digital skills in the national development plans of the target locations.
6. To identify and analyze the role and the impact of digital and multimedia skills in entrepreneurship and the digital economy.
7. To explore the future of the identified skills.

2.2. The assessment objective

During the study the researchers sought to conduct a desk review of relevant literature materials regarding the digital and multi-media sector in Somaliland and Puntland including the HargaBits and GaroBits training program. They also conducted a needs assessment on digital and multimedia skills in Somaliland and Puntland through close consultations with private sector employers, government, trained and untrained youth and the training providers by exploring the missing skills and the market demand as well as the weakness of the currently exiting skills. They also engaged stakeholders to identify specific opportunities for formal employment, self-employment and entrepreneurship in the digital and multimedia sector in the two states of study with a focus on young men and women including IDPs and disabled youth.

Further, the study entailed the mapping and identification of the existing relevant training institutions in the digital and the multimedia sector, as well as identifying and analyzing the relevance of the identified digital skills in the national development plans of the target locations.

The researchers also undertook to identify and analyze the role and the impact of digital and multimedia skills in entrepreneurship and the digital economy while exploring the future of the identified skills and creating a link between the identified digital skills and the existing market demand.

2.3. Research design

The labor market assessment's data gathering exercise applied participatory approaches and a proven methodology that fitted well within the context of local communities and stakeholders. To a large extent, qualitative data was collected and analyzed. Participatory field observations, Household interviews and consultations with key stakeholders were conducted involving actors in the various economic sectors, with emphasis on the most viable sectors for the Somali youth, and more especially those living in informal settlements with IDP and/or refugee status.

The target stakeholders who were interviewed during data collection included representatives from the training institutions (i.e., Hargabits and Garobits), relevant government agencies, the private sector employers, and businesses (i.e., TV stations, printing agencies, corporate companies, online digital marketing, media production companies, telecommunication companies, Internet service providers, financial institutions, digital photographers, ICT service companies, etc.) the trained Somali Youth and humanitarian development organizations operating in Somaliland and Puntland.

The consultants conducted in-depth discussion with selected key-informants from the public and private sectors, employers as well as with the relevant labor markets development organizations through Key Informant Interviews. Interviews were also conducted with representatives from the relevant development organizations and programs that are promoting labor markets development with a focus on digital and multimedia skills. The assessment also involved conducting field surveys and Participatory field observations. The researchers further conducted Focused Group Discussions (FGDs) with beneficiaries and stakeholders in addition to reviewing and analyzing relevant secondary data sources and literature materials, policies & regulations affecting digital and multi-media labor provisions in addition to regulations that affect active participation of refugees and IDPs in entrepreneurship & business and in employment.

Quantitative data collection entailed the use of Surveys, interviews and questionnaires that collected numerical information and count data by using closed-ended questions and Quantitative analyses. Observation surveys, focus groups discussions, interviews, reviewing and analyzing policies and regulations are more other techniques that were used in qualitative data collection.

The Labor Market assessment therefore utilized an articulated and coherent methodology which allowed for very practical references to the above mentioned economic sub-sectors, and which showed a deep understanding of the digital and multimedia skills context in the target areas of Somaliland and Puntland. The labor market assessment utilized both secondary and primary sources, through desk research and field surveys as applicable.

2.4. Data collection methods

The specific data collection methods used included:

- » **Desk Review:** An in-depth desk study to understand the context, and to complement information gaps in the assessment. The desk review included project documents and other available relevant studies as well as previous similar project evaluations and data.
- » **Surveys:** This was used to administer individual questionnaires to collective qualitative data, targeted at Somali Youth, i.e. Unemployed Youth with no Digital/Multimedia background and Youth Studying or Graduated from Digital and Multimedia Courses. The study comprised of 80% of the target 120 youth respondents spread across the study locations. The highly personal nature of this research caused some respondents to refuse to answer questions, hence reason for the 20% deficit on target.

However, the researchers emphasized the issue of representativeness and as such people from different graduations and people of different education institutions were selected. This made the sample more

representative by having youth graduates and employees of various organizations forming separate strata.

» **Focus group discussions (FGDs):** Provided an in-depth qualitative information enhancing understanding of the local labor systems and markets. Participatory approaches were used to encourage the participants to freely discuss, analyses and share their views and opinions on issues related to economic activities, and labor markets. The study used largely qualitative approaches to reach out relevant groups and collate the necessary data from their very sources. A qualitative approach was used to review the available literature and subsequently conduct focus groups discussions to substantiate research findings and deliberations.

» **Key Informant Interviews (KIIs):** Provided a broader picture of information on issues related to the labor market in relation to digital and multi-media skills, labor market dynamics and opportunities.

Key stakeholder meetings were organized and conducted to collect data on the mostly demanded digital and multimedia skills in the ICT sector for local investment & business employers, communities, government agencies, civil society organizations, knowledge institutions and development agencies. Focus was on mapping out and identifying viable economic sectors with potential for the employment of the youth with digital and multimedia skills in addition to investigating and establishing the current capacity gaps on the labor supply side regarding digital and multi-media skills that employers and the general ecosystem needs.

2.5. Data quality assurance

Data quality control measures included the assessment of the knowledge gained and retained by interviewers based on accuracy, completeness, consistency, uniqueness, and timeliness. Use of voice



recording gadgets were some of the data collection and data quality control measures used. The researchers conducted comprehensive desk-top research and literature reviews of documents, reports and literature reviews and conducted a comprehensive Data/records review and analysis of relevant secondary data. They also conducted in-depth interviews with the target audience from the public and private sectors as well as from the training institutions and development organizations in Somaliland and Puntland and international development partners implementing or having implemented similar labor market-oriented livelihood improvement projects in similar youth refugee and IDP contexts.

The team of researchers also engaged one expert who would daily and carefully check and re-check the data transcribed and also raw data captured on audio for omissions and errors during and after completion of the questionnaire administration and the subsequent transcription exercise. Data quality checks and controls were done as close as possible to the data source to make it easier for the consultants to trace data errors and omissions, and commission a repeat in case there is need.

The consultants checked for data omissions, errors in calculations, inconsistencies within and across tables late or missing responses, misunderstanding of the questions and data omission and errors.

2.5.1. Fieldwork

The research teams conducted research from 31/08/2022 to 09/10/2022 in Somaliland and Puntland, within the cities of Borama, Hargeisa, Burco, Garowe and Bossasso. Fieldwork was conducted simultaneously in both study locations of Somaliland and Puntland. National consultants from ECO SPREW Consult were present in both Hargeisa and Garowe to train team leaders and enumerators on the tools, and when necessary, on electronic data collection. The training covered the following components – the objectives of the LMA, planning, content of the data collection tools, understanding of the study concepts and individual questions contained in the questionnaires, tools structure, and enumerator assessment. The national consultants directly supervised the pilot and fieldwork in those locations, as well as conducted KIs there. Each team composed of one local team leader and nine local enumerators, then proceeded to Borama, Burco and Bossasso. In these locations, team leaders also conducted KIs.

Youth sampling both for the survey and FGDs was conducted using a purposeful-then-randomized sampling technique. Each city was divided into four target areas along meaningful landmarks to ensure the broadest geographic and demographic coverage. Based on this division, a fieldwork plan was created to ensure that enumerators went to diverse sets of locations encompassing youth of different digital educational programs and socioeconomic backgrounds, in addition to those with different migration histories. In each town, at least one university campus was visited to allow for analysis.

In each city, a list of public employers and private sector employers were identified. Enumerators targeted employers in industries having potential for future growth and digital jobs creation for youth – in Puntland and Somaliland. Among the public employers, local and international non-governmental organizations (NGO), UN agencies and governmental institutions, such as the Central Bank of Somaliland and Ministry of Environment in Garowe, were also interviewed. Private employers ranged from self-employed to large enterprises with more than 100 employees, including hotels, telecommunication companies, TV stations, Printing agencies, corporate companies, online digital marketing companies, media production companies, internet service provider, financial institutions, digital photographers, and ICT service companies.

In order to best meet the above research objectives, a mixed-methods approach was implemented, inclusive of a desk review, FGDs, KIs, employers skills demand survey, labor market opportunity survey, and youth skills survey. An overview of the data sources or respondents targeted, and the number of respondents is summarized in Table 1-8 on the next pages. More details regarding the record of respondents are provided at the annex of this report.

Table 1: International Non-Governmental Organizations engaged through KIIs

No	Name of Institution	Contact Address	Target Area/ Department	Respondents	
				Male	Female
1	Save the Children (TVET)	Jigjiga-yar	Youth / TVET	1	0
2	OXFAM	Jigjiga-yar	Youth	1	0
3	FCA	Masalah	TVET	1	0
4	NRC	Masalah	TVET	1	0
5	GIZ	Masalah	TVET	1	0

Table 2: Private Companies engaged as Key Informant Interviewees

No	Name of Institution	Contact Address	Target Area/ Department	Respondents		Location
				Male	Female	
1	Sagal Jet	Centre	Multimedia	2	1	Hargeisa
2	Alif Digital Printing	Centre	Multimedia	0	1	Hargeisa
3	Hargeisa Printing House	Centre	Multimedia	2	2	Hargeisa
4	Sagal Digital Printing	Centre	Multimedia	3	1	Hargeisa
5	Telesom Company	Centre	ICT Recruitment	1	1	Hargeisa & Burco
6	Somtel	Centre	ICT Recruitment	2	2	Hargeisa
7	SO Company	Centre	ICT Recruitment	1	3	Hargeisa
8	Horn Cable TV	Shacabka	ICT Farxan	0	3	Hargeisa
9	Astaan	Badda-cass	ICT Recruitment	1	1	Hargeisa
10	Sky Cable	Badda-cass	ICT Recruitment	2	1	Hargeisa & Borama
11	True Cable	Centre	ICT Recruitment	2	2	Hargeisa & Bossaso

Table 3: Government Ministries/Departments engaged as Key Informant Interviewees

No	Name of Institution	Contact Address	Target Area/ Department	Location
1	Ministry of Education	Shacabka	TVET	Garowe
2	Ministry of Information & Technology	Shacabka	ICT	Garowe & Hargeisa
3	Ministry of Youth & Sport	Shacabka	Youth	Garowe & Hargeisa
4	Ministry of Labour	Shacabka	ICT	Garowe & Hargeisa
5	Ministry of Environment	Shacabka	ICT	Garowe
6	Ministry of Communication	Shacabka	Director General	Hargeisa

Table 4: Engaged Unemployed Youth with No Digital/Multimedia Background

No	Name of Institution	Contact Address	Target Area/ Department	Respondents	
				Male	Female
1	Non-IT students, HAVOYOCO	Badda-cass	TVET Schools	42	19

Table 5: Engaged Youth Studying or Graduated from Digital/Multimedia Courses

No	Name of Institution	Contact Address	Target Area/ Department	Respondents	
				Male	Female
1	Shaqodoon (HargaBits, GaroBits)	Pepsi	Digital Training Centre	22	13
2	Other (e.g. Universities)	Pepsi	Digital Training Centre	22	13

Table 6: IDPs – Migrated from the Rural Areas

No	Name of Institution	Contact Address	Target Area/ Department
1	IDP Centre	IDP Centre	Youth

Table 7: Training Providers

No	Name of Institution	Contact Address	Target Area/ Department
1	CTG - Global	Aligobanimo	ICT
2	Somaliland Innovation Zone	Centre	Ministry of Technology
3	TECHNO's ICT & Digital Centre	Jiggiga-yar	ICT
4	Abaarso Tech University	Shacabka	
5	University of Hargeisa	Pepsi	
6	Hargeisa Technical School	Pepsi	
7	HAVOYOCO	Badda-cass	TVET
8	Fikir Camp (Hargeisa)	Jiggiga-yar	Training Centre

Table 8: Tabular Summary of the Research Methods

Method	Source / Respondents
Desk Review	- Available related Projects Documentation. - Contextual Analysis - Available Publications - Relevant Secondary Literature
Key Informant Interviews (KIIs)	- Local Government Officials - Partner Organizations (private, governmental & non-governmental) - Organizations Working with digital and multi-media skills training TVETs. 30 KIIs in total distributed across the study locations as follows - Bosaso: 2, Garowe: 5, Burco: 7, Hargeisa: 11, Borama: 5
Focus Group Discussions (FGDs)	- Main Groups of Market Actors - Shaqodoon Project on digital skills capacity building Beneficiaries - Shaqodoon Project Beneficiaries.
Qualitative Tablet Questionnaires	Employer/Consumer skills Demand Survey - Employers and Consumers of digital skills Labor Market Opportunity Survey - TV stations, Printing agencies, corporate companies, online digital marketing companies, media production companies, telecommunication companies, internet service provider, financial institutions, digital photographers, and ICT service companies Youth Skills Survey - Employed and unemployed youth; youth who have through digital skills training; main groups of market actors; Shaqodoon Project beneficiaries of digital skills capacity building; Shaqodoon Project beneficiaries

2.6. Desk review

A desk review was conducted to inform data collection tools and perform critical digital and multi-media skills labor market analysis while reviewing the current digital and multi-media labor market situation in Puntland and Somaliland. Reviewed documents included available related project documentation, such as previous labor market studies completed in Somaliland and Puntland, and tracer studies of digital and multi-media TVET programmes. The “Vocational Skills Training Labor Market Study” (2012) from the Danish Refugee Council and Somalia Food Security Cluster and the “Youth Employment and Livelihood Survey on Skills and Market Opportunities” (2012) from the International Labor Organization were the two labor market studies completed in Somaliland & Puntland and that served as the basis of this study’s research. A more complete listing of the secondary literature reviewed can be found in the bibliography.



2.7. Survey with employers

Among those reached to during the study through interviews (Tables 2,3 and 7 above) include TV stations' personnel, Printing agencies, corporate companies, online digital marketing companies, media production companies, telecommunication companies, internet service providers, financial institutions, digital photographers, and ICT service companies.

2.7.1. Data analysis and triangulation

The questionnaires were booked in and checked, before data entry could begin. Data cleaning, analysis, and report writing was done for a total period of 10 days. Two main qualitative data analysis techniques used by data analysts were content analysis and discourse analysis. Another method that was also used is narrative analysis, which focused on stories and experiences shared by the study's participants/respondents. Interpretations were made based on analysis findings which were also aligned to the overall objective of mapping, identifying, recommending and justifying the current and the future labor market demand and supply dynamism of the digital and multimedia skills in the target locations of the assessment while exploring factors influencing Youth unemployment in the study locations. Labor market analysis begun with the identification of the appropriate labor market for all types of digital and multi-media job positions available in the organizations contacted. The research team used this phase to identify posts with many employees competing for labor and those with little to no competition.

2.7.2. Limitations

A few limitations in this research exist that are important to note.

- » First, given the highly personal nature of this research, in which respondents were asked about their education, employment, income, and family matters, respondents might not have been as forthcoming as desired, causing some respondents to refuse to answer a number of questions.
- » A limitation to the level of detail that can be provided to TVET programmes is the lack of data currently available about labor markets in Puntland and Somaliland. The limited capacity of the government and organizations to conduct economic research means that the basic facts and figures on labor have not been established, and judgments on the growth of different sectors, important skills, and opportunities and constraints may be subject to respondents' biases. Where possible the lead researcher has contacted participants of KIIs and FGDs to seek clarification and greater detail on the subject in question. Where answers were found to be wanting, we describe the direction future research should take.
- » Slightly over half from the sampling frame of 120 respondents was surveyed. The smaller sample size of some of the survey make estimates drawn from the data more imprecise and the purposive methodology of participant selection makes the sample less representative of the population of interest than a random sample. Specifically, these are the Youth Skills survey. To address this, findings and estimates from these surveys are triangulated with qualitative research where possible, but otherwise should be interpreted with caution.
- » Intensive training was provided to the supervisors and enumerators together and in small groups. Despite all efforts to reduce error in understanding of the concepts and individual questions contained in the questionnaires, misinterpretation of the questions contained in the survey tools is possible.
- » The purposive sampling nature of the site selection and the vast geographical area of the district surveyed meant that in some of the areas the distances between the villages and locations where data was collected was large. Fatigue and human error are always factors in such circumstances.

3. Findings

3.1. The digital and media skills employment situation

Many young Somalis in Puntland and Somaliland face barriers accessing decent work, which the COVID-19 pandemic has only made worse. These barriers include high illiteracy levels, inability to access skills training and education thereby leading to their relative lack of skills, unstable labor market experience and discrimination, which contribute to the difficulty usually faced by young people entering the labor market, the impact of community culture (bad stereotypes of culture) for youth unemployment, e.g. a high percentage of youth are still depending on their families instead of promoting the idea of self-employment by seeking skill based training and initiation of related enterprises.

At the same time, the digital transformation in these cities has the potential to create new jobs in the digital economy and to build back better. Despite Hargeisa's outwardly booming economy, the local job market has struggled to absorb the multitude of skilled graduates produced by the growth of the city's tertiary education sector since the 2000s, many of whom have high expectations as to what they consider suitable employment opportunities.

Local employment generation is a primary focus of Shaqodoon and many of those who participated in this study drawn from the youthful demography and those from a fairly educated cohort- spoke about difficulties young people face in gaining employment. A common narrative among these young men (government and development actors) is the link between youth unemployment and undocumented migration (tahriib) from Somaliland/Somalia to Europe and the Gulf States.

"Online and social media connectivity has increased rapidly across cities in the Horn of Africa, particularly amongst the young generation."

Today, Hargeisa is a booming regional hub for trade and investment (Nimollhan, A., 2016). Given the prominent role played by diaspora remittance, investment and physical 'return' movement, most urban Somali economies such as Garowe in Puntland can be seen as inherently transnational. This is certainly the case for Hargeisa, which has expanded rapidly since the early 2000s with the return of significant number of former refugees.

Online and social media connectivity has increased rapidly across cities in the Horn of Africa, particularly amongst the young generation.

Digital and social media platforms play into important national and cross- border dynamics affecting young men in rural and urban contexts. Social media platforms were seen by many young people as integral to information seeking and networks building practices that are aimed at securing employment or money-generating opportunities both within and beyond Somaliland and Puntland.

A common narrative among Hargeisa's young people on employment concerns clan bias, with



When asked if they were actively and currently looking for a job, 67 per cent of the surveyed youth answered positively – with a notable difference between Somaliland (80 %) and Puntland (53 %)

the perception being that jobs are often awarded on the basis of family/clan connections rather than an applicant's skills or qualifications. One Key Informant explained how he saw social media playing into this trend, noting that companies sometimes advertise vacancies on online platforms that in reality have already been allocated.

Online and social media access in Hargeisa has shifted away from internet cafes towards increasingly affordable smartphones and mobile internet. Recent global comparisons report Somalia (including Somaliland) as being the cheapest country in Africa when it comes to mobile data costs and the seventh cheapest worldwide (Cable UK, 2017). Like in other African countries (Lisa Parks, et al 2017), Facebook is perceived as the dominant platform by young urban Somalis. Other platforms that featured prominently in the research conducted include WhatsApp, Instagram, and YouTube, with Twitter also mentioned on several occasions, despite its reputation as having a more 'elite' user base.

For Puntland, against all odds, the skills market in Puntland was found to be having huge potential to enhance private sector progress. The skills in high demand particularly the private and public sector employers include digital skills, such as graphic design (especially Adobe Creative Cloud: Photoshop, Illustrator and InDesign), motion design, video editing, mobile apps development, web design, information communication and technology (ICT), among others such as electrical skills, tailoring/dressmaking, plumbing and sanitation, masonry, metal works, shoe making, fabric design, secretarial skills and management (Rieckmann, 2018).

When asked if they were actively and currently looking for a job, 67 per cent of the surveyed youth answered positively – with a notable difference between Somaliland (80 %) and Puntland (53 %). By contrast, there are no striking differences for other key variables such as marital/social status since the focus was mainly on the youth. According to focus group respondents and key informants, there is a widespread unemployment situation in Somaliland. For the local youth and the rest of the community, there are probably more job opportunities in Puntland, but it does not mean that the situation is absolutely better there. It is only slightly and relatively better than in Somaliland, where the economic context seems very competitive and less favorable.

Some of the study FGD respondents also talked about how a small number of young people are starting to monetize social media by pursuing entrepreneurial strategies that take advantage of the content they produce and their position within digital networks. An example is a young man acting as a local social media influencer who uses YouTube for income generation. As public events are increasing in Hargeisa, the young man makes a deal with the event organizers as a social media event promoting agent, and promotes the event through social media platforms such as Twitter for the days the event is happening. If it is a week, the income will be based on the number of days worked for them.

Overall, the study respondents expressed generally positive views regarding the utility of digital platforms as not only a direct source of employment opportunities, but also for accessing education and employment related information (while also noting the wider structural constraints of the local job market). In Hargeisa and Bossasso, around half of youth-employer combinations result in the youth meeting some of the skills requirements; while in Burao and Garowe, 40 per cent or less do. Youths in Somaliland met requirements half the time, more often in the private sector than in the public. On the other hand, the public sector in Puntland appears more accommodating of youth, although in each individual measure, the requirements were higher on average.

3.2. Vulnerable groups within Somaliland & Puntland

While forcibly displaced persons face specific vulnerabilities, including psychological trauma, lack of opportunity and protection risks, host communities struggle to pursue their own development efforts in an environment that has been transformed by a large influx of newcomers. The responses to these challenges are becoming more focused on durable solutions to support more dignified, inclusive and comprehensive programmes for refugees and the communities that host them.

For many forcibly displaced people, Internet and mobile connectivity have a similar level of importance as basic needs such as water, food and energy (UNHCR, 2016). They can provide access to loved ones, support networks, vital information, and mobile money services. They can bring education to displaced youth, so that they do not fall irretrievably behind through lack of learning, and training opportunities to young people and adults. Importantly, digital technologies can also enable displaced persons to find decent employment and become more self-reliant. However, meaningful connectivity is still out of reach for many forcibly displaced people, especially for women, older persons and those with lower levels of education. A lack of digital and language skills is an important barrier.

For many forcibly displaced people, Internet and mobile connectivity have a similar level of importance as basic needs such as water, food and energy.

(UNHCR, 2016)

As earlier on mentioned above, host communities also struggle to pursue their own development efforts in an environment that has been transformed by a large influx of newcomers. A lack of economic opportunities, combined with a lack of contact among communities and grievances over access to livelihoods and basic assets, may negatively affect relations between forcibly displaced persons and host communities and their resilience (Brück et al, 2016). In this context, access to skills development opportunities for employment and entrepreneurship are equally important to both groups. As the accelerating digital transformation impacts all—disrupting traditional sectors and growing the share of the overall economy that is linked to, enabled by or otherwise impacted by digital technologies, products, services and data—the ability to work, engage with, and innovate in the digital economy in particular is increasingly important to securing decent employment or creating a successful enterprise. Moreover, pandemics such as COVID-19 have narrowed down opportunities for learners and job seekers and increased the recognition of the importance of remote learning and jobs.

There are an estimated 1 to 1.5 million Somalis living outside of Somalia, with concentrations in the Horn of Africa and Yemen; the Gulf States; and Western Europe and North America (Sheikh and Healy 2009). Recently there has been an increase in return migration of Somalis to their home country. Between December 2014 and the end of May 2017, 66,674 Somalis have been returned (UNHCR, 2017d). Expectations determine that returnees will concentrate in urban centers and are likely to consider repeat migration if they fail to reintegrate (Avis & Herbert, 2016). Overall, returns to Somalia are problematic as the Regional Durable Solutions Secretariat (ReDSS) finds that the infrastructure and livelihood opportunities in Somalia are not sufficient to lead to sustainable reintegration of returnees (ReDSS, 2015).

3.3. Growth sub-sectors & industries in study locations

Somaliland and Puntland have several opportunities—rapid urbanization, the growing use of digital technologies, planned investments in sectors such as energy, ports, education and health—that can support economic growth and job creation. The two Somali states have the opportunity to harness the digital economy as a driver of growth and innovation, but if they fail to bridge the digital divide, their economies risk isolation and stagnation.

The digital economy has the potential to enhance productivity, income and social well-being in the two Somali states. It is creating job opportunities in new markets and increasing employment in some existing occupations. It is unlocking new pathways for rapid economic growth, innovation, job creation and access to services which would have been unimaginable only a decade ago. However, there is also a growing 'digital divide', and increased cyber risks, which need urgent and coordinated action to mitigate.

As digital technologies enable the production of more goods and services with less labor, they also expose some workers to the risk of unemployment or lower wages. They also enable changes in the organization of work, with implications for the capability of existing policies and programmes to ensure labor market inclusion, job quality and skills development. To reap the benefits of the adoption of digital technologies, governments, businesses, trade unions and academia will need to address new economic and labor market challenges.

Investment in data and digital infrastructure is essential to support innovation, growth and jobs in the digital economy of the two Somali states (Puntland and Somaliland). Business adoption of advanced digital technologies however remains limited. Most firms in Hargeisa and Garowe have a broadband connection and a webpage, but few use advanced ICT applications such as enterprise resource planning software, e-commerce, cloud computing or radio frequency identification.

Public procurement and public-private partnerships in the two study regions can stimulate ICT investments and digital adoption and help new digital markets to emerge. Better access to e-government will also raise uptake of these services among firms and citizens. Policy support is needed for complementary investments in knowledge-based capital, including employee skills, organizational know-how, databases, design, branding and various forms of intellectual property. Entrepreneurship plays an important part in the development of the digital economy and the creation of new jobs. Policies are needed to build a regulatory environment in the two regions, so that businesses can thrive, with easier access to finance for small innovative firms, lighter procedures for start-ups and lower failure costs. Policies can also help to promote more positive cultural attitudes towards risk. While it creates new job opportunities, the digital economy may also destroy jobs in sectors with more scope for automation and slower growth in demand, such as manufacturing, retail and finance. This process will affect both low- and high-skill jobs in routine occupations.

Key labor-intensive sectors that drive development, such as information and communication technology, energy, and infrastructure, form the basis of economic activity. According to the Global Information Security Workforce Study (GISWS) survey, it is predicted that there will be an excess of more than 1.8 million IT jobs unfilled by the end of 2022, and still, some IT professionals will still struggle to find a suitable job, this because their skill set is not in alignment with the needs of the market.

This means that to a large extent, the future success of Somaliland IT firms will depend on their ability to find highly skilled employees with the right skillsets. This calls for a closer collaboration, consistent exchange and engagement between industry and learning institutions.

Somalia has a rapidly growing information and communication technology sector and money transfer services. According to preliminary initial discussions that have been held with various stakeholders, telecommunication and money transfer sectors are some of the few predominantly privately owned sectors that provide high employment opportunities for the populations. The sector is growing rapidly and hence is deemed as having high employment potential albeit at a more advanced level than currently being provided by TVET institutions (Ulusio M. M., 2013).

4. Labor market trends in Puntland and Somaliland

4.1. Employer profiles across the key growth subsectors/ industries

During the study, it was evident that there are entrepreneurial shifts; i.e. there are different shifts occurring in the entrepreneurship sector/private sector posed by the rise of technology and automation and young entrepreneurs and job seekers need to position themselves based on those shifts. Tech companies, and indeed all organizations in the digital economy, are coming to realize that digital skills are vital for employees in the digital era. It is more important than ever that new employees are cross-disciplined and have both hard and soft skills. Whatever the specific job one is interviewing for, recruiters will be looking out for a wider skill set and broader experience in their new hires.

For example, a marketing officer with one of the Puntland's largest full-service provider of print and related services; Horyaljet company explained how with the rising aptitude for online shopping, how e-commerce is becoming the future of the world. "The rapidly expanding e-commerce has made mobile applications an integral part of the consumer experience today", he said. "Amidst this rising trend, mobile apps are now playing a major role that is turning mobile app development into the real force that is maneuvering the commerce economy upwards. Mobile app development is not only beneficial for businesses but an opportunity area for youth to build skills in and meet the labor market skill demand", he added.

The recent Covid-19 pandemic has also showed that we need to continually adapt our skill sets to meet evolving requirements in the IT world where the only constant is change. With the future uncertain, one thing is for sure – ongoing skills development is the best defense to ensure organizations can pivot to handle digital disruption with ease. The ever-changing business environment should also be considered when building a labor force. In response to changing business needs, the local appetite for developing technological skills is slowly increasing at the expense of traditional skills.

In Somaliland, COVID-19 created an opportunity for digital disruptions. COVID-19 control measures such as the lockdowns, stay at home orders, and social distancing for example disrupted cash-based hawalas, doing away with teller jobs while providing business opportunities for cashless digital money transfer operators. One of the leaders interviewed working as a digital money transfer operator stated that until recently digital payment services in Somaliland have generally been limited to mobile money transfers, which still involve cash payments from senders. However, with the setting in of COVID-19 money senders who could not visit a hawala operator have turned instead to cashless, digital money transfer services and that their business has recorded a 100% increase in inflows, as well as a significant increase in downloads of their app, since the outbreak of COVID-19. "Digital cashless money transfer is however a nascent and quickly growing business model in Somaliland", he says.

The list on the following pages covers some of the top digital skills employers generally within the studied area are looking for today and in the coming years.

i. Programming, web, and mobile app development

The CEO of True Cable TV; a well-known modern Islamic High definition (HD) Digital television broadcasting service in Hargeisa, Somaliland indicated that at the heart of any tech product or digital service is coding. He said that “for example in a time like this when new technology is evolving every other time, mobile app development has become the most lucrative industry. Every business that kicks off needs strong marketing routes to engage with its target audience. And no other channel does that better than mobile apps. Primarily, it is because the mobile app is convenient as it is in the hands of the target audience 24/7. It gives a huge room to brands and businesses to market their products to their potential customers. Therefore, the evolving revolution in the tech industry escalated the demand for mobile app development. As the Somaliland, just like the rest of the world becomes more and more mobile-dependent, mobile apps open a new horizon of tremendous job opportunities. This tech revolt has rapidly increased the need for quality app developers who can create mobile apps that match the needs of consumers, making mobile app development a rewarding career choice.

The core languages that most programming, web and app development positions need include Bootstrap, jQuery, Angular, Code Igniter, PHP/JavaScript and MySQL. Having a portfolio of projects demonstrating coding skills can also help to validate one’s knowledge and expertise and help him/her land a dream role. Examples of mobile and responsive web development experience will give one an edge over other candidates. The skyrocketing demand for mobile app development has created massive job opportunities, especially in Hargeisa.

Coding is also vital for emerging technologies such as augmented reality (AR) and virtual reality (VR). Coding will provide AR and VR Developers with the foundation skills needed to develop the next generation of AR and VR technologies. Mobile app developers are responsible for crafting and designing the user interface, commonly known as UI. They specialize in coding that makes the mobile app functional.

ii. Digital business analysis

According to the Marketing Director at Sagaljet, digital Business Analysis helps organizations to make the right choices by providing an independent and objective mind set and applying a range of proven analysis techniques to make a convincing business case for investment e.g. in digital solutions. As digital transformation is central to all organizations in the digital economy, digital business analysis skills have become the hottest skills to have in the 21st Century. “Demand for digital skills such as data analysis, software development, graphic designing, motion graphics, content writing, copy writing, call center operators, programmer & digital arts are increasingly in demand”, he said. Digital Business Analysts are at the epicenter of digital transformation projects. They help organizations develop a digital ecosystem of technologies that will help drive digital transformation and business growth.

iii. Digital design and data visualization

Designers can also visualize complex data to help management make vital business decisions. This skill is called data visualization. A Regional Director at Burao Technical Institute in Somaliland, who was one of the interviewees in the study indicated how data visualization is useful for senior leaders to gain valuable insights from data. “Tools such as Tableau and Power BI are used by designers to analyze and visualize data”, he said. He further indicated that telecommunication engineers and any other designers with experience creating effective, dynamic user experiences will be in high demand with most tech companies. Websites, Apps and Digital Services have one thing in common; a user interface. As a training and skills imparting institution, he said that they usually conduct labor surveys, assessing market real needs and thereafter based on the labor market needs, they tailor training to ensure their learners attain the skills in demand within the labor market context.

iv. Digital project management

Project management is by no means exclusively desirable to tech companies but it is a vital part of developing digital products and services in a timely and cost effective manner. An understanding of a range of methodologies such as SCRUM and AGILE will stand out from any job seeker. Digital Project Managers need to have a holistic understanding of how digital projects are developed - from ideation to prototype to fully developed digital product or service.

v. Digital product management

Another skill that is not unique to software development but one that is particularly valuable nonetheless is Digital Product Management. A marketing director at one of the premier and largest Media, branding Digital printing company in Somaliland, said that Digital Product Managers need to devise, create and manage a successful digital product. This involves having technical skills and understanding methodologies like Lean Product Development, SCRUM and Kanban among others. Software services in particular need to have a lifecycle management plan put in place. The continued growth of Software as a Service will make Product Management ever more integral to the tech sector in Puntland and Somaliland.

“Both Public & Private sectors like TV stations, publishing houses, Telecommunication will likely see the increase and will utilize these kind of skills. We are still at the beginning stage when it comes to the digital and we can't compete with the world, but I believe there will be a time where everything will be carried out through digital and the tasks will be moved over. There is no limit to the technology and in the future there will be a time every graduate will require to get a digital skills relate to their filed of specialization”, he said.

vi. Digital marketing

To promote their products and services tech companies will look to Digital Marketing. According to the CEO - True Cable TV, increased demand for remote tech talent, which was enhanced by the COVID-19 pandemic, has created more remote employment opportunities for developers. “Digital marketing, content writing and copy writing is the most needed skills in Somaliland today”, he says. Understanding of how to get the most value for money out of the broadest range of networks will be key here. In-demand skills for Digital Marketers include:

- o Digital marketing tools.
- o Analytics tools.
- o Social media marketing.
- o Content marketing.
- o SEO.
- o UX (User Experience Design)



Figure 1: Social Media Applications

vii. Social media

During the Key Informant interviews, a trainer in one of the Universities in Bossaso who also doubled as the head of the computer science department in the University said that "Academic institutions are among other sectors that use or depend on social media to exchange ideas. Information sharing is easy and affordable to everyone who accesses the internet. Students prefer to use social media platforms like Facebook, Twitter, WhatsApp among others in classroom learning", he said. "Social media is marketing application software that enable users to create accounts and exchange contents. In fact, the social media operates on tablets and mobile devices, which differs from traditional social media sites which used only website pages, therefore mobile social media has additional services such as the current location of the user, indicating chatting time of delay between sending and receiving messages", he added. He also noted that "Most students in Bossaso use social medias such as WhatsApp and Facebook to disseminate knowledge in the class; they spend average of 8 hours taken away by social media daily, which indicates that they are largely obsessed with it, get absent-minded every time they are using social media during class time." The main argument is that it is the content rather than the platform that is most significant when it comes to why social media matters. He further added that some of the best PR today is carried out almost exclusively through social media. Twitter, Facebook, Reddit, Instagram and countless other platforms give tech companies direct access to customers, thought leaders and technical advisors. The best tech PR managers are Social Media managers.

"Academic institutions are among other sectors that use or depend on social media to exchange ideas. Information sharing is easy and affordable to everyone who accesses the internet. Students prefer to use social media platforms like Facebook, Twitter, WhatsApp among others in classroom learning."

- Trainer at one of the universities in Bossaso (KII)

viii. Data science and data analytics

Companies gather huge amounts of data that can be immensely valuable to them if they have a Data Analyst who can make sense of it all. It was noted from the study that data scientists are in-demand by employers across the studied regions. A marketing officer from one of the main and largest providers of complete indoor & outdoor advertising services & solutions noted that, not only do they utilize skilled Data Scientists in their daily operations, but also they demand data analytic skills far outweighs supply, making Data Scientists highly employable. "As data science becomes a minimum requirement for more and more manager level jobs, learning data science will help position themselves ahead of the curve of competition", he said. Further, he noted that data science is an excellent career path for professionals in the digital age as it has enabled them to attain fully consumer satisfaction through transferring their business ideas into the real world of creative, attractive designs and high quality print out that provides best of their marketing & promotion communications at competitive prices.



ix. Decision making for leaders

Decision making is a critical component for leaders in the digital age. For those looking to future proof their careers, building competencies in areas that machines will be unlikely to tackle effectively (i.e. complex problem solving, creativity and problem solving) is likely the best recipe for success. A manager at Dheeman Printing & Advertisement; a printing company in Hargeisa Somaliland alluded to the fact that Organizations need leaders who can tap into their knowledge and experience to make rapid decisions. Based on his daily functions at the company, he is responsible for handling administrative tasks, staffing & hiring, training new employees, coaching and developing existing employees' skills with performance support, problem resolution and decision-making. "Behavioral economics is one route for professionals to improve their decision making abilities", he says. "Our objectives as a business are improving customer service quality, operational optimization or developing new business models, and these needs more technical resources", he added. "Behavioral economics studies the effects of psychological, cognitive, emotional, cultural and social factors on the economic decisions of individuals and institutions. Learning this skill will improve one's decision-making skills by gaining insights from the fields of cognitive and social psychology", he notes.

x. Experience working in international cross-functional teams

Recruitment and hiring being of the roles of Mr. Abdirahman Hassan Musa as the manager at Dheeman printing & Advertisement, he noted that when an employer has to decide between a dozen or so equally qualified candidates they will want to see something to help them make a decision, something unique that a candidate can bring to the team. It might be work on an emerging technology or something completely out of the field. Experience working in international cross-functional teams is highly sought after by tech companies worldwide. Communicating clearly to team members remotely especially in an organization with staff and offices around the world and across multiple time zones helps organizations to operate more effectively and efficiently. Knowledge and experience in methodologies needed to address the uncertainty of a high-level digital project brief and to successfully develop a prototype that demonstrates an understanding of user-driven design, user experience, and lean user experience (UX) methodologies is highly desirable

4.2. Skill level of workers

The much needed job-skills in Somaliland such as web design and development, mobile apps development, and digital marketing have become a booming market for foreigners, particularly Africans from neighboring countries such as Kenya. For example, a respondent drawn from one of the INGOs during one of Key informant sessions stated that four years' degree programs mostly offered in higher educational institutions in Somaliland do not meet today's employment needs in the country. The remote jobs require specific skill sets; among them digital skills, including digital marketing, data analytics, data science, web-design & development, user experience and e-commerce. Also, soft skills are equally on an increasing demand trend because remote work models have made particular skills even more valuable such as communication skills, self-initiation/self-starting, collaboration and team coordination, and time management.

"Unemployment among Somaliland's youth can be attributed to their lack of proper training for the various job opportunities available in the country (e.g. in mobile apps development, digital marketing, software development and engineering, etc.), given the current state of development in the country". The interviewee recommended that there is need to overhaul the education systems in Somaliland and Puntland to prepare for the coming technological revolution. This because of the increasing demand for digital and multi-media skills. While automation could increase skills premiums and exacerbate income inequality, it also could increase productivity and create new occupations", he said.

Discussions with middle level management officials of two leading ICT providers in Somaliland and Puntland i.e., Hormud and Nation Link; and further with leading money transfer services providers; Dahabshil and Amal banks revealed that the companies incurred huge expenses in providing in-house training to staff due to lack of skilled labor in the market e.g. in digital marketing and content development, web designing and mobile apps development. And even after spending so much money, the quality of some of the services is not at the desired level they would want them to be mainly due to issues of incompetence. According to some of the Survey and FGD respondents, among them a project officer at Solidarity Youth Voluntary Organization (SOYVO) in Burao – Somaliland, ownership of mobile telephones in Burao and Hargeisa, is as high as in other metropolitan towns but most of the models are counterfeits from the Asian countries. "This makes them constantly break down. Currently there are a few major mobile phone repair shops in these towns and thus the demand for these services is very high as the phones are susceptible to bugs, crashes, and other damages over time", he noted.

A respondent from Armoud University in Borama indicated that occupations within the ICT sector that have been identified as having high potential for employment include:

- o Small business and private home telephone installation.
- o Repair and maintenance technicians of telephone/ internet lines.
- o Mobile phone repairs.
- o Customer care services.
- o Repair and maintenance of computer hardware and software, and
- o Accounting.

However, several gaps have been identified in these sectors that are affecting the stakeholders' ability to provide employment. These include:

- i. Insufficient capital for expanding or deepening operations due to lack of access to credit facilities.
- ii. Lack of capacity to develop a good marketing strategy.
- iii. Low skills in business management which leave those in sectors badly exposed to middlemen.
- iv. Lack of/low technical skills level that are required for the development of those sectors.
- v. Low institutional capacity of TVET providers to provide competent skills graduates.
- vi. Lack of government policy framework for the development of SMEs.

Somali youth are also more likely to be economically inactive. Only 39 percent of youth (aged 15–24) participate in the labor force compared with 62 percent of adults aged 25–64 (Samuel H, 2016). While youth worldwide generally have lower labor participation, few countries have youth participation rates as low as Somalia (Ministry of Youths & Sports, 2016). Further, labor force participation increases only moderately with age, as only 2 in 5 youth work in Somalia compared to only 3 in 5 young adults aged 25–35 (African Union, 2017).

With a market that is rapidly changing and with increased competition, companies need to be able to attract talented and flexible employees to keep their competitive advantage. So the skills that are needed in order for Somaliland and Puntland IT companies to get a foothold in the global IT sector are as mentioned in section 3.1.1 above.

4.3. Demand and supply for digital and media labor skills

Somalia has several opportunities - rapid urbanization and the growing use of digital technologies among other planned investments in sectors such as Information, Communication and Technology (ICT), energy, ports, education, and health - that can support economic growth and job creation.

[A] failure to acquire or adequately train the future generation of workers for the digitally driven economy will lead to greater income disparity, increased unemployment, and overall regional economic losses.

Shortage of human resource prevails in the ICT area in Somaliland. Although this is a well-known fact, there is not yet a well-defined clear policy on ICT related human resource Skills and development. For instance, ICT related education is not given the same degree of importance given to other education syllabus such as Art Studies and Business. Hence, it is feared that even the existing ICT education programs, especially those in higher education institutions, may be abandoned altogether. In Puntland, young graduates from higher education institutions virtually lack preparation and switching to work automation/digitization skills as required by the Puntland labor market (Farah, 2020). This situation has brought into sharp focus the incongruity between training and the “Transferable skills” demanded by the labor market. Some of the respondents argued 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 was often cited for the incidence of high unemployment among graduates is the absence of entrepreneurial training. 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.

Based on discussions with employers in Somaliland and Puntland during the study, digitalization and automation is heavily influencing which skills are needed in the labor market. Demand is now evolving toward adaptable social, behavioral, and non-repetitive cognitive skills, and away from routine tasks and narrow skills tied to specific jobs. Demand for software engineers, digital marketing specialists, on-line writers, on-line finance trading and financial advisers, web-designers and developers, graphic designers, among others is now on the rise in the regions studied and to a greater extent in Hargeisa.

In the multi-media skills arena, visualization and imaging skills i.e. advanced three dimensional designs and CAD (3-dimensional Computer-Aided Design, a technology that engineers, product developers, and designers use to create functional, virtual prototypes of three-dimensional objects), geographical information systems, volume visualization, virtual reality, entire on-line environments (e.g. webmaster), complete multi-media application design and implementation. Others include design packages such as Photoshop, in-design and after effects as well as skills in video and photo

editing programmes such as adobe package. Skills in the creation of content for social media accounts such as Facebook, Twitter, Instagram, Snapshot, etc, were mentioned by employers as part of the skills required.

In Hargeisa, employers reported that experienced employees are in short supply, meaning the region has had to upskill staff to adopt newer operational initiatives. By ensuring more demand-driven education, Puntland and Somaliland can reduce persistent labor-market deficiencies and mismatches to make education both more attractive to the young people and more relevant for employers. One exciting option is for the two regions to use new dynamic information systems to track current and future digital skills labor-market needs in the economy, making it easier for youth to learn about digital job openings, apply for the jobs, and meet their digital skill requirements.

From the employers' end, organizations and businesses that fail to pay sufficient attention to digital skills development will likely suffer from a variety of productivity-related challenges. This failure to acquire or adequately train the future generation of workers for the digitally driven economy will lead to greater income disparity, increased unemployment, and overall regional economic losses.

From key informant interviews the research team learned that some of the higher learning institutions such as universities and TVET colleges are not accredited, and the quality of offered programmes is questionable. One interview respondent from a higher learning institution in the town of Hargeisa estimated that there are over 24 known universities in Somaliland, with over 15 in Hargeisa alone. There are no figures regarding the school-to-work transition, but interview findings have revealed that there is a high rate of youth unemployment. A respondent who is unemployed from Hargeisa, Mr. Adnan Mohamed Ali said that some of the jobseekers are able to get jobs that are matching their qualifications. However, majority of university graduates do not find jobs and if they do most at times it is not related to their qualifications.

The sector is also supported by non-State actors such as international donor agencies, NGOs, development partners, community education committees, CBOs, education umbrella groups, employers, and religious groups. The diversity of actors, each with their different respective institutional mandates and incentives, has led to a lack of coordination, conglomeration, strategic intent, and collective focus.

Also, it was noted that since the turn of the century, technical training has been passed down from generation to generation among Somalis in a clan based context, with some specific craftsmanship skills limited to a specific clan. Mr. Abdulkadir Caydiid Geelle; the head of the computer science department at Bossaso University alluded to the fact that the institution also offers other technical vocational training programs other than in digital and multimedia, such as including handcraft. And over the years, he has observed that particular handcraft skills e.g. ceramics, textile crafts, leather work, needle work, wood work, weaving, metal work among others could dominate in particular clans than the other.

4.3.1. Employer/consumer skills demand survey

It is quite evident that demand for digital skills continue to grow and will keep on surging in the coming decade, as jobs that previously did not require digital skills will begin to do so. The COVID pandemic has further accelerated the speed of change. From the study finding, there are indications that the majority of demanded digital skills will be from occupations outside ICT specialties and will be generated by enterprises adopting digital technologies. Existing education providers therefore need to align their skills offerings to meet this surge in demand. For traditional providers to keep pace with the speed of technological changes and provide relevant skills, they can partner with dedicated digital skills providers. The unmet training demand provides a significant business opportunity for private local, regional, and global training providers and will require partnerships across the education ecosystem to deliver.

The consumer skills demand survey undertaken during this study show that various employers require various types of digital skills based on their core business activities. There are some essential skills that are increasingly required in almost every location studied. They include:

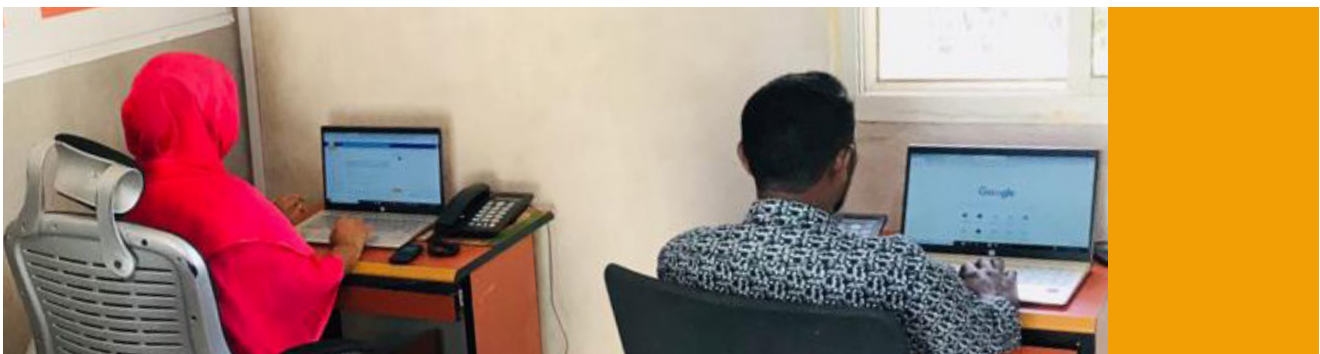
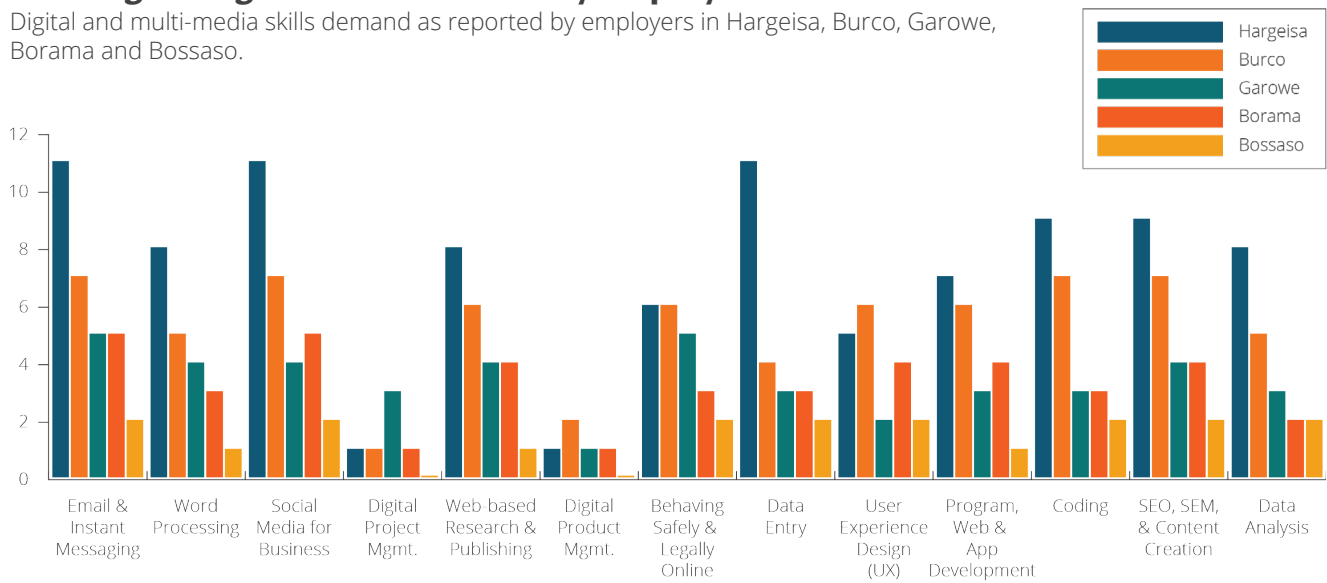
- o Email and instant messaging
- o Word processing
- o Social media for business
- o Web-based research and problem solving
- o Data entry and handling
- o Behaving safely and legally online

Further, it was clear that developing more advanced digital skills will give the youth and other potential candidates in employment an advantage in specific technical careers such as marketing, design, development, and data science. The demand from employers for these more advanced digital skills continues to increase. The advanced digital skill includes:

- o User experience (UX) design
- o Coding
- o Programming, web, and app development
- o Search Engine Optimization (SEO), Search Engine Marketing (SEM),
- o Content creation
- o Data analysis

Ranking on Digital Skills Demand by Employers

Digital and multi-media skills demand as reported by employers in Hargeisa, Burco, Garowe, Borama and Bossaso.



4.3.2. Digital & multimedia skills supply survey

For individuals seeking to enter the job market, digital and multi-media skills are key to standing out amongst a multitude of possible candidates. With the vast majority of job vacancies requiring digital skills, investing in learning a range of these skills is one of the best ways to increase one's chances of being hired for desired roles.

While there are dedicated skilling providers in the studied locations, the demand for digital skills exceeds current supply and the expected growth in demand will further widen the gap. Universities and other tertiary education providers will play an important role in digital skills training, especially for the higher order skills for more specialized professions. Given the pace of technological change, universities that partner with providers holding content expertise are well placed to deliver relevant training to their students.

The table below shows the distribution of youth interviewed in each of the locations studied and those who reported to be having some digital and multi-media skills.

Location studied	Youth interviews	Affirmative responses on skills possession	% to the total interviewed per location	Some of the skills mentioned
Hargeisa	41	17	41.4	<ul style="list-style-type: none"> - Digital marketing - Programming, web, and mobile app development - SEO, SEM and content creation. - Coding - Data entry and handling - Mobile phone repairing - UX design - Photography & video editing
Bossaso	10	4	40	<ul style="list-style-type: none"> - Word processing - Data entry and handling - Mobile phone repairing - UX design
Burco	31	14	45.2	<ul style="list-style-type: none"> - Programming, web, and app development - Search Engine Optimization (SEO), Search Engine Marketing (SEM), - Content creation - Data analysis
Garowe	21	9	42.9	<ul style="list-style-type: none"> - Social media marketing and content development - Mobile apps development - Web design & development - Programming - Mobile phones and computer repair - Video editing
Borama	17	6	35.3	<ul style="list-style-type: none"> - Email and instant messaging - Word processing - Social media for business - Web-based research and problem solving - Data entry and handling

Table 9: Digital & Multi-media skills supply survey

Digital Skills Supply

Digital and multi-media skills skills supply in Borama, Garowe, Burco, Bossaso, and Hargeisa.

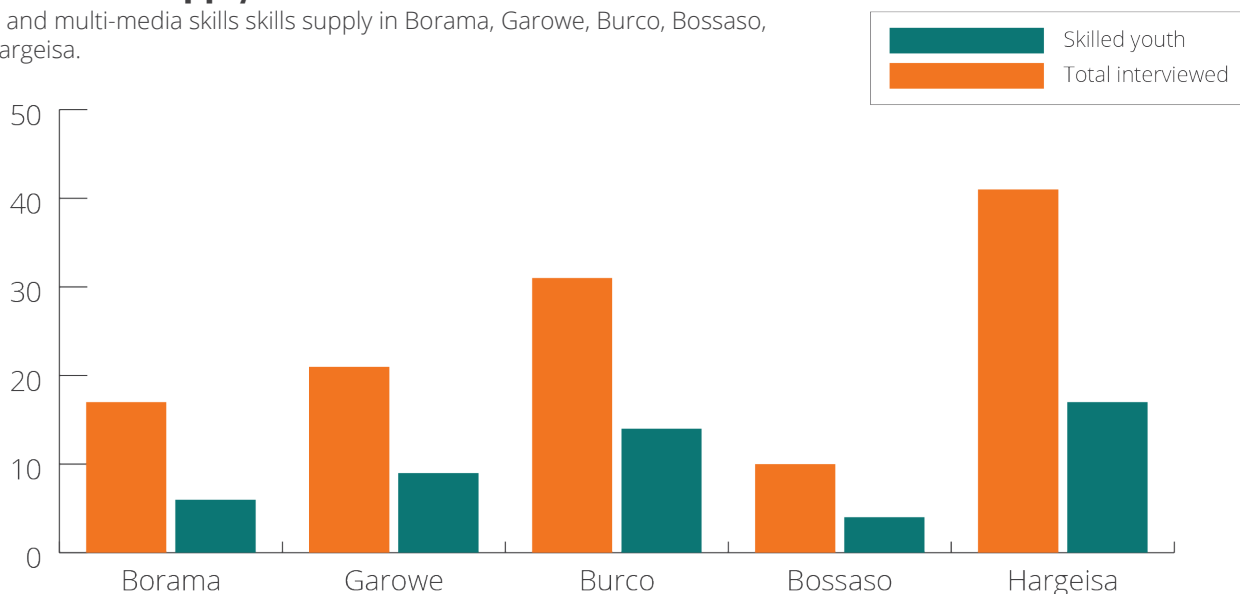


Table 7: Digital & Multi-media skills supply survey

Some of the of institutions and programmes building entrepreneurial, digital and multi-media skills, providing employment services in Puntland and Somaliland include:

Region / State	Institution / Program	Brief institution description
Puntland	University of Bossaso	Offering training programs, some with a technical focus in computer science such as the Diploma in Computer Science course. The course entails a strong technical education in software development, computer systems, computational applications and computational theory. The curriculum emphasizes real-world applications for programming, theory and computer science practice.
Puntland	City College of Technology and Science (CITYCOT)	Formed as a branch of University of Bosaso in 2012 to serve the educational needs of Bosaso, Puntland, Somalia. Offering This students training in technology, and more specifically on computer connections, network installation, server configuration, and user management. Learners are exposed to database and information systems, software engineering, distributed systems, computer networks and 3D graphics.
Puntland	Weirah Digital Technologies Institute (WDTI)	WDTI is a hybrid nonprofit/for-profit, youth led, tech-driven, Innovative, Digital Vocational Education and Training (DVET) center, based in Garowe – Somalia. The institution gives youth the digital skills needed to re-imagine their careers and businesses. The courses embed digital and leadership literacy across all programs, with certificate-based training at the Garowe center and industry partners like Internet Marketing School IMS, it is WDTI's goal to become a driving force for excellence in Somalia's Digital Technology ecosystem. The institution is driven by its aim to give youth the digital skills needed in today's digital world to re-imagine their careers and businesses; to produce a digitally literate, work-ready graduates who have a growth mindset, entrepreneurial skills and the resilience to adapt to a continually evolving world while retooling existing workers for a diversified digital economy, and assisting them in job placements and internships, in addition to achieving the UN's 2030 Agenda for Sustainable Development ambitious targets under Sustainable Development Goal SDG 4 on quality education, SDG 8 on decent work and economic growth, SDG 9 industry, innovation and infrastructure and SDG 17 Partnerships for the Goals.

Region / State	Institution / Program	Brief institution description
Somaliland	The Refugee Employment and Skills Initiative (RESI) project in Hargeisa	The International Trade Centre (ITC); a joint agency of the World Trade Organizations (WTO) and the United Nations (UN) together with Shaqodoon have joined forces to launch the RESI Project in Hargeisa to under courtesy funding by the government of Japan. Shaqodoon Hargeisa is recruiting qualified youth to join the RESI Digital skills training programme. Youth with skills in social media marketing, web design and development, image tagging, SEO, data cleaning, graphic designs, motion designs, and mobile apps development are highly encouraged to apply. At the end of the skills training, participants will be trained on working as online freelancers, through the RESI freelance programme. Youth living in informal settlements and refugees are highly encouraged to be part of this programme.
Somaliland	Borama Job Youth Centre	Borama Job Youth Centre is a youth training and employment project established in 2016. The aim of the centre is provide youth with marketable technical and soft skills training programs. It is one of the project managed by Somaliland Skills Training Association (SOSTA).
Somaliland	Somaliland Skills Training Association (SOSTA) Borama	SOSTA is a non-profit making organization, which was founded in 2005, for development of youth and vulnerable groups in the community like IDPs, women, children, disabled people, and minority. The Organization's mission is to help alleviate the sufferings of vulnerable groups and unemployed youth, women, children, IDPs by equipping them with skills and expertise necessary to enter the job market also provide social services, advocating them and become an active member for drought respond and emergencies.
Somaliland & Puntland	Shuraako (Hargeisa Somaliland & Garowe Puntland. Also operating in Mogadishu)	Connects Somali region entrepreneurs to impact capital with the aim of stimulating economic growth and create jobs while promoting stability and peace. Shuraako identifies enterprises that add value to the local economy by conducting on-the-ground due diligence, connect entrepreneurs/actors along the supply chain, establish strong relationships, connect those with capital appetite with capital, and manage post-investment execution/ responsibilities.
Somaliland	Innovate Ventures	Innovate Ventures is a leading Somali startup accelerator and early-stage startup fund supporting ambitious startups who use technology to change the world. Through the "Innovate Accelerator Programme (IAP)" - a flagship programme, Innovate Ventures invests in and supports great teams with cool ideas to help build a world-class business through an intensive 3-month programme.
Somaliland	Horn of Africa Voluntary Youth Committee (HAVOYOCO)	HAVOYOCO is a regional NGO, founded in 1992 operating in Somaliland and Ethiopia. It is running marketable technical and vocational skills trainings to re-integrate the most vulnerable youth in Somaliland through promotion and provision of vocational skills training for employment. This is done in the organization's technical and vocation centers established across the different regions in Somaliland.
Somaliland & Puntland (also South-Central Somalia)	Shaqodoon	<p>Founded in 2011 with the goal of growing the private sector in Somalia and Somaliland, the organization continues to help local jobseekers through programs while working with private sector, universities, and government.</p> <p>Shaqodoon is a service provider dedicated to skill development, employment services, youth entrepreneurship, private sector business development, and technology for growth & development.</p> <p>Through creative programs, Shaqodoon provides ICT based trainings to youth at disadvantaged positions/locations through their establishment Bits schools in Hargeisa, Garowe and Mogadishu.</p>

Region / State	Institution / Program	Brief institution description
Puntland	Puntland State University	Through the Faculty of Computing, the institution has developed strong industry linkages. Coupled with the rich history of the university, this has enabled the institution to groom future programmers, and technologist who have become successful techno-entrepreneurs. The institution strives to satisfy the changing needs of ICT marketplace and requirements to become one of the leading faculties of information and technology in Somalia. Part of the courses offered include software engineering and information technology in networking and cyber security.
Somaliland	Work in Progress! Alliance	<p>This is an initiative run by Oxfam, VC4Africa, IOM and Butterfly Works that seeks to improve the economic prospects of millennials in Somaliland (among other areas such as Nigeria & Egypt) by building digital skills to find jobs and stimulating entrepreneurship.</p> <p>The initiative entails accelerator programmes for high potential start-ups and “Bits schools” – institutions that give the youth a chance to gain IT and design skills, which will help prepare them for careers as graphic designers or web developers. In the era of the digital revolution, these digital skills and initiatives are instrumental to the transformation happening in Africa.</p>
Somaliland	Shaqo-Abuur Digital Employment and Skills Platform	Shaqo-Abuur is a platform where jobseekers can find their dream job and companies can find their dream employees. The platform is managed by Somalia’s Ministry of Communication and Technology (MoCT). It connects Somali job seekers with national, regional, and international employers in an easy, fun, and transparent way. The platform provides an opportunity for the employers and Job Seekers to communicate without a third party interference.

4.4. Gender dimensions of the labor market

In Somaliland and Puntland, among other regions in Somlia labor force participation is limited and coupled with high disparities, especially for women and youth. A university official from Bossaso said mentioned that “Indeed, the majority of women work in the media, and it is easy for them to become journalists because they prefer that to any digital skills”. Another respondent from the University of Hargeisa indicated that “the demand is low for computer science amongst girls. This is usually due to a fear of Science Technology Engineering & Mathematics (STEM) or mathematical calculations as computer science comprises both. Another reason why demand is low could be due to the reason that employers prefer male employees because majority of the executives in tech companies and telecommunication corporations mainly happen to be male hence creating a discriminatory situation”.

Labor force participation in Somalia is moderately low and lagging behind many other Sub-Saharan Africa (SSA) countries (UNDP, 2012). Just over half of the working-age population aged 15–64 (55 percent) is employed or actively seeking employment. The other half is neither working nor looking for work, and thus considered economically “inactive” (World Bank 2016, 11). Only 43 percent of Somali women actively engage in the labor market compared with 67 percent of men. Relative to other SSA countries, Somalia has the lowest female labor force participation (FLFP) rates for women and the largest gap between men and women (UNFPA & PRB, 2012).

A respondent from Abaarso Tech University in Hargeisa indicated that in the first few years since the installation of the software engineering at this University the number of young women applicants was low. However, there has been a rise in the number of applicants of late. Generally, female students seem to prefer classes in graphic design as opposed to software engineering.

Males fit the current employee pool better than females. In the public sector, young women will find more of their own already employed than in the private sector. Garowe's young women have a relatively high-gender profile similarity to the current employees due to the greater propensity of the businesses in the city to hire women. In general, most focus group participants or key informants consider that traditionalist sociocultural norms, even in urban areas, explain this gap. Moreover, and as argued by a university teacher from the University of Bossaso in Puntland, a poor economic situation is generally not conducive to female employment. Also in Otobe's literature production together with ILO entitled – The Global economic crisis, gender and employment, he says that "It is true of both Somaliland and Puntland that when the economic environment is getting worse, female employment suffers relatively more than male employment (Otobe, N., 2011).

Young people, especially women, within the target group suffer from a particular lack of prospects and are given special attention for reasons of the principle "Leave No One Behind (LNOB)". Traditionally, women have had very limited participation in education and the formal labour market. In 2019, the proportion of women participating in the labour market in Somalia was only 22%, according to World Bank data.

With the rise of technology and digital automation, this is affecting the distribution of income between men and women. These future dynamics are susceptible to women's employment and entrepreneurship/economic participation. While digital technologies have transformed the majority of workplaces in the labor market, gender differences in the use of ICT at work persist. Historically, automation was linked to elimination of clerical jobs and reduced availability of jobs in the retail and financial service sectors that, up to that point, had provided an expanding field of employment for women (Huws, 1982). Women are usually reported to be at a slightly higher risk of job loss due to automation than men (International Monetary Fund, 2018; OECD, 2016; PwC, 2019). A recent International Monetary Fund (2018) study on the gendered impacts of automation found that around 11 % of employed women were at risk of job loss, compared with 9 % of men. The higher risk of automation for women relates to gendered differences in work content; in the Africa, women across different occupational categories are somewhat more likely to undertake routine, repetitive tasks and less likely to undertake complex tasks (Piasna and Drahokoupil, 2017).

In addition to being more exposed to the dangers of digital automation, women may also benefit less from the resulting changes in income distribution. Automation is likely to be a capital-intensive process, relying on increasing use of new technologies and thus particularly benefiting owners of capital. Similar technological changes can be linked to a decreasing share of national income flowing to workers (Schneebaum et al., 2018).

Automation is likely to affect both female- and male-dominated occupations. The slightly higher overall risk posed by automation to women conceals considerable variation in how different occupations (and sectors) will be affected. Digitally enabled machines are likely to replace human labor, particularly in routine, easily codified tasks (Frey and Osborne, 2017), the distribution of which varies considerably across occupations. Less predictable tasks, such as abstract thinking or unstructured social interactions, may prove more difficult to automate, leaving some occupations at a much lower risk of automation than others.

While women face a somewhat higher risk of automation based on current employment patterns, there are signs that the structure of women's employment is changing, with high-skilled work increasingly prevalent. Women's recent educational attainment (particularly in Africa) has grown rapidly and many education gender gaps that existed in the past have already been eliminated, as can be seen from the Gender Equality Index scores in the domain of knowledge. Women have begun to take most of the new high-skilled jobs. This has led to an 'upgrading in the female occupational structure, with the share of women in high skilled occupations increasing' (Piasna and Drahokoupil, 2017, p. 7). This does not, however, mean that women are paid equally to men in these jobs. The fact that women have, on average, lower wages than men may affect the patterns of automation (Rubery, 2018). Firstly, the low-paid nature of certain female-dominated occupations (e.g. domestic work) may slow down the pace of digital innovation, since such innovation can be, at least initially,

quite costly and may not always pay off when labor costs are low. This may protect some women from job loss at least in the short term, although it brings little prospect of better pay or working conditions. Secondly, since women tend to earn less than men in the same occupations, this may provide them with new opportunities when male-dominated occupations become reorganized or restructured as a result of automation. In such cases, employers may favor hiring women into new positions because of their lower salary demands.

4.5. Vulnerable groups in the labor market

The vulnerable groups in the labor market are poorest groups found in internally displaced persons' camps (IDPs), returnees, refugees and other destitute youth who are mainly from low-income families.

There is a large number of underprivileged youth living in IDP (internally displaced people) environments and other informal settlements. Setting these youths up for success today through creative programs, providing ICT based trainings to youth at these disadvantaged positions and many more has the potential to enable them to make meaningful long-term contributions to their societies. Both the youth students and their family's livelihoods standards are set to improve as they learn new skills that enable them to enter labor market. After students acquire digital design skills training, they are now able to engage in consultancy assignments and even be at a better position to acquire permanent jobs.

Skills requirement fulfilment was nearly uniform across internal migrant types in each of the other five cities surveyed, insinuating that internal migrants tend to overestimate the importance of decision factors more than any other type, and returnees tend to overestimate it the least. In these measures, the systematically higher emphasis of these factors by public sector employers plays an important role.

There exists a perception in both Somaliland and Puntland that government jobs are more likely to go to the diaspora who returned home. While one key informant tried to put a positive spin on this, he said that in the situation of Puntland, if you are a diaspora and you have a foreign passport, it is more likely that you would get the government jobs. The returnee diasporas are very common in the government jobs. The reason might be that the leaders think these people have experienced more things that they can apply on the ground (Development Alternatives Inc., Garowe). The Head of computer science at Bossaso University recommends the strengthening of digital and multimedia training for workers and vulnerable individuals for employment.



5. Future of work

Much of the current debate about the future of work centers on the increased use of digital technologies and their capacity to replace or complement workers in an ever-broadening range of tasks. The spread of new technologies is often seen as a way to increase the productivity and competitiveness of the economy.

This section provides an overview focusing on the future of work by analyzing future opportunities for youth in Somaliland and Puntland; and how they can seize opportunities presented by these shifts in future. The recent COVID 19 pandemic has accelerated the existing trends in remote work, e-commerce and automation. The current predominantly gig economy whereby the labor market is characterized by the prevalence of short-term contracts or freelance work as opposed to permanent jobs, is therefore an on-demand economy that is expanding fast with many jobs provided by technology oriented companies for independent workers for short-term and long-term engagements in remote work.

This poses a magnificent opportunity for talented youth who previously struggled to find jobs in Hargeisa or Puntland to get out of unemployment; bringing promising aspects of decent employment and much flexibility. They can now work remotely for multi-nationals, large corporates and giant enterprises. As earlier on mentioned, the remote jobs require specific skill sets; among them digital skills, including digital marketing, data analytics, data science, web-design & development, user experience and e-commerce. Also, soft skills are equally on an increasing demand trend because remote work models have made particular skills even more valuable such as communication skills, self-initiation/self-starting, collaboration and team coordination, and time management.

Today's skills may not be a perfect match with tomorrows jobs or may become outdated. Similarly, the architect of employers including private sector can take a different direction as predicted by the advancement of technology and potential automation of the different occupations in the workplace. It is therefore important to have a focus on the future of work by analyzing future opportunities for youth and seize opportunities presented by these shifts in the future.

This is basically by analyzing the future supply and demand of digital and multi-media skills and identifying future trends in the labor market whilst shining the spotlight and having an in-depth focus on how the future of the education system in Puntland and Somaliland will look like and how that is aligned with future jobs and entrepreneurship opportunities in the labor market.

Based on the feedback from interviewees during the study, there is a trend in terms of an increasing demand for particular types of digital and multi-media skills in the various locations studied. In Bossaso Puntland, training institutions reported digital marketing/ social media marketing, software engineering, programming, graphic design, editing, content developers, as areas whose skills are increasingly in demand. In Hargeisa, Mr. Abdirahman Hassan Musa an employee with one of the printing companies listed digital marketing, content development, mobile apps development, web development, internet security or software engineering, video editing and graphic designing as part of the digital and multi-media skills increasingly showing signs of more demand in the near future.

5.1. Digital and media job skills needed for future workers

The skills requirement nexus was compiled from a comprehensive list of skills employers could indicate were required and youths could indicate possession of. Burao exhibited unmet demands for more technical skills: mobile phone repair, beautician, tailoring and restaurant services Hargeisa's high unmet skills demand pointed towards applications including graphic design, motion design, video editing, app development, web design, and development. Though not a focus area during the study, it was also revealed that for administrative and management skills, this was somewhat offset by its high degree of labor supply sufficiency in most other categories.

Bossaso's employers distinguished themselves by rarely requiring specific skills. However, the head of the computer science department at Bossaso University whose responsibility included hiring suitable instructors to impart digital and multi-media skills into the learners indicated that "the university interacts with employers among them communication and IT companies such as Digital Marketing companies, Universities, and INGO's, to whom we supply students with digital and multimedia skills". He further indicated that "the type of jobs the employers they interact with currently require graduates with graphic design and programming skills". In addition, he said that "in the future, the university projects that the demand for skills in graphic design, and multimedia such as video editing, as well as IT skills – such as programming and web development, will continue to grow". In Bossaso, the sectors/industries that will require more digital and multimedia semi-skilled and high-skilled labour in the future include Online shops, Government, telecommunication companies & media who source these skills from the University of Bossaso.

In Hargeisa, some of the skills employers mentioned were required include social media management (including content planning) and digital marketing, Website CMS (Content Management Systems), graphic design, motion design, video editing, app development, web design and development, data science and analytics, user experience and e-commerce, with up to 25% more workers than previously estimated potentially needing to switch occupations.

5.2. Recruitment practices and challenges

Discourse on the challenges of unemployment in Somaliland and Puntland, among other areas in Somalia would be incomplete without addressing the favoritism, nepotism and corruption that plagues different ranks of the public sector and even the private sector during recruitment.

The Somali provisional constitution clearly stipulates that public sector recruitment process should be merit-based and the whole process from application to the final job offer should be fair and transparent. However, current hiring process in public sector both at State and Federal level (e.g. in Puntland and Somaliland) are marred by nepotism and widespread corruption.

Several factors make nepotism inevitable in Somalia that produces very bad consequences on state effectiveness, private sector and public service delivery. The main elements that are responsible for the endemic nepotism in Somalia include poverty, family pressure, clan factor, safety concern and political affiliation especially Somali Diaspora's unique culture of acquaintances.

Some other major challenges for labor sector in Somaliland and Puntland include mismatch between the skills taught at institutions of higher learning and those required by existing opportunities in Somaliland and Puntland's productive sectors.

Limited digital and multi-media skills development and training opportunities also impede meaningful employment.

Women in particular face employment barriers due to a lack of education and skills development for girls coupled with cultural impediments.

Other challenges include lack of job opportunities, high salary expectations among graduates

and lack of merit-based recruitment practices. The Somali education systems, especially higher education, raises the employment expectations of the learners while providing skills that a number of interviewed employers commonly cited as irrelevant.

[I]n the future, the university projects that the demand for skills in graphic design, and multimedia, such as video editing, as well as IT skills, such as programming and web development, will continue to grow.

(Head of Computer Science,
Bossaso University)

Security challenges, political instability and the absence of an adequate policy and regulatory environmental framework are also key hindrances to job creation.

Another important finding from the study is that university graduates are frequently unemployed due to a lack of automation regarding available occupations. This calls for the establishment of online job portals, such as the freelancer website Somwork which is a hub that aims to connect freelancers with employers and projects locally and internationally. Online job portals, or job boards, are sites where an employer can advertise jobs and search for resumes. They are an integral part of almost every hiring process and using them effectively will translate into qualified candidates for relatively low costs. They make it easier for job seekers to decide on a specific career. Equally, online job search sites can help employers pace up their hiring process. It would be easy for recruiters or hiring managers to verify job applications online than physically scanning printed and bulky resumes.

The study also found out that there are a number of persons with disabilities in Somaliland and Puntland, for whom employment or educational opportunities are nearly nonexistent due to attitudinal, environmental and institutional barriers, leaving them at the very bottom of the economic ladder.

5.3. Training Support

The study's findings suggest that Puntland's TVET difficulties point towards diverse uncoordinated stakeholders', 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 lack public awareness of the value of TVET education. All these plague TVET facilities across Puntland. Also, the participating government ministries have a lot of administrative overlap because they all want to get their hands on the sector's international donor fund.

Puntland's TVET education also lacks clarity on the roles of the private and governmental sectors, as well as a uniform and unified curriculum i.e. a curriculum that reflects the labor market skills demand. To fulfill enterprise and industry standards, there is need for fair access to TVET, increasing the quality of training and its relevance through consistent engagement and exchange between enterprise/industry and TVETs, having the government's active involvement in controlling the sector's delivery, and financing mechanisms. These are all vital.

The government of Somaliland 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 skills e.g. craftsmanship limited to a specific clan. There is therefore need for vocational education 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.

6. The prevailing institutional relationships

6.1. Barriers and enablers for supporting changes

During the preliminary phase of the survey, the research team first sought to identify the key structural obstacles to the integration of youth by the surveyed urban digital labor markets. Most key informant respondents and focus group participants stressed the following obstacles: (a) focus on a few niches and lack of marketable digital and multi-media skills; (b) failure of technical and higher education actors in providing the required digital skills (c) reluctance from youth to accept “degrading” jobs.

This pre-assessment points to a triple mismatch or misalignment between the supply and demand sides: youth’s expectations, interests and digital skills are not aligned with local labor market demands. The field assessments conducted in the five surveyed urban areas confirm this initial analysis, while deepening its causes.

At the national level, one major constraint preventing accelerated growth as pinpointed by one of the Key Informants may be attributed to the lack of an integrated national ICT development strategy. As a result, each organization implementing computerization is required to find its own solutions. Lack of policies exists relating to ICT which has evidently proved non conducive for development of ICT in Somaliland. As a result, the Country is not getting the benefits and opportunities that these technologies can offer. Therefore, the government should immediately Intervene and introduce major changes with regard to ICT and produced a guiding ICT Policy.

It was also noted that local organizations are funded by international organizations, which sometimes do not plan projects well – they are giving a very short period of time – three, six months to give a skill – this is not enough to give one a good level on marketable digital skills. For example, three months cannot make you a good software engineer.

A number of structural and organizational gaps were also identified during the study. These gaps are namely: (a) the lack of regulation around certification, qualified digital skills teachers and trainers; (b) the absence of job placement, internships or apprenticeships for trainees within the digital and multi-media skills space to gain practical experience; and (c) the lack of consistent follow-up on trainees and support that would promote self-entrepreneurship.

The study also reveals that that there are numerous problems in the TVET education industry, with cultural limits and lack of government commitments being most significant impediments to the sector’s growth.

Technical and higher education actors are not providing youth with marketable digital skills: Both tertiary education and vocational trainings have been pointed out as not suitable to equip students with digital skills needed in the digital labor market. While there is a common perception that degrees and certificates are a major prerequisite for obtaining qualified jobs, the fact is that higher education in Somaliland and Puntland does not equip youth with necessary digital skills to find employment. In addition, it is not recognized abroad or among international employers as university experience.

In Puntland, the general TVET system is currently on the decrease, owing to lower productivity and the rising unemployment rates, which are mostly due to a skill deficit.

The other major constraint was languages, with the digital skills employers asked at what level they would require new hires to speak and read each of five languages: Somali, English, (Ki) Swahili and Amharic. Again, for each youth-employer combination in each city, it was determined whether the youth fulfilled the language requirements of the employer. Most businesses require advanced spoken and written Somali, though nearly 10 per cent of youth surveyed do not meet this requirement. Of greater significance, more than a quarter of all employers require basic spoken and written Arabic, which less than 5 per cent of youth have, and nearly half require various levels of speaking and writing in English, which just over half of youth possess. In general, youth in Somaliland met requirements about half the time, more often in the private sector than in the public, while youth in Puntland met requirements about four fifth. In Garowe, the public sector language requirements appear to be less onerous than the private sector ones. Shortfalls in language were partly due to insufficient literacy in Somali, with a tenth of Somalis insufficiently literate to the employer's needs. The most crushing shortfalls were a result of requirements for basic written and spoken Arabic, which few youths possessed, and varying proficiencies in English, which about half of youth do not possess.

The other important aspect identified when considering the actual expectations of youth vis-à-vis the local employment market is that most youth lack a long-term career plan and stay focused on short-term financial objectives. When asked to specify the primary factor considered in job search, having a "good salary" is mentioned by 53 per cent of the respondents, "reasonable work hours" by 26 per cent, "less cost to reach the workplace" by 14 per cent, "status associated with the job" by 13 per cent and "less travel time" by 13 per cent; by contrast, "prospects of evolution" and "employability improvement" are only considered as priorities by 6 per cent and 4 per cent of the surveyed youth. This clearly suggests that most youth have short-term goals (money, image, work hours) whereas longer-term career development objectives (acquisition of actual skills) are often neglected.

Internships and apprenticeships are often missing from youth's experience. It was pointed out in several KIIs that youth might have particular qualifications in a specific educational background, but no practical experience when trying to enter the labor force. Youth must be convinced of the importance of internships, but as one KII pointed out, this requires a change in mentality. "How do you change the mind-set of the Somaliland youth that they can do low paying jobs or that they can do internships; putting aside what they have learned, it is not the reality on the market", he said.

Digital startups in Puntland and Somaliland are struggling to attract funding and 'traditional' businesses are only slowly adopting digital technologies and platforms to boost productivity and sales. Relevant governments are slowly investing strategically and systematically in developing digital infrastructure, services, skills and entrepreneurship. To become tomorrow's innovators, entrepreneurs and leaders, youth from these regions need to be empowered with the digital skills and access to technology and markets that are essential to thrive in an increasingly digitized global economy. The governments need to find nimbler and effective means of delivering services and interacting with citizens. Businesses need to utilize digitally-centered business models to connect with the hundreds of millions of customers previously out of reach due to geography or low income.

7. Conclusions and recommendations

7.1. Conclusions

Most key informants highlighted that there is lack of sufficient funding for digital courses; the government has not allocated funding to the sub-sector and hence tuition fees on TVET funding should be taken seriously. For example, the head of the computer science department at Bosaso University observes that to ensure vulnerable people also benefit from digital and multi-media skills labor market opportunities “they should receive both moral and financial support from government, development partners and any other well-wishers to acquire the skills in demand in addition to support their positioning within the labor market”. Also, Migrants, and more so refugees, are unlikely to have documentary evidence of their formally acquired skills and even less likely for non-formal learning. A move towards prior skills assessment, or recognition of prior learning (RPL), is in line with the African Union Commission (AUC) directive that RPL be considered for migrants.

Also, there is overlap of ministries involved in TVET education terms of reference hampering the sector’s ability to get properly established and thrive e.g. in Puntland state. There is therefore need for the examination of the context and circumstances surrounding vocational and technical training (TVET) in Puntland and Somaliland in order to have a positive impact on reducing chronic youth unemployment, which is currently high.

One of the biggest challenge that the youth face when they want to learn Digital and Multimedia skills is lack of sufficient finances to take them through the training they need as well as the lack of relevant tools, equipment and materials such as the necessary instructional materials, computers, internet and other infrastructural requirements. Government and the development partners should work towards addressing this challenge e.g. through deliberate budgetary allocations from treasury and/or robust resource mobilization through lobbying from development partners and the international community. There are also insufficient qualified and competent teachers, gender imbalance ratios among teachers, an imbalance in the distribution of TVET facilities, and lack of awareness among the public on the value of TVETs across Somaliland and Puntland. Government should come up with strategies that can adequately address these gaps.

There is also dissatisfaction with the sectors dependency on international development partners and the international community. Thus, if the value of digital skills building is to be felt in the public and commercial sectors, political stability, transparency e.g. in recruitment and acquisition of skills from the supply side, sound economic policies and reasonable wealth transfer should all be attained to enhance exponential growth of the private sector thereby creating more job opportunities within the digital and multimedia discipline to absorb skilled manpower related to this discipline that is available within the labor market.

"The role of governments will be important to allow quality skills provision to scale quickly and to meet the high level of demand for digital skills in Somaliland and Puntland over the next decade."

One of the most distinguishing characteristics of digital skills building in

Somaliland and Puntland is that the concentration on the acquisition of applicable skills agrees with the African Union's (AU) goal for the development of the continent's human resources (Overview of the Continental Education Strategy for Africa 2016-2025, CESA 16-25, edu-au.org). It recognizes the value of digital skills building as a means of empowering individuals and believes that it should be customer made to respond and meet demands of the community.

It is also observed that there is equitable access to Digital and multi-media skills building among the youth in order to educate the young people from all walks of life with the digital skills they need to help the country's economy recover and grow and subsequently assist families and communities they come from. This report strongly recommends that a state-level digital skills building conference



be convened in order to better engage all stakeholders and improve the quality and relevance of digital and multi-media skills building. For the conference to be a success, several political economic and social changes found throughout the research study must be examined.

Partnership with the private sector by giving them a meaningful role in the digital and multi-media sub-sector's development, management and evaluation; policy changes such as integrating digital literacy into the government's fiscal policy; development of effective and upgraded uniform digital skills training curricula, bringing in new and modern technologies in the relevant training institutions, adequately experienced digital skills trainers and close ties with the already established partnering international donor communities.

Education providers also have a key role to play. One of the main constraints to addressing the supply-demand gap for digital skills is a lack of well-trained teachers and trainers. Private providers could tap into this opportunity and partner with education providers to offer teacher training programs across all education levels. Similar to private providers, higher education providers could expand their courses to smaller towns through distance learning and local partnerships in order to meet unmet demand. Lastly, higher education institutes could build incubators and organize innovation events with industry to help support digital entrepreneurship.

Finally, a positive enabling environment for innovation in the delivery of digital skills training is required. Governments need to act as "enablers" by formulating and implementing policies for ICT infrastructure expansion and cost reduction, as well as by creating a regulatory environment that allows private sector providers to more easily scale their delivery models, including through partnerships with business, government and educational institutions. The role of governments will be important to allow quality skills provision to scale quickly and to meet the high level of demand for digital skills in Somaliland and Puntland over the next decade.

7.2. Recommendations

Before any youth-specific programming can commence, it is critical to understand the current employment and income generation prospects for the youth within the sectors and value chains of focus. While on this, also analyze the future supply and demand of skills and identify future trends in the labor market whilst shining a deeper focus on how the future of the training system of Puntland and Somaliland will look like and how that is aligned with future jobs and entrepreneurship opportunities in the labor market. Then, work closely with different stakeholders in order to enable youth have access to relevant and market-oriented skills well-tailored to the future of work and entrepreneurship whilst influencing the ecosystem to create an enabling environment. Identify skills needed by the future of work/trends and shifts potentially occurring in the future profession and whether the education sector is keeping pace with/preparing for the potential future shifts in the world of work. Identify and also provide substantive examples and scenarios) on whether there will be occupational shifts in the world of work. This is based on scenarios of work partly on the impact of automation and labor demands in the coming years.

For interventions aimed at enabling young people generate sustainable living wages and create optimism about the future in Puntland, and Somaliland, there is need for stakeholders to consider

working on the whole employment ecosystem including digital skills development, fostering an employment opportunities creation enabling environment including employment policies whilst anchoring the development of the private sector. They should build young people's digital skills to prepare them find paid jobs or set up their own enterprises, support startups, small and medium-impact businesses to grow so that they can employ more young people while improving social impact, improve policies and attitudes towards youth jobs and small & medium businesses.

There is need for promoting a national exchange between governmental institutions, educational actors, and public/private sector players to align youth's digital skills on the reality of the market. Two aspects should be prioritized:

- a. Providing high-quality digital education and vocational training to develop the digital skills in business, science, technology, engineering, as well as in more technical fields; and
- b. Organizing career fairs where the biggest digital skill employers of Somaliland and Puntland visit universities to raise awareness of employment prospects of the different fields of digital studies, of the practical experience needed to find

employment in the company and the internship/apprenticeship opportunities offered by the company.

There is also need in fostering the interest of larger local and international employers within the digital skills space in providing internships and practical trainings to youth by:

- a. Creating awareness among bigger companies of the value of "shaping" the digital workforce the way they need it by providing internship/apprenticeship opportunities to youth; and
- b. Advocating with the government to promote fiscal measures favoring youth employment and practical internships.

This should be pursued in a coordinated approach towards job placements and internships. Currently, each organization providing vocational training, approach potential employers individually in an uncoordinated fashion to secure internships and apprenticeships for their students. A more

There is need for promoting a national exchange between governmental institutions, educational actors, and public/private sector players to align youth's digital skills on the reality of the market.

coherent and coordinated approach, particularly towards large employers, would be more powerful and improve the impact of the training programmes, decreasing the duplication of trainings in the same areas and improving the chances of youth finding employment afterwards.

- Develop and align the curriculum to the digital skills labor market needs and connecting educators and learners with employers: An initiative by the Somaliland Chamber of Commerce to link industry sector representatives with universities and convince them to add practical training to the curriculum should be supported and taken to the Ministry of Education to include practical elements in the training curricula for digital skills among the other disciplines.
- Including start-up grants and support in forming savings and credit cooperatives in programmes/provide microcredits to entrepreneurial youth: Access to start-up capital for youth with good business ideas in the digital space was pointed out to significantly improve chances for the youth to start their own businesses. Together with education and digital skills development, start-up financing was pointed out as the most important factor to succeed in business (such as grants, peer-to-peer lending, self-help groups and microfinance schemes).
- Improving on career counselling. The digital and multi-media skills training institutions bear a responsibility to ensure that their students are adequately prepared for the future and have the digital skills necessary not just to perform in jobs but also to apply for them. Career counselling should start from the beginning of the tertiary institution's cycle, before the students decide their final field of study so that they can base their decision on the prevailing and projected labor market realities.
- There is need to develop pragmatic areas of cooperation among stakeholders in the digital and multi-media skills arena through mapping, sharing of best practices, monitoring and evaluation of programmes, making the results public. While coordinating bodies and consortia for NGOs in Somaliland and Puntland are active, in many cases, youth-specific efforts are not coordinated. In particular, among vocational training programmes, research found duplication of trainings and overlap in target groups. It is recommended that research specifically focuses on existing programmes and players to map out the best role for each organization and how to optimize overall efforts.
- The study findings suggested that in certain Somali conflict contexts, local populations perceive diaspora communities as playing a destabilizing role from afar, particularly in using social media platforms to promote particular (clan) interests or negative stereotypes (Interpeace/PDRC, 2017). Although this study did not focus on these issues specifically, the raising of these points by participants highlights the need for further study in this area – particularly in relation to the financial incentives that may exist on digital platforms encouraging the dissemination of ‘shareable’ but also positive and development promoting content.
- Entrepreneurship, particularly in the digital sector, can provide a solution to many employments related challenges that Puntland and Somaliland states are facing. There is therefore need to start technology accelerator facilities in Somaliland and Puntland to support tech entrepreneurs to grow their businesses, receive mentoring and access seed investment. This will further generate more job opportunities and generate a demand pull for digital and multi-media skills within the labor market. The demographic shift, and current problem of brain drain and immigration through dangerous routes in search of ‘better’ opportunities in the West suggest a pressing need for changes in the provision of local opportunities for employment and contribution to the local economy.
- Local and international non-governmental organizations (NGO's) have also given great consideration to funding e-commerce business ideas by youth in general and information technology (IT) graduates in particular, e.g., Innovate Ventures in Somaliland. Nevertheless, many of our youth are still missing the skills needed to generate enough economy from the rapidly growing digital world. Online freelancing can be a source of digital economy solution

to challenges and an insight into the future of work in Somaliland and Puntland. Nowadays, there are many online freelancing platforms and dozens of online courses that teach how to make online income. One of the biggest freelance portals that is worth mentioning is UpWork, a platform that facilitates transactions between employers around the globe and job hunters. This site only approves the profile of skilled and qualified freelancers when they register. Somali youth need training on how they can sell their skills in international job markets. They need to acquire the skills needed to compete for online jobs. Introduce online freelancing to university graduates irrespective of their faculties, helping them write their profiles and connecting them with clients. There is a lot that can be done with regard to connecting the youth with international job markets and creating more job opportunities for them.

- While education institutions also need to align their offerings to assist in advancing digital skills to accommodate the ever increasing demand, governments and the private sector in the study locations need to work together to improve the necessary infrastructure.
- Government should control and monitor the quality of higher learning and TVET institutions in addition to providing support e.g. in term of the provision of requisite infrastructure, instructional materials, tools and equipment. For example, skills training centers should be opened with high-speed internet and computers/laptops to train and provide a working space for freelancers. As the job market in Somaliland fails to provide job opportunities to most of university graduates, more graduates will try to start their own freelance business. Those businesses will mainly depend on the internet as the offline business expenses is hard to afford by fresh graduates; as such more enabling environment is needed to boost digital economy activities in the country.
- Policy support is needed for complementary investments in knowledge-based capital, including employee skills, organizational know-how, databases, design, branding and various forms of intellectual property. Entrepreneurship plays an important part in the development of the digital economy and the creation of new jobs. Policies are needed to build a regulatory environment in the two regions, so that businesses can thrive, with easier access to finance for small innovative firms, lighter procedures for start-ups and lower failure costs. Policies can also help to promote more positive cultural attitudes towards risk. While it creates new job opportunities, the digital economy may also destroy jobs in sectors with more scope for automation and slower growth in demand, such as manufacturing, retail and finance. This process will affect both low- and high-skill jobs in routine occupations.



Entrepreneurship plays an important part in the development of the digital economy and the creation of new jobs.



Annex

Annex 1 - References

African Union. (2017). African Union Youth Division. Retrieved from africa-youth.org.

Ahmed HS (2009). An analytical understanding of how external sources inform and impact upon Somaliland's National Education and Teacher Education Policy Making Processes. School of Sport and Education Brunel University.

Ashnah Kalemera. (2021), Promoting Effective and Inclusive ICT Policy in Africa. Retrieved in November 2022 from: [Africa Digital Rights Fund Supports Mainstreaming of Online Freedoms in Somali Territories – Collaboration on International ICT Policy for East and Southern Africa \(CIPESA\)](#).

Avis, W., & Herbert, S. (2016). Rapid fragility and migration assessment for Somalia. Birmingham: GSDRC University of Birmingham.

Brian M., and Kalvin B., (2020); The mobile money regulatory index. [Mobile-Money-Regulatory-Index-2019.pdf \(gsma.com\)](#)

Brück et al., Jobs Aid Peace: A Review of the theory and practice of the impact of employment programmes on peace in fragile and conflict-affected countries, 2016. Available at: https://www.ilo.org/wcmsp5/groups/public/ed_emp/emp_ent/fp_crisis/documents/publication/wcms_633429.pdf

Cable.co.uk (February 2020); <https://cable.co.uk/mobiles/worldwide-data-pricing/>.

Farah AA (2020). Puntland that came into a cross road oblivion by its sovereign, and federal Government that had a day trip to Damascus and came back. Wardheernews.

Frey, Carl Benedikt & Osborne, Michael A., 2017. "The future of employment: How susceptible are jobs to computerization?" Technological Forecasting and Social Change, Elsevier, vol. 114(C), pages 254-280.

Huws, G. M. (1982). The conscientization of women: A rite of self-initiation with the flavor of a religious conversion process. Women's Studies International Forum, 5(5), 401–410. [https://doi.org/10.1016/0277-5395\(82\)90002-4](https://doi.org/10.1016/0277-5395(82)90002-4)

International Monetary Fund. 2018. World Economic Outlook: Challenges to Steady Growth. Washington, DC, October.

Inter-peace/PRDC, 'Galkacyo Conflict Assessment December 2016 – March 2017'. <https://pdrcsomalia.org/wp-content/uploads/2019/04/Galkacyo-Conflict-Assessment-Research-Report.pdf>; for an analysis focused on the 'recreation' of conflict dynamics in the diaspora itself, see Idil Osman, Media, Diaspora and the Somali Conflict, Springer, 2017.

Lisa Parks and Rahul Mukherjee, 'From Platform Jumping to Self-Censorship: Internet Freedom, Social Media, and Circumvention Practices in Zambia', Communication and Critical/Cultural Studies 14/3 (2017): 221 -237.

Mahad Wasuge, 'Youth Migration in Somalia: Causes, Consequences and Possible Remedies', The Heritage Institute, 11 April 2018.

MoE, HE (2017). Project TEU and TVE Department. Ref ww&TS/50228/2017.

- N. Otobe, Global economic crisis, gender and employment: the impact and policy response (ILO Employment Sector, Geneva, 2011).
- Nimollhan Ali, Going on Tahriib: The Causes and Consequences of Somali Youth Migration to Europe, Nairobi: Rift Valley Institute, 2016.
- Piasna, Agnieszka and Drahokoupil, Jan, Gender Inequalities in the New World of Work (May 1, 2017). Transfer: European Review of Labour and Research, Vol. 23(3), DOI: 10.1177/1024258917713839, Forthcoming, Available at SSRN: <https://ssrn.com/abstract=2971931>.
- PEC (2017). Headcount Report for the Puntland of Somalia civil Service. Human Resource Audit, Capacity Injection project. Puntland of Somalia Civil Service.
- Regional Durable Solutions Secretariat (ReDSS) (2015). ReDSS Solutions Statement: Somalia. Nairobi: Danish Refugee Council and ReDSS. Retrieved November 2022 from http://www.regionaldss.org/sites/default/files/2015_2105_ReDSSstatementSomalia_0.pdf.
- Rieckmann U (2018). Rehabilitation of technical and vocational education and training in Somalia. Ministry of Planning, Investment and Economic Development (Federal Government); Ministry of National Planning and Development (Somaliland). Federal Ministry for Economic Cooperation and Development (BMZ).
- Rubery, J, Keizer, A, Grimshaw, D (2016) Flexibility bites back: The multiple and hidden costs of flexible employment policies.
- Samuel, H. (2016). Investing in Somali Youth: Exploring the Youth-Employment-Migration Nexus in Somaliland and Puntland. IOM Somalia.
- Schneebaum, A., Rehm, M., Mader, K. & Hollan, K., 1 Sep 2016, Vienna: [WU Vienna University of Economics and Business](#), (Department of Economics Working Paper Series; no. 232).
- Sheikh, H. and Healy, S. 2009. Somalia's Missing Millions: The Somali diaspora and its role in development: Nairobi UNDP.
- Ulusio, M. M. (2013). Somalia: Youth of Somalia - From Heroes to Criminals and Victims.
- UNDP. (2012). Somalia Human Development Report 2012. UNON Publishing Services Section. UNDP 2012 report, Somalia Human Development Report 2012, http://hdr.undp.org/sites/default/files/reports/242/somalia_report_2012.pdf.
- UNFPA. (2015). Population Estimation Survey for Somalia 2014.
- UNFPA (2014) report - Population estimation survey for the 18 pre-war regions of Somalia. Mogadishu Somalia: Retrieved from <http://www.mopic.gov.so/DNS-Metadata-en-v4.2/index.php/catalog/6/download/20>.
- UNFPA, & PRB. (2012). Status Report on Adolescents and Young People in Sub-Saharan Africa: Opportunities and Challenges.
- UNHCR, Connecting Refugees, 2016. Available at: https://www.unhcr.org/innovation/wp-content/uploads/2018/02/20160707-Connecting-Refugees-Web_with-signature.pdf.
- United Nations General Assembly. (2001). Implementation of the World Programme of Action for Youth to the Year 2000 and Beyond.
- United Nations High Commissioner for Refugees (UNHCR) (2017b). UNHCR Population Statistics. Retrieved November 2022 from <http://popstats.unhcr.org/en/overview>
- World Bank (2005), Conflict in Somalia: Drivers and dynamics. Washington, DC: World Bank Economic and Sector Work group. Available at: [EDC-Education-Fragility-Series-Somaliland-Shaqodoon.pdf](#).
- World Bank. (2016, 11). The World Bank. Retrieved from Somalia Country Overview: <http://www.worldbank.org/en/country/Somaliland/overview>

Annex 2 - Fieldwork

Zone: Somaliland | District: Hargeisa

Respondent Type	Centre / Company / Organization	Start Date	End Date	FGD	KII	Status
Head of Youth	Ministry of Youth and Sport	9/3/2022	9/3/2022		Yes	Done
Head of TVET	MoE	9/4/2022	9/4/2022		Yes	Done
Head of ICT	Ministry of Technology	9/5/2022	9/5/2022		Yes	Done
Head of ICT	Ministry of Education	9/6/2022	9/6/2022		Yes	Done
Youth / TVET	SCI	9/4/2022	9/4/2022		Yes	Done
Youth / TVET	OXFAM	9/5/2022	9/5/2022		Yes	Done
TVET	FCA	9/6/2022	9/6/2022		Yes	Done
TVET	NRC	9/7/2022	9/7/2022		Yes	Done
TVET	GIZ	9/8/2022	9/8/2022		Yes	Done
ICT Training Centre	Shaqodoon, Hargabits	9/3/2022	9/3/2022		Yes	Done
ICT Department	Abaarso Tech University	9/4/2022	9/4/2022	Yes	Yes	Done
ICT Department	University of Hargeisa	9/5/2022	9/5/2022		Yes	Done
TVET	Hargeisa Technical School	9/4/2022	9/4/2022		Yes	Done
HAVOYOCO	TVET	9/3/2022	9/3/2022	Yes		Done
ICT & Digital Centre	FIKIR	9/6/2022	9/6/2022		Yes	Done
Digital Centre	Sagal Jet	9/3/2022	9/3/2022		Yes	Done
ICT Department	Telesom	9/4/2022	9/4/2022		Yes	Done
ICT Department	Somtel	9/4/2022	9/4/2022		Yes	Done
ICT Department	SO	9/5/2022	9/5/2022		Yes	Done
TV Cable Centre	True Cable	9/5/2022	9/5/2022		Yes	Done
TV Cable Centre	ASTAAN	9/6/2022	9/6/2022		Yes	Done
9 Individuals	Individuals	9/5/2022	9/8/2022		Yes	Done
3 Individuals	Individuals				Yes	Done

Zone: Somaliland | District: Hargeisa

Respondent Type	Centre / Company / Organization	Start Date	End Date	FGD	KII	Status
Unemployment	Unemployment					Done
Disability	Unemployment					Done
Multimedia	Job-seeker					Done
Multimedia	Job-seeker					Done
Multimedia	Job-seeker					Done
Graphic Designer	2 Unemployed					Done
Graphic Designer	3 Unemployed					Done
IT Department	4 Unemployed					

Zone: Somaliland | District: Borama

Respondent Type	Centre / Company / Organization	Start Date	End Date	FGD	KII	Status
ICT Department	Camuud	9/15/2022	9/15/2022			Done
IT Department	Camuud	9/18/2022	9/18/2022		Yes	Done
ICT Department	Elo University	9/14/2022	9/14/2022	Yes	Yes	Done
FGD	Community	9/18/2022	9/18/2022	Yes	Yes	Done
ICT Department	Somtel Borama	9/17/2022	9/17/2022		Yes	Done
Training Centre	Sh. Mahdi Computer Training Centre	9/3/2022	9/3/2022		Yes	Done

Annex 2 - Fieldwork, continued

Zone: Somaliland | District: Burco

Respondent Type	Centre / Company / Organization	Start Date	End Date	FGD	KII	Status
TVET	Burco Technical Institute	9/19/2022	9/19/2022		Yes	Done
Somtel	Somtel Burco	9/15/2022	9/15/2022		Yes	Done
Youth Centre	SYVO Youth Centre	9/19/2022	9/19/2022		Yes	Done
ICT Training Centre	ORBIT International Academy	9/18/2022	9/18/2022		Yes	Done
Community	Burco Community	9/15/2022	9/17/2022	Yes		Done
Senior Student	Alpha University	9/18/2022	9/18/2022	Yes		Done

Zone: Puntland | District: Garowe

Respondent Type	Centre / Company / Organization	Start Date	End Date	FGD	KII	Status
Faculty of ICT	East Africa University	9/3/2022	9/3/2022	Yes		Done
Printing House	Horyaal Jet	9/22/2022	9/22/2022		Yes	Done
TVET	Garowe Education College	9/3/2022	9/3/2022		Yes	Done
Garobits	Garobits, Shaqodoon	9/25/2022	9/25/2022		Yes	Done
TVET	Ministry of Education	9/4/2022	9/4/2022		Yes	Done
Digital Training Centre	Ministry of Information - MAAP	9/24/2022	9/24/2022		Yes	Done
TVET	CARE International	9/5/2022	9/5/2022		Yes	Done
Youth	ADRA	9/5/2022	9/5/2022		Yes	Done
Communication	Save the Children	9/5/2022	9/5/2022		Yes	Done
Individual - Jobseeker	East Africa University	9/27/2022	9/27/2022		Yes	Done
Individual - Unemployed	PSU	9/20/2022	9/20/2022		Yes	Done
Senior Student	PSU	9/25/2022	9/25/2022	Yes		Done





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