



International
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Organization

PROSPECTS



▶ Youth employment opportunities in the digital economy in Ethiopia: Afar and Somali regions



Kingdom of the Netherlands

- ▶ **Youth employment opportunities in the digital economy in Ethiopia: Afar and Somali regions**

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First published 2022

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ISBN: 9789220374733 (print)

9789220374726 (web pdf)

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► Foreword

Across the continent, African governments have issued a strong commitment to embracing technology, expanding broadband internet access, and equipping all Africans with the appropriate digital skills to leverage the growing digital economy. Promoting equal uptake of internet and use are key aspects to ensuring that everyone can reap the benefit from the services and opportunities that connectivity provides. Access to and use of internet is still limited to very few.

Young people on the move, displaced from their homes, are among the most vulnerable groups of youth. Displaced young women and girls face significant challenges in accessing education, work-related training, guidance, and support for decent work opportunities whether as employees or through self-employment, and opportunities in the digital economy are hard to concretize. The digital economy offers potential for the creation of decent jobs in Ethiopia. Guided by Ethiopia's digital transformation strategy 'Digital Ethiopia 2025', which recognizes digital literacy and digital skills as a foundation for building an inclusive digital economy, various activities are ongoing in the country.

The Youth employment opportunities in the digital economy in Ethiopia: Afar and Somali regions report is co-published by the International Labour Organization (ILO) and the International Telecommunication Union (ITU). It aims at providing an insight into the opportunities that the digital economy can provide to and the challenges that currently exist in making this a reality. With a focus on displaced women and youth, and their host communities in Afar and Somali regions, the research provides insights in the current job opportunities in the digital economy and barrier to such uptake in the two regions. Seeking to fill existing knowledge gaps on how the digital economy can drive decent job creation in Ethiopia, the report shares in its analysis key areas that would merit further attention.

We take this opportunity to thank everyone who took their time for interviews, consultations and focus group discussions to share insights and explore the potential of the digital economy and the renewable energy sector in the two regions and at the national level. We invite national and regional stakeholders and development partners, and other UN agencies active within the UN country team in Ethiopia, to continue sharing experiences and working with us on the implementation of the guidance that this report provides to advance and unlock opportunities for young people in Ethiopia's digital economy.



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► Acknowledgements

The completion of this report could not have been accomplished without its ILO commissioned authors, Dr Jennifer Shkabatur and Yohannes Fikre, and the critical role and guidance of Drew Gardiner from the ILO Employment Policies Department (EMPLAB), Jonas Bausch and Albert Okal from the Regional Office for Africa, Jean-Yves Barba and Luladay Aragaw from ILO PROSPECTS Ethiopia team, as well as Christine Sund and Caroline Gaju from ITU's Regional Office for Africa.

This assessment was undertaken prior to the restructuring and change of names of institutions following the formation of Ethiopia's new Government in October 2021. Therefore, governmental and public institutions referred to in this report may reflect prior names and status.

► Abbreviations

AHA	African Humanitarian Action	IFC	International Finance Corporation
ANE	Action for the Needy in Ethiopia	ILO	International Labour Organization
ARRA	Administration for Refugee and Returnee Affairs	IOM	International Organization for Migration
AU	African Union	IRC	International Rescue Committee
BIC	Business incubation centre	ITU	International Telecommunication Union
BoLSA	Bureau of Labour and Social Affairs	JCC	Jobs Creation Commission
BPO	Business process outsourcing	LMIS	Labour market information system
CALS	Center for African Leadership Studies	MFI	Microfinance institution
DBE	Development Bank of Ethiopia	MInT	Ministry of Innovation and Technology
DCA	Danish Church Aid	NBE	National Bank of Ethiopia
DICAC	Development and Inter-Church Aid Commission	NER	Net Enrolment Rate
EECMY	Ethiopian Evangelical Church Mekane Yesus	OCP	Out-of-camp policy
EEF	Ethiopian Employers Federation	R&D	Research and Development
FGD	Focus group discussion	SDG	Sustainable development goals
GDP	Gross Domestic Product	SHS	Solar home systems
GER	Gross enrolment rate	SME	Small and medium enterprise
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	SMFI	Somali Microfinance Institution
GoE	Government of Ethiopia	SOE	State-owned enterprise
GPI	Gender parity index	STEM	Science, Technology, Engineering, and Mathematics
GTP II	Second Growth and Transformation Plan	TVET	Technical and vocational education and training
HGER	Homegrown Economic Reform Programme	UNCTAD	United Nations Conference on Trade and Development
IAN	Impact Angel Network	UNHCR	United Nations High Commissioner for Refugees
ICT	Information and communication technologies	UNICEF	United Nations Children's Fund
IDP	Internally displaced person	WB	World Bank

► Executive summary

The jobs creation challenge in Ethiopia

Estimates suggest that more than 2 million youth are entering the labour market in Ethiopia every year, yet the economy is unable to meet the demand. The creation of 14 million jobs between 2020 and 2025 is needed to absorb the current backlog of unemployed and new entrants to the labour market. Women and youth face particular structural challenges when transitioning to work and tend to suffer from a systemic and persistent gap in accessing the labour market when compared with males and adults. The COVID-19 pandemic has exacerbated these challenges. The pandemic's economic impact has resulted in reduced employment and household incomes and increased inactivity.

Refugees constitute one of the most vulnerable groups in Ethiopia. The country hosts the second-largest refugee population (more than 800,000) in Africa, and until 2020, very few refugees had the legal right to work. Because of these restrictions, coupled with a range of other factors, refugees have much higher rates of poverty and lower rates of employment than Ethiopians in their host communities. Several initiatives have been put in place to strengthen the rights and livelihoods of refugees in the country.

The opportunity of the digital economy

At the current pace of economic and social advancement, too many of Ethiopia's expanding youth population will be denied the opportunity to live up to their potential. Digital technologies offer a chance to disrupt this trajectory — unlocking new pathways for rapid economic growth, innovation, job creation and access to services which would have been unimaginable only a decade ago. The digital economy¹ thus presents a significant opportunity for job creation in the country.²

Objective and methodology of the assessment

The objective of this assessment is to fill existing knowledge gaps on how the digital economy can drive decent job creation in Ethiopia, focusing primarily on young refugees and host community members in two refugee-hosting regions: Afar and Somali.

The report consists of the findings of desk research, interviews, consultations and focus group discussions (FGDs) that reveal the employment potential of the digital economy (ICT sector as well as jobs affected by digitalization in non-ICT sectors) and the renewable energy sector in Afar and Somali regions, as well as at the national level.

1 According to the Digital Strategy of Ethiopia, “digital economy” refers to economic activity that utilizes the enhanced interconnectivity of networks and the interoperability of digital platforms. It is born through the combination of two key network developments: (i) the internet and (ii) IP-enabled communications systems – such as mobile networks, electronic payment systems and public service networks.

2 A job in the digital economy may encompass a variety of digital livelihoods. (1) Jobs that require sophisticated Information and Communication Technology (ICT) skills (for example, software engineering and IT development). Such skills are typically acquired in computer science or information technology departments and can thus be out of reach for youth that do not attend higher education. (2) Jobs that require vocational ICT skills, such as IT hardware, maintenance, and repair. Such skills are generally acquired as part of vocational training and are more accessible for refugees and host communities in less developed and remote areas. (3) Jobs on digital labour platforms. These can be classified as two types: online web-based and location-based platforms. On online web-based platforms, tasks or work assignments are performed online or remotely by workers. The tasks on location-based platforms are carried out in person in specified physical locations by workers, and include taxi, delivery and home services (such as a plumber or electrician), domestic work and care provision. Digital labour platforms offer two types of work relationship: either workers are directly hired by a platform or their work is mediated through a platform. (4) Small-scale digital entrepreneurship that uses digital tools and e-commerce platforms to run and grow businesses, often from home. (5) A variety of non-ICT jobs that may nonetheless require digital skills, such as office administration and secretarial tasks that require the knowledge of Microsoft Office and related tools.

The conditions for job creation in the digital economy, both nationally and at the regional level, are analysed through five pillars: access to digital infrastructure; enabling policy environment and supportive platforms; labour supply; and labour demand.

Limitations. First, there is a dearth of regional and local data on employment patterns in Ethiopia. Data on jobseekers, existing enterprises and labour demand is often unavailable or registered manually and in a scattered manner. Second, the private sector in both regions (and especially in Afar) is quite weak and under-developed — particularly in ICT-related areas. This considerably limited the scope of the assessment, as it seems that digital jobs are barely nascent in both regions.

The digital economy conditions at the national level

Infrastructure. Strong connectivity and affordable internet access are the backbone on which a digital economy is built. These aspects have traditionally hindered the digital development of Ethiopia. Electricity service in the country is currently accessible to only 44 per cent of the population. The Ethiopian telecom market currently depends on one state-owned provider, and internet services are offered with limited capacity and relatively high tariffs. Lack of availability, affordability, and low quality of broadband connectivity is particularly significant among socially vulnerable populations, including children and the elderly, women, disabled, low-income and rural populations. However, in 2021 the Government of Ethiopia started opening up the telecom sector, and a new telecommunications licence was awarded to a private companies' consortium.

Enabling policy environment. With a relatively nascent digital economy, the Proclamations, or pieces of legislation that regulate businesses in the country, do not have specific provisions for digital companies. Digital platforms are often faced with regulatory provisions that do not fit their operational structures and models. Taxation and licensing issues present particular challenges, since there is uncertainty around the application of existing tax laws to the digital economy. Licensing has also stood out as a key challenge for firms in the space, with companies having to find various sectors they fit into instead of being classified as strictly digital platforms. Labour laws do not account for workers who rely on digital platforms for income, leaving them without mandatory social benefits such as healthcare and pensions. Access to affordable credit is reiterated by all stakeholders as a predominant impediment to the growth of the digital economy.

Enabling digital services and platforms

Mobile banking is rapidly expanding in Ethiopia. Banks are offering mobile wallet solutions to almost 1 million previously unbanked clients. Key challenges still exist in this area, including low internet penetration, high data costs, low mobile penetration, low access to formal financial services, lack of awareness of existing digital financial services and a Fintech industry that is in the early stages of development. E-commerce activities are still limited in the country.

With respect to access to data and cloud services, a number of public and private organizations have set up in-house data centres. However, lack of regulation and certification of data centres results in poor management, especially of physical security to ensure that data is protected from theft or damage from natural disasters and environmental factors, such as fires, floods, over-heating, and so on.

Established business incubation centres (BICs) are mostly owned by the Ministry of Innovation and Technology (MInT) and public universities. However, only one out of the five incubation centres owned by MInT is reportedly active. Addis Ababa, Hawasa and Bahir Dar universities are the only ones to have BICs. There is also a growing presence of private BICs in the country. The major ones include blueMoon, iceaddis, xHub, IBA Ethiopia, GrowthAfrica, and iCogs Lab. Privately owned BICs have not been able to spread very far outside the capital and often rely on donors for funding.

Digital labour supply. Digital skills are crucial to enable current and future workers (especially youth) to meet the employment requirements of a digital economy, embrace innovation and help maintain a competitive edge. This presents a challenge for Ethiopia, which currently ranks 112th out of 149 countries on the World Economic Forum's digital skills index, and 112th out of 138 economies according to the Global Competitiveness Index on the metric of digital skills among population.

Digital labour demand. The demand for digital workers is currently centred in Addis Ababa — the digital economy hub of the country. Generally, job creation in ICT as a sector remains low but has been increasing over the past years. Interviews with local private firms reveal that the most common practice used to hire IT staff is based on recommendations from internal staff or members of their network. Vacancies and posts are rarely advertised.

Job opportunities in the digital economy in Afar Region

Afar presents a challenging case for the development of jobs in the digital economy. The primary hurdles include the following.

- ▶ **Limited electricity access and internet connectivity.** While electricity is accessible in urban areas, it is more challenging in rural districts. Internet connectivity is generally available but often not affordable for refugees and poor host community members.
- ▶ **Lack of relevant industry and employers.** The primary impediment is the lack of relevant industry in the region. Both wage- and self-employment in sectors that require ICT skills are highly limited, and government agencies remain the primary employers in this field.
- ▶ **Insufficient ICT skills.** Another challenge is the perceived weakness of ICT skills acquired by university graduates, whose studies are focused on theoretical issues and who often lack opportunities for practical internships. While the training of TVET students is more practical in its nature, their employability is also limited.
- ▶ **Limited opportunities for self-employment.** Generally, university and TVET graduates are not interested in self-employment and do not consider it as a career path. Only 1 per cent of TVET ICT graduates are self-employed. This can be attributed to the lack of access to finance in the region, the lack of entrepreneurial skills among the youth, weak entrepreneurial culture, and the lack of private market presence. The experience in the Ethiopian Evangelical Church Mekane Yesus (EECMY), see box 1, in this area reveals that while an employability support initiative in the ICT sector may be successful, it requires a significant hands-on engagement and eventually results in a relatively limited impact (in terms of the number of created jobs and affected beneficiaries).
- ▶ **Lack of labour intermediation.** Business Development Services (BDS) or other labour intermediation support (either by public or private service providers) are unavailable in the region.
- ▶ **Fatigue related to capacity-building programmes among refugees.** FGDs revealed significant fatigue among refugees about training and capacity-building interventions that provide skills but overlook the need for labour intermediation. While refugees are eager to work, they are reluctant to take part in upskilling programmes that would not generate sustainable employment opportunities.
- ▶ **Lack of institutional partners.** There seem to be no government or international development partners who could spearhead an initiative on digital job creation in the region. Existing development initiatives focus on livestock, small-scale retail, and so on.

Despite these challenges, several opportunities are available as part of a pilot intervention on job creation in the digital economy.

- ▶ **Limited developmental interventions in the region.** The scale of developmental activities in Afar is relatively limited, despite the fact that the region is one of the poorest in the country and lagging behind the other regions. As a result, the impact of a potential developmental intervention could be significant, resulting in tangible benefits for refugee and host community youth. Contrary to other regions, there would be no concerns related to duplicative or competing efforts.

- ▶ **Reliable internet connectivity and ICT equipment are available in several locations.** The digital library in Samara University, for instance, provides internet access and computer equipment for its students 24/7. The facilities of the university could be used for training and capacity-building programmes for refugee and host community youth.
- ▶ **Aysaita refugee camp's connection to the grid.** The refugee camp is the first one in Ethiopia to be connected to the national grid. Reportedly, administrative issues that prevented the delivery of electricity services to the camp have been resolved as of November 2021, and camp residents should now have access to electricity. This presents a significant opportunity to engage refugees in capacity-building programmes and potentially facilitate online remote work.
- ▶ **The promise of renewable energy in the region.** Owing to the low access to the grid in the region on the one hand, and limited usage of solar energy on the other, an intervention that focuses on the provision of renewable energy skills and products (such as a mini-grid) could be promising and impactful. This kind of intervention might include a training component that would target local youth (or specifically young women) and equip them with valuable skills, and a distribution component, as part of which solar products would be provided to local communities. However, it should be thoroughly considered whether a reliable business model can be generated based on solar energy products, since households in the regions may not be able to afford solar panels, and the private sector is limited.
- ▶ **A large pool of unemployed youth with basic ICT skills.** Upskilling that is linked to tangible job opportunities would be most welcome in the region and could have highly positive impacts on the local youth. This can be particularly promising in the field of renewable energy, which may fulfil two dire needs in the region — provide solar energy to households that lack access to the grid, and create jobs.
- ▶ **Linkages to employers in Addis Ababa and other regions.** Gig platforms and the practice of online remote work are still in the early stages in Ethiopia and virtually absent in Afar. However, given that reliable internet connectivity is available in several locations in the region, a pilot programme that provides local youth with ICT skills and links them to gig platforms in Addis Ababa can be considered.

In sum, because of the unavailability of relevant industry, any intervention in the region must include a labour intermediation component and ensure that capacity-building and upskilling programmes are directly linked to clear employment opportunities.

While the general conditions for digital job creation are challenging, several opportunities for engagement could be considered. Renewable energy seems to present a promising opportunity, although the implementation modality for an intervention in this area should be thoroughly examined. Upskilling initiatives that target ICT graduates in the region and connect them with employers (such as gig platforms) elsewhere could also be considered, but they would require a strict selection process. For refugees, the connection of the Aysaita camp to the national grid presents a potential opportunity for ICT upskilling and online remote work.

Job opportunities in the digital economy in Somali Region

Somali Region presents a promising and timely case for the development of jobs in the digital economy. The primary hurdles and opportunities include the following.

- ▶ **Limited electricity access and internet connectivity.** While access to electricity is prevalent in urban areas, it is more challenging in rural districts. The refugee camps are not connected to the grid. Internet connectivity is generally available but often not affordable for refugees and poor host community members.
- ▶ **Limited number of ICT employers.** Wage employment in the ICT sector is relatively limited in the region, and most of ICT-related jobs are small enterprises (for instance, mobile repair shops, electronics, and so on).

- ▶ **Insufficient quality of ICT skills.** Another challenge is the perceived weakness of ICT skills acquired by university graduates, whose studies are focused on theoretical issues and who typically lack opportunities for practical internships. The training of TVET students is more practical in its nature, and their employability is reportedly better in the region.
- ▶ **Lack of market information on ICT-related needs.** Reliable and up-to-date data on the number and nature of ICT-related businesses in Jigjiga or Kebribeyah is unavailable. The same applies to information on market needs and demands in this area, although the regional Job Creation Commission (JCC) intends to collect such data in the near future. This gap hinders the ability to assess the viability of enterprises in ICT-related fields, or to gauge factors that affect the success or failure of these enterprises.

Despite these challenges, several opportunities can be exploited for job creation in the digital economy.

- ▶ **Favourable geolocation.** Both Jigjiga and Kebribeyah are favourably located at the intersection of trade routes and take advantage of diversified products and services from neighbouring Somalia and Somaliland. The urban areas of the two cities are being rapidly urbanized and are bustling with businesses.
- ▶ **Strong integration between refugees and host communities.** The integration between refugees and host community members is not only socially strong, but also geographically smooth. Kebribeyah town and refugee camp are adjacent and enjoy robust ties, thus facilitating any intervention that would focus on both refugees and host community youth.
- ▶ **Highly developed mobile banking and technical knowledge.** While the impact of mobile banking platforms on job creation could not be established as part of this study, it is clear that these platforms facilitate the ease of doing business in the region. They also contribute to the general technical skills of regional youth, which may translate into the adoption of other ICT innovations.
- ▶ **Openness to self-employment.** Daily labour and self-employment opportunities are reportedly more significant than wage employment in Somali Region. This presents an opportunity for the development of enterprises in the ICT sector, such as electronics or mobile repair shops, maintenance, internet cafés, mobile banking, database design, and so on.
- ▶ **Relevance of ICT skills for a variety of sectors.** The relative economic diversification in the Fafan area enables the good use of ICT skills for a variety of purposes, including the retail and hospitality sectors. This seems to be an unfulfilled opportunity in the region. While these sectors do not rely on ICT skills at present, they could become more in demand as the sectors grow further.
- ▶ **Promising labour intermediation services by JCC.** The newly established regional JCC seems to be a promising partner for a regional job creation initiative in the ICT-sector thanks to its access to jobseekers, its partnership with TVET institutes, and its experience in supporting the establishment of SMEs. The agency has set ambitious job creation objectives, and it focuses specifically on the establishment of small enterprises — the type of businesses that seem to be most relevant in the ICT sector in Jigjiga and Kebribeyah. Entry points for collaboration with the JCC could include the following: support in conducting market needs assessment in the ICT sector in order to overcome the current deficit of such information; support in the provision of business development services, which are currently weak (or even non-existent) in the region; development of training curricula; and development of a market linkages and mentorship programme.
- ▶ **Renewable energy in the region.** Because of the low access to the grid in the region on the one hand, and the limited usage of solar energy on the other, an intervention focusing on the provision of renewable energy skills and products (such as a mini-grid) can be promising and impactful. Such an intervention might include a training component that would target local youth (or specifically young women) and equip them with valuable skills, and a distribution component, as part of which solar products would be provided to local communities. However, it should be thoroughly considered whether a reliable business model can be generated based on solar energy products, since households in the regions may not be able to afford solar panels. The model pursued by helloCash, for instance, reveals that the price of solar lamps is too high for refugees.



▶ 1

Introduction

▶ 1.1 Background

Digital technologies are transforming societies and labour markets, with the potential to create new jobs in the digital economy. Africa's transition to the digital economy offers an opportunity for job-rich, sustainable and inclusive growth. In recognition of this worldwide, and more specifically continental, trend, the government of Ethiopia approved a national digital transformation strategy in June 2020. Aligned with home-grown economic reform agendas, including the Ten-Year Development Plan (2020–2030), as well as international commitments such as sustainable development goals (SDGs) and the African Union's Continental Digital Strategy, the “Digital Ethiopia 2025 – A Digital Strategy for Ethiopia Inclusive Prosperity” lays out an inclusive digital economy approach that catalyses the realization of Ethiopia's broader development vision.

The Government of Ethiopia has set an ambitious goal of creating 14 million jobs over five years.³ Out of those, 300,000 jobs are expected to be digital. While the ICT sector has yet to contribute more to creating jobs, the digital strategy recognizes that this requires a skilled workforce, efficient labour market facilitation and an enabling business environment. Job-oriented digital upskilling — through training for skills such as typing and printing, advanced Microsoft office skills, data analysis and graphics, coding — could create jobs in data entry, marketing, creative design and business process outsourcing (BPO). The digital economy, in addition to creating direct ICT jobs, can also act as a catalyst to create new indirect jobs related to industry.

Under the aegis of the Global Initiative on Decent Jobs for Youth, the International Labour Organization (ILO) and the International Telecommunication Union (ITU), with the support of the African Union (AU), has initiated a programme with continental reach to create decent employment and enhance skills for youth in Africa's digital economy. The programme aims to ensure that Africa's youth are empowered and able to benefit from new opportunities in the digital economy, and in turn, that their energy and creativity can be harnessed by expanding digitally enabled industries.

³ Job Creation Commission, *Plan of Action for Job Creation (2020–2025)*, 2020.

The joint initiative between ITU and ILO intends to leverage the mandates and technical expertise of the two institutions, as well as potential partners. It aims to support the Government of Ethiopia's development plans with regards to digital economy and interlinkages with the renewable energy sector to support its infrastructure, skills-building and job creation. It also seeks to enhance the inclusion of forcibly displaced persons and their host communities in this focus area of the country's development vision.

The ITU's goal is to connect all the world's people, and through this, it works to protect and support everyone's right to communicate. The objectives of the ITU Telecommunication Development Sector (ITU-D) include supporting countries on their digital transformation journeys, fostering an enabling environment for the development of telecommunication and ICT networks, building human and institutional capacity, and promoting digital inclusion. The ITU supports countries in internet connectivity and in developing digital skills at basic, intermediate and advanced levels, particularly in marginalized and underserved communities, including displaced persons and their hosting communities. The ILO aims to promote opportunities for women and men to obtain decent and productive work in conditions of freedom, equity, security and human dignity. Its main goals are to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen social dialogue.

This joint initiative is also expected to reinforce PROSPECTS. The PROSPECTS partnership, launched in 2019 and supported by the Government of Netherlands, brings together multiple development partners — the International Finance Corporation (IFC), the International Labour Organization (ILO), the UN Refugee Agency (UNHCR), the UN Children's Fund (UNICEF) and the World Bank (WB) — and in responding to forced displacement crises, aims to shift the paradigm from a humanitarian to a development approach.

PROSPECTS hopes to transform the way governments and other stakeholders, including the social partners and the private sector, respond to forced displacement crises, by fostering an enabling environment for socio-economic inclusion, improving access to education and protection for vulnerable children on the move and strengthening the resilience of host communities.

The ILO's vision within the partnership is to promote opportunities for women and men and to strengthen decent work in focus areas impacted by forced displacement, to mitigate stress factors at all levels, and to support inclusive socio-economic enablers for access to labour markets and the empowerment of host communities and forcibly displaced populations. Its main aims are to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen social dialogue.

▶ 1.2 Objective

The objective of this assessment is to fill existing knowledge gaps on how the digital economy can drive decent job creation in Ethiopia, focusing primarily on young refugees and host community members in two refugee-hosting regions: Afar and Somali.⁴

The report consists of the findings of desk research, interviews, consultations and focus group discussions (FGDs) that reveal the employment potential of the digital economy (ICT sector as well as jobs affected by digitalization in non-ICT sectors) and the renewable energy sector. Specifically, it explores the following pillars.

⁴ For this purpose, "youth" is defined in line with the National Youth Policy of GoE, as individuals between the ages of 15 to 29 years. Available at https://www.youthpolicy.org/national/Ethiopia_2004_National_Youth_Policy.pdf [English]; <http://www.mowcy.gov.et/files/68/Youth-Policy/1/Youth-policy-amharic.pdf> [Amharic].

- ▶ **Digital infrastructure:** assessment of available and required infrastructure to facilitate direct and indirect digital jobs (access to electricity, internet connectivity, and access to renewable energy)
- ▶ **Enabling environment:** analysis of platforms and services that enable or hinder opportunities for youth's access to the digital labour market (for instance, availability of digital identity, access to digital payment and e-commerce platforms, availability and access to digital labour platforms)
- ▶ **Labour market conditions and supply:** current digital literacy and skills of young refugees and host community members, constraints that young people may face in accessing digital jobs, as well as assessment of the current employment patterns among refugee and host community youth
- ▶ **Labour demand:** needs assessment for upskilling or reskilling based on context analysis of private sector/employer demand in the digital economy (including direct and indirect digital jobs, as well as jobs in the renewable energy sector)
- ▶ **Labour intermediation:** available public or private services that support job creation and employability in the regions.

▶ 1.3 Structure

The structure of this report is as follows.

- ▶ Chapter 1 outlines the assessment's objective, methodology, and limitations.
- ▶ Chapter 2 lays out the rationale for this assessment, shedding light on the jobs creation challenge in Ethiopia, and the opportunities embedded in the digital economy.
- ▶ Chapter 3 outlines the digital economy conditions at the national level in Ethiopia, focusing on five pillars: infrastructure, enabling policy environment, enabling digital services and platforms; digital labour supply; and digital labour demand.
- ▶ Chapter 4 and 5 explore the job opportunities in the digital economy in Afar and Somali regions, respectively. They outline the regional demographic and socio-economic conditions, and then examine the regional state of digital infrastructure, supporting platforms and services, skills supply, labour market conditions, and labour demand. Each of the parts concludes with lessons learned and recommendations.
- ▶ Chapter 6 provides overall conclusions and recommendations for future interventions to support the creation of jobs in the digital economy in the two regions.

▶ 1.4 Methodology

The methodology for this assignment draws on a two-phased approach.

First phase

1. Desk review of all available materials — both national and regional, related to the issues outlined below. This relied mainly on online research of publicly available materials, as well as outreach to relevant national actors to obtain additional information and data that they may have.

2. Background interviews with key informants. These include the Administration for Refugee and Returnee Affairs (ARRA), Jobs Creation Commission (JCC), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Ethiopian Employers Federation (EEF), International Organization for Migration (IOM), Dereja.com, Gebeya.

Second phase

1. **Afar Region:** the desk research and background interviews revealed that we were unable to access data from Afar remotely, and information on relevant regional stakeholders has also been scarce. For this reason, a field visit was carried out during the week of 13 April 2021 to collect primary data and hold interviews with stakeholders. Overall, discussions and interviews were carried out with 21 individuals and 15 focus group participants. The full agenda is attached in Annex 1.
2. **Somali Region:** a field visit to the region was conducted during the week of 19 April 2021 and included interviews with key stakeholders and focus group discussions. Overall, discussions and interviews were carried out with 26 individuals and 12 focus group participants. The full agenda is attached in Annex 2.

The interviewees were selected based on recommendations from regional informants — either from PROSPECTS contact persons or through organizations that were identified as part of the regional data collection process. In each region, the list of stakeholders who were interviewed, along with the interview method, are outlined below.

Interview method	Key informant or stakeholder
Background discussions with key stakeholders from government institutions, development partners and donor organizations working with refugees and host communities in the two regions	<p>Government (in each region):</p> <ul style="list-style-type: none"> ▶ ARRA regional representatives ▶ Bureau of Labour and Social Affairs ▶ Urban Job Creation and Food Security Bureau or Bureau of Job Creation ▶ Bureau of Finance and Economic Development ▶ Bureau of Innovation and Technology ▶ Bureau of Education ▶ Ethio Telecom regional branch ▶ TVET Bureau <p>Development partners or donor organizations:</p> <ul style="list-style-type: none"> ▶ Afar: UNHCR; EECMY; Danish Church Aid (DCA); Action for the Needy in Ethiopia (ANE) ▶ Somali: UNHCR; Mercy Corps; DICAC; IRC
Key informant interviews with key stakeholders from government, education institutions, energy sector and private sector at the local level through semi-structured guide	<p>Employers from the ICT sector, a priority sector that can benefit from ICT-based jobs, and from the energy sector:</p> <ul style="list-style-type: none"> ▶ Afar: Ethio Telecom and Bureau of Education ▶ Somali: helloCash, HelloSolar, Ethio Telecom <p>Regional university and TVETs:</p> <ul style="list-style-type: none"> ▶ Afar: Samara University (College of Engineering; Career Services; digital library); Adadale Polytechnic TVET institute; Aysaita Teacher's College ▶ Somali: Jigjiga University (Vice President for Research and Community Affairs; College of Engineering and Technology; Deliverology Directorate; Career Services) and Jigjiga Polytechnic College <p>Organizations in the electricity sector:</p> <ul style="list-style-type: none"> ▶ Afar: Ethio Telecom ▶ Somali: HelloSolar and Ethio Telecom <p>Fintech organizations:</p> <ul style="list-style-type: none"> ▶ Somali: helloCash
Focus group discussions with job seekers from refugee camps and host communities through structured discussion guide	<ul style="list-style-type: none"> ▶ Afar: three focus groups discussions were carried out. Two FGDs with refugees in Aysaita camp (one FGD with male participants, and one with female participants) and one FGD with host community youth in Aysaita (mixed gender) ▶ Somali: two focus groups were carried out with refugees (mixed gender) in Kebribeyah ▶ Each focus group consisted of five or six participants. ▶ The coordination of focus groups was facilitated by ARRA and UNHCR in Afar and ARRA in Somali region .

The findings of this report were validated during a stakeholder workshop, which was held on 1 November 2021 in Addis Ababa. The list of workshop participants and a summary of its discussions is available in Annex 5. The feedback received from workshop participants was integrated into the assessment.

▶ 1.5 Limitations

The methodology employed for this study encountered three primary hurdles.

- ▶ There is a dearth of regional and local data on employment patterns in Ethiopia. Data on jobseekers, existing enterprises and labour demand is often unavailable or registered manually and in a scattered manner. Similarly, data on regional access to electricity and internet connectivity is largely anecdotal and not readily accessible. This does not enable a rigorous regional analysis and requires reliance on estimates and qualitative assessments.
- ▶ The private sector in both regions (and especially in Afar) is quite weak and under-developed — particularly in ICT-related areas. This considerably limited the scope of the assessment, as it seems that digital jobs are barely nascent in both regions. For instance, the team was unable to identify a relevant private sector employer in ICT-related areas in Afar. Assistance with that matter was requested from UNHCR, ARRA, Samara University's Career Services Centre and EECMY, but to no avail. There are no industry/employers' or workers' organizations or associations in Afar or Somali regions.
- ▶ The team also encountered difficulties with respect to the selection process of FGD participants. While the objective was to hold FGDs with young jobseekers — both refugees and host community members — ARRA counterparts were unable to recruit relevant participants. This can be partially explained by "interview fatigue" that was notable among refugees, who said that they have often been asked to participate in interviews and discussions without clear outcomes. The FGD participants that were eventually selected were older and significantly less educated than the levels in the original requests of the team (for example, most of the women participants were illiterate). This hindered the team's ability to gauge the participants' employability potential in the digital economy.



▶ 2

Rationale: the jobs creation challenge and opportunity in Ethiopia

▶ 2.1 The jobs creation challenge

Estimates suggest that more than 2 million youth are entering the labour market in Ethiopia every year. There is a need to create 14 million jobs between 2020 and 2025 to absorb the new entrants to the labour market and the current backlog of unemployed.⁵ Women and youth face particular structural challenges when transitioning to work and tend to suffer from a systemic and persistent gap in accessing the labour market when compared with males and adults. In January 2020, unemployment among urban youth (15–29) was estimated at 25.7 per cent, and among urban females at 31.7 per cent, compared with 18.8 per cent among young urban men above the age of 30).⁶

The economy, however, is unable to meet the demand. In Sub-Saharan Africa, it is generally estimated that around 96 per cent of youth are affected by informal labour practices and unstable incomes.⁷ Labour markets in Ethiopia are no different. They are characterized by high levels of subsistence employment, widespread (and minimally productive) self-employment, and very low levels of wage employment.

5 Job Creation Commission, *Plan of Action for Job Creation (2020–2025)*, 2020.

6 The Federal Democratic Republic of Ethiopia, Central Statistical Agency, *Key Findings on the 2020 Urban Employment Unemployment Survey*, 2020.

7 ILO, *Global Employment Trends for Youth 2020: Technology and the Future of Jobs*, 2002.

The State continues to play a heavy role through state-owned enterprises (SOEs) in key areas of the economy, including telecommunications, finance, energy, logistics and transport, as well as in manufacturing.⁸ The private and public sectors have been creating a similar number of jobs in wage employment, while the number of civil servants has doubled since 2009.⁹ This trend is unsustainable, and without new and productive job opportunities, unemployment and poverty are likely to increase.

The COVID-19 pandemic has exacerbated these challenges. The pandemic's economic impact has resulted in reduced employment and household incomes and increased inactivity. Urban household incomes declined most, mainly due to reduced demand which affected income generation from self-employment, wage-employment, and household enterprises.¹⁰ Formal employment has decreased. Women are likely to bear the economic brunt of the pandemic, since they comprise the primary workforce in sectors that have been hit particularly hard (80 per cent of the workforce of 1.5 million in hospitality and tourism, and 80 per cent of the workforce in industrial parks).¹¹ The impacts of the pandemic on young people have also been systemic, deep and disproportionate, obliging them to face disruptions in learning, training and employment, loss of income, and greater difficulty in finding good quality jobs.¹²

► 2.2 The jobs challenge for refugees

Ethiopia hosts the second-largest refugee population (more than 800,000) in Africa, and it has a long-standing history of hosting refugees and asylum seekers, mainly from South Sudan, Somalia, Eritrea and Sudan. It is one of the most camp-reliant countries, with the majority of refugees residing in 26 camps across five regions, though more than 27,000 refugees live out of camp. The Agency for Refugees and Returnees Affairs (ARRA), currently housed under the Ministry of Peace, is a designated government body overseeing day-to-day refugee support.

At the end of 2019, Ethiopia was home to some 1.8 million internally displaced persons (IDPs), in addition to those seeking refuge from elsewhere.¹³ This figure has dramatically increased since the Tigray crisis broke in late 2020, and the number of IDPs in Tigray is estimated at 2.12 million (as of June 2021),¹⁴ living in dire conditions.

Refugee populations are largely grouped by nationality near their countries of origin. The social and economic impacts of displacement differ across and within each refugee-hosting region. In some regions, such as Somali, it can be difficult to distinguish between refugee and host in Ethiopia because of cross-border cultural and economic connections, common ties of kinship, language and ethnicity, and relatively fluid attachments to national identity. In other regions, such as Gambella, intragroup conflict can be a significant component in displacement.¹⁵ With some refugee camps in Tigray entirely cut off from assistance, and others decimated, many Eritrean refugees in the region have fled to other parts of Ethiopia and neighbouring Sudan.

8 World Bank, [Creating Markets in Ethiopia: Country Private Sector Diagnostic](#), 2019.

9 Job Creation Commission, [Plan of Action for Job Creation \(2020–2025\)](#), 2020.

10 World Bank, [“Tackling the Impacts of COVID-19 is Imperative to Ethiopia’s Journey to Prosperity,”](#) 29 October 2020.

11 UN Ethiopia, [United Nations Sustainable Development Cooperation Framework \(2020–2025\)](#), 2020, p. 4.

12 Deloitte, [Economic impact of the COVID-19 pandemic on East African economies](#), May 2020.

13 UNHCR, Ethiopia Country Refugee Response Plan, 2020–2021 <https://reliefweb.int/sites/reliefweb.int/files/resources/73571.pdf>; IDMC, “Ethiopia,” <https://www.internal-displacement.org/countries/ethiopia>, 2020.

14 According to a NDRMC – Emergency Response Plan, May 2021.

15 World Bank, [Impact of Refugees on Hosting Communities in Ethiopia: A Social Analysis](#), 2020.

Owing to the protracted nature of the conflicts in the refugees' countries of origin, it is unlikely that many refugees will be able to return home any time soon.¹⁶ In this context, the GoE has been making far-reaching changes to its refugee policies. In 2016, it made "nine pledges" at the Leaders' Summit on Refugees held in New York, which include: expanding its out-of-camp policy (OCP); providing work permits to refugees; increasing enrolment in primary, secondary and tertiary education; providing access to irrigable land for crop cultivation; facilitating local integration in instances of protracted displacement; earmarking a percentage of jobs for refugees within industrial parks; and providing access to vital events documentation to facilitate increased access to basic and essential social services. In February 2019, the Ethiopian parliament adopted a new refugee proclamation (No. 1110/2019) to facilitate the implementation of its pledges.

Legally, most refugees are required to live in the camps, which are jointly run by the UNHCR and ARRA. However, a limited number of refugees (about 20,000) have been granted permission to live outside camps, and others (roughly 11,000) are living outside camps without legal authorization.¹⁷ Until 2020, very few refugees had the legal right to work. Because of these restrictions, coupled with a range of other factors, refugees have much higher rates of poverty and lower rates of employment than Ethiopians in their host communities.¹⁸

The working-age populations of both refugees and hosts are relatively small in most hosting regions, in many cases below 40 per cent of the total population.¹⁹ By comparison, the working-age population in all of Ethiopia accounts for about 56 per cent of the total population. These figures suggest that it might be more difficult for refugees to achieve self-reliance, as many cannot work, and those who can work might need to support a large number of nonworking relatives. Across all regions, about half of the refugee and host populations are women.²⁰

Several initiatives have been put in place to strengthen the rights and livelihoods of refugees in the country. For instance, the Ethiopian Jobs Compact will support the GoE's industrialization efforts, creating more than 100,000 jobs for Ethiopians and refugees residing in the country.²¹ The Compact will match international support for job creation in Ethiopia to the gradual relaxation of the limitations on labour market access for 30,000 refugees. The Compact would support improvements in the investment climate, investment promotion, and improving environmental and social standards in the manufacturing sector. This would create more than 100,000 jobs, mainly for young women, in global value chains such as garments and textiles. Support to refugees would include the necessary legislative changes but also training, relocation, rehousing and protection measures for this vulnerable group. It is anticipated that some of these employment opportunities for refugees would be in the manufacturing sector. Additional programmes and initiatives to strengthen refugees' livelihoods include the Refugee and Host Integration through the Safety Net project financed by the World Bank.

The promising policy developments, coupled with the positive economic relationships between host community and refugees in most of the refugee-hosting regions, can be further leveraged towards positive employment and income generation efforts.

16 UNHCR, [Ethiopia Country Refugee Response Plan, 2020–2021](#).

17 UNHCR, [Ethiopia: 2019 Summary Pledge Progress Report](#), July 2020; IIED (2018) [Urban Refugee Economies](#), Alison Brown, Peter Mackie, Kate Dickenson, and Tegegne Gebre-Egziabher, March 2018.

18 Refugees International, [From Displacement to Development: How Ethiopia Can Create Shared Growth by Facilitating Economic Inclusion for Refugees](#), June 2021.

19 Refugees International, [From Displacement to Development: How Ethiopia Can Create Shared Growth by Facilitating Economic Inclusion for Refugees](#), June 2021.

20 Ibid.

21 Development Tracker, [Jobs Compact Ethiopia](#), 2021.

▶ 2.3 The opportunity of the digital economy

Creating productive employment opportunities has become one of the most significant long-term objectives of the Ethiopian economy, particularly in the wake of the COVID-19 pandemic. At the current pace of economic and social advancement, too many of Ethiopia's expanding youth population will be denied the opportunity to live up to their potential. Digital technologies offer a chance to disrupt this trajectory — unlocking new pathways for rapid economic growth, innovation, job creation and access to services which would have been unimaginable only a decade ago.

In the context of job creation, the digital economy presents an unprecedented opportunity, which can unlock significant growth and productivity gains for the country. Global online labour is rapidly growing, with most supply coming from developing economies, and most demand from more developed economies.²² For instance, technology companies often outsource tasks, such as content review, transcription, annotation and image tagging, to workers in developing countries.²³

The growth of digital platforms in Africa could offer new opportunities to bridge the current gap between informal work that is often insecure, and formal employment. Innovative employment modalities and digitalization are stimulating job creation and contributing to addressing poverty, reducing inequality, facilitating the delivery of goods and services, and contributing to the achievement of Agenda 2063, Agenda 2030 and the SDGs. A job in the digital economy may encompass a variety of digital livelihoods.²⁴

1. **Jobs that require sophisticated ICT skills** (for example, software engineering and IT development). Such skills are typically acquired in computer science or information technology departments and can thus be out of reach for youth that do not attend higher education.
2. **Jobs that require vocational ICT skills, such as IT hardware, maintenance, and repair.** Such skills are generally acquired as part of vocational training and are more accessible for refugees and host communities in less developed and remote areas.
3. **Jobs on digital labour platforms.** These can be classified into two types: online web-based and location-based platforms.²⁵ On online web-based platforms, tasks or work assignments are performed online or remotely by workers. These tasks may include carrying out translation, legal, financial and patent services, design and software development on freelance and contest-based platforms; solving complex programming or data analytics problems within a designated time on competitive programming platforms; or completing short-term tasks, such as annotating images, moderating content, or transcribing a video on microtask platforms. The tasks on location-based platforms are carried out in person in specified physical locations by workers, and include taxi, delivery and home services (such as a plumber or electrician), domestic work and care provision.²⁶ Digital labour platforms offer two types of work relationship: workers are either directly hired by a platform. or their work is mediated through a platform. In the first case, they are categorized as employees with an employment relationship to their employer, while in the second case they are categorized as self-employed or independent contractors by the platforms.
4. **Small-scale digital entrepreneurship** that uses digital tools and e-commerce platforms to run and grow businesses, often from home.
5. A **variety of non-ICT jobs** that may nonetheless require digital skills, such as office administration and secretarial tasks that require the knowledge of Microsoft Office and related tools.

22 E. Ameli, N. Bargotra, K. Kanji, K. Khedr, and L. van Meensel, The digital transformation in Africa and its potential to create jobs for youth, 2019; ILO *Report on Employment in Africa (Re-Africa): Tackling the Youth Employment Challenge*, 2020.

23 ILO, *The Role of Digital Labour Platforms in Transforming the World of Work*, 2021.

24 See also ILO, *Digital refugee livelihoods and decent work – Towards inclusion in a fairer digital economy*, 2021.

25 ILO, *The Role of Digital Labour Platforms in Transforming the World of Work*, 2021.

26 Ibid.

While digital jobs are still nascent in the country, the GoE has expressed its commitment to embark on the digital transformation path. Ethiopia's digital economy is at an early stage of development with few private sector players offering digital services and some government-driven digitalization initiatives. However, in June 2020, the Council of Ministers endorsed the *Digital Ethiopia 2025 Strategy*, which proposes an inclusive digital economy approach that will catalyse the realization of Ethiopia's broader development vision. The strategy sets forward four pathways for the development of the digital economy in the country (agriculture, manufacturing, IT-enabled services, and tourism), and provides guidelines on strengthening Ethiopia's general readiness for digital transformation.

The national development policy has similarly embraced the digital economy trajectory. A key pillar of the Ten Year Development Plan 2020–2030, which substituted the Second Growth and Transformation Plan (GTP II) (2015–2020), is: “*encouraging technology transfer, deepening the technological and skills-base of the economy, particularly in ICT. Special attention will be given to the development of IT-enabled services, including through attracting investment into the ICT Park.*” The plan is implemented as part of the GoE's Homegrown Economic Reform Programme (HGER), which calls for building a resilient and diversified middle-income economy, driven by the private sector. Notably, after more than a decade of sustained public sector-led growth, the government is revising its growth strategy to allow for a much greater role for the private sector and digital technology in driving growth and job creation.

Innovative and digital labour modalities can also be particularly appealing for the local Ethiopian context. As of the last Urban Employment/Unemployment survey in Ethiopia in 2020,²⁷ unemployed youth and youth employed in informal sectors primarily reside in urban areas, where most digital gig work is done. This creates a significant opportunity for digital gig platforms²⁸ to tap into this labour force.

27 The Federal Democratic Republic of Ethiopia, Central Statistical Agency, *Key Findings on the 2020 Urban Employment Unemployment Survey, 2020*.

28 Gig work is characterized as independent, temporary work that is conducted on a short-term or task-by-task basis, and payment is received upon the completion of these tasks. In contrast, traditional employment is characterized by standard working hours and a monthly salary, or contractual employment.



▶ 3

The digital economy conditions at the national level

According to the Digital Strategy of Ethiopia, “digital economy” refers to economic activity that utilizes the enhanced interconnectivity of networks and the interoperability of digital platforms. It is born through the combination of two key network developments: (i) the internet and (ii) IP-enabled communications systems — such as mobile networks, electronic payment systems and public service networks. Critical to developing a digital economy is innovation, which creates new and improved goods, services and business practices, through the creation or adoption of new technology, repurposing existing technology for a new use, or introducing existing technology to a new geography and user.

This section briefly outlines the national conditions of the digital economy following the same pillars that will be employed for the regional assessment: digital infrastructure; enabling policy environment and supportive platforms; labour supply; and labour demand (focusing on the market conditions in Addis Ababa).

▶ 3.1 Infrastructure

Strong connectivity and affordable internet access are the backbone on which a digital economy is built. Creating this access requires two key pieces: basic infrastructure such as electricity and transportation; and core connectivity infrastructure that includes spectrum, fibre optic cables, mobile phone towers, and affordable devices.

These aspects have traditionally hindered the digital development of Ethiopia. Electricity service in the country is currently accessible to only 44 per cent of the population. This data indicates that Ethiopia is on a par with the Sub-Saharan average (44.5 per cent), but lower than leaders like Nigeria (54.5 per cent)

or neighbouring Kenya (64 per cent). The last available national statistics show that around 33 per cent of Ethiopians benefit from an on-grid electricity access, while 11 per cent access electricity through some forms of off-grid systems, such as generators, solar home systems (SHS) and mini-grids.²⁹ Even those who are connected to the grid experience challenges — 57.6 per cent of grid-connected households face 4 to 14 outages a week.³⁰ Out of the estimated 6.9 million households considered as having access to electricity, only 3 million have a legal connection, while 3.9 million are connected informally.³¹ Electricity affects connectivity as the towers are powered through electric connection and not through other alternative sources of power.

The Ethiopian telecom market currently depends on one state-owned provider, and internet services are offered with limited capacity and relatively high tariffs. In a country of more than 100 million people, where 40 per cent are aged under 15, internet use or access only amounted to 18.6 per cent at the end of 2017.³² By comparison, internet usage in Sudan stood at 30 per cent at the same date. Mobile phone use and ownership in Ethiopia was around 44 per cent in mid-2020.³³ The gaps are amplified when examining the uptake of mobile broadband services. Connectivity prices are also significantly higher than in other countries in the region.³⁴ Furthermore, data connections are reportedly unreliable, with the country experiencing slow internet connections and occasional shutdowns. Such connectivity challenges result in various limitations. For instance, Ethiopian BPO cannot reliably take on tasks that involve real-time communication, such as virtual assistance.

Similarly, Ethiopia has evidenced a significant growth in mobile subscriptions since 2010, but mobile adoption is still low compared with its African peers.³⁵ The number of telecom towers deployed in Ethiopia is reported to be around 7,000, which is inadequate for the provision of universal coverage and reliable services. Of the existing infrastructure, the network equipment is outdated and consequently unable to extend reliable coverage or provide 3G or 4G services.³⁶

Lack of availability, affordability, and low quality of broadband connectivity is particularly significant among socially vulnerable populations, including children and the elderly, women, disabled, low-income and rural populations. Fewer than 12 per cent of women have internet access in Ethiopia.³⁷ Considering the disparities that exist in literacy rates between women and men, the discrepancy is greater for the acquisition of digital skills, which require a basic level of literacy.

The telecom sector is currently heavily controlled by the State with both operations and regulations managed by the State institutions, and a state-owned enterprise, Ethio Telecom, maintains a monopoly over fixed, mobile, internet and data communications. Ethio Telecom's critical infrastructure assets include two domestic satellites which provide the national trunk service and large long-distance fibre network organized into 13 rings, with around 22,000 km of fibre for its service operations, including fixed line, mobile, internet, data, voice and other value-added services. Ethio Telecom has some 7,100 cellular towers, connected largely by microwave rather than fibre, and provides around 85 per cent of Ethiopians with at least 2G mobile coverage, 66 per cent with 3G, and just 4 per cent with 4G.³⁸

The Communication Services Proclamation, adopted in September 2019, is expected to liberalize the market, generating for the country an opportunity to leapfrog and rip the growth and productivity benefits of the digital economy.

29 All figures are taken from the Ethiopia Digital Strategy 2025 (2020).

30 World Bank, "Ethiopia: Beyond Connections – Energy Access Diagnostic Report Based on the MTF." Washington, DC, 2018.

31 Digital Ethiopia 2025 strategy.

32 International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database.

33 Digital Ethiopia 2025 strategy.

34 [Mobile Broadband Pricing Q2 2019](#), Alliance for Affordable Internet, 2019.

35 Digital Ethiopia 2025 strategy.

36 Ibid.

37 World Bank, "Minimum data consumption: How much is needed to support fundamental online activities", WDR-21 background paper, 2020.

38 Digital Ethiopia 2025 strategy.

In May 2021, it was reported that the GoE awarded a new telecommunication licence to a consortium that includes the UK's Vodafone Group Plc., Vodacom Group Ltd. and Safaricom Ltd., which will invest USD 8.5 billion in their network over ten years, including the licence fee. The consortium committed to creating 1.1 million jobs in ten years and covering the country with a 4G service by 2023.³⁹ In September 2021, the Ethiopian Communications Authority released a request for proposals for a second full-service telecommunications licence, to stimulate competition with both Ethio Telecom and the Vodafone-Safaricom consortium.⁴⁰

▶ 3.2 Enabling policy environment

Ethiopia is ranked low on general “doing business” conditions, and its policy environment is relatively challenging for digital jobs. The country is ranked 159th out of 190 economies in the WBG's Doing Business rankings (2020).

With a relatively nascent digital economy, there are no regulations and policies in Ethiopia which apply specifically to digital jobs such as digital freelance, gig platforms or BPOs. Currently, the Proclamations, or pieces of legislation that regulate businesses in the country, do not have specific provisions for digital companies, leaving them with the burden of fitting into various structures and regulations created without their operational models in mind.

Digital platforms are often faced with regulatory provisions that do not fit their operational structures and models. For instance, the Commercial Code of Ethiopia, which was enacted in the 1960s, is not tailored to new digital technology-driven realities. The Investment Proclamation sets high minimum investment requirements for foreign investors for all sectors including digital entrepreneurship and digital financial services (a minimum of US\$150,000 for investing in Joint Ventures and US\$200,000 for outright ownership). This discourages angel investors, equity financiers and other forms of foreign investment in the digital entrepreneurship sector, who are reluctant to enter a new market with high seed investment requirements.

Taxation and licensing issues present particular challenges.⁴¹ There is uncertainty around the application of existing tax laws to the digital economy, creating an environment where platforms perceive a constant risk of penalization. For instance, VAT reporting regulations do not consider the operating models of digital gig platforms, leading to time inefficiencies and unnecessary costs. Current VAT compliance regulations require physical receipts to be submitted to the Ministry of Revenues as proof of transactions, assuming that the exchange of cash and receipts occurs at the same time and place for goods or services rendered. However, in some cases gig workers may not be located at the same physical location as their customer, thus necessitating a burdensome preparation of documentation to ensure proof of transactions for VAT purposes.

Licensing has also stood out as a key challenge for firms in the space, with companies having to find various sectors they fit into instead of being classified as strictly digital platforms. For instance, a digital gig platform or worker would have to get a licence for each additional service they provide. In addition to a commercial business licence, it implies that separate licences would be required by different authorities that govern specific services (for example, logistics, taxis, plumbing) that may be provided through digital platforms and by digital entrepreneurs.

39 Bloomberg, “Ethiopia Awards New Telecoms License to Vodafone Consortium,” 23 May 2021.

40 ET Telecom, “Ethiopia Opens Tender Process to Sell Second Telecom License,” 29 September 2021.

41 Mercy Corps, *Operating Digital Gig Platforms in Different Regulatory Environments: A Comparative Assessment of Kenya, Tanzania, and Ethiopia*, June 2020.

The labour laws do not account for workers who rely on digital platforms for income, leaving them without mandatory social benefits such as healthcare and pensions. Furthermore, while the consumer protection laws protect consumers from business malpractices, there is no clear legislation on the rights and responsibilities of customers and gig workers. The ICT sector is not prioritized for import licences and foreign exchange allocation.⁴² As a result, importing equipment often presents difficulties and entails longer waiting periods for import licences.

Access to affordable credit is reiterated by all stakeholders as a predominant impediment to the growth of the digital economy.⁴³ Commercial banks are generally risk-averse and unwilling to lend for technology or new innovative projects. While micro-enterprises usually have access to small loans provided by micro-financing institutions, and large enterprises can afford the requirements of commercial loans, small and medium enterprises (SMEs) face an inherent disadvantage. Lending interest rates are generally high — the minimum rate set by the National Bank of Ethiopia is 8 per cent, but businesses usually report much higher rates for commercial loans, standing at nearly 12 to 15 per cent. SMEs also face difficulties in fulfilling the collateral requirements of commercial banks.

As a result, just 16 per cent of the private sector uses finance from banks for its activities, compared with Kenya where the comparable figure is 41 per cent.⁴⁴ Private sector credit amounts to only 9 per cent of the GDP, in contrast to the 20 per cent median for Sub-Saharan Africa. In the Global Competitiveness Report, Ethiopia is ranked 109th out of 137 countries in terms of financial market development. The two state-owned banks dominate the banking sector, and the credit market is skewed towards state-owned enterprises. Further, private businesses have limited awareness of loan policies and procedures.

Accordingly, Ethiopia scores low in global rankings such as the 2018 Global Entrepreneurship Index (rank 110 out of 137), which in turn also affects its attractiveness as an investment location. Technology entrepreneurship usually requires larger early-stage risk capital and higher skilled human capital than other forms of entrepreneurship to undertake R&D and to develop a competitive product or service. Lack of a supporting regulatory environment and limited access to risk capital hampers the development of innovative ideas and digital enterprises.

▶ 3.3 Enabling digital services and platforms

This pillar refers to the availability of key systems such as Digital ID, payment platforms, asset registries and cyber-security, which together allow for rapid verification and transactions. These are relatively nascent in Ethiopia.

3.3.1 Digital ID

The major identification programmes for the different segments of the population — Kebele IDs, Tax Identification Number (TIN) cards, passports, driver's licences, Productive Safety Net Programme (PSNP) cards, birth certificates — cover less than half of the population, and fraudulent versions of these documents are widespread. A unified digital ID card is still unavailable, but its development is being spearheaded by the Ministry of Peace.⁴⁵

42 Digital Ethiopia 2025 strategy.

43 Digital Ethiopia 2025 strategy; World Bank, [Creating Markets in Ethiopia: Country Private Sector Diagnostic 2019](#), p. xiv.

44 World Bank, [Creating Markets in Ethiopia: Country Private Sector Diagnostic 2019](#), p. xiv.

45 Digital Ethiopia 2025 strategy.

3.3.2 Digital payment platforms

Although the adoption of digital mechanisms for financial transactions is still low in Ethiopia, it is higher than cards ownership. Thus, 12 per cent of Ethiopians made or received digital payments during 2020, compared with the 4 per cent of the population that hold a debit card.⁴⁶ Mobile financial services are allowed only if they are linked to banks, and online payments are restricted because of the lack of interoperability among banks and financial services. Financial transactions require the customer to be physically present in the bank office, as well as filling paper forms. While banks implement mobile wallet services, they also lack interoperability, so that mobile money transfers can only be made among individuals who hold accounts in the same bank.

While Digital Financial Services are advancing Ethiopia's financial inclusion, key challenges still exist in this area, including low internet penetration, high data costs, low mobile penetration, low access to formal financial services, lack of awareness of existing digital financial services and a Fintech industry that are in the early stages of development.⁴⁷ Despite these challenges, mobile banking is rapidly expanding in Ethiopia. Banks are offering mobile wallet solutions to almost 1 million previously unbanked clients (for instance, Dashen Bank serves more than 700,000 customers, and the Commercial Bank of Ethiopia serves 200,000 customers).⁴⁸ Ethio Telecom launched a mobile payment system — Telebirr — in May 2021, aiming to attract 21 million customers in its first year.⁴⁹ In October 2021, it was publicized that mobile money transfers would also be allowed for foreign telecom operators.⁵⁰ Somali Region is leading among Ethiopian regions in this respect, with three fiercely competing mobile payment platforms that offer their service to any mobile phone holder (see [section 5.3.2](#)).

3.3.3 E-commerce

Currently much of the internet activity in Ethiopia is focused on social media rather than e-commerce, business or education. This is largely a consequence of limited quality access.⁵¹ In Ethiopia e-commerce is in the early stages of development, with very few organizations present. However, the opportunity for growth may be significant, since Ethiopia has the second-largest population on the continent and a large domestic market. Even though Ethiopia scored 17.8 out of 100 on UNCTAD's Business to Customer (B2C) E-commerce Index 2018 (lower than Nigeria, 54.7; Kenya, 46.2; Rwanda, 32.7), instances of e-commerce activity over social media channels such as Telegram exist, indicating a strong growth potential.

3.3.4 Access to data and cloud services

Access to data and cloud services are necessary for a vital digital ecosystem, but currently this presents a challenge in Ethiopia. Many public and private organizations have set up in-house data centres. However, lack of regulation and certification of data centres results in poor management, especially of physical security to ensure that data is protected from theft or damage from natural disasters and environmental factors, such as fires, floods, over-heating, and so on.

Additionally, in Ethiopia, it is difficult for SMEs to acquire cloud storage services, as they need to be paid in US dollars and often by credit card. Ethiopian companies also experience difficulties in obtaining cybersecurity expertise. Private cloud services are commonly provided over an intranet (for instance, government networks such as WoredaNet) — an approach that does not address the needs of digital workers.

46 Ibid.

47 ITU, *Country Assessment to facilitate Digital Financial Inclusion in Ethiopia*, 2021.

48 Digital Ethiopia 2025 strategy.

49 Reuters, "Ethiopia's state telecoms monopoly launches mobile money service", 11 May 2021.

50 The Reporter Ethiopia, "Mobile money allowed for foreign telecom operators," 2 October 2021.

51 Digital Ethiopia 2025 strategy.

3.3.5 Business development services and business incubation centres

Established business incubation centres (BICs) are mostly owned by the Ministry of Innovation and Technology (MInT) and public universities. However, only one out of the five incubation centres owned by MInT is reportedly active. Addis Ababa, Hawasa and Bahir Dar universities are the only ones to have BICs.

There is also a growing presence of private BICs in the country. The major ones include the following:

- ▶ **blueMoon:** established in November 2016 as Ethiopia's first youth agribusiness incubator and seed funding investor. The incubator runs a national competition twice a year and accepts five to ten start-ups to participate in its on-site four-month programme in Addis Ababa. Beyond the incubation programme, blueMoon also serves as the first investor in start-ups that pass through the programme by providing a seed funding of USD 10,000 to enable them to build their prototype as well as proof of concept. Since inception of the incubation programme, a total of 33 start-ups have graduated from the programme.
- ▶ **iceaddis:** founded in 2011, iceaddis is an innovation hub and co-working space. It supports start-up teams and hosts events for tech community and social focus. The hub also runs programmes such as ice180, a six-month start-up accelerator bootcamp that has graduated 40 ventures. iceaddis also offers a 24-hour co-working space with internet access (as a paid service).
- ▶ **xHub:** founded in 2014, xHub is an initiative of the Center for African Leadership Studies (CALs). It provides working space and counselling services to entrepreneurs who seek to promote social ideas.
- ▶ **IBA Ethiopia:** IBA Ethiopia focuses on stimulating a sustainable innovation and entrepreneurship culture among start-ups in growing markets in Africa, with a particular focus on Ethiopia. It aims to provide assistance and follow-up to start-ups during their early stage of establishment, assist with commercialization through seed funding and link them with the right local and international investors for further scaling-up. IBA Ethiopia is the main organizer of the African Innovation Week (enabling start-ups to pitch their products and network), the Ethiopian Angels Network (generating a community of angel investors), the Coffee Innovation Academy (aiming to integrate innovations into the local coffee industry), and the Addis Ababa International Hub (envisioned to serve as an incubator).
- ▶ **GrowthAfrica:** a pan-African accelerator for entrepreneurs looking to scale. In the first six months in the accelerator, founders are supported and trained through workshops led by mentors and business experts. Start-ups must have a minimum turnover of USD 50,000 to participate in the accelerator, which also offers financial modeling and investor engagement.
- ▶ **iCogs Lab:** the Solve It nationwide innovation competition organized annually by ICogs Lab makes technology accessible to young founders and youth in more than 15 cities in Ethiopia. The best emerging talents from Solve It gain access to the iCogs Lab incubator, which offers investor connections, training and mentorship.

Privately owned BICs have not been able to spread very far outside the capital and often rely on donors for funding. These privately run incubation centres are faced with capacity issues, unable to scale. For example, iceaddis and blueMoon take just two rounds of applications from entrepreneurs each year, and each round can only accept 10 to 20 new applicants among hundreds of proposals.⁵²

BICs face many challenges related to the supporting environment: policies, guidelines, incentives and connections with the financial sector are absent or weak. Tenant dropout rates are high (more than 50 per cent) and BICs are found to use less than 50 per cent of their capacity. In this context, performance monitoring is rare, and readjustment based on feedback by users does not take place.

52 Mercy Corps, 2020.

▶ 3.4 Digital labour supply

Digital skills are crucial to enable current and future workers (especially youth) to meet the employment requirements of a digital economy, embrace innovation and help maintain a competitive edge. This presents a challenge for Ethiopia, which currently ranks 112th out of 149 countries on the World Economic Forum's digital skills index, and 112th out of 138 economies according to the Global Competitiveness Index on the metric of digital skills among population. Women are some 20 percentage points below men. Further, as most technology interfaces require knowledge of English, poor knowledge of the language has created a barrier towards developing digital skills. This challenge is compounded by the fact that the general literacy rate in Ethiopia is only 52 per cent among the general population and 73.5 per cent among the youth (aged 15 to 24) (compared with 44 per cent among adult women and 72 per cent among young women).⁵³

Despite increases in university enrolment, higher education curricula have not evolved to match the needs of the workplace, where there is demand for graduates to possess digital skills and an entrepreneurial mindset encouraging graduates to become job creators. Lack of standardized digital training and skills assessment systems throughout the whole education system has resulted in students with poor digital skills. There is also a lack of demand-driven training programmes and consumer-facing apps to create critical demand for digital skills in both urban and rural Ethiopia.

However, the labour supply in Ethiopia also presents an opportunity for digital jobs. Ethiopia's urban population is fairly well educated, with literacy rates of 80 per cent in Addis Ababa. Additionally, Ethiopia's sheer size means that there is a relatively large pool of educated urban youth, who constitute a latent supply of knowledge workers for the global IT-enabled services sector.⁵⁴ By policy, 70 per cent of university students in Ethiopia graduate in Science, Technology, Engineering, and Mathematics (STEM) subjects, which offers a unique advantage for finding work on online labour platforms (such as Upwork and Fiverr). This advantage is, however, hardly fulfilled in practice.

A survey conducted in 21 universities in 2020 by the Higher Education Sector of the Ministry of Science and Higher Education reveals that the total number of graduates in 2019 was more than 44,000, with 9 per cent of these graduates completing their studies in the field of ICT and Technology.

▶ 3.5 Digital labour demand

The demand for digital workers is currently centred in Addis Ababa — the digital economy hub of the country. While the assessment pursues a regional focus, the understanding of the state of digital labour demand in the capital is important, since jobseekers located in the regions may take advantage of digital employment opportunities in the capital (especially given that such employment opportunities may not be available regionally). This section provides a brief overview of digital employers in Addis Ababa, highlighting recruitment patterns and challenges.

Generally, job creation in ICT as a sector remains low but has been increasing over the past years. While the available statistical data is dated, it is nonetheless telling. Approximately 60,000 people were employed across ICT fields in 2013, growing to an estimated 78,000 in 2018.⁵⁵ The telecommunications sector is the

53 World Bank, Literacy rate, adult total (% of people ages 15 and above) (Ethiopia) <https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=ET>, 2017.

54 Digital Ethiopia 2025 strategy.

55 Job Creation Commission (2020), Plan of Action for Job Creation (2020–2025), <https://jobscommission.gov.et/wp-content/uploads/2019/11/National-Plan-for-Job-Creation-Brief.pdf>.

largest employer, with 19,500 employees in 2013. The majority of these are employed by Ethio Telecom (15,000 in 2018). The information services sector employed almost 17,000 people in 2013, approximately 28 per cent of the ICT sector; 7,500 of these were employed in data processing and web systems. Just 7,800 people were employed in computer programming.⁵⁶ The sector requires a relatively high level of ICT skills, focusing on software engineering. Less sophisticated ICT skills may be required by other types of employers, but there is no available data on non-ICT sectors, where ICT skills are demanded.

By 2025, the sector could employ over 126,000 workers across the industry, an increase of 62 per cent from 2018.⁵⁷ As the digital ecosystem supports growth across the economy, the number of direct jobs in ICT could be even higher. The multiplier effect of job creation means that employment in the ICT industry could also create over 240,000 new indirect jobs.

3.5.1 Digital platforms in Ethiopia

An overview of some of the key IT companies and digital platforms in Ethiopia is provided below.

Digital upskilling

Gebeya Inc. Gebeya, a pan-African Ed Tech and online marketplace company founded in 2016 and headquartered in Addis Ababa has more than 400 software developers on the books who are being outsourced to other companies, both locally and abroad. Gebeya signed a Memorandum of Understanding (MoU) in 2019, with the GoE, to train more than 5,000 developers over five years. Through the Digital Gender Ethiopia Program, Gebeya will train a total of 250 aspiring female software engineers and offers seed funding to 20 female entrepreneurs, targeting the gender disparity in the areas of technology and innovation. Gebeya offers its services to some of the largest organizations including Ethiopian Airlines, Heineken and Orange telecommunications. Gebeya has also partnered with Microsoft 4Afrika to provide apprenticeship-based training to 200 African software engineers: they will work with experienced software engineers over a period of up to six months. More than 600 trainees have been matched with clients seeking to hire IT professionals that completed Gebeya's training.

Ethiojobs | Dereja. Dereja.com, a business unit of Infomind Solution (ethiojobs.net) is an online platform created with the aim of providing solutions to youth unemployment through innovative and effective methods to improve the socio-economic well-being across the nation. Dereja and its institution Dereja Academy have formed a partnership with the MasterCard Foundation and the Jobs Creation Commission of Ethiopia to reach more than 20,000 students (graduate candidates) and find employment opportunities for at least 50 per cent, with 70 per cent of these to be women.

AddisCoder. AddisCoder is a free intensive four-week summer programme in Addis Ababa, introducing high schoolers to programming and algorithms. The programme started in 2011 and has run in 2011, 2016, 2018 and 2019, with more than 500 students having completed the course so far.

Accelerated. Founded in 2016, Accelerated was established to address poor education outcomes by improving the quality of teaching in Africa, starting in Ethiopia. The ed-tech start-up blends behavioural sciences, technology and classroom data in order to build a unique teacher-coaching platform for the African context.

Software development

Apposit. Apposit is an Ethiopian-based software development company with more than 120 clients including government agencies, international organizations and local or international private companies. Comprised of more than 50 people, the Apposit team seeks to expand to other African countries including

⁵⁶ Job Creation Commission (2020), Plan of Action for Job Creation (2020–2025).

⁵⁷ Job Creation Commission (2020), Plan of Action for Job Creation (2020–2025).

Ghana, Nigeria, Kenya and Rwanda. Apposit recruits highly skilled experts through a competitive selection process. The company's well-structured internship programme, focused on university students with a grade average of three points, has helped many to learn on the job and secure jobs after graduation.

M-Birr. M-Birr is the first mobile payment and money service in Ethiopia. Established in 2010 by a technology group from Ireland, M-Birr currently works with eight financial institutions and is providing opportunities to more than 15,000 agents across the country,

Belcash (helloCash and HelloSolar). Belcash Technology Solutions PLC provides banks and microfinance institutions (MFIs) with go-to turnkey mobile money solutions (including capacity-building, business and operational models, hardware, disaster recovery and call centre facilities) and facilitates the penetration of mobile and agent banking in the Ethiopia's financial landscape. HelloSolar in partnership with Belcash — the mobile banking platform system — is set to introduce a pay-as-you-go system for the nation's off-grid population with an affordable solar home system.

Kifiya Financial Technologies. Kifiya, established in 2010, is a software development company, servicing clients in Ethiopia and East Africa region. It is a Fintech company, providing payment, distribution and digitally enabled services enabling financial and non-financial transactions made simple, affordable, secure and within reach of consumers that provide small and large businesses. Kifiya has partnered with the MasterCard Foundation to implement a solution that helps to digitize Ethiopia's bill payment ecosystem, making the monthly obligation of paying bills less of a burden by simplifying the process, reducing transaction costs and removing risk through direct and electronic payment.

Location-based digital platforms

RIDE is the largest taxi-hailing service provider in Ethiopia, with more than 500K application downloads on Google Play Store and more than 10,000 cars on its books. Established in Ethiopia in 2014 as an SMS-based taxi-request service, RIDE developed into a company offering varied options, from web apps to a call centre in 2017.

Feres, another taxi-hailing app, joined the arena in mid-2019 and has already garnered more than 100K application downloads and runs more than 5,000 cars.

Deliver Addis. Founded in 2015 with support from Microsoft and other partners, Deliver Addis is Ethiopia's first and largest online food delivery service. The start-up secured follow-on funding from the Impact Angel Network (IAN) to increase its capacity and efficiency, bringing new products and services and expanding its market share in mid-2020. Since the IAN's initial investment, which financed the enhancement of the start-up's platform and the expansion of its fleet, the company's daily deliveries have grown by 630 per cent. Deliver Addis now provides food from more than 100 restaurants, groceries, flowers and other consumer products, and the latest investment will further increase its capacity, enabling it to reduce prices, increase efficiency to expand market share and offer new products and services.

Internet Service Providers

Internet service by private companies came to reality when the first licence for providing the service was issued by the Ministry of Communication and Technology in late 2017. Until then, Ethio Telecom had been the only internet service provider. Eight companies were granted the licence to provide the first private value-added internet service.

WebSprix. WebSprix is a private internet service provider (reseller). It was established in 2010 but started providing internet services in Addis Ababa in 2017. Serving more than 4,000 homes and office spaces in Addis Ababa, WebSprix employs 42 permanent staff and more than 100 contract-based employees who install, maintain and troubleshoot internet connectivity issues.

Clean tech and utilities

dVentus Technologies. The company produces propulsion systems used in clean energy vehicles, wind turbines and smart power converters. It manages a live advanced monitoring system to manage smart grids and interrelated big data analytics of many cities in the world from its Addis Ababa HQ. Its products are exported to Europe and the United States.

Flowius is a start-up that focuses on building affordable water pipelines by using mobile surveying tools, solar power and microfinance to many homes in the rural areas of Ethiopia. In 2017, Flowius was accepted in the water innovation accelerator Imagine H2O based in Silicon Valley.

3.5.2 Recruitment patterns

Interviews with local private firms — Kifiya, Apposit, Meda (360Ground) and YenePay — revealed that they all had a similar recruitment process. The most common practice used to hire IT staff is based on recommendations from internal staff or members of their network. Vacancies and posts are rarely advertised, unless it is for a very specific, specialized field, apparently because open tender processes are less trusted. Companies mostly hire relatively young, recent graduates for programming, database and web development tasks. In other areas where experience is needed, including infrastructure setup, software architecture and project management, companies look for more experienced and seasoned experts.

Internship programmes that are available in some IT companies are another source of retaining talented staff. The most competitive students, with a grade point average (GPA) of at least 3.0 or 3.5 in the case of Meda, are selected through a rigorous screening process of interviews and competitions. As all relevant IT companies are located in Addis Ababa, these opportunities are generally used by students in the capital. Selected interns are then assigned to teams based on their interest and assessed over time on their skills, attitudes and willingness to learn and adapt.

3.5.2 Limited opportunities in the domestic market

IT firms, digital freelance platforms and location-based digital platforms encounter a plethora of hurdles in the local Ethiopian market. As discussed in [sections 3.1–3.3](#), these include challenges related to infrastructure and connectivity, unfavourable regulation that hinders the operation of platforms in the country, as well as skills gaps. Decent work conditions on these platforms are also often weak, since freelancers are often low paid and lack social protection or income stability.

In addition to these oft-cited challenges, local IT firms bemoan the lack of opportunities in the domestic market, since government agencies often outsource large projects to international firms, preferring them over local competitors. For instance, the National Bank of Ethiopia (NBE) and the Development Bank of Ethiopia (DBE) have recently awarded data centre projects to the Ethiopian Information Network Security Agency, which in turn outsourced the projects to international organizations, excluding local firms from the process. This issue of excluding local firms, even from competing, is not exclusive to government agencies; other relatively smaller companies and projects outsource their IT development needs to companies in India, Pakistan and Kenya. This challenge can be attributed to the low levels of trust in the perceived competency of local firms.

Lack of trust in local IT firms is a big challenge cited by interviewed firms. 360Ground, the company behind the mobile wallet Amole and Meda app, recounted the struggle behind convincing leadership at the Dashen Bank on how the firm is capable of building the app in house; it has more than 750K subscribers.

Another notable feature of the Ethiopian IT market is its Addis-centricity. Regionally based IT companies are uncommon in the country, and Addis Ababa-based companies generally do not hire specialists from the regions, nor offer their services in the regions.



▶ 4

Job opportunities in the digital economy in Afar Region

▶ 4.1 Demographic and socio-economic information

4.1.1 General

Afar Region is situated in the north-eastern part of Ethiopia and has an estimated population of almost 1.9 million people, approximately 2 per cent of the country's total, and is home to the Afar people. Samara, the capital of Afar Regional State since 2007, was constructed on the Awash-Assab-Djibouti highway.

The region has an estimated density of 14.6 people per sq km, which is the lowest in Ethiopia. As elsewhere in the country, the population of Afar is young: 12 per cent are under 5 years of age and 39.5 per cent are under 18. The total fertility rate is high, standing at 5.5 in 2016. Approximately 95 per cent of the Afar population are Muslim. Most Afar residents are pastoralist or agro-pastoralist, dependent on their livestock for subsistence. Other income-generating activities include crops such as sorghum, maize, barley, teff and cotton, and the production of honey. The number of agro-pastoralists is increasing, owing to the development of irrigation infrastructure in the region.

The Ethiopian government identified Afar Region as one of four Developing Regional States because of high poverty prevalence and social indicators lagging significantly compared with national averages. An estimated 10 per cent of the population in Afar requires emergency food assistance, and almost all the *woredas* in the region are under the PSNP.⁵⁸ As of 2020, the estimated urban unemployment rate in the region is 30.3 per cent.⁵⁹

58 FAO and Tufts University, *Examining Alternative Livelihoods for Improved Resilience and Transformation in Afar*, 2019.

59 The Federal Democratic Republic of Ethiopia, Central Statistical Agency, *Key Findings on the 2020 Urban Employment Unemployment Survey*, 2020.

Major development challenges include the following.⁶⁰

- ▶ The infrastructure is poor, and the capacity for management and implementation of development projects is insufficient.
- ▶ More than 9 per cent of the Afar community have a pastoralist livelihood system, which is highly dependent on extensive livestock production. Their mobile lifestyles are associated with limited, and often difficult and expensive, access to social services.

Gender relations in Afar are highly traditional. According to the EDHS 2016,⁶¹ only 17 per cent of women (aged 15–49) in the region decided on their first marriage themselves (the second-lowest rate in the country), while 82 per cent of women stated that their parents made the decision for their first marriage. The rate of women who stopped attending school after marriage is 50 per cent (aged 15–49). Only 27 per cent of husbands participate in household chores, of whom 35 per cent participate every day.

4.1.2 The refugee population in Afar

Based on data provided by ARRA in March 2021, the refugee population in Afar Region was 52,940, with youth (15–24 years old) comprising 21.6 per cent of the population. The refugees are predominantly Eritrean Afari people, who are hosted or live side by side with the Ethiopian Afar.

The refugees reside in urban and rural areas: two formal refugee camps (Barhale and Aysaita), and four settlements, or small urban areas, where 14,406 refugees (as of 2019) live within host communities in Dalool, Ayne Dib, Erebti and Samara. Other minor sites accommodating refugees are also known. The UNHCR estimates that as of 2019, about 380,000 Ethiopian Afar live in refugee-impacted *woredas*. All figures below rely on official ARRA data, as of March 2021.

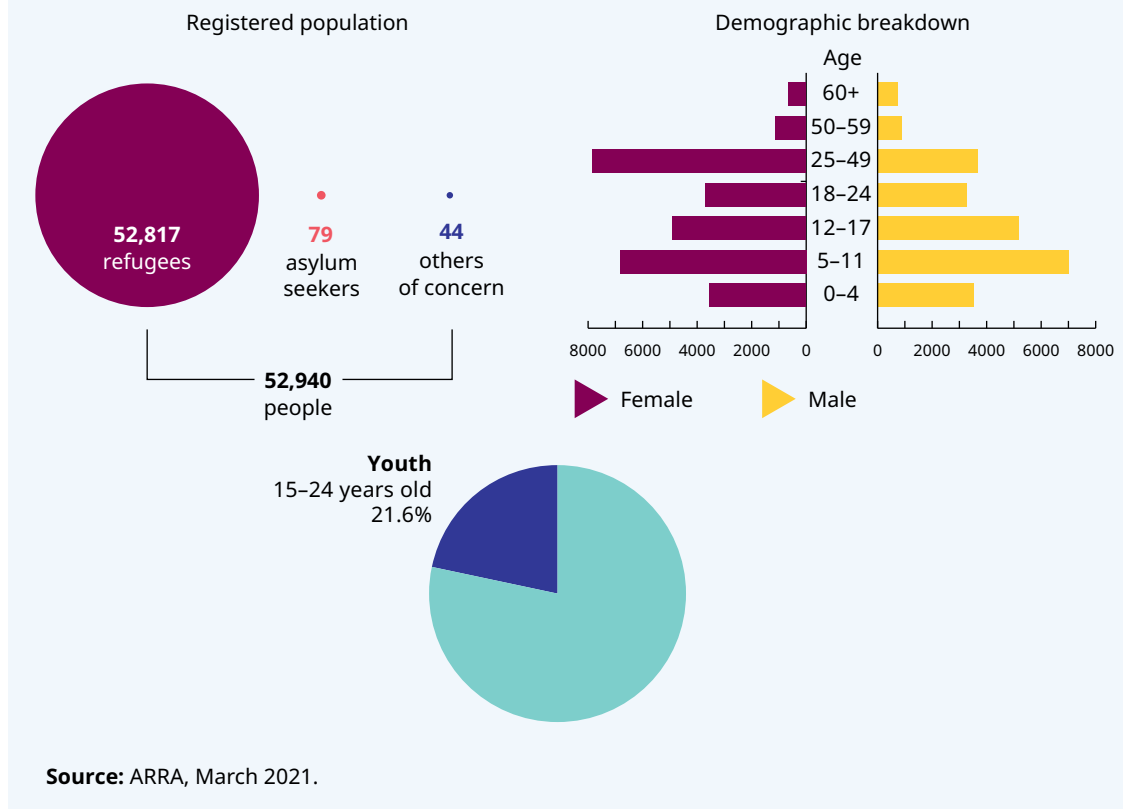
▶ **Figure 1. Area of operations in Afar Regional States**



60 UNICEF, Situation Analysis of Children and Women: Afar Region, 2019.

61 Ethiopia: Demographic and Health Survey, <https://dhsprogram.com/pubs/pdf/FR328/FR328.pdf>, 2016.

► **Figure 2. Demographic breakdown of refugee population in Afar**

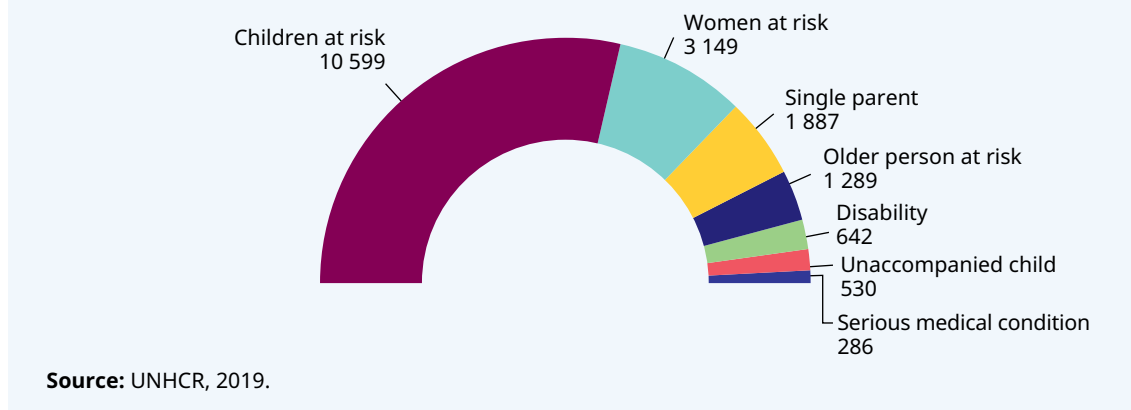


More than 99 per cent of the refugees are Eritrean and 42.7 per cent of them lack identity documents. A large number of refugees can be considered vulnerable. There are 10,599 children at risk, 3,149 women at risk, 1,887 single parents, and 642 persons with disability (see figure 3), and 42.1 per cent of individuals without relatives in Ethiopia.

UNHCR's intention survey, conducted for the entire refugee population, showed that 9 per cent would like to return, 76 per cent would not, with 15 per cent undecided.⁶²

There are 29,404 school age children (3–18 years old) among the refugee population (49.1 per cent female), but the general school attendance is relatively low.

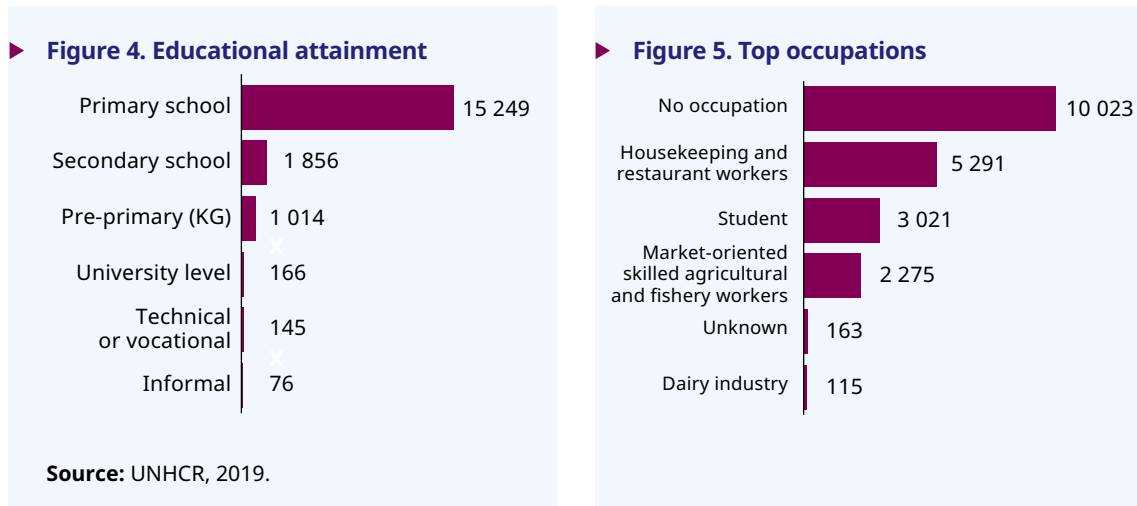
► **Figure 3. People with special needs**



62 UNHCR, Afar Regional State: 2019 Pledge Progress Report (January–December 2019).

The educational attainment among refugees is also generally low. According to available data, 15,249 have only attended primary school and 1,856 attended secondary school, 145 individuals have vocational training, and 166 obtained university education (see figure 4).

Based on the ARRA data, the occupational profile of refugees is depicted in figure 5: 5,291 are engaged in housekeeping and restaurant workers; 3,021 are students, 2,275 work in the area of agriculture.



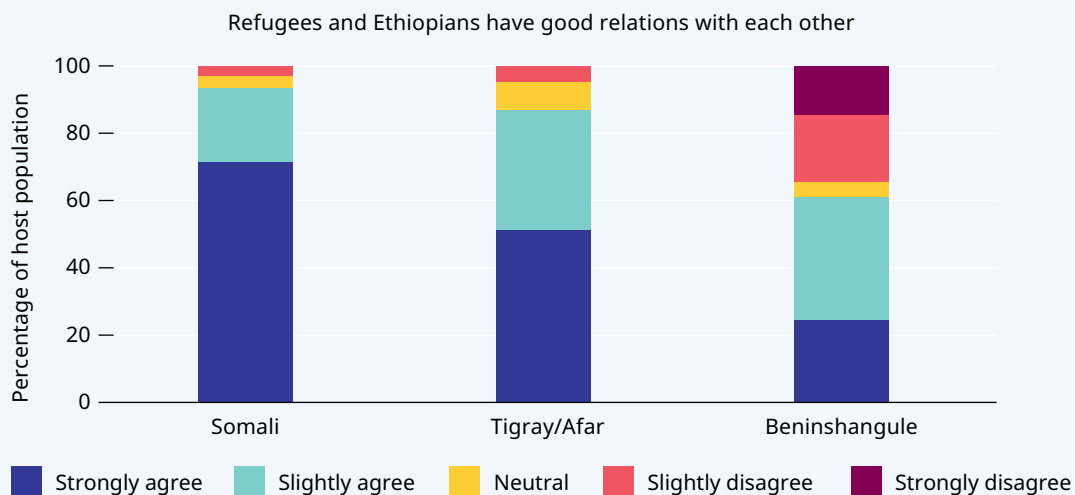
Only 2 per cent of the refugees own property. As many as 97 per cent of the refugee population speak the Afar language, while only 2 per cent speak Amharic and 0.44 per cent speak English.

4.1.3 Host communities and refugees' relations

Refugees and host communities in Afar share culture, language and religion, which contributes to a natural potential for socio-economic inclusion. Indeed, a World Bank survey (2018) indicated that host communities' sentiments towards refugees in Afar is positive overall, and more than 80 per cent of host community residents "strongly agree" or "slightly agree" that the relations are good.⁶³

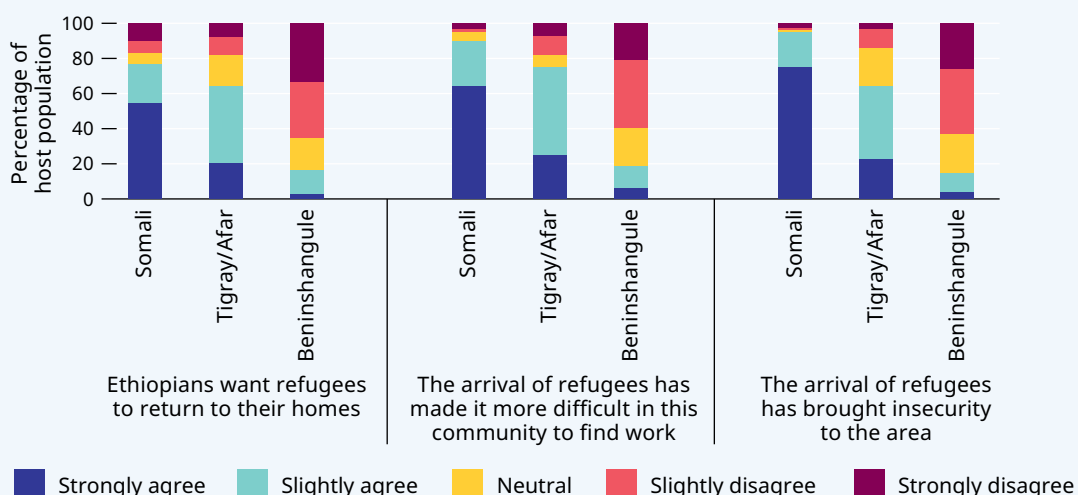
63 World Bank, A Skills Survey for Refugees in Ethiopia, 7/10/2018.

► **Figure 6. Host community sentiments**



Source: World Bank, 2018.

► **Figure 7. Host community sentiments**



Source: World Bank, 2018.

More than 60 per cent of host community respondents do not want the Eritrean refugees to return to their homes, and more than 75 per cent do not perceive refugees as a threat in terms of finding jobs (see Figures 6 and 7).

Refugees make up about 14 per cent of the population of their *woredas* of residence, while the host communities' population is estimated at 380,685.⁶⁴ In Aysaita, the refugee population in the camp is 27 per cent in relation to the *woreda*. Similarly, in Barhale, the refugee population forms 19 per cent of the local population. When natural resources are extremely scarce, as they are in Afar, this poses challenges, especially on water, livestock grazing and firewood.

64 UNHCR, 2019.

► 4.2 Digital infrastructure

4.2.1 Access to electricity

In Ethiopia, about 96 per cent of urban households are connected to the grid (99.9 per cent in Addis Ababa), while only 27 per cent of rural households have access to electricity services.⁶⁵ This corresponds to the situation in Afar, where around 74 per cent of households are dependent on non-grid lighting sources.⁶⁶

While access to electricity is generally limited in rural areas, the Aysaita refugee camp is the first camp in Ethiopia that is fully connected to the national electric grid. Although physical connections have been in place for a while, electricity has not been delivered to the camp because of a conflict between ARRA and UNHCR on billing issues. In principle, billing is done in a pre-paid manner; each household gets a pre-paid card, which can be charged from time to time. The general estimate is that each household would have to pay around 100 birr per month, and reportedly refugees are willing to cover these costs by themselves. During the field work for this study, electricity was only available at the camp's health centres, and refugees come there to charge their phones. During the Validation Workshop of this study, carried out in November 2021, it was reported that the billing issues have been resolved and electricity can now be delivered to the camp.

► Photo 1. Grid connections in the Aysaita Camp



© Jennifer Shkabatur, April 2021

4.2.2 Internet and mobile connectivity

Accurate regional connectivity data is hard to obtain, and the regional Ethio Telecom branch was unwilling to share precise figures of coverage and number of users. Generally, there are 148 mobile sites in the region, with 2G or 3G coverage.

65 World Bank, [Project Information Document: Access to Distributed Electricity and Lighting in Ethiopia](#) (February 2021) .

66 USAID, [Off-Grid Solar Market Assessment: Ethiopia](#) (October 2019)

According to Ethio Telecom's regional representative, there are around 4,000 fixed broadband users in the region. Out of those, around 3,000 are private households, most of whom are located in the towns — Logiya, Samara, Awash and Aysaita. Others are government agencies and NGOs. According to key informants from Ethio Telecom, the internet connectivity is highly reliable in the region. This is partially attributed to the fact that there is almost no industry that would heavily use the network.

Gender gaps persist with respect to internet access, and data shows that women in Afar are six times less likely to use the internet than men.⁶⁷ Women are also less exposed to mass media: 3 per cent of women and 6 per cent of men read a newspaper at least once per week; 16 per cent of women and 29 per cent of men watch television at least once per week; and 13 per cent of women and 20 per cent of men listen to the radio at least once per week.⁶⁸

Mobile connectivity. The mobile phone coverage in the refugee camps is 16,519 persons (32 per cent).⁶⁹ The vast majority of internet users in the region access the internet through their mobile phones and use the internet for social media purposes (Facebook and Telegram). There are no internet cafés in Samara or Aysaita.

FGDs in the Aysaita refugee camp revealed that most refugees own a mobile phone (but not a smartphone), and some of them purchase internet access if they manage to earn some money from daily labour jobs and can charge their phones. The mobile internet is largely used for social media purposes.

Internet connectivity in schools. According to the Bureau of Education, 75 per cent of secondary schools in the region are connected to the internet, and the regional Ethio Telecom representative confirmed that most schools are connected to the internet through fixed broadband. Up until 4–5 years ago, schools were connected via VSat, but this method had bandwidth limitations and the connections were slow. Today, reportedly, there are no bandwidth limitations. The team's visits to educational institutions in the region did not confirm these statements — Wi-Fi was unavailable to students in Aysaita's secondary school, teachers' college, and TVET institute (apparently because of connectivity issues).

Internet connectivity in Samara university. Wi-Fi connectivity is widely available to all visitors of Samara University (including the dormitories) through a fixed broadband connection.

ICT equipment. Samara University has a 24/7 "digital library," equipped with 295 computers that are all connected to the internet. Less than 5 per cent of Samara University's students own laptops. Computers and IT equipment in the five TVET institutes and schools in Afar are significantly less prevalent. Only some of the available computers in TVET institutes are functional, and they are usually not connected to the internet.

4.2.3 Access to solar energy

Despite the inaccessibility of the national grid for a vast percentage of households, initiatives related to the provision of solar energy are relatively limited. Several NGOs have distributed solar lanterns in the camps in the past years, but these projects have not been sustainable. Two initiatives are notable in this respect.

First, the Danish Church Aid (DCA) has distributed 350 solar lanterns (175 in Aysaita and 175 in Berhale) and installed two solar panels in rural primary schools for Aysaita's host community. DCA also trained community groups (ten people in Aysaita and ten in Berhale) on how to maintain the lanterns, but accessories are not available in Aysaita, and repairs were thus not feasible.

67 EDHS, 2016.

68 Ibid.

69 UNHCR, 2019.

DCA has also explored the possibility of using solar equipment for irrigation and water pumping from the Awash river to support the cultivation of cotton and maize. Feasibility assessments produced promising results, but the cost of such solar equipment is rather high, around 40,000–50,000 birr (nearly US\$900–1,100) installation costs.

Second, a recent programme of the NGO Action for the Needy of Ethiopia (ANE) also focused on solar energy and distributed in 2020 1,000 lanterns: 500 in Berhale and 500 in Aysaita. The lanterns were purchased in Addis Ababa for 900 birr each. They may last for a year, but there are no experts in the camps who are skilled to maintain them, so they are discarded in the case of malfunction. The ANE also distributes briquettes (produced from biomass). Host communities (30 people, 22 male and 8 female) produce the briquettes in Aysaita, and they are distributed in refugee camps in Aysaita and Berhale.

It is not clear to what extent households in the region would be willing to pay for solar panels or products. As the presence of industry in the region is very limited, the private sector cannot be reliably considered as potential customers of solar energy products.

► 4.3 Supporting platforms and services

Supporting ICT platforms in Afar are uncompetitive, with a limited number of ATMs that accept international payments, and a lack of mobile banking, or other services that could contribute to the digital economy.⁷⁰

One private industrial park is being constructed in Afar, but it is still not functional.

► 4.4 Skills supply

4.4.1 General school enrolment

School enrolment at every level presents a significant challenge in the Afar Regional State. According to the Education Statistics Annual Abstract (ESAA) 2018/19 (the latest available),^{71, 72} the gross enrolment rate (GER) for pre-primary education in Afar were the second lowest in the country, at 12.9 per cent. These rates are far below the national GER target of 80 per cent by 2020.

For primary school enrolment, the GER decreases notably between Grades 1–4 and Grades 5–8, suggesting a low transition rate between the first and second cycles of primary education. In Afar, 84.1 per cent boys and 72.1 per cent girls are enrolled in grades 1–4 (net enrolment rate (NER) is 57.8 per cent for boys and 50.4 per cent for girls), but the GER drops to 33.8 per cent boys and 28.3 per cent girls in grades 5–8 (the NER is even lower at 20.5 per cent for boys and 18.4 per cent for girls).

The gender parity index (GPI) for Afar primary schools is 0.7, which is the second lowest in the country (only behind Somali) — meaning that there are significantly more boys enrolled in primary school than girls.

70 FAO and Tufts University, 2019.

71 Ethiopia: Demographic and Health Survey, <https://dhsprogram.com/pubs/pdf/FR328/FR328.pdf>, 2016.

72 http://213.55.93.149/get/PDF/Ministry%20of%20Education-ESAA%202011%20E.C.%20October%202019_23.pdf

Many children who attend school fail to acquire basic skills such as literacy and numeracy. Nearly three quarters (72 per cent) of children aged 15 to 17 years are illiterate, a significantly higher rate than the national average of 46 per cent.⁷³

The educational situation in refugee camps is generally similar. As of 2018, the best GER is 29 per cent of primary age refugee students attending school in Aysaita. In Barhale, the primary GER is only 9 per cent. The most worrying statistic is also from Barhale, where only 3 per cent of secondary age children attend school.

There is one primary school in each camp. In addition, there are four early childhood care and education schools in the two camps placed in different zones. African Humanitarian Action (AHA) and ARRA manage the pre-schools and primary schools in both locations respectively. In terms of secondary education, refugee school-age children attend classes in government schools. The UNHCR, with funding from Demark, has made improvements of the two secondary schools. These include construction of two academic blocks (one in Aysaita and one in Barhale). The UNHCR also provided 360 combined school desks, 150 single chairs and computers for ICT classrooms.⁷⁴ At the higher education level, a total of 31 students (ARRA Annual Report 2019) are attending different government colleges and universities in the region and the country. All students placed in the universities are supported by UNHCR scholarship through ARRA.

Similar to the general situation in Afar, the GPI in refugee camps is the lowest of all regions and stands at 0.54. This is due to many contributing factors, including harmful practices such as early marriage, engaging children in domestic work such as firewood collection, combined with lack of awareness on the importance of education.⁷⁵

4.4.2 ICT training in secondary education

Young people in the region do not seem to have “natural” ICT skills that would be developed based on daily internet usage. Only a tiny minority owns laptops and most young people seem to be connecting to the internet via their mobile phones to consume social media contents. Several issues related to ICT skills were revealed during the field visit.

Computer skills in secondary schools. Computer classes are taught to all students between grades 9 to 12, starting from basic computer skills at grade 9 up to advanced use of application software, website development and database management at grade 12. In Afar, such classes are supposed to be held three times a week, but because of COVID they were reduced to two classes a week. However, FGD respondents noted that only one class per week is delivered, and that the same topics are repeated every year. The class mostly consists of basic computer skills (for instance, typing) and familiarization with Microsoft Office programmes but do not include coding or software development.

ICT equipment in schools. As noted by Bureau of Education representatives and during a conversation with the principals of the Aysaita secondary school, ICT equipment in schools is lacking, and computer classes are primarily theoretical. The FGD with Aysaita secondary school students revealed, for instance, that their computer class is largely theoretical, and they have almost no practical training on computers. A computer lab is available in the school, but only a few of the computers are functional, with none of them connected to the internet. The Aysaita secondary school, where the FGD was conducted, has a VSat installation that used to enable virtual learning (plasma education), but it has not been functional for at least five years owing to changes in the VSat system.

73 UNICEF, 2019.

74 UNHCR, 2019.

75 Ibid.

Availability of ICT teachers. As noted by Bureau of Education representatives and during a conversation with the principals of the Aysaita secondary school, there is a dearth of qualified ICT teachers in the region. This is due to the lack of ICT teachers' colleges in the region. Samara university, for instance, does not train teachers, and the Aysaita Teachers' College does not have an ICT department, although it is planning to start the department in the next academic year.

The ICT skills self-assessment that was carried out during the FGD in Aysaita showed that 80 per cent of the students responded saying they have at least basic skills in using MS Word, and 60 per cent have MS Excel skills; 60 per cent said that they are skilled in using smart phones, while only 50 per cent of the respondents have an email address.

4.4.3 ICT training in higher education

The primary provider of ICT skills in higher education in the region is Samara University — a regional public university established in 2008. Overall, the university has 17,700 students, and they are accepted from all over Ethiopia (through a governmental assignment system).

ICT-related subjects are taught in two departments: information technology and computer science. There are 206 students in ICT (24 women, 182 men); none of them are refugees but in the past there used to be a few. The university grants bachelor degrees in computer science and IT; and master degrees in computer science.

The university also has an ICT centre, which provides general IT support to different university departments, and also develops e-learning tools and academic software. For instance, there is an ongoing collaboration with Cisco Academy and Huawei Academy, and students may pay and enrol in their online courses. Such courses include, for instance, IT maintenance and networking. Students who complete these online courses obtain certificates but not university credit.

The ICT training provided in universities is generally deemed unsatisfactory in terms of actual market needs and demand, and ICT graduates are perceived as insufficiently skilled. Most of the training is theoretical, and ICT graduates have limited practical computer skills. This opinion is generally supported by the Samara University key informants.

The lack of practical training is attributed to several factors. First, university professors usually lack industry experience or other practical background and are thus unprepared to deliver practical skills to their students. Second, there is a lack of sufficient and functional equipment in the university. Third, owing to the dearth of industry in the region, students do not have opportunities for apprenticeships or internships.

Several opportunities exist for the upskilling of ICT teachers: they may take one of the Cisco Academy classes (five or six teachers already did so), and trainers from other regions are also invited from time to time to deliver training. However, there is no mandatory upskilling policy.

4.4.4 ICT training in TVET institutions

The region has five TVET institutions, and the TVET system provides two types of training: hard skills (for example, construction, metal work) and soft skills (such as ICT, accounting, management). ICT-related courses are provided in three TVET institutes: Adadale Polytechnic College, Lucy TVET College, and Ab'ala TVET College. The two other institutes do not provide ICT-related courses; they are Aysaita College of Teacher Education and Saami Bilo TVET College of Nursing and Midwifery.

ICT-related training aims to prepare IT technicians (for instance, network service, maintenance) and computer office workers (typing skills, Microsoft Office programmes such as Word, Excel, and PowerPoint, and so on). Reportedly, students struggle to find a job, and only 1 per cent of graduates in this area are self-employed. There is a general shortage of TVET trainers in the region, and ICT trainers are even more in demand.

By policy, all TVET students should complete internships (30 per cent of the curriculum consists of in-class training, while 70 per cent is supposed to constitute out-of-campus training). However, there are no employers in the regions who could take up all the students, and even existing employers (government agencies and Ethio Telecom) have no incentives to accept student interns.

The Aysaita Adadale Polytechnic TVET institute has nearly 700 students, 365 of whom study in its ICT department. ICT subjects include hardware, networking and maintenance. Only six ICT teachers work in the institute, all trained at the Federal TVET institute. There are no opportunities for apprenticeships in the industry, and learning is often theoretical. The institute has four computer labs with 80 computers, which are not connected to the internet. Generally, internet connectivity is only available at the library.

4.4.5 Refugees' access to ICT training

There were no refugee students among Samara University ICT students. Key informants thought that the general educational attainment of refugees is often relatively low, and it is challenging for refugees to meet the university cut-off point.

The access of refugees to vocational training also appears to be limited. Key informants at the Aysaita TVET institute noted that there were no refugees among their ICT students, and that ARRA lacked the necessary resources to bring them in (refugees cannot leave the camp without ARRA's permission). ARRA explained that the reason for this is the lack of a budget to support refugees' training in the TVET institute. Although the training itself is provided free of charge, ARRA would need to cover refugees' transportation from the camp and back, as well as provide them with a per diem.

4.4.6 Renewable energy skills

The availability of renewable energy skills in the region is very limited. Regional TVET institutions prepare electricity technicians but do not deliver training on renewable or solar energy. Samara University provides training on renewable energy as part of the departments of chemical engineering and mechanical engineering, but there is no data on employment opportunities in this area. The Aysaita TVET institute used to provide training on solar maintenance, but this was discontinued because of the lack of job opportunities in the area and lack of solar equipment. In practice, experts may be invited from Addis Ababa for solar installations and maintenance that are funded by development organizations.

4.4.7 Summary

In sum, key informants agree that ICT students are unprepared to meet the market demands. Key reasons include:

- ▶ lack of exposure to the labour market during university or vocational studies;
- ▶ theoretical rather than practical learning in the university or TVET institute;
- ▶ lack of employability skills;
- ▶ lack of industry in the region. This challenge is compounded for female students, who are generally less mobile and less prepared to move to a different region for a job.

► 4.5 Labour market conditions

4.5.1 Employment patterns: host communities

It is estimated that about 85 per cent of the Afar population practise pastoralism.⁷⁶ All major species of livestock, including camels, cattle, sheep and goats, are kept. Livestock management practices are tradition-based and depend on pastoralists' indigenous knowledge, but the productivity of livestock is generally poor overall and hampered by several prevailing factors.⁷⁷ These include feed and water shortages, livestock disease prevalence and poor veterinary service delivery systems, poor infrastructure development, weak extension service systems, poor market development and marketing systems organization, lack of awareness, and poor pastoral capacity. Climate change, prolonged drought and a range of other complex factors, such as demography, government policies and ecological-related problems, have also increased vulnerability in the Afar Region in recent decades.

Wage labour in the region is relatively limited and involves skilled and unskilled temporary employment in all sectors, including agriculture, mining, manufacturing, construction, transportation and other services. There is limited skilled employment in the public and private sectors such as carpentry, repairs, masonry, brickmaking, steelworks and painting in construction and its subsidiary industries. Formal public and private sector jobs include office assistants, janitors, guards, drivers and farm supervisors in commercial farms and industries. Wage labour takes place mostly outside the Afar community through seasonal or temporary migration to urban centres or construction work sites or settlements.⁷⁸

A recent study carried out by researchers from Tufts University (2019) explored the main types of diversified and alternative livelihoods that substitute or complement pastoralism in the different *woredas*. These include: (i) livestock-based activities (fodder commercialization, livestock trade, livestock product value addition); (ii) small-scale irrigation farming; (iii) fishing; (iv) natural resource production and handicrafts; (v) small-scale or retail trade; and (vi) wage employment, including mining, tourism and commercial farming. Many of these alternative livelihoods are carried out alongside pastoralism activities — contributing towards sustaining pastoralism rather than replacing it.

Primarily, constraints related to finding wage employment include lack of skills or low level of skill and attitude, negative perception of pastoralists on wage employment, lack of confidence in pastoral workers from the employee side, lack of year-round employment opportunities; poor wage rate.⁷⁹

The study indicated that the skills needed by Afar residents to move out of pastoralism include enhancement of life skills training, entrepreneurship development, appropriate education, vocational and skills training, as well as mechanisms for providing credit, stimulating savings and allowing investment.

4.5.2 Employment patterns: refugees

According to a UNHCR study (2019), the most common economic activities with refugees are housekeeping and restaurant workers (3,974); students (2,154); and market-oriented skilled agricultural and fishery workers (1,563). Top skills include housekeeping and restaurant workers, market-oriented skilled agricultural and fishery workers, and athletes, sportspersons.

A UNHCR survey (2019) revealed that 7,978 refugees have an occupation (economic activity) and 12,182 do not. For employment, the highest income is around 12,000 birr (USD 375) per month, yet most refugees, if engaged, earn closer to 1,400 birr (USD 44) — probably because they lack the relevant skills.

76 Afar Atlas. Regional atlas of Afar. Region Bureau of Finance and Economic Development, Samara, 2014.

77 FAO and Tufts University, 2019.

78 Ibid.

79 FAO and Tufts University, 2019.

Several examples of successful livelihood support initiatives can be noted.⁸⁰ In Aysaita, DCA supported 70 (13 female) refugee households to secure land under a sharecropping arrangement with host communities for producing maize and cotton, with support from the EU-funded Regional Development and Protection Programme. To date, 60 ha of land is planted with maize. In this scheme, refugee households are responsible for activities such as site clearing, cleaning irrigation canals, weeding, harvesting, and so on, including searching for suitable cropland and negotiating with landlords. The Afar regional government, mainly Aysaita *woreda* agriculture office, has encouraged and supported this arrangement through regular technical support and close monitoring by experts of the Agriculture Bureau. Refugees have gained improved agricultural farming practices as well as water management skills. The initiative has also contributed to strengthening social cohesion between refugees and host community.

The Ethiopian Evangelical Church Mekane Yesus (EECMY) implemented a livelihood project organizing 52 self-help groups (SHGs) with 540 individuals in Barhale and Aysaita, including 332 female refugees. The groups gained some income by running various businesses: mini markets, producing local mats, trade, goat rearing, grinding mills and bakery. Also, as a community empowerment project, 14 (6 female) youth refugees worked in bakeries in the camps after receiving practical training. Moreover, three youth groups were organized for income-generating activities selling packed water to the community and refugees in Barhale.

The absence of technical, vocational and skill training in both camps has remained a significant gap in Afar, since the lack of job opportunities for youth coupled with the inadequate food assistance demands better opportunities for self-reliance. Limited access to livelihood activities remains a major challenge across the two camps in Afar and for refugees living out of camp.

4.5.3 Employability in the ICT Sector

University graduates. Some 240 to 260 ICT graduates complete their studies in Samara University every year. Generally, 60 per cent of the university students get a job within one year after graduation, but there is currently no specific tracer data related to ICT graduates. Reportedly, ICT graduates who remain in the region find jobs with Ethio Telecom or government agencies. In other regions, industrial parks constitute another category of employers. A large number of its ICT students are from other regions, and because of the lack of industry in Afar, the majority of them leave the region upon graduation. Graduates look for permanent jobs, and the prospects of ICT freelancing are not perceived attractive (probably due to the low and unpredictable returns of such occupation).

Another challenge noted by key informants is the lack of “soft” employability skills among students. For instance, graduates do not know how to look and apply for jobs, how to prepare a CV, how to behave at the workplace, and so on. The career services office provides training on this issue, but only 50 per cent take advantage of this opportunity (while the rest do not consider it necessary).

TVET graduates. Most of the graduates look for government jobs upon graduation, as there are virtually no opportunities for self-employment or private sector jobs in the region. Estimates suggest that only 10 per cent of the ICT TVET graduates find a job.

Self-employment. All key informants agreed that self-employment generally, and in ICT-related areas specifically, is very low. This is partially attributed to the common mindset among university and TVET graduates, who prioritize permanent jobs (especially in government offices) over less stable and less predictable forms of employment. Another factor that hinders the prospects of self-employment is access to capital and BDS. The latter are out of reach for both refugees and host community youth. However, an example of a promising employability support initiative that has been recently implemented in Afar is presented in Box 1.

80 UNHCR, 2019.

► **Box 1. Employability support initiative in the ICT Sector**

A promising programme that was implemented in Aysaita camp by EECMY in 2019 managed to overcome the barriers and support the self-employment of refugees in the ICT sector. The initiative consisted of the following components.

Selection: in Aysaita and Berhale camps, EECMY selected young refugees who were motivated and interested in a livelihood training, who had not participated in other trainings in the past, and who were unemployed.

Entrepreneurship training: all programme participants underwent a general entrepreneurship training, which included a variety of subjects.

ICT training: different types of livelihood training were offered to programme participants — agriculture, driving, ICT, and so on. The ICT training was delivered by the Aysaita TVET institute and lasted for 35 days. EECMY covered the training costs of eight young refugees.

Post training support: upon completion of the training, EECMY furnished the refugees with a small business shed and IT equipment to start their own business: desk, computer, printer, chairs, cables, and so on.

Ongoing business development support (BDS): EECMY had presence on the ground in both camps and provided ongoing BDS to its programme participants. The ICT business shed in Berhale is still functional today, while the one in Aysaita has been less successful (probably because of its inferior location in the camp, and more competition).

Several factors have contributed to the success of the EECMY programme:

- Selection process that focused on trainees' motivation and interest;
- Availability of the Aysaita TVET institute near the camp, and a government policy that enables refugees to attend the college;
- The availability of in-kind support (business shed and equipment) and BDS to training participants post-graduation.

► **4.6 Labour demand**

Industry presence is generally limited in Afar, and private employers in ICT-related sectors are unavailable. Most of the non-government employers are in construction and small-scale manufacturing.

The primary category of employers hiring ICT graduates are government agencies, which are mainly interested in secretarial work (typing skills and familiarity with Microsoft Office programmes, for instance), and IT equipment maintenance. Some were also interested in more complex ICT jobs such as database engineering (for example, to develop and maintain the Education Management Information System) and software development.

Ethio Telecom is the primary (and only) ICT-sector employer in the region. It has two maintenance centres in Samara and in Awash, employing nearly 300 workers. Every technician who joins Ethio Telecom must have an engineering or computer science degree. Reportedly, however, most of these technicians come from other regions. The recruitment process relies on public advertisements of open vacancies.

Respondents' opinions varied on labour demand for ICT specialists in regional government agencies. While some thought that there is a need for more highly skilled ICT specialists in these agencies (especially in areas such as database engineering), others noted that ICT graduates generally struggle to find a job. ICT projects related to database engineering or software development are typically procured from Addis Ababa.

The ICT or computer skills of ICT graduates are generally perceived as insufficient in terms of the actual needs of their employers, and on-the-job training is provided. Ethio Telecom, for instance, provides a one-week induction training which consists of technical subjects (such as IP transmission, radio, and so on) and soft skills. It follows the curriculum developed by Ethio Telecom's national training centre. Trainers are invited from other regions because there are not enough in Afar. There is a mandatory quota of 5 per cent women employees in Ethio Telecom, but it is not met, and the actual number of female employees is smaller.

Employers (government agencies and Ethio Telecom) are generally not interested in accepting student interns owing to several factors. First, the university students or the TVET trainees are not perceived as sufficiently skilled, and thus their perceived value to the employers is low. Moreover, in some cases they are viewed as a burden, since they require their employers' attention and time, without contributing to the job. There are no government or other incentives to accept interns, and no insurance should they damage or mishandle equipment.

The apprenticeship opportunities that are available are not only limited, but also difficult to access. For instance, if a regional university management is interested in an apprenticeship with Ethio Telecom for its students, it has to submit a request to the Ministry of Science and Higher Education, which transfers the request to Ethio Telecom national office, from where it is sent to the relevant regional branches.

► 4.7 Lessons learned: challenges and opportunities for jobs in the digital economy in Afar Region

Afar presents a challenging case for the development of jobs in the digital economy. The primary hurdles include the following.

- **Limited electricity access and internet connectivity.** While electricity is accessible in urban areas, it is more challenging in rural districts. Internet connectivity is generally available but often not affordable for refugees and poor host community members.
- **Lack of relevant industry and employers.** The primary impediment is the lack of relevant industry in the region. Both wage- and self-employment in sectors that require ICT skills are highly limited, and government agencies remain the primary employers in this field.
- **Insufficient ICT skills.** Another challenge is the perceived weakness of ICT skills acquired by university graduates, whose studies are focused on theoretical issues and who often lack opportunities for practical internships. While the training of TVET students is more practical in its nature, their employability is also limited.
- **Limited opportunities for self-employment.** Generally, university and TVET graduates are not interested in self-employment and do not consider it as a career path. Only 1 per cent of TVET ICT graduates are self-employed. This can be attributed to the lack of access to finance in the region, the lack of entrepreneurial skills among the youth, weak entrepreneurial culture, and the lack of private market presence. The experience in EECMY (see box 1) in this area reveals that while an employability support initiative in the ICT sector may be successful, it requires a significant hands-on engagement and eventually results in a relatively limited impact (in terms of the number of created jobs and affected beneficiaries).

- ▶ **Lack of labour intermediation.** BDS or other labour intermediation support (either by public or private service providers) are unavailable in the region.
- ▶ **Fatigue related to capacity-building programmes among refugees.** FGDs revealed significant fatigue among refugees about training and capacity-building interventions that provide skills but overlook the need for labour intermediation. While refugees are eager to work, they are reluctant to take part in upskilling programmes that would not generate sustainable employment opportunities.
- ▶ **Lack of institutional partners.** There seem to be no government or international development partners who could spearhead an initiative on digital job creation in the region. Existing development initiatives focus on livestock, small-scale retail, and so on.

Despite these challenges, several opportunities are available as part of a pilot intervention on job creation in the digital economy.

- ▶ **Limited developmental interventions in the region.** The scale of developmental activities in Afar is relatively limited, despite the fact that the region is one of the poorest in the country and lagging behind the other regions. As a result, the impact of a potential developmental intervention could be significant, resulting in tangible benefits for refugee and host community youth. Contrary to other regions, there would be no concerns related to duplicative or competing efforts.
- ▶ **Reliable internet connectivity and ICT equipment are available in several locations.** The digital library in Samara University, for instance, provides internet access and computer equipment for its students 24/7. The facilities of the university could be used for training and capacity-building programmes for refugee and host community youth.
- ▶ **Aysaita refugee camp's connection to the grid.** The refugee camp is the first one in Ethiopia to be connected to the national grid. Reportedly, administrative issues that prevented the delivery of electricity services to the camp have been resolved as of November 2021, and camp residents should now have access to electricity. This presents a significant opportunity to engage refugees in capacity-building programmes and potentially facilitate online remote work.
- ▶ **The promise of renewable energy in the region.** Owing to the low access to the grid in the region on the one hand, and limited usage of solar energy on the other, an intervention that focuses on the provision of renewable energy skills and products (such as a mini-grid) could be promising and impactful. This kind of intervention might include a training component that would target local youth (or specifically young women) and equip them with valuable skills, and a distribution component, as part of which solar products would be provided to local communities. However, it should be thoroughly considered whether a reliable business model can be generated based on solar energy products, since households in the regions may not be able to afford solar panels, and the private sector is limited.
- ▶ **A large pool of unemployed youth with basic ICT skills.** Upskilling that is linked to tangible job opportunities would be most welcome in the region and could have highly positive impacts on the local youth. This can be particularly promising in the field of renewable energy, which may fulfil two dire needs in the region — provide solar energy to households that lack access to the grid, and create jobs.
- ▶ **Linkages to employers in Addis Ababa and other regions.** Gig platforms and the practice of online remote work are still in the early stages in Ethiopia and virtually absent in Afar. However, given that reliable internet connectivity is available in several locations in the region, a pilot programme that provides local youth with ICT skills and links them to gig platforms in Addis Ababa can be considered.

In sum, because of the unavailability of relevant industry, any intervention in the region must include a labour intermediation component and ensure that capacity-building and upskilling programmes are directly linked to clear employment opportunities.

While the general conditions for digital job creation are challenging, several opportunities for engagement could be considered. Renewable energy seems to present a promising opportunity, albeit the implementation modality for an intervention in this area should be thoroughly examined. Upskilling initiatives that target ICT graduates in the region and connect them with employers (such as gig platforms) elsewhere could also be considered, but they would require a strict selection process. For refugees, the connection of the Aysaita camp to the national grid presents a potential opportunity for ICT upskilling and online remote work.

▶ 5

Job opportunities in the digital economy in Somali Region

▶ 5.1 General demographic and socioeconomic information

5.1.1 General

Somali Regional State is located in the east of Ethiopia, and its territory is the largest after Oromia Region (279,252 sq km). It is home to 12.5 million people, who are predominantly ethnic Somalis and Muslim. Somali borders the Ethiopian states of Afar and Oromia and the chartered city Dire Dawa (Dire Dhawa) to the west, as well as Djibouti and Somalia to the north, east and south, and Kenya to the southwest. For decades, the region has been affected by socio-political issues and disasters, while hosting a large number of refugees who have been uniquely integrated with host communities in the region.

The economic development of Somali Region is generally hampered by unemployment, poverty and internal displacement, caused by recurrent conflicts and natural disasters. As of 2020, urban unemployment in the region was estimated at 19.5 per cent.⁸¹ A total of 80 per cent are agro-pastoralists or pastoralists, and around 22 per cent of the population live below the poverty line according to the most recent official statistics.⁸² However, the region is also recognized for its unique socio-economic potential: its residents are homogeneous and the local economy is closely linked to neighbouring countries and regions, namely Somalia, Somaliland, Djibouti, Kenya and the Gulf States, as well as Somali diasporas worldwide.⁸³

81 The Federal Democratic Republic of Ethiopia, Central Statistical Agency, *Key Findings on the 2020 Urban Employment Unemployment Survey*, 2020.

82 National Plan Commission (NPC), "Ethiopia's Progress Towards Eradicating Poverty: An Interim Report on 2015/16 Poverty Analysis Study" (Federal Democratic Republic of Ethiopia (FDRE), 2017).

83 Kassahun Berhanu and Danish Institute for International Studies, *The Political Economy of Diaspora Remittances in the Ethiopian Somali Region* (Copenhagen: DIIS, 2019).

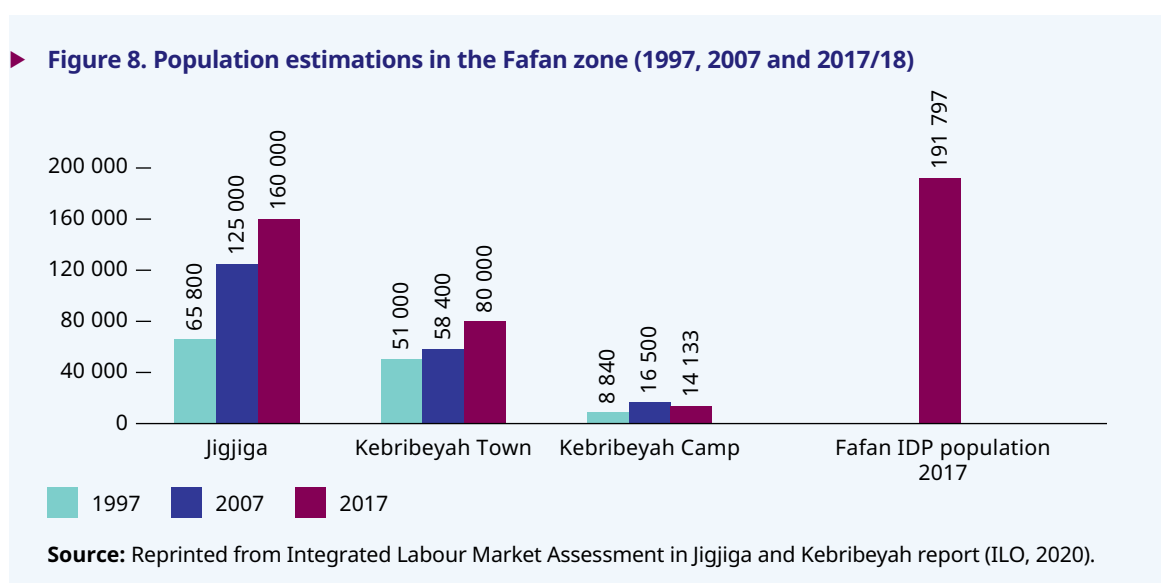
5.1.2 The refugee population in Somali Region

Somali Region in eastern Ethiopia has provided shelter for large numbers of refugees for decades and as of May 2020 hosts approximately 198,536 refugees, almost exclusively Somali (160,948 in Dollo Ado and 37,542 in Jigjiga).⁸⁴ Nearly all the Somali refugees reside in eight camps; the largest group live confined in Dollo Ado, a small area with a host population of 141,000. While there have been waves of Somali refugees over the years, most of the current refugees arrived in Ethiopia after the 2008 drought and the Ethiopian–Somali joint military campaign against violent extremism (2006–2009).

Within Somali Region, Fafan has an estimated population of 1,187,022 and is relatively better off than other regional zones, thanks to its transnational economic links and available infrastructure.⁸⁵ Jigjiga, the largest city in the zone, has a total population of 250,000, evenly divided between men and women. Some 37,000 registered Somali refugees live in the Jigjiga area, of whom about 13,800 belong to households that have been in camps since 2000 (for instance, Kebribeyah). Overall, 62 per cent of refugees are under 18 years of age.⁸⁶

Kebribeyah has a total population of roughly 214,000, including 112,349 males and 102,068 females, with 94,470 living in an urban context and 180,107 in a rural context (CSA, 2017 population projections). Of these, 89,072, or 42 per cent, are dependent on government safety net allocations. In Kebribeyah refugee camp, the total of 13,978 refugees (7,260 women and 6,700 men) includes a protracted population of 6,912 refugees (3,386 women and 3,526 men, UNHCR Global registration system data, 2019). This produces a total and protracted refugee to resident population ratio of 1:15 and 1:31 respectively.⁸⁷ Of the refugee population in Kebribeyah, 56.8 per cent are under the age of 18, meaning that more than half of the camp population were born in the camp and have lived there all their lives. There are 2,090 young adults aged 18 to 25, and 3,355 adults aged 26 to 59. In terms of the protracted refugee population, there are 829 young adults aged 18 to 25.

The region hosts 191,797 IDPs, a large number compared with the population, almost outnumbering Somali refugees (see Figure 8).



Somali refugees share the same ethnic group of host communities in the Somali Region: 97 per cent of the population is ethnic Somali. The rural population (85 per cent of the total) is mostly pastoralist (60 per cent), with the presence of agro-pastoralists (25 per cent), and farmers (14 per cent).

84 ILO, Integrated Labour Market Assessment in Jigjiga and Kebribeyah, 2020.

85 Ibid.

86 Ibid.

87 Reid Cooper, Janet Ouma and Francesco Villarosa, Socio-Economic Integration Area Analysis and Actions Fafan Zone (Somali Regional State, Ethiopia), World Bank, 2019.

5.1.3 Host communities and refugees' relations

Refugees and host communities share a common ethnic language (with more than 98 per cent Somali speakers), religion and culture. The relations between refugees and host communities are strong and congenial, and the Somali territory is part of a single economic and cultural space between Djibouti, Ethiopia, Kenya and Somalia.⁸⁸ Positive economic relationships exist between host community and refugees.⁸⁹

▶ 5.2 Digital infrastructure

5.2.1 Access to electricity

Somali Region has a population of more than 8 million, and only 10 per cent of them are connected to the national grid. As many as 77 per cent of households depend on non-grid lighting sources.⁹⁰

Refugee camps in the region are not formally connected to the national grid. However, households that are located close to host communities connect to the grid illegally, through the host communities. Others rely on solar lanterns and use charcoal or firewood.

FGD participants noted that they often charge their phones in the market or through friends who have informal connections to the grid. In some cases, ARRA sponsors a pay-for-use commercial service to enable refugees to pump water or operate mills.⁹¹

5.2.2 Internet connectivity

Accurate regional connectivity data is hard to obtain, and the regional Ethio Telecom branch was unwilling or unable to share precise figures. Generally, there are 327 cellular towers in the region. In 2021, 4G connectivity was introduced, and the general network coverage is reportedly strong. Broadband and VSat connectivity are available throughout the region, including rural areas. Primary operational challenges cited by Ethio Telecom include cable theft and damage to the cables.

The vast majority of internet users in the region connect to the internet through their mobile phones and use the internet for social media purposes (Facebook and Telegram). Only a tiny minority owns laptops. There are no internet cafés in Jigjiga or Kebribeyah, but Wi-Fi access is available in regular cafés.

Internet connectivity in schools. According to the Bureau of Education, 75 out of 197 secondary schools in the region are connected to the internet through fixed broadband. A total of 175 schools have practised distance education through satellite TV (plasma screens) and are thus connected via VSat. There is, however, no reliable data on the actual connectivity and internet accessibility conditions on the ground.

Internet connectivity in Jigjiga University. Wi-Fi connectivity is widely available to all visitors of Jigjiga University through a fixed broadband connection, but there is no Wi-Fi connectivity in the dormitories. Jigjiga University has ten computer labs, each of which is equipped with at least 25 computers that are all connected to the internet. Most engineering students possess their own laptops.

88 Ibid.

89 DAI Ethiopia Feasibility Study, 2020.

90 USAID, *Off-Grid Solar Market Assessment: Ethiopia* (October 2019).

91 Reid Cooper, Janet Ouma and Francesco Villarosa, *Socio-Economic Integration Area Analysis and Actions Fafan Zone (Somali Regional State, Ethiopia)*, World Bank, 2019.

Internet connectivity in TVET institutes. Connectivity is quite expensive for TVET institutes in the region, and only some are connected through fixed broadband connections. Some TVETs lack connectivity because they are far from the city, and it is generally more limited in remote areas. The Jigjiga Polytechnic College has four computer labs with 35 to 40 computers each. However, they are not connected to the internet, and about one third are not currently functional. There is limited Wi-Fi connectivity in the college, usually used by staff and trainers only.

5.2.3 Access to solar energy

A notable solar energy initiative in the region has been spearheaded by the private sector. HelloSolar,⁹² which operates through the Somali Microfinance Institute, is a for-profit private company that sells solar lanterns, including in refugee camps. The lanterns are imported from Holland (through Belcash). The price of a lantern is 5,000 birr (around USD 110), which can be paid in monthly instalments of 350 birr (around USD 8) or daily instalments of 20 birr (around USD 0.5). Monthly payments are done through helloCash, and a charge code is delivered to the customer upon payment. The charge code should be entered into a remote control that unlocks the lantern (if a customer does not pay, the lantern would lock itself and stop providing light). The lantern provides light and also enables charging. The company provides a 2 year damage guarantee.

HelloSolar employs ten full-time agents responsible for marketing, ten full-time technicians responsible for installation and maintenance, and there is a call centre that responds to customer questions (with two full-time employees). The most common problem encountered by customers is confusion on how to pay. The technicians are trained in local TVET institutes. On average, there are three to five daily calls requesting technical support — primarily issues related to installation and maintenance. So far, 2,000 lanterns have been distributed, including nearly 500 in refugee camps. The lantern is considered to be too expensive for refugees.

► **Photo 2. The HelloSolar System**



© Jennifer Shkabatur, April 2021

92 For more information, see here: https://shellfoundation.org/app/uploads/2019/08/HelloSolar_Ethiopia_Learning.pdf; <https://shellfoundation.org/app/uploads/2020/08/HelloSolar-learning-report.pdf>

It would seem that at present no development organization is working on renewable energy in the region. In the past, several NGOs have worked in the refugee camps on facilitating access to solar energy. The IRC and GAIA distributed solar lanterns and solar charging devices to refugees. Solar streetlamps were provided to the Kebribeyah camp by the UNHCR (see Photo 3), but most of those are no longer functional.

► **Photo 3. Solar panels and informal grid connections in Kebribeyah**



© Jennifer Shkabatur, April 2021

Mercy Corps is planning a new project in the renewable energy sector, financed by Shell Oil company. The project, which was approved in 2021, will include the construction of solar mini-grids in the vicinity of refugee camps.

► 5.3 Supporting platforms and services

5.3.1 Conditions for doing business and access to finance

The conditions for doing business in Jigjiga and Kebribeyah are generally considered positive and are improving over the years. According to an ILO labour market assessment (2020), in Jigjiga 54 per cent of respondents reported a small or significant increase in their business between 2018 and 2019, and 83 per cent considered that 2020 would be better than 2019. In Kebribeyah, a positive trend was reported by 62 per cent of the respondents in 2018–2019, and 78 per cent expected further improvements in 2020.⁹³

The COVID-19 pandemic has significantly affected this positive outlook, especially since outside Addis Ababa, the Somali Region has suffered the highest number of COVID-19 cases. A USAID/Mercy Corps assessment conducted in June 2020 revealed that supply chain actors for essential foods were worried about their continuing operation, enterprises were unsure whether staff salaries could be paid, and household expenditure and consumption fell significantly, in part driven by the stagnation of the livestock market system. Data from Somali Microfinance Institution (SMFI) showed that loan repayments by businesses were facing increasing delays, and liquidity was falling.⁹⁴

93 ILO, Integrated Labour Market Assessment in Jigjiga and Kebribeyah, 2020.

94 USAID/Mercy Corps, *Economic Impact of COVID-19 in the Somali Region of Ethiopia*, June 2020.

Typical obstacles to doing business in Jigjiga and Kebribeyah pre-pandemic include the following.⁹⁵

- ▶ **Lack of access to capital.** In Jigjiga, this dimension is mentioned as the main obstacle (78 per cent) to doing business, as SMEs lack access to affordable interest rates from MFIs and banks that do not allow them to develop longer-term plans. In Kebribeyah, the percentage is lower (69 per cent), given the quasi absence of any supportive financial services.
- ▶ **Lack of technical capacity and market information.** The lack of technical capacity has become an issue for local businesses that sought to benefit from the positive economic development of Jigjiga. However, it is not yet an issue for Kebribeyah, where activities and markets do not require particular expert skills. Likewise, lack of information on local market prices and opportunities on the supply and demand side undermines the development potential of small and medium-sized firms.
- ▶ **Lack of supply, infrastructure, regulation.** As the market conditions in Kebribeyah are still in their infancy, surveyed businesses mentioned the following issues as significant obstacles to doing business:
 - ▶ **Supply:** both volume and quality issues were mentioned as critical issues by respondents with an increase of +33 percentage points compared with Jigjiga;
 - ▶ **Infrastructure:** the absence of good roads, warehouses, cold storage facilities, factories, and small transformation units strongly undermine the development of business activities (+6 percentage points compared with Jigjiga);
 - ▶ **Regulation:** regulatory restrictions and requirements (for instance, licensing, permits, taxation) also have a negative effect on enterprises in Kebribeyah (+13 percentage points compared with Jigjiga). The lack of business development services in the city is likely to exacerbate this sentiment.
- ▶ **Local competition.** The lack of diversified activities and models in both Jigjiga and Kebribeyah make the competition a relatively secondary obstacle (mentioned by 28 per cent and 24 per cent of survey respondents, respectively). Production and business activities are limited to similar products, with relatively similar costs and prices, as access to products and goods is based on a few wholesalers or suppliers who import products and goods.

Kebribeyah entrepreneurs have also mentioned fragile supply chains, limited access to personal capital or resources, policy restrictions for refugees, lack of financial literacy, limited access to technology and Wi-Fi, lack of access to professional networks or mentors, and perverse incentives from donor interventions.⁹⁶

Currently, hardly any linkages exist between Addis Ababa and the Somali region, which is a missed opportunity for regional enterprises.

Access to finance. The main institution that facilitates access to finance in the region is the SMFI, which provides micro-loan services to Somali residents and refugees (these last are served through NGOs). Access to credit is also facilitated by the regional Jobs Creation Commission (more information on the JCC is provided in section 6 below). Two government supported funds are available, as follows.

- ▶ A revolving fund for youth and women groups to start a business, without the need for collateral. A maximum loan of 750,000 birr (around US\$17,000) is available, repayable over five years.
- ▶ A revolving fund for individuals or groups that seek to expand an existing business. A maximum loan of 1,500,000 birr (around US\$34,000) is available, repayable over two years.

These loans are available in Shedder, Aw Barre, and Kebribeyah, but the JCC acknowledges that this mechanism is underused, and more guidance is required on how to scale up its uptake.⁹⁷

95 ILO, Integrated Labour Market Assessment in Jigjiga and Kebribeyah, 2020.

96 DAI Ethiopia Feasibility Study, 2020.

97 Reid Cooper, Janet Ouma and Francesco Villarosa, Socio-Economic Integration Area Analysis and Actions Fafan Zone (Somali Regional State, Ethiopia), World Bank, 2019.

Another agency that facilitates doing business in the region is the Somali Regional State Cooperative Promotion Agency in Jigjiga, which administers the process for creation and certification of co-ops. The Cooperative Promotion Agency conducts its own training (financial training, co-op management, purchasing, control, and management) and works with the TVET Bureau when more technical training is called for. There are currently 31 types of co-ops, including agriculture, savings and credit, natural resource, livestock and small business co-ops; the Cooperative Promotion Agency counts 35 registered cooperatives with both residents and refugee members.⁹⁸

5.3.2 Mobile banking

Fintech (financial technology) penetration in Somali region is high compared with other locations in Ethiopia, and the population has basic technical skills.⁹⁹ In particular, Somali Region is characterized by extensive presence and fierce competition among three mobile banking platforms: helloCash (part of Somali Microfinance, the oldest platform with the most extensive regional coverage and over 600,000 registered users), e-Birr (part of the Cooperative Bank of Oromia, with more than 100,000 users), and Sahay (part of Rays MicroFinance Institution). helloCash and Sahay charge commission for each transaction, while e-Birr is currently free of charge.

► Photo 4. Mobile payment platforms advertisements in Jigjiga, Somali region



© Jennifer Shkabatur, April 2021

helloCash operates as a mini-bank and facilitates digital money transfers, loans, and savings. The platform is owned by the Dutch Belcash corporation and is licensed as a banking institution in Ethiopia, albeit with a relatively low investment limit. The platform has its own servers, which are connected to Ethio Telecom, and all technology is developed by Belcash.

98 Ibid.

99 DAI Ethiopia Feasibility Study, 2020.

There is no need to open a formal bank account in order to use helloCash, and the service reportedly has more than 600,000 customers in Somali Region (including around 50,000 PSNP customers). Refugees may also use the service and have helloCash accounts. All that is required to open an account is an Ethiopian ID card or a refugee card, and a mobile phone with a SIM card (not necessarily a smart phone). In the past, refugees were not allowed to purchase SIM cards, but the UNHCR distributed one card per household, and today the restriction has generally been eased. All FGD participants in Kebribeyah were familiar with the helloCash service, and most of those who had mobile phones also had a helloCash account, using it to send money to friends or to receive it from them.

Services offered by helloCash include cashing in, cashing out, and transferring money to other helloCash users. The daily limit for an individual cash-out is 8,000 birr (USD 180) per day, and individual users can transfer up to 50,000 birr (USD 1,130) to other helloCash users per day. There is no limit on B2B transfers. Transfers cannot be made to users of other digital payment platforms. While helloCash is available outside Somali Region, customers who registered their account in one region cannot cash in or out in other regions.

User registration, as well as cashing in and out, are done through helloCash agents — registered merchants, who work with helloCash on a commission basis. A commission is charged for each transaction (for example around 2 to 3 birr for a 1,000 birr deposit or payment), and helloCash does not provide any other form of compensation to its agents. One agent serves up to 2,000 customers. The vast majority of agents are men — since having a merchant licence is a precondition for becoming an agent, and the number of female merchants is low. Owing to the low commission and the ability of a single agent to serve a large number of customers, the job creation potential of helloCash is relatively limited.

helloCash has 42 branches in Somali Region and employs 500 full-time staff. It also has 2,500 agents, two or three of those in the refugee camps. The conditions required to become an agent are as follows: official business licence issued by the Trade Bureau, Ethiopian nationality, residence ID, and tax ID number. According to an agreement with the UNHCR and ARRA, refugees can also become agents. New agents receive an “onboarding training” of 30 to 40 minutes. No formal education is required to become an agent, and most agents have only obtained primary school education. Nearly 6,500 agents are employed across the region.¹⁰⁰

Full-time staff is recruited through a competitive process, based on education and skills. Vacancies can be advertised on different recruitment websites (Somali Jobs, Ethio Jobs), in public locations, and in helloCash offices. Full time employees receive an induction training of five days, focusing on customer service, technology, organizational culture, mobile banking, risk management, and so on.

helloCash collaborates with different NGOs to expand the coverage of its services. For instance, IRC helps refugees to open helloCash accounts and to become agents. MercyCorps provides training to rural communities on digital financial services (based on a 50:50 cost-sharing agreement with helloCash).

The main challenges encountered by helloCash include connectivity difficulties (the USSD of Ethio Telecom is inconvenient) and restrictive directives issued by the National Bank of Ethiopia (such as limits on investments). For the future, helloCash is interested in expanding its services into other regions and also supports the EthioSwitch services, which would enable users to cash in or out in every ATM as well as across varying financial institutions.

Sahay and e-Birr were not directly interviewed during the field visit, since their practices are similar to helloCash, and e-Birr is the largest digital payment platform in the region that also has significant coverage in rural areas.

Ethio Telecom has also launched a digital payment platform, called TeleBirr, in the coming months, in direct competition with the regional platforms.

100 Mercy Corps, Economic Impact of COVID-19 in Somali Region of Ethiopia, 2020.

Generally, awareness and usage rates of digital payment platforms seem to be extensive in the region, but there do not seem to be clear pathways of translating this into job creation.

5.3.3 Incubators and accelerators

There are currently no incubators or accelerators for start-ups of ICT-based SMEs in Somali Region. The construction of a Science Café is planned by the regional Innovation and Technology Bureau in Jigjiga.

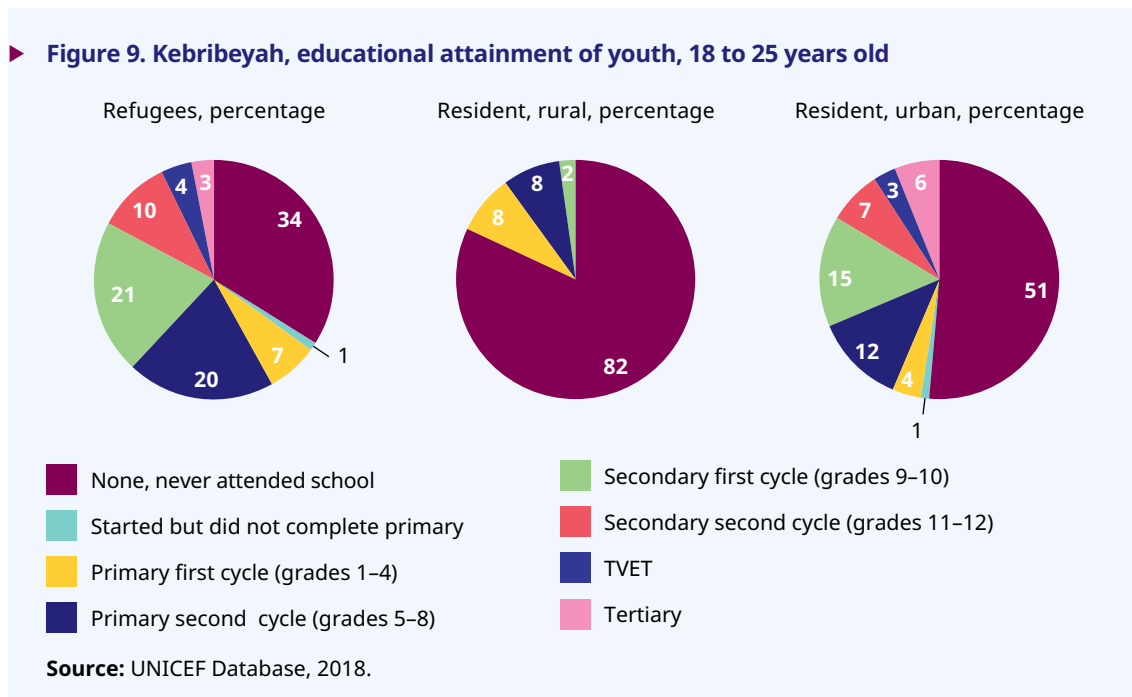
5.3.4 Competitions

The regional Innovation and Technology Bureau was established in 2018. Its main activity so far has been the arrangement of annual innovation competitions in ICT sectors. These competitions are national and have regional representatives. They are advertised through Somali regional TV, newspapers and social media, as well as in TVET institutes and in schools. More than 20 participants took part in the competition in 2020, and winners earn a monetary prize.

► 5.4 Skills supply

5.4.1 General educational attainment

Regarding education levels of refugees and the host community, data from the UNICEF database for youth (18–25 years) and household heads show that the refugee population of Kebribeyah camp in this category has attained levels that are slightly higher than those of urban residents, and much higher than those of rural residents (see Figure 9).



5.4.2 ICT training in secondary schools

Computer skills at secondary schools. Mandatory computer skill classes are provided starting from grade 9, around two or three classes per week. Grade 9 consists of an introduction to basic computers, grade 10 focuses on Microsoft programmes, and grades 11 to 12 may include basic programming.

ICT equipment in schools. Equipment is generally a challenge. But there are also regional initiatives the target-specific schools. For instance, a World Bank project financed the delivery of computers to selected 18 schools (80 for each school).

Availability of ICT teachers. Overall, there are around 550 ICT teachers in the region (about 3 per school), who usually have computer science degrees. Most ICT teachers come from other regions. There are no upskilling opportunities for teachers, and their skills are generally perceived to be sufficient.

5.4.3 ICT training in Jigjiga University

Jigjiga University is a regional public university, established in 2007. It has 12,000 students, accepted from all over Ethiopia (through a governmental assignment system). Refugees (250) and IDPs (about 800) account for 9 per cent of the students. The university offers 24 masters programmes and 47 bachelor programmes. Of the 1,138 university lecturers, 5 per cent hold a PhD. ICT-related subjects are taught as part of three departments: computer science, software engineering, and IT.

The ICT training provided in universities is generally deemed unsatisfactory in terms of actual market needs and demand, and ICT graduates are perceived as insufficiently skilled. Most of this training is theoretical, and ICT graduates have limited practical computer skills. As a result, the majority of ICT graduates do not manage to secure jobs in their professions.

The lack of practical training can be attributed to several factors. First, university professors usually lack industry experience or other practical background and are thus unprepared to deliver practical skills to their students. Second, there is insufficient functional equipment in the university. Third, although internships are a mandatory part of the degree, they are quite scarce because of the dearth of industry in the region. ICT students who manage to obtain apprenticeships or internships typically work in construction companies, Ethio Telecom, banks, or Ethiopian Electric Power corporation.

5.4.4 Employability skills of university graduates

A common challenge noted by key informants in Jigjiga is the lack of employability skills among students. A national survey carried out by EthioJobs reveals that the most significant gaps of young university graduates include computer literacy, job readiness (in terms of both personal and professional skills), English proficiency, self-awareness and preparation for interviews.

Graduates do not know how to search and apply for jobs, how to prepare a CV, how to behave at the workplace, and so on. The university's career services office provides a variety of training on this issue, but only 300 to 400 students, of whom only 30 per cent are women, take advantage of it. The career services office employs two male counsellors. Graduates typically find jobs through word of mouth, connections and scattered advertisements. The general opinion is that jobs are scarce and highly in demand. Very few graduates consider self-employment as an option. It is more difficult for women to find jobs, since they are often unwilling or unable to leave their home towns.

Jigjiga University also has a Centre of Excellence, which focuses on curriculum development for pastoralist and agro-pastoralist communities. The university-industry linkage department is available but reportedly unfunctional.

5.4.5 ICT training in TVET institutions

TVET opportunities are diverse in Jigjiga, with four private colleges and a dozen smaller private TVET centres, in addition to several public TVET colleges. The public TVET institutions are Jigjiga Polytechnic College (JPT), the School of Management and the Health Science College. The four large-scale private TVET colleges are Liberty, Horn, Ilyas International and Rift Valley College. There is a total of more than 1,500 ICT trainees in all the institutes, and more than 100 ICT trainers and federal TVET graduates.

The TVET system provides two types of training in the region: hard skills (for instance, construction and metalwork) and soft skills (such as ICT, accounting and management). ICT-related training aims to prepare IT technicians (for example, for network service or maintenance) and computer office workers (typing skills, use of Microsoft Office programmes such as Word, Excel and PowerPoint). The skills of ICT trainers are generally considered overly theoretical and irrelevant for meeting market demands, especially in areas such as software engineering. Upskilling is required, and there is interest in Cisco education. All TVET trainees come from the region, and refugees also attend short-term training. According to key informants, 45 per cent of ICT students are female, and the interest from women in the field is constantly increasing. They usually uptake secretarial jobs or software design.

Jigjiga Polytechnic College (JPT) is the main TVET institution in the Fanfan zone, offering 13 distinct sector programmes taught by 168 teachers to 1,000 to 1,500 students every academic year. TVET completion rates for construction are 20 per cent, mechanics 20 per cent, and electricity 40 per cent, while soft skill modules such as ICT had a completion rate of 90 per cent. The ICT programme always enrolled the highest ratio of students (20 per cent), compared with construction, mechanics, GMFA and furniture making, which collectively enrolled 16 per cent of all students.¹⁰¹

Internship opportunities are available for students in both public offices and the private sector, and the completion of internships is mandatory for all. TVET institutes tend to identify small enterprises that might be interested in interns, but convincing them to participate in an internship programme is often challenging. The institutes also connect their trainees to regional and *woreda* level employment services.

Unemployment rates among TVET graduates are high, with 22 per cent employed and 78 per cent unemployed. However, the results of a recent tracer survey (November 2019)¹⁰² suggest that only 2.7 per cent of the unemployed graduates surveyed believed that it was because the skills they had gained were not useful.¹⁰³

5.4.6 Renewable energy skills

Regional TVET institutions prepare electricity technicians, and some of them also deliver training on solar panel installations (both short and long term).

101 ILO, Integrated Labour Market Assessment in Jigjiga and Kebribeyah, 2020.

102 ILO, Integrated Labour Market Assessment in Jigjiga and Kebribeyah, 2020.

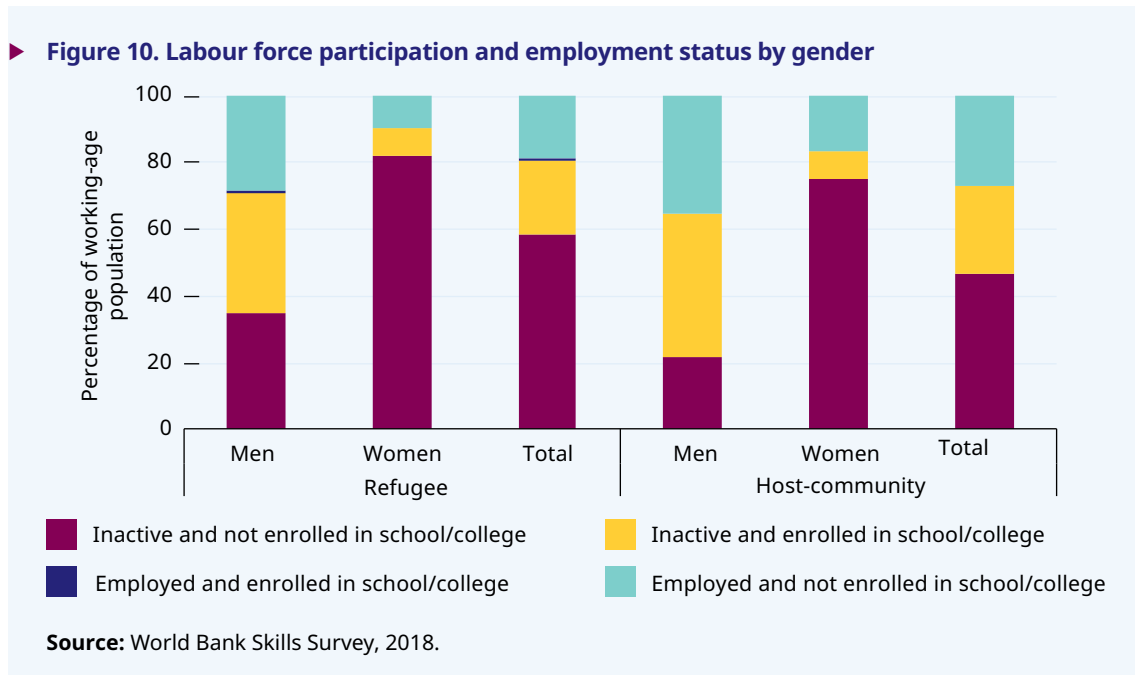
103 ILO, Integrated Labour Market Assessment in Jigjiga and Kebribeyah, 2020.

▶ 5.5 Labour market conditions

5.5.1 Employment statistics

The ILO's Labour Market Assessment (2020) confirmed high levels of unemployment among educated Jigjiga youth with secondary education, university level, or TVET. Students who graduate from universities face employment challenges in their fields, such as engineering, health and finance. More than half of the working-age population of refugees (58 per cent) are inactive, while more than 54 per cent of the corresponding host community is either active and employed or enrolled in school or college.¹⁰⁴ In both groups, being inactive in the labour market is more common for the female working-age population than for males, especially among refugee women (see Figure 10). Males in the host community have a higher employment rate than the refugees.

The most common reason cited for unemployment (by 45 per cent of unemployed graduates) is the limited supply of jobs in the community. Moreover, 35 per cent of unemployed graduates stated that the lack of capital to start their own business contributed to their unemployment.



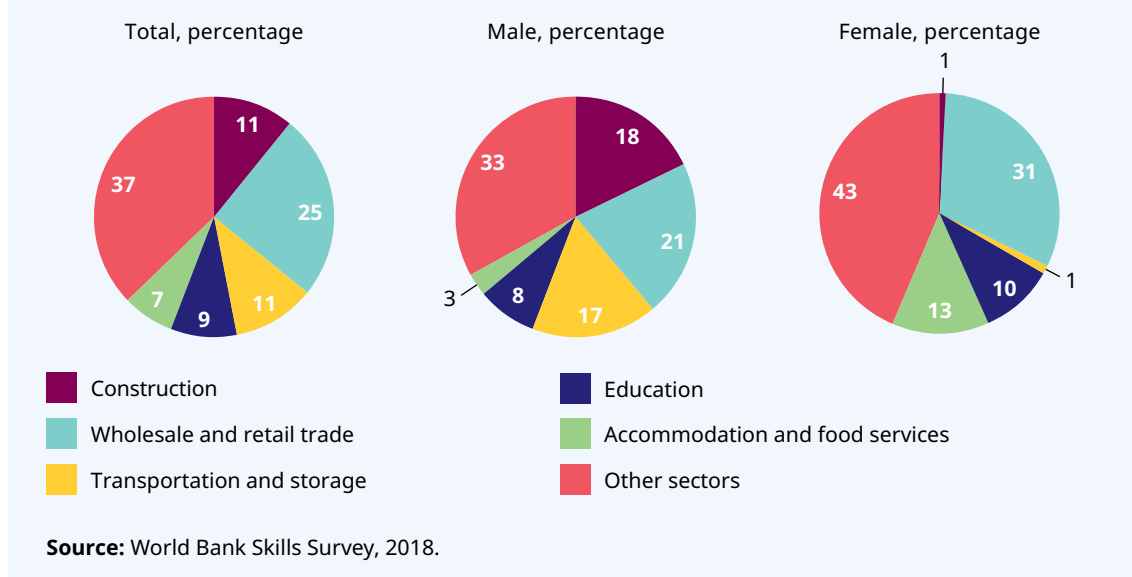
A World Bank assessment (2019) revealed that there are few opportunities for youth (both host community and refugees) in the region, owing to a lack of employment positions and their lack of experience; also, open vacancies can become available through family connections. As such, there are systemic constraints on employment opportunities for youth populations.

¹⁰⁴ Reid Cooper, Janet Ouma and Francesco Villarosa, Socio-Economic Integration Area Analysis and Actions Fafan Zone (Somali Regional State, Ethiopia), World Bank, 2019.

5.5.2 Wage employment

Employment in Jijiga is dominated by trade which comprises 25 per cent of the total employed by major industry, and has a larger ratio of female participants (31 per cent) than male (21 per cent).¹⁰⁵ Women are also active in accommodation and food services, with 13 per cent employed by major industry, and 10 per cent in education. Men work mostly in the trade sector, in construction, and in the transportation and storage industries, as shown in Figure 11 (CSA, 2018).

► **Figure 11. Employment by major industry**



In the ICT sector, private employers mainly manage small mobile repair shops or electronics stores. The primary category of employers hiring ICT graduates are government agencies, which are mostly interested in secretarial work (typing skills and familiarity with Microsoft Office programmes) and IT equipment maintenance. Some were also interested in more complex ICT jobs, such as database engineering (for instance, to develop and maintain the Education Management Information System) and software development.

Ethio Telecom is the first (and only) ICT-sector employer in the region. It employs 390 workers educated in different parts of the country. Every technician who joins Ethio Telecom must have a degree in engineering or computer science. The recruitment process relies on public advertisements of open vacancies.

Ethio Telecom offers an induction training for its new employees, which focuses on organizational and work culture, as well as specific technical skills — based on the requirements of each vacancy. A typical training lasts for 15 days. More than 15,000 training courses are delivered annually in the country. On average each employee follows three training sessions every year. Reportedly, university graduates who join the company require significant capacity-building, as the skills that they possess are largely theoretical and do not meet the company's requirements. Internship opportunities are provided for students, and the company employs 10 to 15 engineering students every year.

The ICT or computer skills of ICT graduates are often perceived as overly theoretical and not relevant to the practical needs of their employers. In general, on-the-job training is provided. Ethio Telecom, for instance, provides a one-week induction training, which consists of technical subjects (such as IP transmission, radio, and so on) and soft skills. This training follows the curriculum developed by Ethio Telecom's national training centre.

¹⁰⁵ Reid Cooper, Janet Ouma and Francesco Villarosa, Socio-Economic Integration Area Analysis and Actions Fafan Zone (Somali Regional State, Ethiopia), World Bank, 2019.

For several reasons, employers (government agencies and Ethio Telecom) are not always interested in accepting student interns. First, either university students or TVET trainees are not perceived as sufficiently skilled, and thus their perceived value to the employers is low. Moreover, in some cases they are also viewed as a burden, since they require their employers' attention and time, without contributing to the job. There are no government or other incentives to encourage employers to accept interns, and no insurance should equipment be damaged or mishandled.

5.5.3 Self-employment opportunities

In Somali Region, daily labour and self-employment opportunities are reportedly more significant than wage employment. Owing to restrictions on the right to work, all refugee income apart from humanitarian assistance is from informal daily labour or micro-enterprises. Micro entrepreneurs often report that they prefer running their own business rather than taking wage employment. Refugees in Kebribeyah run a number of retail businesses, including shops selling fast-moving consumer goods, tailoring, small-scale restaurants and tea or coffee shops, water delivery services and DSTV access points.¹⁰⁶

All key informants agreed, however, that self-employment in ICT-related areas is relatively low. This is partially attributed to the common mindset among university and TVET graduates, who prioritize permanent jobs (especially in government offices) to any other form of employment. TVET graduates are more likely than university graduates to pursue self-employment, as they have more practical skills.

Several development organizations support self-employment among refugees and host community youth, but none of the existing projects have ICT-related components.

- ▶ The IRC implements the SHARP project, which aims to develop market systems in Jigjiga, Dollo Ado and Gambella, focusing in particular on the livestock sector. The project targets entrepreneurs and provides business development services and market linkages, access to finance support, help with purchasing inputs or technology, and so forth. IRC also collaborates with helloCash on opening accounts for refugees and recruiting refugee agents. The IRC considers the ICT sector to be fairly limited and lacks data on ICT-related enterprises. Out of 20,000 SHARP beneficiaries, around 35 per cent are women.
- ▶ Mercy Corps has been implementing a programme that is fairly similar to SHARP (focusing on livestock and not related to ICT).
- ▶ DICAC is the implementing partner of GIZ as part of the STEP programme, which targets refugees and host communities in Sheder and Aw Barre camps and delivers training on metalwork and woodwork, in collaboration with local TVET institutes. Upon completion of the training, trainees are given in-kind support, enabling them to open their businesses and establish cooperatives. GIZ supplies all the materials and equipment. As of April 2021, 240 trainees have completed the programme, 200 refugees and 40 host community representatives; 19 are women (all refugees).

Self-employment in ICT-related areas is reportedly scarce and consists mostly of micro enterprises (such as repair sheds) that provide mobile repair services, small database design, and so on.

¹⁰⁶ Reid Cooper, Janet Ouma and Francesco Villarosa, Socio-Economic Integration Area Analysis and Actions Fafan Zone (Somali Regional State, Ethiopia), World Bank, 2019.

► 5.6 Labour intermediation

Two government agencies are responsible for employment services in the region: the Job Creation Commission (JCC) and the Bureau of Labour and Social Affairs (BoLSA). They appear to have duplicate functions, but the former focuses on *creating* jobs, while the latter focuses on *finding* jobs and matching jobseekers to existing jobs.

The regional BoLSA manually registers jobseekers and provides them with a jobseeker's ID card. As of 2021, there are some 4,000–5,000 registered unemployed individuals in the region. The bureau is generally expected to provide employability or job search services, but these do not seem to be available and its capacity generally appears to be very weak.

BoLSA does not conduct market assessments but intends to do so in the future. Its key informants generally indicated that there is a mismatch between available skills and the market needs. Most jobseekers look for government positions, but if this is not possible, they are also willing to opt for private sector jobs in the hotel industry, food industry (bakeries), construction or mattress production (a strong area in the region). There is no clear way to advertise jobs, and the bureau becomes aware of available jobs through inspections carried out by its officers in various industries. No initiatives are available in the renewable energy sector.

The most promising and effective labour intermediation activities in the region are carried out by the newly established regional JCC, which accompanies jobseekers through the full cycle of business establishment and development and provides the following services.

- **Registration and business plan development.** Jobseekers are registered by regional one-stop-shop (OSS) centres, which report to the JCC. OSS centres also support jobseekers in the development of business plans.
- **Business establishment.** Those who are interested in establishing their own business may then obtain targeted support from the JCC; it helps them to fulfil all legal requirements for the establishment of new businesses (registration of new legal entities, licensing, and so on).
- **Training.** The JCC facilitates the delivery of training and capacity-building to jobseekers in areas in which they seek to establish their enterprises. For technical training, the JCC collaborates with local TVET institutes and covers the expenses of jobseekers who are interested in specific training. Entrepreneurship training is delivered by the regional Entrepreneurship Development Centre.
- **Access to finance.** This can be obtained through government or donor loan. In the case of the former, the JCC provides letters of support for new enterprises to access the government's revolving fund, to obtain a micro-finance or a regular commercial loan.

These activities are carried out in 93 *woredas* across the region, and 25,159 urban jobs in newly established SMEs have been created in 2020. The SMEs usually employ two or three workers. There is no precise sectoral data on newly registered SMEs, but all of them are in the sectors of urban agriculture, industry (metal and woodwork) and services (ICT is one of those). The registration process at OSS centres is currently manual, and the JCC is looking for donor support to digitize the process. There are 6 OSS centres in Jigjiga and 30 overall in Somali Region, but none in Kebribeyah or other camp areas.

Jobseekers who are interested in the ICT area are predominantly TVET college graduates (rather than university graduates), and they are interested in the establishment of enterprises such as electronics or mobile repair shops, maintenance, internet cafés and mobile banking.

A target objective of the JCC is that at least 75 per cent of newly created jobs are for the youth, at least 50 per cent for women, and 1 per cent for persons with a disability. As of April 2021, 46 per cent of the JCC's beneficiaries are women, all of whom work in retail. There is generally a highly positive perception of women as committed business owners who pay back their loans, and the JCC encouraged micro-finance institutions to provide women's SMEs with additional loans.

Refugees can also benefit from the JCC's support, within the limits of the government's regulations. In 2020, four enterprises were supported in Kebribeyah (two beauty salons and two retail stores).

Challenges and gaps

- ▶ **Structure.** The JCC was created in 2019 to substitute fragmented job creation services. As of 2021, the bureau has six departments, most of which are not yet functional. The structure and functionalities of the new bureau has not been fully developed, and this is one of its main challenges.
- ▶ **Market linkages.** The JCC seeks to better understand how market linkages can be created sustainably in different sectors, and also how all government-funded projects can be linked together to better identify new job opportunities. The generation of market linkages seems to be challenging, and the JCC currently lacks sufficient capacity to properly assess the market conditions of SMEs. A newly created department will be responsible for assessing market needs and job opportunities, but it is not active yet.
- ▶ **Market assessments.** The JCC does not conduct assessments that would explain the failure or success of supported SMEs. There are also no market assessments of female-owned SMEs or any other regional assessments regarding the impact of JCC services.
- ▶ **OSS capacity.** The regional OSS capacity is low. There is a lack of equipment (such as tablets for digital registration) and also low staff capacity (for instance, the ability to follow up with enterprises and collect information regarding business needs or opportunities). The government regulation stipulates that there should be 16 employees in each OSS, but in practice there are four to five members of staff only. The OSS functions reactively, while the JCC would like it to be more proactive.

It should be noted, however, that the availability of BDS is uncommon in Somali Region, and the uptake of JCC's services remains to be seen. According to the ILO labour market assessment (2020), BDS are perceived as either too limited or too expensive for local businesses. Several issues were identified as part of the assessment.

- ▶ Business skills training is common as part of livelihood programming, but there has been no holistic programme set up in Kebribeyah that brings entrepreneurs from ideation to scale.
- ▶ Most entrepreneurs do not have access to business skills training, and there continues to be fatigue with one-off approaches that have no follow-on support.
- ▶ FGDs conducted as part of the ILO assessment (2020) indicated the willingness to pay for services in small amounts if they provide real value.
- ▶ While mentorship is not a well-known concept outside the Addis-based ecosystem, regional value chain actors have expressed interest in connecting further with refugee communities.
- ▶ TVET institutions partner with donors to adapt their programmes to improve employment outcomes and provide more entrepreneurship programming.

► 5.7 Lessons learned: challenges and opportunities for jobs in the digital economy in Somali Region

Somali Region presents a promising and timely case for the development of jobs in the digital economy. The primary hurdles and opportunities include the following.

- **Limited electricity access and internet connectivity.** While access to electricity is prevalent in urban areas, it is more challenging in rural districts. The refugee camps are not connected to the grid. Internet connectivity is generally available but often not affordable for refugees and poor host community members.
- **Limited number of ICT employers.** Wage employment in the ICT sector is relatively limited in the region, and most of ICT-related jobs are small enterprises (for instance, mobile repair shops, electronics, and so on).
- **Insufficient quality of ICT skills.** Another challenge is the perceived weakness of ICT skills acquired by university graduates, whose studies are focused on theoretical issues and who typically lack opportunities for practical internships. The training of TVET students is more practical in its nature, and their employability is reportedly better in the region.
- **Lack of market information on ICT-related needs.** Reliable and up-to-date data on the number and nature of ICT-related businesses in Jigjiga or Kebribeyah is unavailable. The same applies to information on market needs and demands in this area, although the regional JCC intends to collect such data in the near future. This gap hinders the ability to assess the viability of enterprises in ICT-related fields, or to gauge factors that affect the success or failure of these enterprises.

Despite these challenges, several opportunities can be exploited as part of a pilot intervention on job creation in the digital economy.

- **Favourable geolocation.** As indicated by the ILO Labour Market Assessment (2020), both Jigjiga and Kebribeyah are favourably located at the intersection of trade routes, and take advantage of diversified products and services from neighbouring Somalia and Somaliland. The urban areas of the two cities are being rapidly urbanized and are bustling with businesses.
- **Strong integration between refugees and host communities.** The integration between refugees and host community members is not only socially strong, but also geographically smooth. Kebribeyah town and refugee camp are adjacent and enjoy robust ties, thus facilitating any intervention that would focus on both refugees and host community youth.
- **Highly developed mobile banking and technical knowledge.** While the impact of mobile banking platforms on job creation could not be established as part of this study, it is clear that these platforms facilitate the ease of doing business in the region. They also contribute to the general technical skills of regional youth, which may translate into the adoption of other ICT innovations.
- **Openness to self-employment.** Daily labour and self-employment opportunities are reportedly more significant than wage employment in Somali Region. This presents an opportunity for the development of enterprises in the ICT sector, such as electronics or mobile repair shops, maintenance, internet cafés, mobile banking, database design, and so on.
- **Relevance of ICT skills for a variety of sectors.** The relative economic diversification in the Fafan area enables the good use of ICT skills for a variety of purposes, including the retail and hospitality sectors. This seems to be an unfulfilled opportunity in the region. While these sectors do not rely on ICT skills at present, they could become more in demand as the sectors grow further.

- **Promising labour intermediation services by JCC.** The newly established regional JCC seems to be a promising partner for a regional job creation initiative in the ICT-sector thanks to its access to jobseekers, its partnership with TVET institutes, and its experience in supporting the establishment of SMEs. The agency has set ambitious job creation objectives, and it focuses specifically on the establishment of small enterprises — the type of businesses that seem to be most relevant in the ICT sector in Jigjiga and Kebribeyah. Entry points for collaboration with the JCC could include the following:
- support in conducting market needs assessment in the ICT sector in order to overcome the current deficit of such information;
 - support in the provision of business development services, which are currently weak (or even non-existent) in the region;
 - development of training curricula;
 - development of a market linkages and mentorship programme.
- **Renewable energy in the region.** Because of the low access to the grid in the region on the one hand, and the limited usage of solar energy on the other, an intervention focusing on the provision of renewable energy skills and products (such as a mini-grid) can be promising and impactful. Such an intervention might include a training component that would target local youth (or specifically young women) and equip them with valuable skills, and a distribution component, as part of which solar products would be provided to local communities. However, it should be thoroughly considered whether a reliable business model can be generated based on solar energy products, since households in the regions may not be able to afford solar panels. The model pursued by helloCash, for instance, reveals that the price of solar lamps is too high for refugees. It would also be important to avoid duplication, since Mercy Corps is pursuing a project to construct mini-grids in the renewable energy sector (to be financed by Shell Oil company).



▶ 6

Recommendations and conclusions: jobs in the digital economy in Afar and Somali regions

This section brings together the lessons learned from the Afar and Somali regions. It outlines the challenges for job creation in the digital economy in both regions and discusses potential opportunities for programmatic interventions.

▶ 6.1 Challenges

The two regions studied in this assessment share several common characteristics and challenges for job creation.

Access to electricity

In a pattern similar to the one identified in other refugee camps in East Africa (ILO, 2021), limited access to electricity is a pre-eminent challenge that hinders refugees' access to livelihoods in general and the digital economy more specifically. Clearly, the path from electricity access to a job in the digital economy is long and convoluted. Electricity access is not directly linked to internet connectivity, but the former facilitates the latter. Having affordable electricity access enables refugees to charge their mobile phones easily, thus encouraging more people to own a phone and use it more extensively for a variety of purposes, including accessing the internet and social media. In such a way, marginalized communities — and especially the youth — can start acquiring basic digital skills, which can then be expanded into more sophisticated skills that are useful in the digital economy. Electricity access also facilitates the delivery of capacity-building activities and training inside the camp, eliminating the need to arrange other training locations and thus enhancing the accessibility of such capacity-building. Once electricity is available in the camps, it is also much easier for trainees to continue their studies and practise at home, and not only on the premises of their training institution.

The electricity conditions in the two refugee communities are distinct. In Afar, Aysaita camp is already connected to the grid, but electricity is not supplied because of a billing conflict. The camp could thus get reliable access to electricity as soon as the conflict is resolved. In Somali, Kebribeyah camp is largely connected informally to grid and non-grid sources. Such connections are naturally less sustainable, but they are already in place and can be taken advantage of.

Internet connectivity

Internet connectivity is generally available in both regions, but it is often not affordable for refugees and poor host community members. FGDs suggest that internet is typically accessed through mobile phones, on a per-usage basis. This results in sporadic internet use, mostly for social media purposes.

Availability of jobs in the digital economy

This assessment outlined five possible categories of jobs in the digital economy: (1) jobs that require complex ICT skills; (2) jobs that require vocational ICT skills; (3) jobs via digital labour platforms; (4) small-scale digital entrepreneurship; and (5) non-ICT jobs (secretarial or administrative) that require basic ICT skills.

Out of these categories, regional universities and TVET colleges equip their graduates with jobs from categories (1) and (2). Jobs that require complex ICT skills are scarce in both regions. There is a lack of ICT-related industry and employers in both regions. Both wage and self-employment in sectors that require ICT skills are highly limited. Ethio Telecom and government agencies remain the primary employers in this field.

Jobs via digital labour platforms and digital entrepreneurship are virtually absent in both regions. In Somali, there is a significant usage of digital payment platforms (helloCash, e-Birr and Sahay), but there is no evidence on whether and how these platforms contribute to job creation.

Administrative and secretarial jobs that require basic ICT skills are more prevalent in Somali Region than in Afar, but no formal employment data is collected.

ICT and employability skills

In both regions, the ICT skills acquired by university graduates are perceived weak and inadequate to meet market needs. As there is a general dearth of employers in this field, computer science and information technology students do not have opportunities for internships or other practical experience during the course of their studies. While the training of TVET students is more practical in its nature, their employability is also limited. In both regions, it appears that the majority of ICT graduates either leave to seek employment in other regions or remain and work in other fields. Only a minority of ICT university graduates manage to find employment in this field. TVET graduates are more likely to find employment in Somali, mostly in small mobile repair or electronics shops. This evidence is anecdotal, since the regional BoLS offices do not collect data on employability patterns.

Self-employment

Generally, university and TVET graduates in both regions are not interested in self-employment and do not consider it as a career path. In Afar, this can be attributed to lack of access to finance in the region, lack of entrepreneurial skills among the youth, weak entrepreneurial culture, and lack of private market presence. In Somali, there is more openness to self-employment, but similar challenges are in place.

Labour intermediation

Business development services or other labour intermediation support (either by public or private service providers) are unavailable in Afar. This hinders the ability of young people to find a job and turns the job search process into an endeavour that necessitates informal ties and connections (and thus placing an additional burden on refugees and other marginalized groups that lack the required connections).

Lack of market information on potential ICT-related needs

Reliable and up-to-date data on the number and nature of ICT-related business in Afar and Somali is unavailable. Information on market needs and demands in this area is also unavailable, although the regional JCC in Somali intends to collect such data in the near future. This gap hinders the ability to assess the viability of enterprises in ICT-related fields, or to gauge factors that affect the success or failure of these enterprises.

Fatigue related to capacity-building programmes among refugees

FGDs revealed significant fatigue among refugees about training and capacity-building interventions that provide skills but overlook the need for labour intermediation. While refugees are eager to work, they are reluctant to take part in upskilling programmes that would not generate sustainable employment opportunities.

▶ 6.2 Opportunities

Despite these challenges, several opportunities are available in both regions to generate jobs in the digital economy.

- ▶ **Reliable internet connectivity and ICT equipment are available in several locations.** In both regions, the facilities of regional universities (Samara and Jigjiga) can be used to deliver ICT-related training and capacity-building activities. Both universities have computers and reliable internet connectivity.
- ▶ **Large pool of unemployed youth with basic ICT skills.** Upskilling that is linked to tangible job opportunities would be most welcome in both regions and could have highly positive impacts on the local youth. This can be particularly promising in the field of renewable energy, which may fulfil two dire needs in the region: provide solar energy to households that lack access to the grid, and create jobs.
- ▶ **The promise of renewable energy in the region.** Owing to the low access to the grid in both regions, as well as the limited usage of solar energy, an intervention that focuses on the provision of renewable energy skills and products (such as a mini-grid) can be promising and impactful.
- ▶ **Linkages to employers in Addis Ababa and other regions.** Digital labour platforms and the practice of online remote work are still in their infancy in Ethiopia and virtually absent in the Afar and Somali regions. However, given that reliable internet connectivity is available in several locations in both regions, a pilot programme that provides local youth with ICT skills and links them to gig platforms in Addis Ababa can be considered.

Somali Region presents some additional opportunities that are not in place in Afar.

- ▶ **Favourable geolocation.** As indicated by the ILO Labour Market Assessment (2020), both Jigjiga and Kebribeyah are favourably located at the intersection of trade routes and take advantage of diversified products and services from neighbouring Somalia and Somaliland. The urban areas of the two cities are being urbanized rapidly and are bustling with businesses.
- ▶ **Strong integration between refugees and host communities.** The integration between refugees and host community members is not only socially strong, but also geographically smooth. Kebribeyah town and refugee camp are adjacent and enjoy robust ties, thus facilitating any intervention that would focus on both refugees and host community youth.
- ▶ **Highly developed mobile banking and technical know-how.** While the impact of mobile banking platforms on job creation could not be established as part of this study, these platforms clearly facilitate the ease of doing business in the region. They also contribute to the general technical skills of regional youth, which may translate into the adoption of other ICT tools.

- ▶ **Openness to self-employment.** Daily labour and self-employment opportunities are reportedly more significant than wage employment in Somali Region. This presents an opportunity for the development of small-scale ICT entrepreneurship (for instance, e-commerce) as well as supporting small enterprises in the ICT sector such as electronics or mobile repair shops, maintenance, internet cafés, database design, and so on.
- ▶ **Relevance of ICT skills for a variety of sectors.** The relative economic diversification in the Fafan area enables the good use of ICT skills for a variety of purposes, including the retail and hospitality sectors. This seems to be an unfulfilled opportunity in the region. While these sectors do not rely on ICT skills at present, they could become more in demand as the sectors grow further.
- ▶ **Promising labour intermediation potential of the JCC.** The newly established regional JCC seems to be a promising partner for a regional job creation initiative in the ICT-sector thanks to its access to jobseekers, its partnership with TVET institutes, and experience in supporting the establishment of SMEs. The agency has set ambitious job creation objectives and it specifically focuses on the establishment of small enterprises — the type of businesses that seem to be most relevant in the ICT sector in Jijjiga and Kebribeyah.

▶ 6.3 Potential job creation interventions

The expansion of the digital economy presents opportunities for young refugees, IDPs and host communities to gain work experience. However, the conditions for achieving this in the refugee setting are extremely challenging.

This assessment identified five pillars that are necessary for job creation in the digital economy: digital infrastructure; enabling policy environment and supportive platforms; digital labour supply; labour intermediation; and digital labour demand. Based on the findings of this assessment, as well as prior studies, interventions that contribute to each of these pillars in Afar and Somali regions are as follows.

6.3.1 Access to infrastructure

Electricity access. This is a general enabler of economic activities, which also facilitates internet connectivity. Intervention in this area is particularly needed in the Aysaita camp in Afar, which is already connected to the grid. The ILO and ITU could liaise with UNHCR and ARRA and contribute towards resolving the billing challenge that prevents the provision of electricity services in the camp. While such an intervention may not directly contribute to job creation, it would significantly improve the enabling environment for any type of social and economic activities in the Aysaita camp.

Internet connectivity. The necessity of internet connectivity differs, depending on the specific type of digital job. Reliable connectivity is less crucial for mobile repair or electronics shops, or for secretarial office work, but it is necessary for jobs on digital labour platforms. Since most refugee and host community members do not own desk computers and access the internet through their mobile phones, a programmatic intervention could subsidize data plans for its beneficiaries (for instance, training participants).

Renewable energy. Because of the low access to the grid in both regions on the one hand, and limited usage of solar energy on the other, an intervention that focuses on the provision of renewable energy skills and products (for instance, a mini-grid) can be promising and impactful. Such an intervention could improve the access of local communities to renewable energy and generate a potential employment sub-sector. It could include the following components.

1. A training component that would target local youth (or specifically young women) and equip them with valuable and practical skills on electricity and electronics. The training would focus on the installation and maintenance of solar panels (and potentially other solar products). Such training could be delivered using existing TVET facilities in both regions (such as Adadale TVET college in Afar and Jigjiga Polytechnic in Somali). It would provide participating trainees with skills that could then be demanded in the regions and in Addis Ababa.
2. A distribution component, as part of which solar products would be provided to local communities. It may be feasible to sell such products for heavily subsidized prices, but it is unlikely that either refugees or host communities in Afar and Somali would be willing or able to purchase solar products at their full price. It would also be important to avoid duplication, since Mercy Corps is pursuing a project to construct mini-grids in the renewable energy sector (to be financed by Shell Oil company) in Somali Region.

6.3.2 Enabling policy environment and supporting platforms

Policy environment

The current policy environment in Ethiopia presents challenges for the digital economy in general, and digital freelancing in particular. PROSPECTS could contribute to the national policy dialogue on improving decent work conditions for digital freelance workers. With a digital economy that is still in its infancy, there are no regulations and policies in Ethiopia that specifically apply to digital freelance or gig platforms, nor to outsourcing service providers. Currently, the proclamations, or pieces of legislation that regulate businesses in the country, do not have specific provisions for digital companies, leaving them with the burden of fitting into various structures and regulations created without their operational models in mind.

There is uncertainty around the application of existing tax laws to the digital economy, creating an environment where platforms perceive a constant risk of penalization. VAT reporting regulations do not consider the operating models of digital platforms, leading to time inefficiencies and unnecessary costs. Licensing also stands out as a key challenge for firms in the space, with companies having to find various sectors they fit into instead of being classified as strictly digital platforms. The labour laws do not account for workers who rely on digital platforms for their income, leaving them without social benefits such as healthcare and pensions. Furthermore, while the consumer protection laws safeguard consumers from business malpractices, there is no clear legislation on the rights and responsibilities of customers and gig workers.

The ILO could collaborate with the JCC and the MInT to develop decent work standards for the digital economy.

Further, the understanding of social dialogue concepts and practice in refugee hosting areas is often low, providing an opportunity for employers' and workers' organizations to combine forces for advocacy. This can be achieved by involving the ILO and its workers' and employers' groups in key humanitarian policy channels such as the UN Roadmap for Digital Cooperation, UNHCR Digital Private Sector Group and the African Union Digital Transformation Strategy.

Supportive platforms

Business incubators for digital entrepreneurs and nascent digital companies can create promising job opportunities. While such incubators operate in Addis Ababa, they are unavailable in Afar and Somali regions. PROSPECTS could initiate the establishment of such incubators in both regions, offering incubation services to young refugee and host community women or other target groups that would be identified. The incubators could provide digital and employability skills, and also connect participants to digital labour platforms and digital employers outside the region (see [Section 3.5](#)).

In Somali Region, a promising entry point could be the Science Café, which is being established in Jigjiga by the regional Bureau of Innovation and Technology. The purpose of the Science Café is to bring together innovators and entrepreneurs, and provide a platform for knowledge exchange, capacity-building and awareness-raising on a variety of technological issues. Supporting the Bureau on this endeavour could be useful for a variety of training and upskilling initiatives.

6.3.3 Digital labour supply

The required ICT skills differ based on the different types of jobs in the digital economy. While jobs in the ICT sector are likely to require sophisticated skills that necessitate university training and practice, jobs that are facilitated through location-based platforms only require some basic acquaintance with ICT platforms. Moreover, the general employability skills of both refugees and host community youth have to be improved in order to satisfy market needs.

Capacity-building on digital and entrepreneurial skills

Similar to experience in other refugee settings, digital skills training often does not transform into real job prospects, despite the high expectations of the trainees.¹⁰⁷ Owing to the dearth of private sector employment in Afar and relatively limited private sector employment opportunities in Somali, capacity-building and upskilling initiatives in both regions must provide trainees with clear pathways to employment, and must be linked to pre-identified employers or self-employment opportunities.

Upskilling initiatives should not necessarily include sophisticated programming or software engineering skills but rather include more basic ICT skills: vocational ICT skills (IT hardware, maintenance, repair); entrepreneurial skills, which include general digital awareness of mobile banking, e-commerce, and so on; and basic skills that would enable the performance of various tasks on digital labour platforms or on location-based platforms. These initiatives should target issues such as marketing, pricing and other entrepreneurship concepts; basic and advanced digital skills; and information about the most relevant digital employers.

It should be noted that digital upskilling is likely to yield more results in the Somali region, where conditions for digital entrepreneurship and digital labour platforms are more advanced.

Sensitization on labour rights in the digital economy

In light of the new national regulations related to refugees' right to work, sensitization programmes could be offered to refugees to explain their rights at work in the digital and other sectors. Closer collaboration with humanitarian and refugee support organizations could also be supported to improve their understanding of labour standards and regulations that affect refugees.

6.3.4 Labour intermediation

As suggested in a recent ILO study, "there is enormous potential for work to be outsourced to geographically dispersed online platforms covering a range of occupations and industries, from clerical work to creative work and software development for a range of industries, including health services."¹⁰⁸ The challenge is, however, to connect jobseekers to such jobs and platforms. The ILO's "My first job" initiative, outlined in box 2, presents a promising programmatic approach in this respect.

107 ILO, Digital refugee livelihoods and decent work – Towards inclusion in a fairer digital economy, 2021.

108 ILO, *Is the future ready for youth? Youth employment policies for evolving labour markets*, 2021, p. 44.

► Box 2. “My first job” programme

“My first job” programmes have been implemented by government and development organizations, including by the ILO, as a targeted, active labour market programme. “First job” describes initiatives to promote wage employment among youth. These initiatives differ in terms of conception, design, implementation and coverage. They have specific features tailored to the contexts where they are implemented and include the following components.

1. Training and job placement programmes, which are available in several countries (e.g., Seychelles), are a mechanism to promote and facilitate dual training, such as that offered by vocational training institutes, as well as on-the-job training in enterprises.
2. Training contracts, which include internship, apprenticeship or traineeship contracts (Brazil, Chile, Colombia, Mexico, Honduras, Paraguay, Peru).
3. Hiring subsidies, including initiatives that complement wages or that offer tax or social security exemptions (South Africa, Estonia, Argentina, Brazil, Chile, Colombia, Mexico, Panama).

Owing to the limited presence of relevant industry in both regions, any intervention must include a labour intermediation component and ensure that capacity-building and upskilling programmes are directly linked to clear employment opportunities. Labour market assessments are also necessary to understand existing market conditions and needs and also identify non-ICT economic sectors and activities that could benefit from ICT skills.

Unfortunately, social partners (workers’ organizations and trade unions, employers’ organizations, and so on) are not available in Afar or Somali regions and thus cannot support the labour intermediation endeavour. National-level representatives of the Ethiopian Employers Federation were interviewed for this study; unfortunately they reported that the EFF lacks active regional engagement in Afar and Somali regions.

6.3.5 Digital labour demand

In order for labour intermediation programmes to be demand-driven and respond to industry needs, they need to be designed with sectoral focuses in mind and closely involve employers and the private sector. In remote regions such as the refugee hosting areas in Afar and Somali, where there is a struggling local economy and opportunities for on-the-job and traineeship experiences are limited, this will be a major barrier. Three types of interventions could mitigate this challenge.

Incentives to digital employers

The PROSPECTS partners could extend financial incentives (for instance, subsidies, rewards, vouchers, in-kind assistance) to employers who recruit refugees or host community youth for digital jobs. This initiative would require the identification of relevant employers and their sensitization. Since the availability of such employers in Afar and Somali regions is limited, there may be a need to engage with companies based in Addis Ababa and provide them with financial incentives to hire interns or recent university or TVET graduates remotely. This, in turn, would make it necessary to secure the availability of reliable internet connectivity for remote workers, taking advantage of science cafés or computer labs available in the universities and TVET institutes in both regions.

Supporting remote digital jobs

The lack of digital employers in Afar and their limited availability in Somali significantly hinder the employment perspectives of refugees and host community youth in both regions. However, given that internet access is available in several locations, such as universities, TVET institutes and science cafés, remote jobs on various digital labour platforms could be facilitated.

As part of this intervention, PROSPECTS partners could select and train young refugee and host community women in skills demanded by the freelance market, combining IT skills (such as coding, graphic design and marketing) with soft skills (basic financial management, presentation, communication, and so on). These women could then be connected to a digital freelance platform, where they could offer their services without the need to relocate or leave their home towns.

Reliable internet connectivity would be required to facilitate such an intervention, and programme participants could take advantage of the computer laboratories available in regional universities, science cafés or other locations.

Vulnerable groups among refugees and host community members (such as young women at risk of violence, disabled youth, unaccompanied young people, individuals that face mobility challenges, and so on) may be particularly suited for such an initiative.

An example of such a programme, implemented by the World Bank in Kosovo, is presented in box 3.

► Box 3. Digital labour pilot for women in Kosovo

The Women in Online Work (WoW) pilot was implemented in Kosovo, with the support of the World Bank, to explore the suitability of online work for young Kosovar women, a population with the poorest job prospects. The two-phase WoW pilot covered five municipalities and aimed to train un- and underemployed young women in skills demanded by the ever-growing online freelancing market.

The first phase — which ran from February through August 2016 — focused on front-end web development, while the second — from September through December 2016 — had three learning tracks: coding, graphic design, and digital marketing. In addition to technical-skill components, both phases had a strong soft skills component, with beneficiaries working with career counsellors and participating in networking events to build presentation skills, business communications, and basic management skills. In parallel to the training, beneficiaries were introduced to online job bidding and actual online work.

WoW demonstrated that online work was a viable option for helping young Kosovar women build skills and find gainful employment. After two phases, a total of 78 programme graduates collectively earned close to USD 25,000 from jobs obtained online. Some started their own ventures or found jobs in the local IT market.

<https://www.worldbank.org/en/country/kosovo/brief/kosovo-wow>

Supporting self-employment

In light of the limited digital labour demand in both regions, it is particularly recommended to support self-employment in small and medium-sized enterprises that provide various IT-related services. Information on which IT-related services would be needed in each of the regions is currently unavailable, and it is thus advised to support a local government partner (such as the JCC) on conducting a local labour market assessment to identify promising entry points for digital enterprises (see the [Section 6.3.2](#) on labour intermediation).

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